

# *ski-doo* 2005<sup>®</sup>

## *Operator's Guide*

*Includes Safety,  
Vehicle and Maintenance  
Information*

### *MX Z<sup>®</sup> Renegade™ 600 H.O. SDI*

 **WARNING**

Read this guide thoroughly. It contains important safety information.

Minimum recommended operator's age: 16 years old.

Minimum recommended passenger's age (if applicable): 16 years old.

Do not remove this Operator's Guide from the vehicle.



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## SAFETY WARNING

Disregarding any of the safety precautions and instructions contained in this *Operator's Guide*, *Safety Videocassette* or on-product warnings may result in injury, including the possibility of death.

This *Operator's Guide* and *Safety Videocassette* should remain with the unit at time of resale.

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# 2005 SKI-DOO OPERATOR'S GUIDE

This guide is applicable to ***MX-Z® Renegade™ 600 HO SDI.***

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## FOREWORD

Congratulations on your purchase of a new SKI-DOO 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.

The *Operator's Guide* has been prepared to acquaint the owner/operator and passenger with this new snowmobile and its various controls, maintenance and safe riding instructions. This guide is indispensable for the proper use of the product and should be kept with this snowmobile at all times.

Make sure you read and understand the content of this *Operator's Guide*.

For any questions pertaining to the warranty and its application, consult the WARRANTY section in this guide, and/or an authorized SKI-DOO dealer.

This guide uses the following safety alert symbol in conjunction with signal words to indicate a potential personal injury hazard.

### **WARNING**

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

### **CAUTION**

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. When used without the safety alert symbol , potential hazard exists for property damage only.

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

Although the mere reading of such information does not eliminate the hazard, the understanding and application of the information will promote the correct use of the vehicle.

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!

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.

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.

Because of its ongoing commitment to product quality and innovation, Bombardier reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The illustrations in this document 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.

It is understood that this guide may be translated into another language. In the event of any discrepancy, the English version shall prevail.

Specifications are given in the SI metric system with the SAE U.S. equivalent in parentheses. Where precise accuracy is not required, some conversions are rounded off for easier use.

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.

We recommend genuine Bombardier products for replacement parts and accessories. They've been specially designed for your vehicle and manufactured to meet Bombardier's demanding standards.

A *Shop Manual* can be obtained for complete service, maintenance and more repair information.

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## **⚠ SAFETY MEASURES**

### **Observe the Following Warnings:**

- ⚠ 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.
- ⚠ Basic training is required for the safe operation of any snowmobile. Study your *Operator's Guide* paying particular attention to cautions and warnings. Join your local snowmobile club: its social activities and trail systems are planned for both fun and safety. Obtain basic instructions from your snowmobile dealer, friend, fellow club member or enroll in your state or provincial safety training program.
- ⚠ Know the local laws regarding snowmobiles and be aware of the liability, property damage and insurance laws relating to your equipment.
- ⚠ Always keep right hand side of the trail.
- ⚠ Always keep a safe distance from other snowmobiles and bystanders.
- ⚠ Jumping a snowmobile is an unsafe and dangerous practice.
- ⚠ Know your snowmobile and treat it with the respect and care due of any power driven machine. Common sense, proper handling and routine maintenance will result in safer and enjoyable use. Check your machine before each ride.
- ⚠ Always make a pre-start inspection BEFORE you turn on the ignition.
- ⚠ If you are a parent, you must be the judge of your child's capability to understand, to operate and to control a snowmobile. Warn against speeding, over confidence and carelessness. Never let children snowmobile unsupervised.
- ⚠ Snowmobiles are used in many areas and in many snow conditions. Not all models perform the same in similar conditions. Always consult your snowmobile dealer when selecting the snowmobile model for your particular needs and uses.
- ⚠ Injury or death may result to the snowmobile operator, passenger or bystander if the snowmobile is used in risky conditions which are beyond the driver's, passenger's or snowmobile's capabilities or intended use.
- ⚠ Remember, promotional material may show risky maneuvers performed by professional riders under ideal and/or controlled conditions. You should never attempt any such risky maneuvers if they are beyond your level of riding ability.

- ⚠ Never ride after consuming drugs or alcohol or if you feel tired or ill. Operate your snowmobile prudently.
- ⚠ Speeding can be fatal. In many cases, you cannot react or respond quickly enough to the unexpected. Always ride at a speed which is suitable to the trail, weather conditions and your own ability. Know your local rules. Speed limit may be in effect and meant to be observed.
- ⚠ Snowmobile can carry a passenger only if it is equipped with a 2-up seat including a single hand grip (seat strap) or a double hand grip (rear passenger grab handles).
- ⚠ In an emergency, the snowmobile engine can be stopped by activating the engine cut-out switch, pulling the tether cord cap or turning off the key.
- ⚠ Your snowmobile is not designed to be operated on public streets, roads or highways. In most States and Provinces, it is considered an illegal operation.
- ⚠ Throttle mechanism should be checked for free movement and return to idle position before starting engine.
- ⚠ For vehicles with a parking brake, always engage brake when vehicle is not in use.
- ⚠ Always stop the engine before refueling. Fuel is inflammable and explosive under certain conditions. Always work in a well-ventilated area. Do not smoke or allow open flames or sparks in the vicinity. Open cap slowly. If a differential pressure condition is noticed (whistling sound heard when loosening fuel tank cap) have vehicle inspected and/or repaired before further operation. Do not overfill or top off the fuel tank before placing the vehicle in a warm area. As temperature increases, fuel expands and might overflow. Always wipe off any fuel spillage from the vehicle. Periodically verify fuel system.
- ⚠ Never run the engine in a non-ventilated area and/or if vehicle is left unattended.
- ⚠ Never operate the engine without belt guard securely installed or, with hood or access/side panels open or removed. Never run the engine without drive belt installed. Running an unloaded engine such as without drive belt or with track raised, can be dangerous.
- ⚠ Unless otherwise specified, never run the engine when the track is raised off the ground or with the hood opened or removed.
- ⚠ Do not stud the track. At speed it may cause the track to tear and separate from vehicle posing a risk of severe injury or death.
- ⚠ Maintain your snowmobile in top mechanical condition at all times.
- ⚠ 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 and cold for all lubrication, adjustment and maintenance procedures.
- ⚠ Electric start models only: Never charge or boost a battery while installed on snowmobile.
- ⚠ 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. or its subsidiaries.
- ⚠ **Electronic reverse (RER™) models only:** The shifting to reverse mode on these snowmobiles is done by the push of the RER button when the engine is running. Wait until the reverse alarm sounds and the Rotax Electronic Reverse (RER) pilot lamp comes on in the dashboard before operating throttle to proceed in reverse. The reverse speed of these snowmobiles is not limited. Always proceed with caution as fast reverse could result in loss of vehicle stability and control. Come to complete stop before depressing RER button. Always remain seated and apply the brake before shifting. Ensure the path behind is clear of obstacles or bystanders before proceeding.
- ⚠ **Models with mechanical reverse:** The reverse speed of these snowmobiles is not limited. Always proceed with caution as fast reverse could result in loss of vehicle stability and control. Come to complete stop before selecting reverse gear. Wait until the reverse alarm sounds before operating throttle to proceed in reverse. Always remain seated and apply the brake before shifting. Ensure the path behind is clear of obstacles or bystanders before proceeding.

# ***SAFETY INFORMATION***

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## INTRODUCTION

This safety information section includes safety WARNINGS which if not followed may result in serious personal injury including the possibility of death.

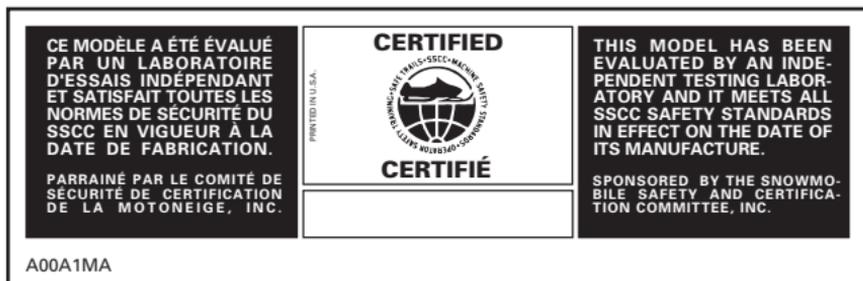
After reading, please keep this *Operator's Guide* with the snowmobile. If the snowmobile is resold, please give the guide to the new owner for his awareness. An extra copy of the *Operator's Guide* is available from your SKI-DOO snowmobile dealer at no charge.

This safety information section is dedicated to safer snowmobiling.

## SAFETY LABELING

Safety standards for snowmobiles have been adopted by the Snowmobile Safety and Certification Committee (SSCC) of which Bombardier is a proud participating member. Assurance that your snowmobile meets these standards is easily checked by locating the Certification Label on a right vertical portion of the vehicle.

This label signifies that an independent testing laboratory has verified compliance with the SSCC safety standards. Other important labels on the vehicle are WARNING or CAUTION labels relating to safety, maintenance and/or snowmobile operation. Ensure all such labeling is retained on the vehicle and its content is followed by vehicle operator and passenger.



## OTHER SAFETY FEATURES

Read this *Operator's Guide* for other features that may be on your particular snowmobile model. Do not operate your snowmobile unless all its safety features are in place and in good working order.

**Lights** — Headlamp, taillight and brake light are standard equipment. Be sure lights are clear of dirt, slush or snow and are in good working order or condition.

## HOW TO DRESS

Proper snowmobile clothing should be worn. It should be comfortable and not too tight. Always check the weather forecast before you go on a ride. Dress for the coldest weather expected. Thermal underwear next to the skin also provides an important layer of insulation.

Approved helmets are recommended at all times. They provide both warmth and reduce injury. A stocking type cap, balaclava and face mask should always be carried or worn. Goggles or a face shield which attach to the helmet are indispensable.

Hands should be protected by a pair of snowmobile gloves or mitts which have sufficient insulation and permit use of thumbs and fingers for operation of controls.

Rubber bottom boots with either a nylon or a leather top, with removable felt liners are best suited for snowmobiling.

You should keep yourself as dry as possible when snowmobiling. When you come indoors, take your snowmobile suit and boots off and make certain they dry properly.

**Do not wear long scarfs and loose apparels that could get caught in moving parts.**

## WHAT TO BRING

Every snowmobiler should carry at least the following basic parts and tools that can help him and others in an emergency:

- this *Operator's Guide*
- spare spark plugs and wrench
- friction tape
- spare drive belt
- spare starter rope
- spare Light bulbs
- tool kit (including at least pliers, screwdriver, adjustable wrench)
- knife
- flashlight.

Include other items depending on the length and time of your ride.

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## A WORD TO ALL SNOWMOBILERS

Everyone is a beginner the first time he sits behind the controls of a snowmobile regardless of previous experience in driving an automobile, a motorcycle or a motorboat. The safe use of your snowmobile is dependent on many conditions such as visibility, speed, weather, environment, traffic, vehicle condition and the condition of the driver.



Each operator has a responsibility to ensure the safety of his/her passenger, if any, and of other recreationists or bystanders.

You are responsible for proper operation of your vehicle as well as training those whom you allow to ride or drive. There may be noticeable handling and performance differences from one snowmobile to another one.

A snowmobile is relatively simple to operate but like any other vehicle or mechanical equipment, it can be hazardous if you or a passenger are the least bit reckless, thoughtless or inattentive. We encourage you to have an Annual Safety Inspection of your snowmobile. Please contact an authorized SKI-DOO dealer for further details. Finally, we urge you to visit an authorized SKI-DOO dealer periodically for regular and safety maintenance, as well as snowmobile accessories you may require.

## TRANSPORTING AND TOWING

Follow transporting and towing instructions explained further in this guide.

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## LAWS AND REGULATIONS

Federal, state, provincial and local government agencies have enacted laws and regulations pertaining to the safe use and operation of snowmobiles. It is your responsibility as a snowmobiler to learn and obey these laws and regulations. Respect and observance will result in safer snowmobiling for all.

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## SUMMARY OF ACCIDENT PREVENTION PRACTICES

- △ Snowmobiling at night can be a delightful experience but because of reduced visibility, be extra cautious. Avoid unfamiliar terrain and be sure your lights are working. Always carry a flashlight and spare light bulbs.
- △ Do not leave your keys in the ignition switch, it presents an invitation to thieves and a danger to young children.
- △ Nature is wonderful but don't let it distract your attention from driving. If you want to truly appreciate winter's scenery, stop your snowmobile on the side of the trail so that **you** don't become a hazard to others.
- △ Fences represent a very serious threat for both you and your snowmobile. Give a wide berth to telephone poles or posts.
- △ Hidden wires unseen from a distance can cause serious accidents. Obtain reflective tape or markings to identify hazardous wires near your trail.
- △ Overhead branches can cause driver distraction, cut faces and even cause eye damage. Always wear an approved safety helmet, eye protection and a face shield. This also applies to your passenger.
- △ Smoking while refueling or while checking the fuel level can be dangerous. All fuel gives off fumes. If you do smoke, do so away from the snowmobile.
- △ Although the snow on the ground measures several inches and even feet in depth, dry grasses — in certain areas — may extend above snow level. Remove any such accumulation from track, engine and gas tank areas.

- ⚠ Be aware of inherent risks associated with riding off trails, such as avalanche and other natural or man made hazards or obstacles.
- ⚠ Avoid road traveling. If you must do so and it is permitted, reduce speed. The snowmobile is not designed to operate or turn on paving. When crossing a road, make a full stop, then look carefully in both directions before crossing at a 90° angle. Be wary of parked vehicles.
- ⚠ Tailgating another snowmobile should be avoided. If the snowmobile in front of you slows for any reason, its driver and passenger could be harmed through your neglect. Maintain a safe stopping distance between you and the snowmobile in front of you. Depending on the terrain condition, stopping may require a little more space than you think. Play it safe. Be prepared to use evasive driving.



- ⚠ Make certain you check the throttle movement prior to starting the snowmobile to ascertain that the throttle cable is properly operational. If not, turn off the machine by pushing the engine cut-out switch, pulling the tether cord cap or by turning off the ignition. Correct the problem before the snowmobile is operated. Be prepared to immediately respond should a throttle malfunction occur.

- △ Always show a new operator how to start and stop the vehicle. Indicate the correct riding positions and, above all else, only allow him to operate the snowmobile in a restricted flat area — at least until he is completely familiar with its operation. If there is a local snowmobile operator's training course existing, have him enroll. Make sure he is dressed properly for the weather with no long scarves or loose fitting apparel that could get caught in moving parts. Make sure his feet are on the running boards and that he maintains a firm grab of the passenger strap or grips.
- △ Never have the engine running while the hood is open. Even at idle, a snowmobile engine is turning around 1,800 revolutions per minute. Always turn off the ignition before opening the hood for any reason.
- △ Never remove any original equipment from your snowmobile. Each vehicle has many safety features built in. Such features include various guards and consoles, plus reflective materials and warning labels.
- △ Venturing out alone with your snowmobile could also be hazardous. You could run out of fuel, have an accident, or damage your snowmobile. Remember, your snowmobile is capable of traveling further in half an hour than you may be able to walk in a day. Use the "buddy system". Always ride with a friend or member of your snowmobile club. Even then, tell someone where you are going and the approximate time you plan to return.
- △ Meadows sometimes have low areas where waters accumulate and freeze over in winter. This ice is usually glare ice. Attempting to turn or brake on this surface could cause your vehicle to spin out of control. Never brake or attempt speeding or turning on glare ice. If you do happen to travel over such a condition, reduce speed by carefully releasing the throttle.
- △ Never "jump" your snowmobile. This should be left to professional stunt men. Don't show off. Be responsible.
- △ **Stay sober.** Safe riders don't ride under the influence of alcohol or drugs. Drinking and driving demonstrates a most irresponsible attitude not only to others but to yourself. Legislators and the population in general don't tolerate it for good reason and BOMBARDIER Recreational Products doesn't either!
- △ Wildlife compliments your snowmobiling day. Snowmobile tracks provide firm ground over which animals can travel from area to area. Do not violate this privilege by chasing or harassing wildlife. Fatigue and exhaustion can lead to death. Avoid areas posted for the protection or feeding of wildlife.
- △ If you happen to be fortunate enough to see an animal, stop your snowmobile and observe quietly.

- ⚠ Excessive speeding can be fatal. In many cases, you cannot react or respond quickly enough to the unexpected. Ride at a speed which is suitable to the trail and weather conditions. If a maximum speed is posted, observe it.
- ⚠ A poorly maintained snowmobile itself can be a potential hazard. Excessively worn components could render the vehicle completely inoperative. Keep the snowmobile in good working condition at all times. Follow your pre-operation check, weekly, monthly and annually routine maintenance and lubrication procedures as detailed in this guide. Consult a snowmobile dealer or acquire a shop manual and proper tools and equipment if other repairs or service is required.
- ⚠ Raising the rear of your snowmobile while the engine is running could cause snow, ice or debris to be thrown back at an observer. Never raise the rear of the vehicle while the engine is running. To clear or inspect the track, stop the engine, tilt the vehicle on its side and remove blockage with a piece of wood or branch. Never allow anyone near a rotating snowmobile track.
- ⚠ Do not stud the track. At speed it may cause the track to tear and separate from vehicle posing a risk of severe injury or death.
- ⚠ While on safari, do not “gun” the throttle. Snow and ice can be thrown back into the path of a following snowmobile. In addition, when “gunning” the throttle, the vehicle digs into and leaves an irregular snow surface for others.
- ⚠ Safaris are both fun and enjoyable but don’t show off or overtake others in the group. A less experienced operator might try to do the same as you and fail. When riding with others, limit your abilities to the experience of others.
- ⚠ Always cover your snowmobile when leaving it overnight or during extended periods of inactivity. This will protect from freezing as well as retain appearance.
- ⚠ The guidelines that we support are not designed to limit your snowmobiling fun, but to preserve the beautiful freedom that you can experience only on a snowmobile! These guidelines will keep snowmobilers healthy, happy and able to introduce others to what they know and enjoy about their favorite winter pastime. So, the next time you hit the trails on a cool, crisp and clear winter day, we ask you to remember that you are paving the way for the future of our sport. Help us lead it down the right path! From all of us at BOMBARDIER Recreational Products, thank you for doing your share.

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## ENVIRONMENT

There is nothing more exhilarating than snowmobiling. Venturing onto snowmobile trails that criss-cross the wild areas of the U.S. and Canada is an exciting and healthy winter sport. However, as the number of people using these recreational parks increases, so does the potential for damage to the environment. Abuse of land, facilities and resources inevitably leads to restrictions and closures of both private and public land.

In essence, the greatest threat to our sport, is all around us. Which leaves us with one logical choice. When we snowmobile, we must always ride responsibly.

The vast majority respect the law and the environment. Each of us must set an example for those who are new to the sport, young and old alike.

It is in every one's best interest to tread lightly into our recreational areas. Because, in the long run, to protect the sport we must preserve the environment.

Recognizing the importance of this issue and the need for snowmobilers to do their share in preserving areas that make it possible to enjoy our sport, BOMBARDIER Recreational Products has developed the "Light Treading Is Smart Sledding" campaign for snowmobilers.

Light Treading refers to more than the tread of our tracks. It's a statement of concern, respect and willingness to take the lead and take action. It applies to the environment in general, its proper care and maintenance, its natural inhabitants and all enthusiasts and the public at large who enjoy the great outdoors. With this theme, we invite all snowmobilers to remember that respecting the environment is not only critical to the future of our industry but to future generations.

Light Treading in no way suggests you should curb your appetite for snowmobiling fun! It simply means tread with respect!

### JUST WHAT IS LIGHT TREADING?

The fundamental objective of Light Treading is one of respect for where and how you ride a snowmobile. You're a light treader when you follow the principles below.

**Become informed.** Obtain maps, regulations and other information from the Forest Service or from other public land agencies. Learn the rules and follow them and that goes for speed limits, too!

**Avoid** running over young trees, shrubs, and grasses and don't cut wood. On flatlands or areas where trail riding is popular, it's important to ride only where authorized. Remember, there is a link between protecting your environment and your own safety.

**Respect wildlife** and be particularly sensitive of animals that are rearing young or suffering from food shortage. Stress can sap scarce energy reserves. Refrain from riding in areas where only animals are intended to tread!

**Obey** gate closures and regulatory signs and remember, light treaders don't litter!

**Stay out** of wilderness areas. They're closed to all vehicles. Know where the boundaries are.

**Obtain permission** to travel across private land. Respect the rights of landowners and other people's privacy. Remember, snowmobile technology has lowered the noise factor considerably, but you still shouldn't rev your engines where quiet "is the order of the day".

## **WHY IS LIGHT TREADING SMART**

Snowmobilers know all too well the efforts that have been made throughout the sport's history to enjoy access to areas where people can snowmobile safely and responsibly. This effort continues today, as strong as ever.

Respecting the areas where we ride... wherever they may be... is the only way to insure their future enjoyment. That's one major reason why we know you'll agree that Light Treading Is Smart Sledding! And there are more.

Enjoying the opportunity to see winter and all its natural majestic wonders, is an experience cherished by snowmobilers. Light Treading will preserve this opportunity and will make it possible for us to expose others to the beauty of winter and the unique thrill of our sport! Light Treading will help our sport to grow!

Finally, Light Treading is the sign of a smart snowmobiler. You don't have to leave big tracks or careen through a virgin forest to show you can ride. So whether you're driving a high performance Ski-Doo, a sporty MX-Z snowmobile or any other make or model, show you know what you're doing. Show you know how to send snow flying and make tracks with a light touch!



# ***VEHICLE INFORMATION***

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## **LIST OF HOT PARTS**

All power train components.

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## **LIST OF MOVING PARTS**

All transmission, suspension and steering parts.

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# **BOMBARDIER LIMITED WARRANTY NORTH AMERICA: 2005 SKI-DOO® SNOWMOBILES**

## **1. SCOPE OF THE LIMITED WARRANTY**

In Canada, BOMBARDIER INC. (hereinafter "BOMBARDIER"), and in the USA, Bombardier on behalf of BOMBARDIER MOTOR CORPORATION OF AMERICA (BMCA) warrants its 2005 SKI-DOO snowmobiles from defects in material or workmanship for the period described below.

All genuine BOMBARDIER parts and accessories, installed by an authorized BOMBARDIER dealer (as hereinafter defined) at the time of delivery of the 2005 SKI-DOO snowmobile, carry the same warranty as that of the snowmobile.

Use of the product for racing or any other competitive activity, at any point, even by a prior owner will render this warranty null and void.

## **2. WARRANTY COVERAGE PERIOD**

This warranty will be in effect FROM THE DATE OF DELIVERY TO THE FIRST RETAIL CONSUMER or the date the product is first put into use, whichever occurs first and for a period of:

TWELVE (12) CONSECUTIVE MONTHS, for private or commercial use owners. The warranty coverage period on a snowmobile delivered between June 1<sup>st</sup> and December 1<sup>st</sup> of a given year will expire December 1<sup>st</sup> of the following year

The emission-related components on EPA certified MX-Z® Renegade™ registered in the USA are covered for thirty (30) consecutive months or 2500 miles (4000 km) of engine use whichever occurs first. If the 2500 miles (4000 km) are reached during the regular warranty coverage period, the emission-related components are still on warranty until the end of regular warranty coverage period.

## Emission-Related Components

COMPONENT	ENGINE FAMILY (type)
	600 HO SDI
Throttle Position Sensor (TPS)	X
Air Temperature Sensor (ATS)	X
Air Pressure Sensor (APS)	X
Fuel Pressure Regulator	X
Fuel Injectors	X
Engine Management System (EMS)	X
Cylinder Head Rubber Rings/O-rings or Gasket	X
Cylinder/Base Gaskets	X
Throttle Body Shaft Seals	X
RAVE Hose System	X
Exhaust System Sealing Components	X
Knock Sensor	X
Muffler Temperature Sensor	X

The repair or replacement of parts or the performance of service under this warranty does not extend the life of this warranty beyond its original expiration date.

### 3. CONDITIONS TO HAVE WARRANTY COVERAGE

This warranty coverage is available only on 2005 SKI-DOO snowmobile purchased as new and unused by its first owner from a BOMBARDIER dealer authorized to distribute SKI-DOO products in the country in which the sale occurred (hereinafter “**BOMBARDIER dealer**”), and then only after the BOMBARDIER specified pre-delivery inspection process is completed and documented. Moreover, this warranty coverage is only available if the SKI-DOO snowmobile is purchased in the country in which the purchaser resides. Bombardier will not honor this limited warranty to any personal use owner or commercial use owner where the preceding conditions have not been met. Warranty coverage only becomes available upon proper registration of the product by a BOMBARDIER dealer. Such limitations are necessary in order to allow BOMBARDIER to preserve both the safety of its products, and also that of its consumers and the public. Routine maintenance outlined in the *Operator's Guide* must be timely performed in order to maintain warranty coverage. BOMBARDIER reserves the right to make warranty coverage contingent upon proof of proper maintenance.

#### **4. WHAT TO DO TO OBTAIN WARRANTY COVERAGE**

The customer must notify a servicing BOMBARDIER dealer within two (2) days of the appearance of a defect, and provide it with reasonable access to the product and reasonable opportunity to repair it. The customer must also present to the BOMBARDIER dealer, proof of purchase of the product and must sign the repair/work order prior to the start of the repair in order to validate the warranty repair. All parts replaced under this limited warranty become the property of BOMBARDIER.

#### **5. WHAT BOMBARDIER WILL DO**

BOMBARDIER's obligations under this warranty are limited to, at its sole discretion, repairing parts found defective under normal use, maintenance and service, or replacing such parts with new genuine BOMBARDIER parts without charge for parts and labor, at any authorized BOMBARDIER dealer. BOMBARDIER reserves the right to improve or modify products from time to time without assuming any obligation to modify products previously manufactured.

#### **6. EXCLUSIONS - ARE NOT WARRANTED**

- Normal wear and tear;
- Routine maintenance items, tune ups, adjustments;
- Damage caused by failure to provide proper maintenance and/or storage, as described in the *Operator's Guide*;
- Damage resulting from removal of parts, improper repairs, service, maintenance, modifications or use of parts not manufactured or approved by BOMBARDIER or resulting from repairs done by a person that is not an authorized servicing BOMBARDIER dealer;
- Damage caused by abuse, abnormal use, neglect, use of the product on surfaces other than snow, or operation of the product in a manner inconsistent with the recommended operation described in the *Operator's Guide*;
- Damage resulting from accident, submersion, fire, theft, vandalism or any act of God;
- Operation with fuels, oils or lubricants which are not suitable for use with the product (see the *Operator's Guide*);
- Snow or water ingestion;
- Incidental or consequential damages, or damages of any kind including without limitation towing, storage, telephone, rental, taxi, inconvenience, insurance coverage, loan payments, loss of time, loss of income; and
- Damage resulting from tracks which have been studded.

#### **7. LIMITATIONS OF LIABILITY**

THIS WARRANTY IS EXPRESSLY GIVEN AND ACCEPTED IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT THAT THEY CANNOT BE DISCLAIMED, THE IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE LIFE OF THE EXPRESS WARRANTY. INCIDENTAL AND CONSEQUENTIAL DAMAGES ARE EXCLUDED FROM COVERAGE UNDER THIS WARRANTY. SOME STATES/PROVINCES DO NOT ALLOW FOR THE DISCLAIMERS, LIMITATIONS AND EXCLUSIONS IDENTIFIED ABOVE, AS A RESULT, THEY MAY NOT APPLY TO YOU. 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.

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

BOMBARDIER reserves the right to modify this warranty at any time, being understood that such modification will not alter the warranty conditions applicable to the products sold while this warranty is in effect.

## 8. TRANSFER

If the ownership of a product is transferred during the warranty coverage period, this warranty shall also be transferred and be valid for the remaining coverage period provided that BOMBARDIER is notified of such transfer of ownership in the following way:

- a. The former owner contacts BOMBARDIER (at the phone number provided below) or an authorized BOMBARDIER dealer and gives the coordinates of the new owner; or
- b. BOMBARDIER or an authorized BOMBARDIER dealer receives a proof that the former owner agreed to the transfer of ownership, in addition to the coordinates of the new owner.

## 9. CONSUMER ASSISTANCE

- a. In the event of a controversy or a dispute in connection with this BOMBARDIER LIMITED WARRANTY, BOMBARDIER suggests that you try to resolve the issue at the dealership level. We recommend discussing the issue with the authorized dealer's service manager or owner.
- b. If the issue has not yet been resolved, please submit your complaint in writing or call the appropriate number below:

In Canada:

**BOMBARDIER INC.**  
**RECREATIONAL PRODUCTS**  
SKI-DOO®  
CUSTOMER ASSISTANCE CENTER  
VALCOURT QC J0E 2L0  
Tel: (819) 566-3366

In USA:

**BOMBARDIER MOTOR**  
**CORPORATION OF AMERICA**  
**RECREATIONAL PRODUCTS**  
SKI-DOO®  
CUSTOMER ASSISTANCE CENTER  
7575 BOMBARDIER COURT  
WAUSAU WI 54401  
Tel: (715) 848-4957



**BOMBARDIER**  
*RECREATIONAL PRODUCTS*

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## FREQUENTLY 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 SKI-DOO dealer must register your snowmobile with Bombardier. Make sure the registration form has been sent. All of this will allow you to:*

*a) have warranty work performed at any authorized SKI-DOO dealer in North America. Your registration form will provide the authorized SKI-DOO 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 predelivered by an authorized SKI-DOO dealer. However, if a particular failure is caused by inappropriate operation or maintenance instructions in the Operator's Guide are not followed and, THAT failure may not be covered under warranty. This includes service work performed by the customer, especially the critical adjustments: ignition timing, carburetion 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 an authorized SKI-DOO 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 SKI-DOO 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 resale 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 authorized SKI-DOO dealer and Bombardier. Normally, any problems that arise in connection with the sales transaction or the operation of your snowmobile will be handled by your authorized SKI-DOO 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 authorized SKI-DOO dealership management. If the problem already has been reviewed with the Sales Manager or Service Manager, contact the General Manager or the owner of this authorized SKI-DOO dealership.*

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

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## **AUTHORIZED SKI-DOO DEALERS**

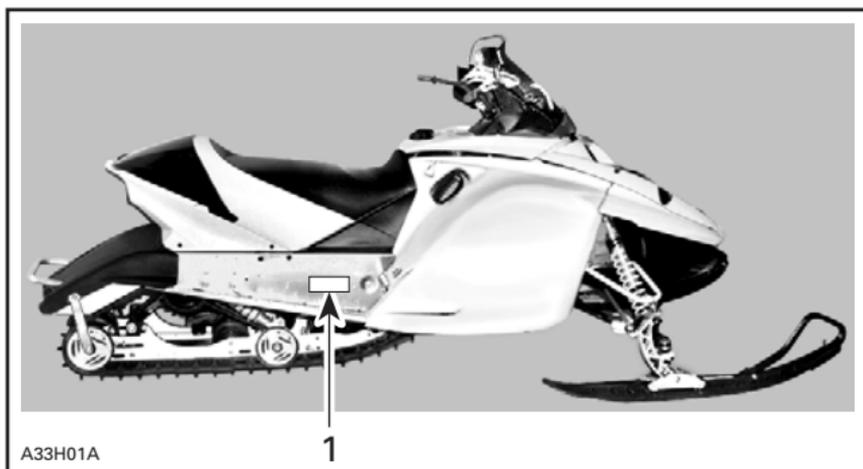
For Canada and USA Only

To find the nearest authorized SKI-DOO dealer, dial: 1 800 375-4366  
or visit our web site at [WWW.SKIDOO.COM](http://WWW.SKIDOO.COM).

# HOW TO IDENTIFY YOUR SNOWMOBILE

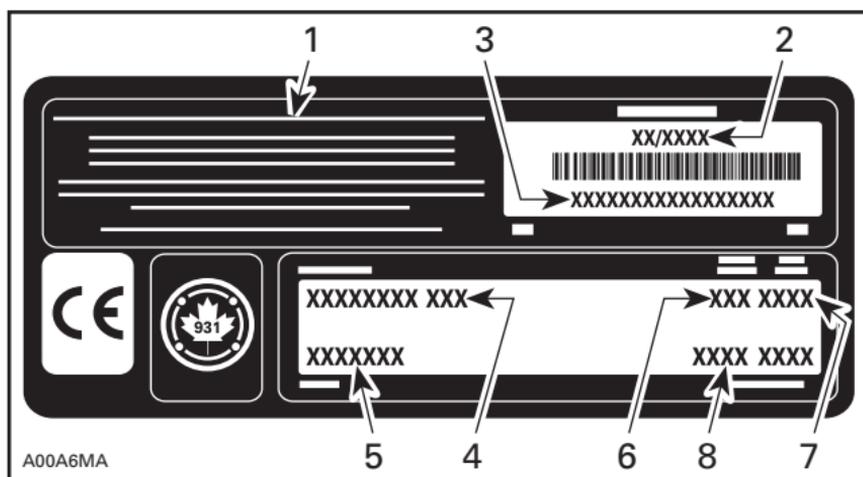
## Vehicle Description Decal

Vehicle description decal is located on right hand side of tunnel.



**TYPICAL**

1. Vehicle description decal



### VEHICLE DESCRIPTION DECAL

1. Manufacturer name
2. Manufacturing date
3. Vehicle identification number (VIN)
4. Model name
5. Option package
6. Engine type
7. Model year
8. Color codes

## Serial Numbers

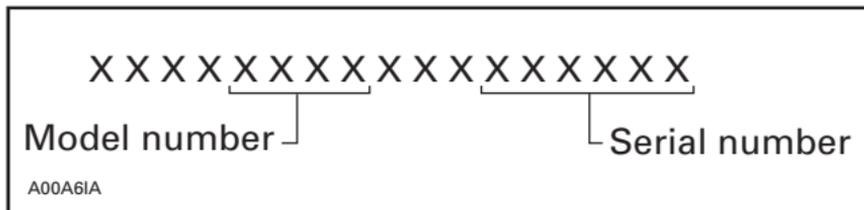
The main components of your snowmobile (engine and frame) are identified by different serial numbers. It may sometimes become necessary to locate these numbers for warranty purposes or to trace your snowmobile in the event of loss. These numbers are required by the authorized SKI-DOO dealer to complete warranty claims properly. No warranty will be allowed by Bombardier if the engine serial number or vehicle identification number (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.

### Vehicle Identification Number (VIN) Location

VIN is scribed on vehicle description decal. See above. It is also engraved on tunnel near vehicle description decal.

### Model Number Location

Model number is part of vehicle identification number (VIN).



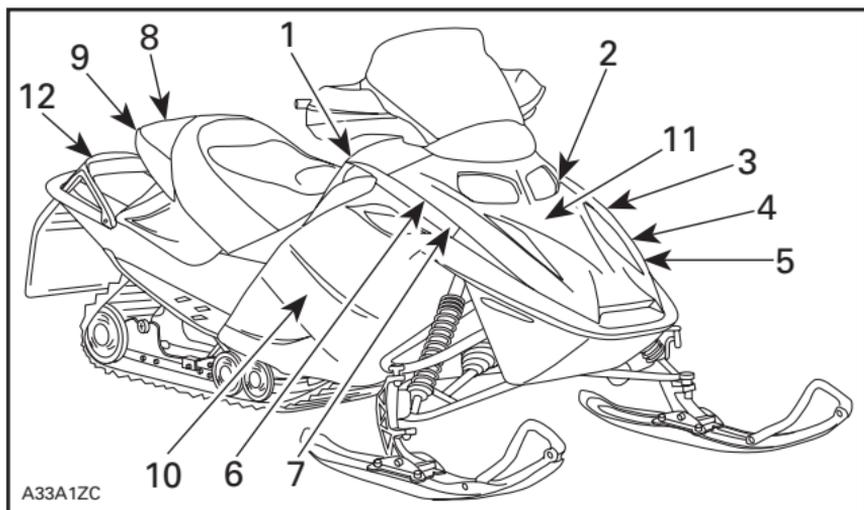
*VIN DESCRIPTION*



## ON-VEHICLE IMPORTANT INSTRUCTIONS

The following instructions are on your snowmobile. If missing or damaged, the decals can be replaced free of charge. See an authorized SKI-DOO dealer.

Please read the following instructions carefully before operating this snowmobile.



TYPICAL — LOCATION OF IMPORTANT INSTRUCTIONS

516 002 024

**! WARNING**

Read and follow all warning labels & operator's guide/safety handbook before operation. Severe injury or death can result from ignoring warnings or through improper use of snowmobile.

Before starting engine, check: • If throttle lever returns to its initial position when released. • All guards are in place. • The hood and both side panels are closed. • Parking brake is applied.

After starting, check proper operation of:

• Engine emergency cut-off switch and all controls.

Before operating the vehicle: • Make sure parking brake is fully disengaged. Drive carefully.

This vehicle is designed for operator only, unless an extra seat station with a single or double handgrip is installed for a passenger.

## Instruction 2

### **CAUTION**

- To comply with noise regulations, this engine is designed to operate with an air intake silencer.
- Operation without air intake silencer or with one not properly installed may cause engine damage.

### **ATTENTION**

- Le moteur a été conçu pour fonctionner avec ce silencieux d'admission afin de se conformer aux lois et règlements relatifs au bruit.
- Son absence ou une mauvaise installation peut endommager le moteur.

516 001 191

A01A2EA

## Instruction 3

### **WARNING**

This guard must always  
be in place when engine is running.

### **AVERTISSEMENT**

Ce garde-courroie doit toujours être  
en place lorsque le moteur fonctionne.

516 001 190

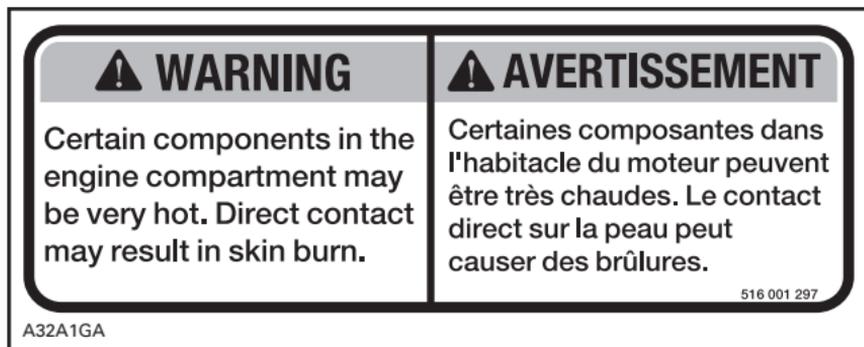
A01A2FA

#### Instruction 4



TYPICAL

#### Instruction 5



## Instruction 6



A32A1HA

## Instruction 7

### **CAUTION**

Use XP-S II synthetic injection oil  
(or equivalent)  
See operator's guide

### **ATTENTION**

Utilisez de l'huile synthétique XP-S II  
(ou équivalent)  
Voir guide du conducteur

516 001 794

A32A1EA

### Instruction 8

DO NOT SIT HERE / NE PAS S'ASSEOIR ICI



A33H02A

### Instruction 9

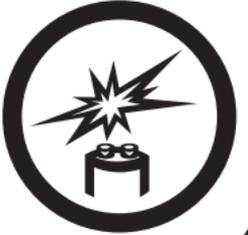


**WARNING**

**Make sure the optional  
seat is properly locked  
in place before using  
snowmobile.**

A33H11A

## Instruction 10

<p><b>⚠ AVERTISSEMENT</b></p> <p><b>Le condensateur peut produire une étincelle si court-circuité.</b></p> <ul style="list-style-type: none"><li>- Une étincelle peut enflammer les vapeurs d'essence.</li><li>- Garder tout objet éloigné des bornes.</li><li>- Si démonté du véhicule, toujours décharger adéquatement.</li></ul>	<p><b>⚠ WARNING</b></p> <p><b>Capacitor May Spark If Shorted.</b></p> <ul style="list-style-type: none"><li>- Spark can ignite fuel vapors.</li><li>- Keep objects away from poles.</li><li>- When removing from vehicle, always discharge properly.</li></ul>	<p><b>CAPACITOR CONDENSATEUR</b></p>  <p>516 002 601</p>
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A33A20A

## Instruction 11

<h3>EMISSION CONTROL INFORMATION</h3>		
THIS ENGINE IS CERTIFIED TO OPERATE ON UNLEADED GASOLINE AND CONFORMS TO XXXX U.S. EPA REGULATIONS FOR SNOWMOBILE SI ENGINES.		<b>BOMBARDIER</b> RECREATIONAL PRODUCTS
ENGINE FAMILY: .....	XXXXXXXXXXXX	
FEL: .....	XXg/kW-hr HC+NO <sub>x</sub> XXXg/kW-hr CO	
ENGINE DISPLACEMENT:.....	XXXX cc	
EXHAUST EMISSION CONTROL SYSTEM: .....	XXX	
<b>TUNE-UP SPECIFICATIONS</b>		
IDLE SPEED: .....	XXXX RPM ± XXX	
SPARK PLUG TYPE: .....	XXXXXXXXXXXX	
SPARK PLUG GAP: .....	XXXX in/XXXX mm	

A00A82A

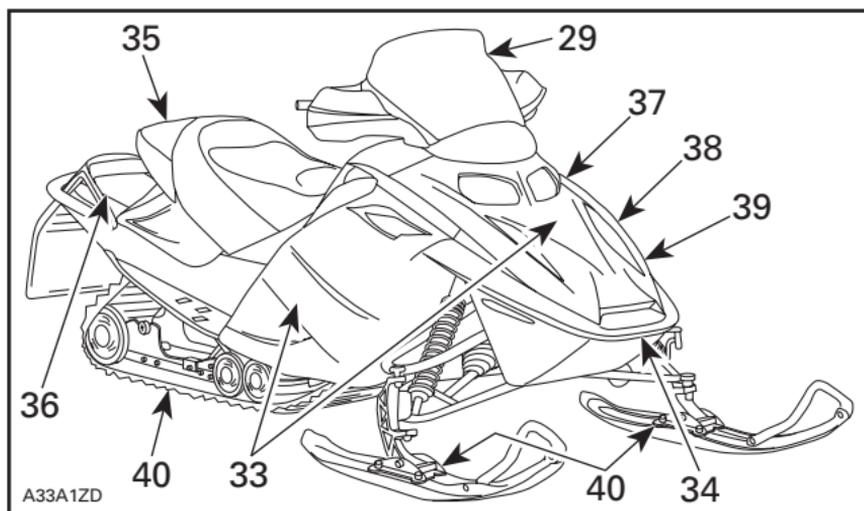
## Instruction 12

<p><b>CAUTION</b></p> <p><b>Maximum total weight including jerry can and cargo: 15.8 kg (35 lb).</b></p>	<p><b>ATTENTION</b></p> <p><b>Poids total avec le bidon d'essence et les bagages: 15.8 kg (35 lb).</b></p> <p>516 001 994 A</p>
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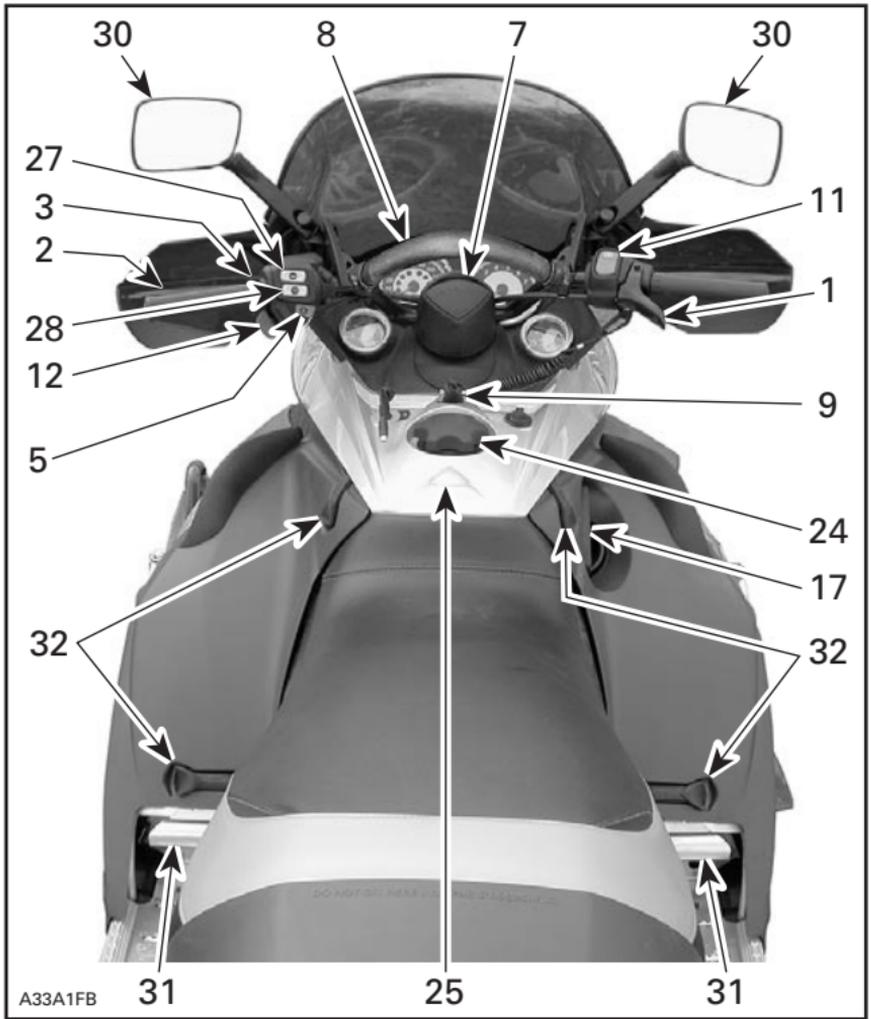
A33A2AA

## CONTROLS/INSTRUMENTS/EQUIPMENT

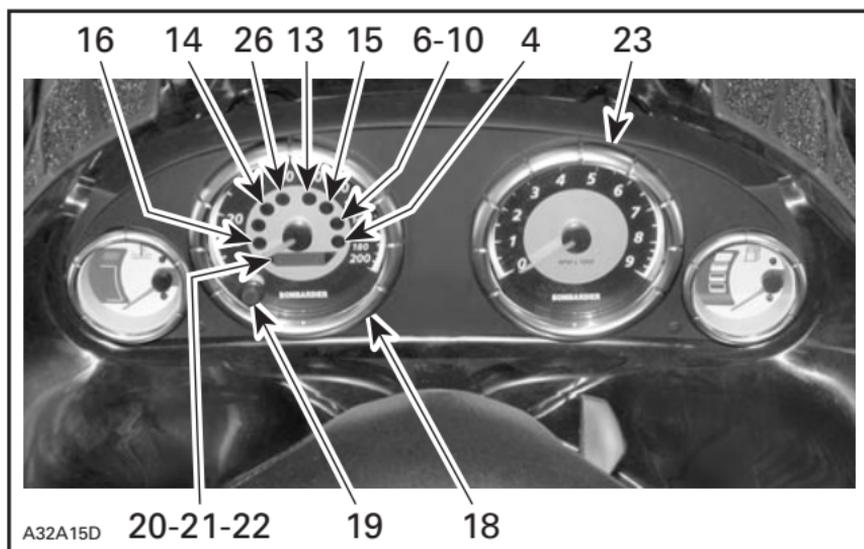
NOTE: Some controls/instruments/equipment are optional on the MX-Z Renegade.



TYPICAL



TYPICAL



TYPICAL

## 1) Throttle Lever

Located on the right hand side of handlebar and designed to be thumb activated. When squeezed, it increases the engine speed and engages the transmission. When released, engine speed returns automatically to idle.

### **WARNING**

Test the throttle lever operation each time before starting the engine. The lever must return to its original position once released. Otherwise, do not start engine.

## 2) Brake Lever

Located on the left hand side of handlebar. When squeezed, 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 Lever

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

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

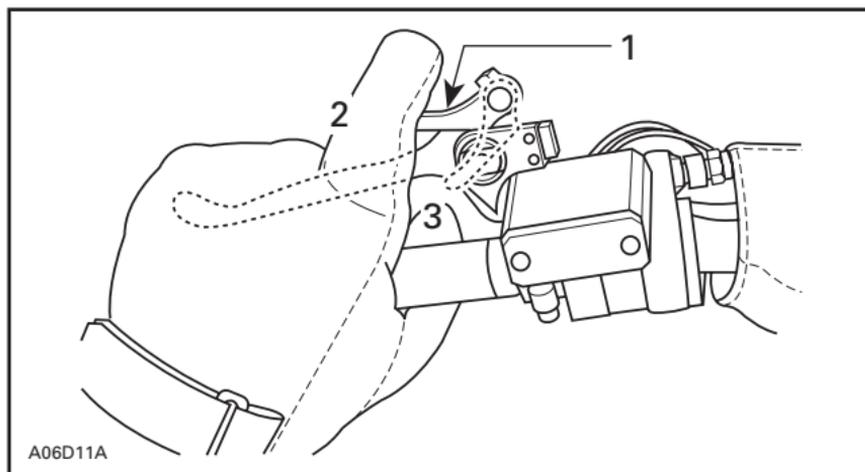
## **WARNING**

Make sure parking brake is fully disengaged before operating the snowmobile.

When you ride the vehicle, brake pads that are caused to drag by a continuous pressure on the lever may cause damage to the brake system and cause loss of braking capacity and/or fire.

**To engage** mechanism, squeeze brake lever and maintain while pulling locking lever with a finger. When brake lever is held at half-way the parking brake should be fully applied.

**To release** mechanism, squeeze brake lever. Locking lever will automatically return to its original position. Always release parking brake before riding.



### **TYPICAL**

1. Locking lever
2. OFF
3. ON

## **4) Brake/Parking Brake (Red) Pilot Lamp**

Lights when brake or parking brake is applied (with engine running).

This pilot lamp also lights up when injection oil level is low (with engine running). Check oil level and replenish as soon as possible.

## 5) RER Button

### General

When the engine **is running**, depressing the RER button will command the engine to reverse crankshaft rotation as driving the snowmobile in reverse is achieved by changing the direction of rotation of the engine, not by shifting the chaincase in reverse gear.

When depressing the RER button, the MPEM (Multi-Purpose Electronic Module) will practically slow down the engine RPM to a stop and advance the ignition timing to cause crankshaft rotation reversing.

Engine will automatically shift into forward when starting after stopping or stalling.

Shifting procedure will take place only when the engine is running.

If engine is running at a speed above 3800 RPM, the reverse function of the RER button is cancelled.

It is recommended to warm up the engine to its normal operating temperature before shifting.

### Shifting in Reverse

#### **WARNING**

The shifting to reverse mode on these snowmobiles is done by the push of the RER button when the engine is running. Wait until the reverse alarm sounds and the DESS/RER pilot lamp comes on in the dash before operating throttle to proceed in reverse. The reverse speed of these snowmobiles is not limited. Always proceed with caution as fast reverse could result in loss of vehicle stability. Come to complete stop before depressing RER button. Always remain seated and apply the brake before shifting. Ensure the path behind is clear of obstacles or bystanders before proceeding.

With the snowmobile completely stopped and engine running at idle, press and release the RER button.

The DESS™/RER™ pilot lamp will blink and a warning buzzer will sound once every second with a half a second duration when the snowmobile is engaged in reverse.

Apply throttle slowly and evenly. Allow drive pulley to engage then accelerate carefully.

### Shifting in Forward

With the snowmobile completely stopped and engine running at idle, press and release the RER button.

DESS/RER pilot lamp and warning buzzer will stop.

Apply throttle slowly and evenly. Allow drive pulley to engage then accelerate carefully.

## **RER Modification at High Altitude**

### **General**

At high altitude, the RER system needs a different engine timing curve to work properly.

### **Operation**

The MX-Z Renegade 600 HO SDI is equipped with a Engine Management System (EMS). This system takes care of the altitude mode required by the RER.

No RER button operation is needed to select a mode. Just follow SHIFTING IN REVERSE above.

## **6) Reverse Pilot Lamp**

This pilot lamp will light up when reverse is selected.

## **7) Handlebar**

The handlebar controls the steering of the snowmobile. As the handlebar is rotated to right or left, the skis are turned right or left to steer the snowmobile.

### **WARNING**

Fast reverse while turning, could result in loss of stability and control.

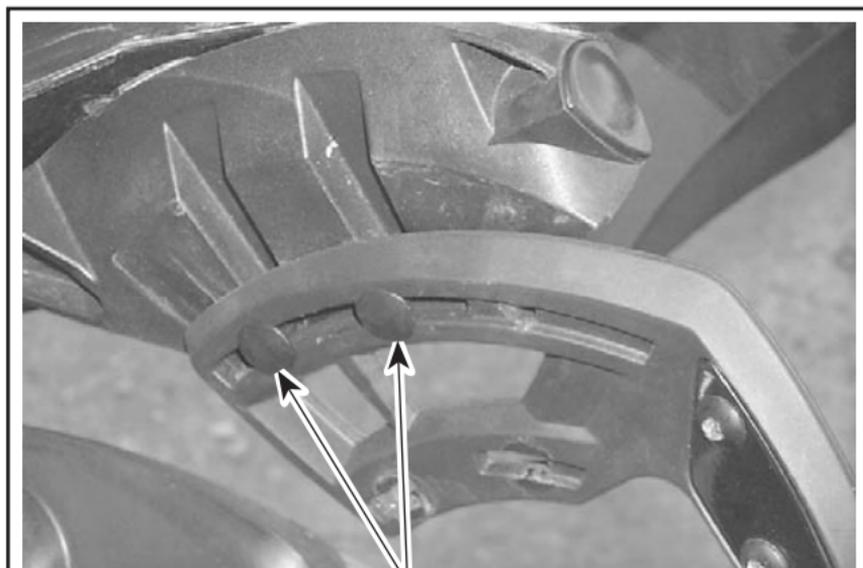
## **Steering Column Position Adjustment**

Steering column position is adjustable. Proceed as follows.

There are 2 positions.

**NOTE:** Following procedure describes how to change steering column position from rearward to forward position.

Unscrew 4 bolts retaining windshield assembly to handlebar. Remove windshield assembly.



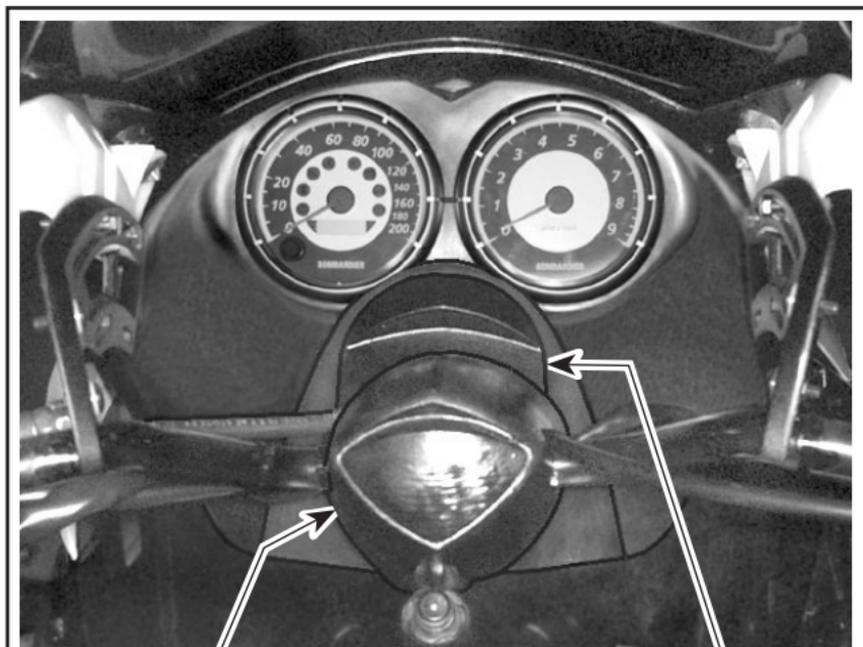
A33H12A

1

**ONE SIDE SHOWN — REARWARD POSITION**

1. Bolts retaining windshield assembly

Remove steering cover and console cap.



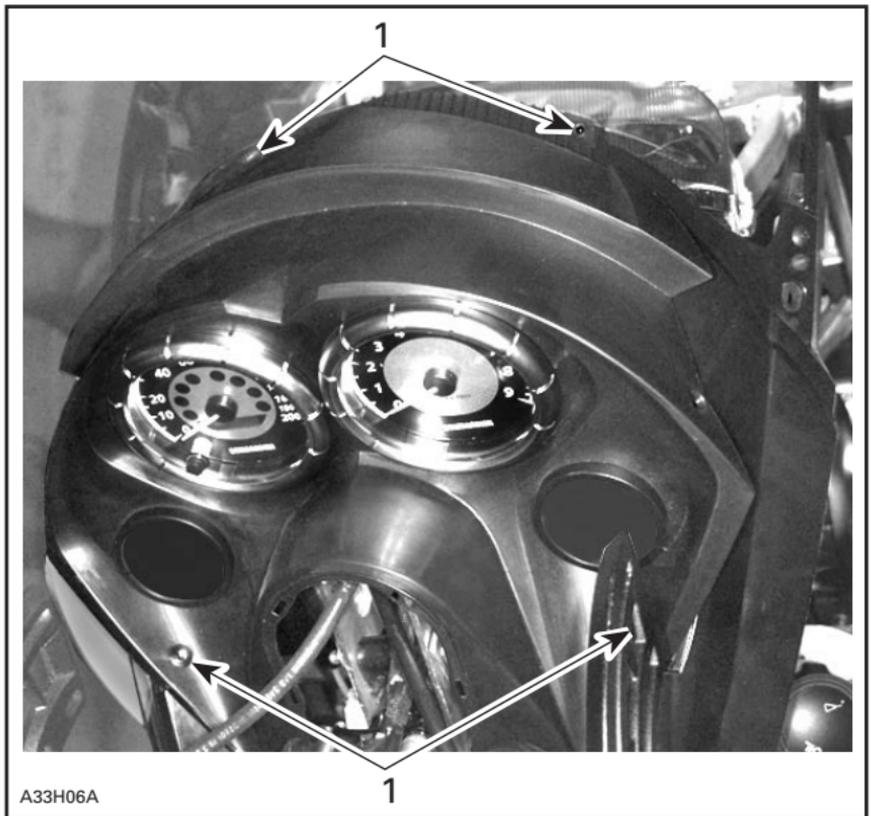
A33H05B

1

2

1. Steering cover  
2. Console cap

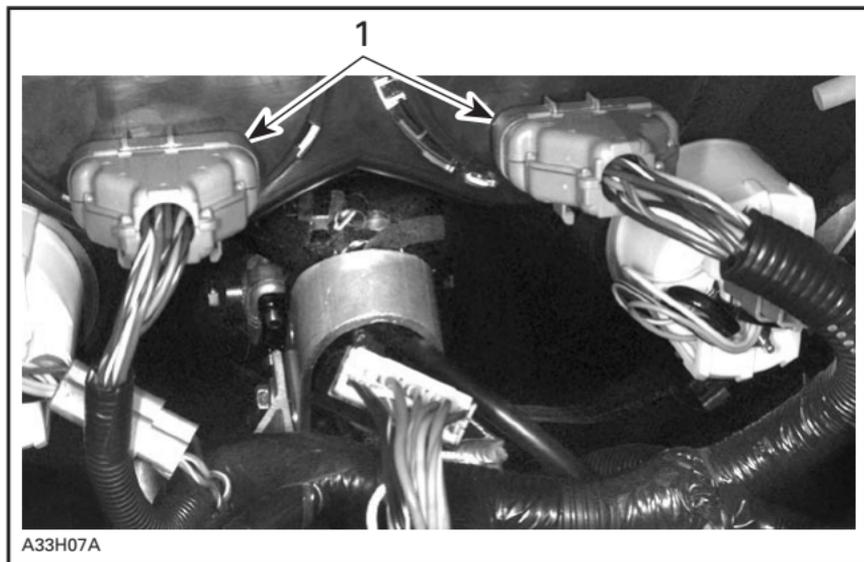
Unscrew 4 bolts retaining console.



A33H06A

1. Bolts retaining console

Slightly lift console to gain access to electrical connector housings. Unplug the 2 large connector housings and the separate 3 wire connector.

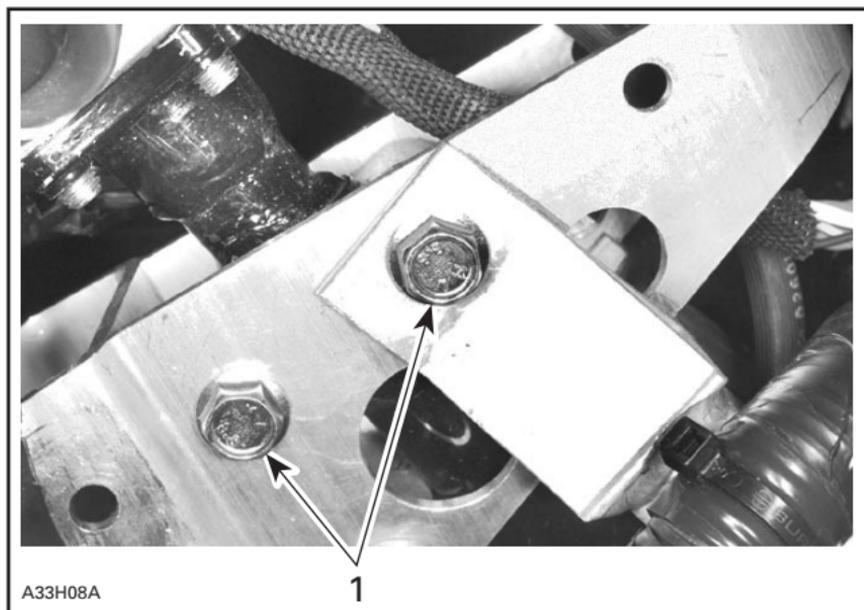


*TYPICAL*

1. Large connector housings

Remove console.

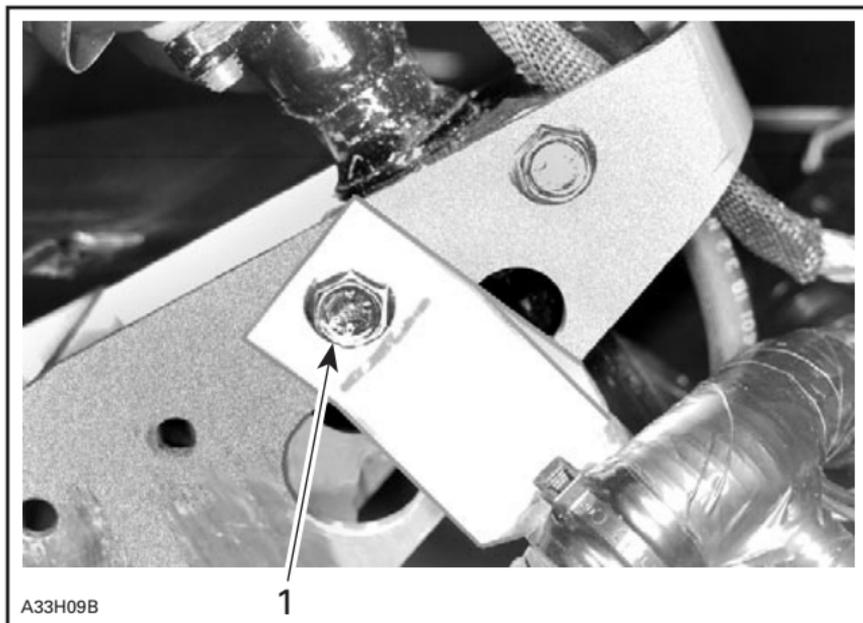
Remove 2 bolts retaining top of steering column.



*STEERING COLUMN IN REARWARD POSITION*

1. Two bolts retaining top of steering column

Move steering column to forward position.



**STEERING COLUMN IN FORWARD POSITION**

1. Longer bolt

Reinstall the 2 bolts. Always install the longer bolt on thicker portion to be bolted. Use new lock nuts. Torque nuts to 24 N•m (18 lbf•ft).

Reconnect the electrical connectors and reinstall all removed parts.

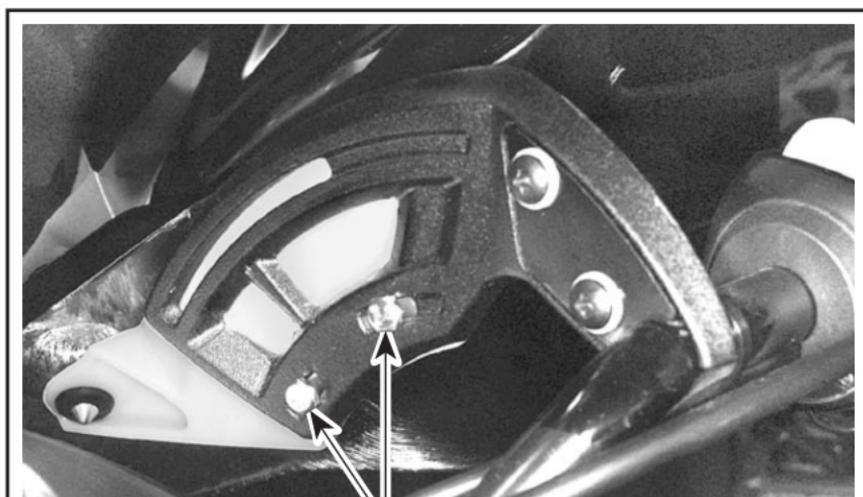
Position of console cap will be inverted. Instead of being above it will be beneath steering column.



A33H0AA

**CONSOLE CAP INSTALLED BENEATH STEERING COLUMN**

Reinstall windshield assembly to handlebar. Refer to WINDSHIELD ADJUSTMENT below.



A33H04A

1

**ONE SIDE SHOWN — FORWARD POSITION**

1. Bolts retaining windshield assembly

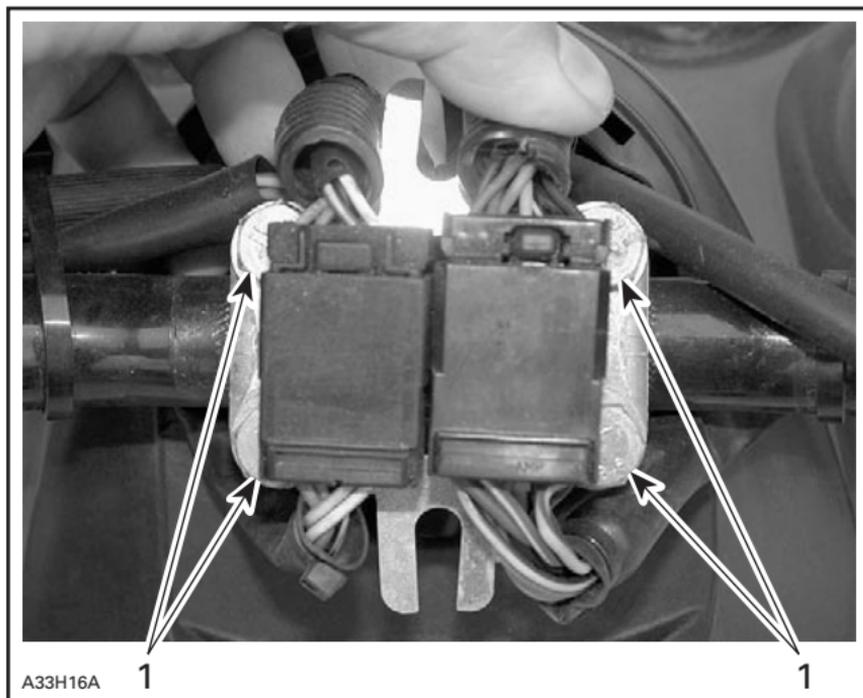
Readjust throttle lever housing and brake lever housing accordingly to optimal angle so that you will not need to release your grip to operate levers.

## **WARNING**

Adjust with vehicle at rest in a safe place. Securely retighten all fasteners. Never rotate throttle lever to operate with fingers instead of thumb.

### **Handlebar Position Adjustment**

The handlebar position can be adjusted to suit driver's preferences. Loosen all 4 bolts retaining handlebar to steering column.



1. Four bolts

Move handlebar to the desired position. Torque all 4 bolts to 24 N•m (18 lbf•ft).

Readjust windshield for proper fit with console. Refer to WINDSHIELD ADJUSTMENT below.

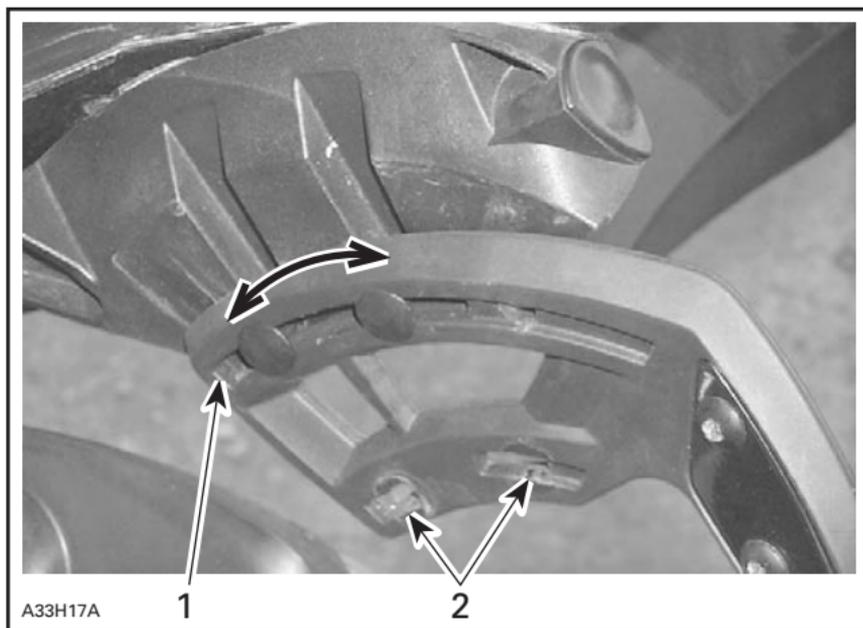
## Windshield Adjustment

The windshield can be adjusted to properly fit with console.

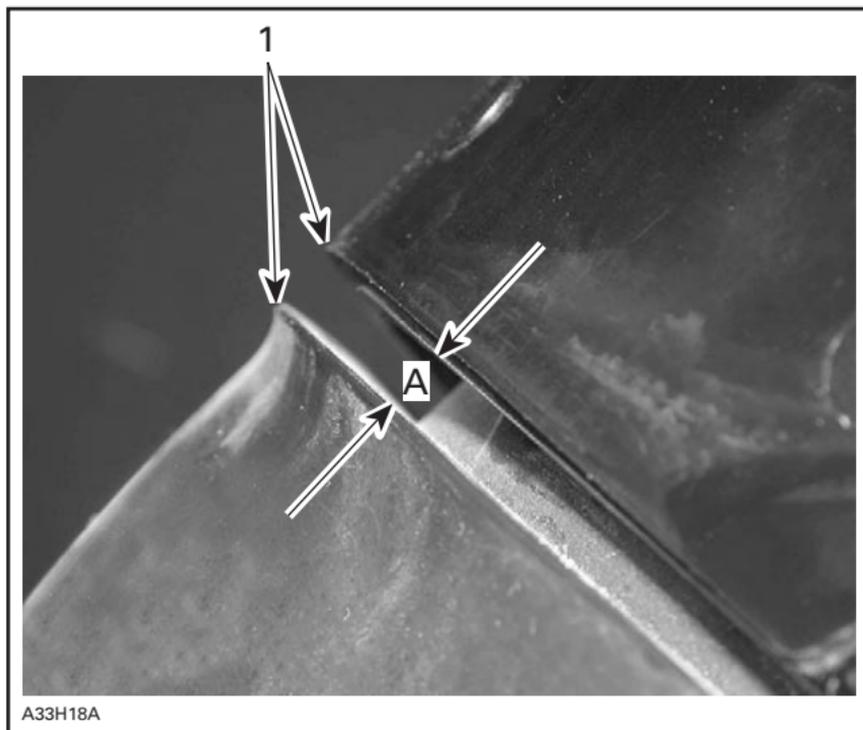
Before adjusting windshield, make sure it is installed on the proper bracket slots according to steering column position. See above photos.

Slots in brackets allow different windshield positions. Move windshield to fit with console. Retighten 4 nuts to 5 N•m (44 lbf•in).

Check that windshield does not touch console after adjustment.



1. Slot when windshield is installed for rearward steering column position
2. Slots when windshield is installed for forward steering column position



#### PROPER FIT OF WINDSHIELD VERSUS CONSOLE

1. In line

A. 8 to 12 mm (3/8 to 1/2 in)

## 8) Holding Strap

Holding strap provides a grip for driver when side-hilling.

### **WARNING**

This strap is not for towing, lifting or other purpose than temporary use as a grab bar during side-hilling. Always keep at least one hand on handlebar.

## 9) Tether Cut-Out Switch

### General

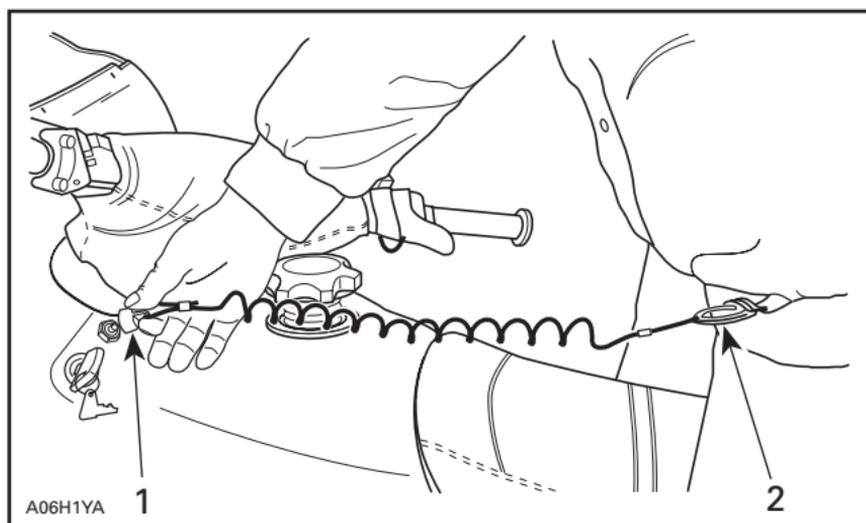
It shuts off engine preventing snowmobile to runaway if the operator falls off the vehicle accidentally.

### **WARNING**

Always remove tether cord cap and key when vehicle is not in operation in order to prevent accidental engine starting or to avoid unauthorized use by children or others or theft.

## Operation

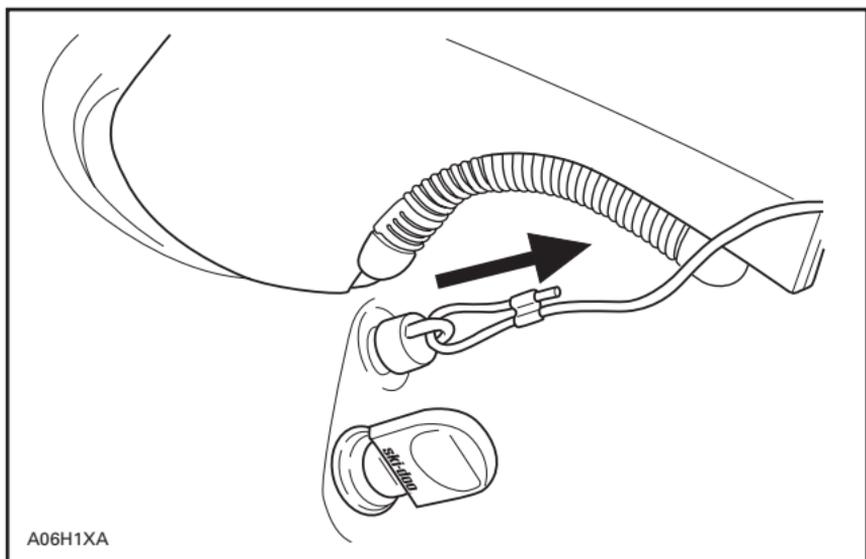
Attach to clothing eyelet then snap tether cord cap over post before starting engine.



### TYPICAL

1. Snap over post
2. Attach to eyelet

If emergency engine **shut off** is required, completely pull tether cord cap from post.



### TYPICAL

Tether cut-out switch is part of tether cut-out system. This system serves 3 functions.

It shuts off engine preventing snowmobile to runaway if the operator falls off the vehicle accidentally.

Through the DESS™ (Digitally Encoded Security System), it acts as a lock by preventing unauthorized use of your snowmobile thus deterring theft.

Finally, it prevents unintentional electric starter operation on vehicles so equipped by disabling the electric starter and ignition circuits in the MPEM or ECU.

## **WARNING**

**Always remove tether cord cap and key when vehicle is not in operation in order to prevent accidental engine starting or to avoid unauthorized use by children or others or theft.**

### **DESS (Digitally Encoded Security System) Description**

This system is digitally encoded to provide you and your snowmobile with the equivalent security as a conventional lock key.

The tether cord cap provided with your snowmobile contains an electronic chip in which a unique digital code is permanently memorized. Your authorized SKI-DOO dealer programs this key code in the ECU (Electronic Control Unit) of your snowmobile to allow engine operation above 3000 RPM if and only if this unique code has been read after engine starting.

If a tether cord cap with different code is installed, the engine will start but cannot reach drive pulley engagement speed to move vehicle.

### **Operation**

See above for details.

### **Additional Tether Cord Caps**

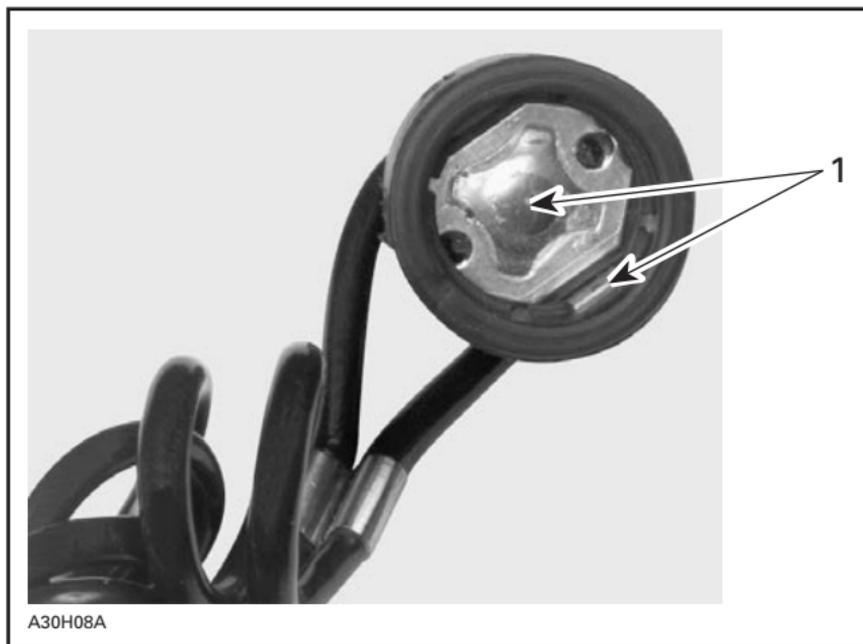
The ECU of your snowmobile can be programmed by your authorized SKI-DOO dealer to accept 8 different key codes (tether cord caps).

We recommend the purchase of additional caps from your authorized SKI-DOO dealer as additional keys. If you have more than one DESS-equipped SKI-DOO snowmobile, each can be programmed by your authorized SKI-DOO dealer to accept the other vehicles' keys.

## DESS Pilot Lamp Codes

DESS pilot lamp blinking slowly (one time per 1.5 seconds) means that a bad connection has been detected. Vehicle can not be driven.

To check for bad connection, remove tether cord cap. Make sure the tether cord cap is free of dirt or snow. Reinstall cap and restart engine. If a blink per 1.5 seconds still occurs contact an authorized dealer.



1. Free of dirt or snow

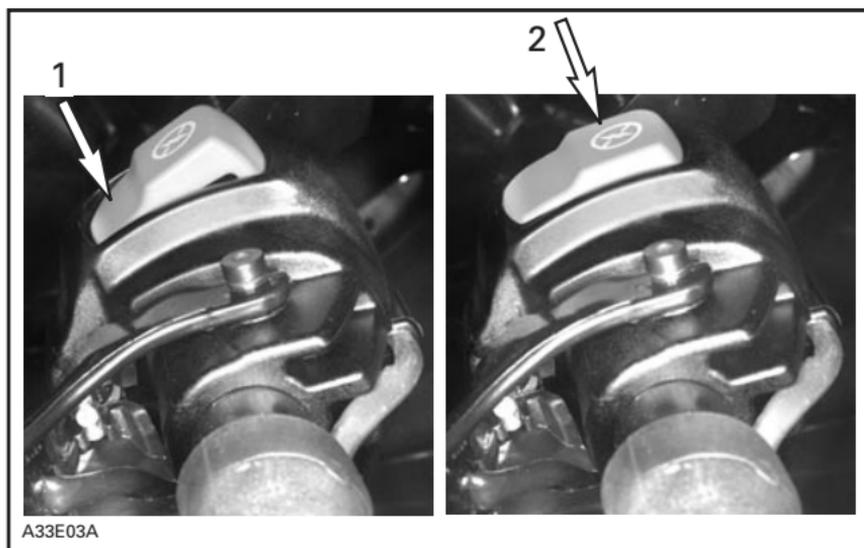
A DESS pilot lamp blinking 3 times per second means that you have installed a cap with a code that MPEM of this snowmobile was not programmed to recognize (wrong key). Vehicle can not be driven.

## 10) DESS Pilot Lamp

This lamp will light up to confirm DESS status. Refer to previous paragraphs for description.

## 11) Engine Cut-Out Switch

This toggle type switch is located on the right hand side of the handlebar. To stop the engine in an emergency, select OFF position and simultaneously apply the brake. To restart, button must be at the ON position.



*TYPICAL*

1. ON
2. OFF

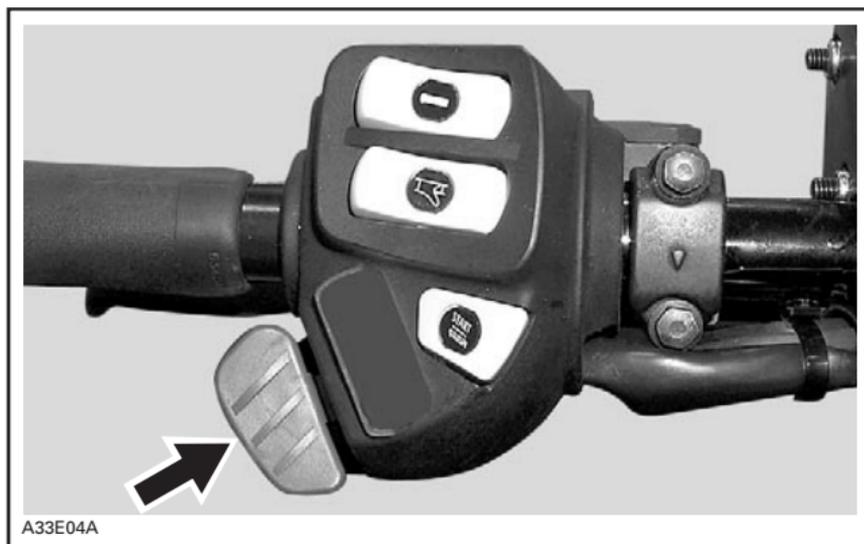
All operators of the snowmobile should familiarize themselves with the function of this device by using it several times on first outing and whenever stopping the engine there-after. This engine cut-out procedure will become a reflex and will prepare operators for emergency situations requiring its use.

**⚠ WARNING**

If the switch has been used in an emergency caused by a suspected malfunction, the source of the malfunction should be determined and corrected before restarting engine. See an authorized SKI-DOO dealer for servicing.

## 12) Headlamp Dimmer Switch

Located on left hand side of handlebar, allows selection of headlamp beam. Note that lights are automatically ON whenever the engine is running.



TYPICAL

### **13) High Beam Pilot Lamp (Blue)**

Lights when headlamp is on HIGH beam.

### **14) Oil Pilot Lamp**

This pilot lamp will glow up when injection oil level is low. Stop vehicle in a safe place then, replenish injection oil reservoir.

### **15) Low Battery Voltage Pilot Lamp**

This lamp will light up to indicate a low battery voltage condition. See an authorized SKI-DOO dealer as soon as possible.

### **16) Engine Management System (EMS) Pilot Lamp**

This lamp will light up to indicate a trouble. Refer to TROUBLESHOOTING for trouble code meaning and remedy.

### **17) 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.

## 18) Speedometer

These models are equipped with an electronic speedometer. It may show speed in km/h or MPH.

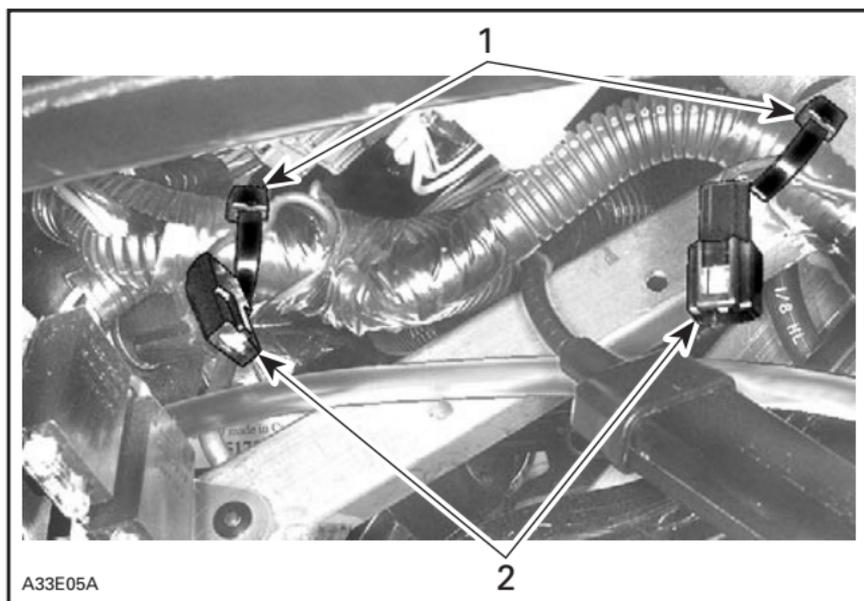
**NOTE:** At vehicle speed of 90 km/h (55 MPH) and more the mode LCD screen will show speed only instead of the selected mode.

### Change from One Unit to the Other

**NOTE:** Speedometer, odometer and trip meter will have their units (kilometer or miles) changed all together.

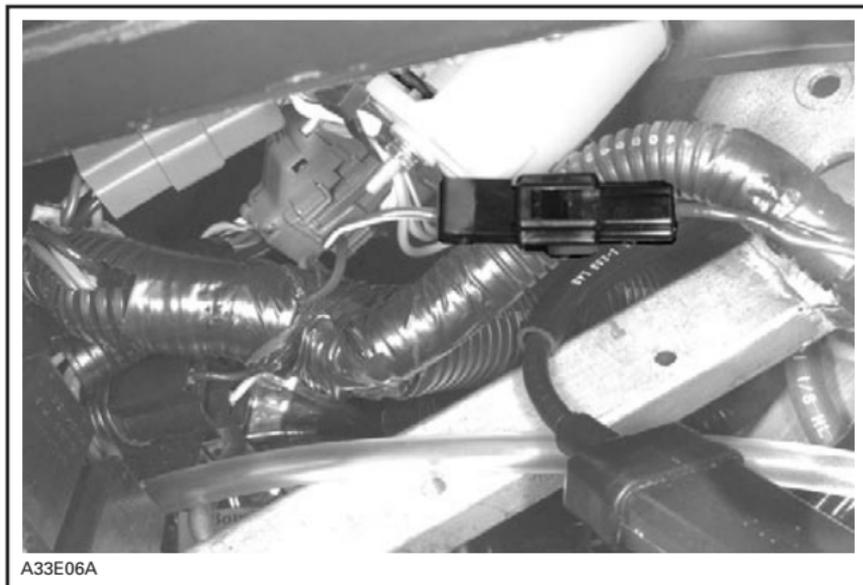
Stop engine and open engine compartment. Cut locking ties. Plug connectors together to change units from miles to kilometers.

Unplug to return to miles reading. Fasten connector to harness with locking ties.



### **REV SERIES — MILES READING — CONNECTORS UNPLUGGED**

1. Locking ties
2. Connectors



*REV SERIES — KILOMETERS READING — CONNECTORS PLUGGED*

## **19) Mode Button**

Depress mode button to change display. Each time engine is started, display shows odometer. From that point depressing mode button will change display for the trip meter.

Depressing mode button again will change display for the resettable hourmeter. Push mode button again to return to odometer.

Push and hold mode button for 2 seconds to reset the tripmeter or the resettable hourmeter depending on the one displayed.

## **20) Odometer**

Odometer records the total distance travelled and displays it either in miles or kilometers. Refer to SPEEDOMETER for changing units.

**NOTE:** At vehicle speed of 90 km/h (55 MPH) and more the mode LCD screen will show speed only instead of the selected mode.

## **21) Trip Meter**

Records distance travelled since it has been reset. Distance travelled is displayed either in miles or kilometers. Refer to SPEEDOMETER for changing units.

**NOTE:** At vehicle speed of 90 km/h (55 MPH) and more the mode LCD screen will show speed only instead of the selected mode.

## 22) Resettable Hourmeter

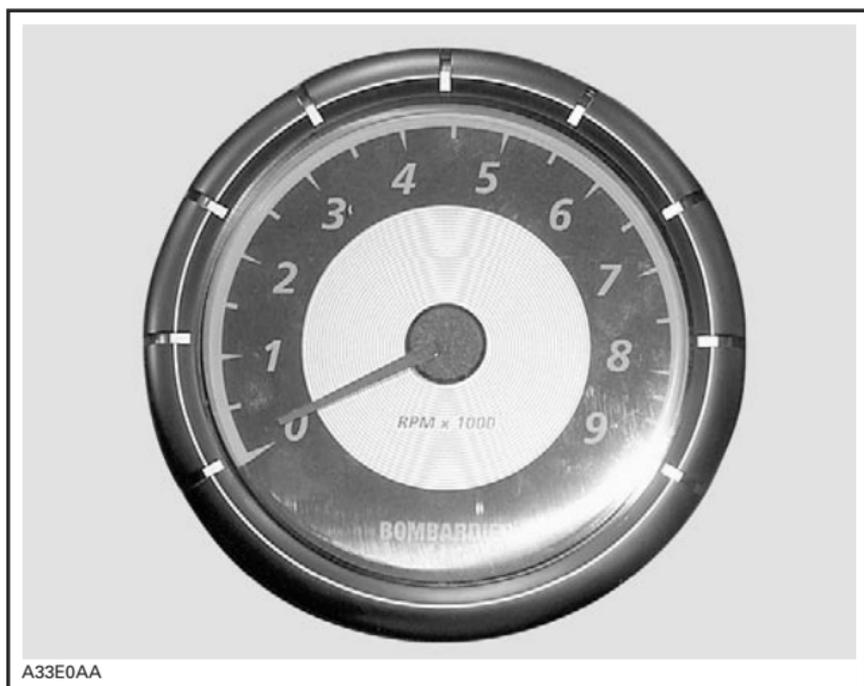
Records engine running time in hours and minutes since it has been reset.

**NOTE:** At vehicle speed of 90 km/h (55 MPH) and more the mode LCD screen will show speed only instead of the selected mode.

Push and hold mode button for 2 seconds to reset the resettable hourmeter.

## 23) Tachometer

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



**MULTIPLY THE READING BY 1000**

## 24) Fuel Tank Cap

Unscrew to fill up tank then fully tighten.

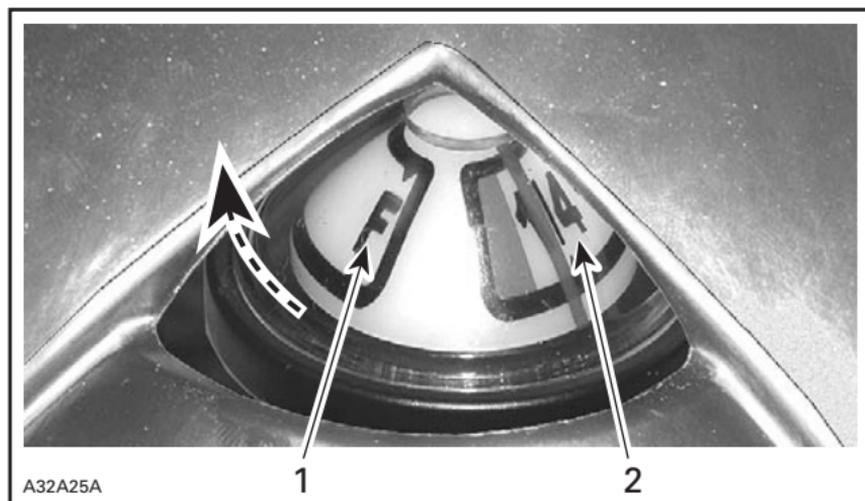
### **WARNING**

Always stop the engine before refueling. Fuel is inflammable and explosive under certain conditions. Always work in a well ventilated area. Do not smoke or allow open flames or sparks in the vicinity. Open cap slowly. If a differential pressure condition is noticed (whistling sound heard when loosening fuel tank cap) have vehicle inspected and/or repaired before further operation. Do not overfill or top off the fuel tank before placing the vehicle in a warm area. As temperature increases, fuel expands and might overflow. Always wipe off any fuel spillage from the vehicle. Periodically verify fuel system.

**NOTE:** Do not sit or lean on seat when fuel tank cap is not properly installed.

## 25) Mechanical Fuel Level Gauge

Located at rear of fuel tank cap the gauge facilitates fuel level reading.



*TYPICAL*

1. Full
2. Empty

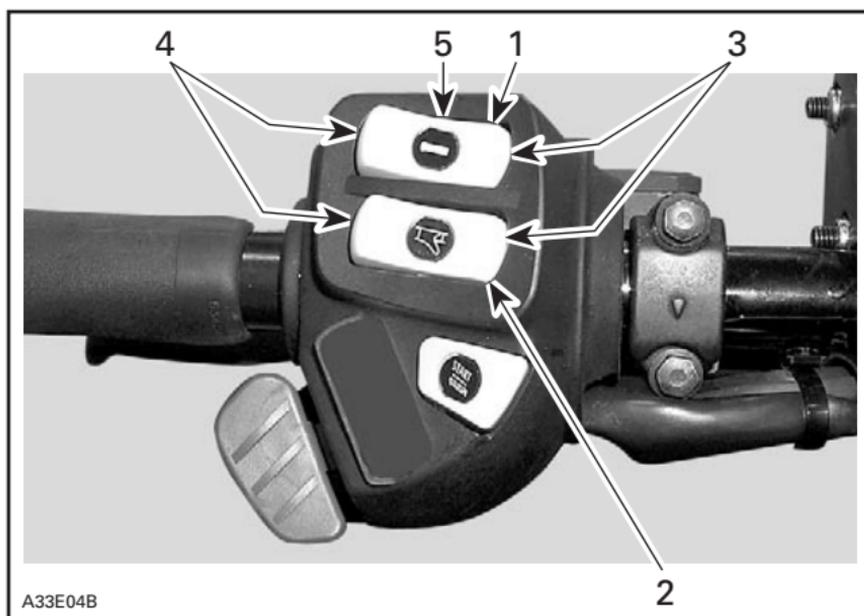
NEEDLE POSITION OF FUEL LEVEL GAUGE	APPROXIMATE REMAINING FUEL QUANTITY L (U.S. gallon)
1/4	15 (4)
1/2	21 (5.5)
3/4	30 (8)
F	36 (9.5)

## 26) Engine Overheat Warning Lamp (Red)

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

## 27) Heating Grip Switch

It is a three-position switch. Select the desired position to keep your hands at a comfortable temperature.



A33E04B

1. Heating grip switch
2. Heating throttle lever switch
3. Hot
4. Warm
5. Off

## 28) Heating Throttle Lever Switch

Three-position switch. Select the desired position to keep your right thumb at a comfortable temperature. See illustrations above.

## 29) Windshield

Windshield provides operator comfort, as well as protection by deflecting wind and snow away from the operator.

## 30) Adjustable Mirrors (optional)

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

### **WARNING**

Adjust with vehicle at rest in a safe place.

## 31) Adjustable Toeholds

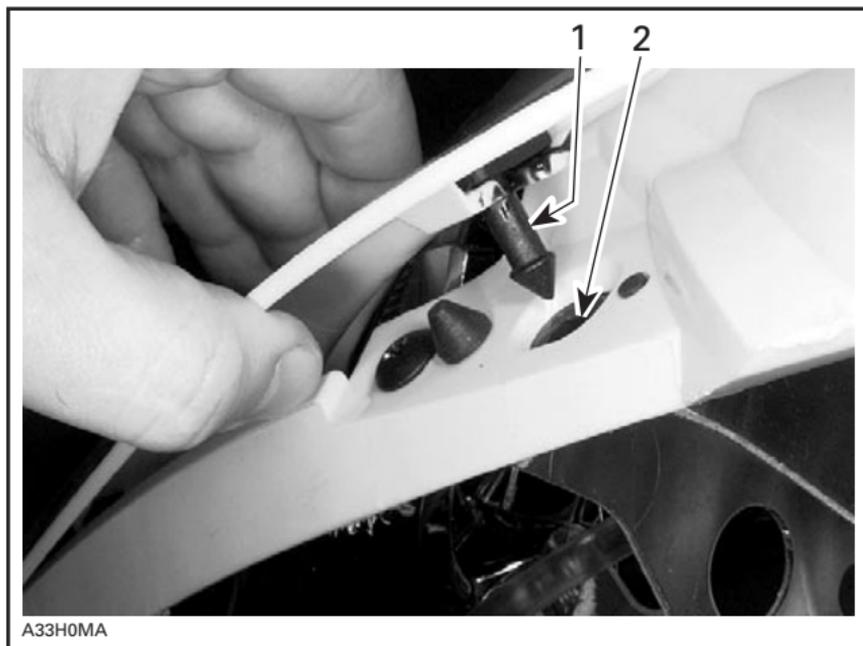
Each toehold can be adjusted to suit driver's preference. Loosen bolts, adjust then, retighten bolts to 10 N•m (89 lbf•in).

### **WARNING**

Adjust with vehicle at rest in a safe place. Do not adjust too snugly to trap booted foot. Securely tighten all adjustments.

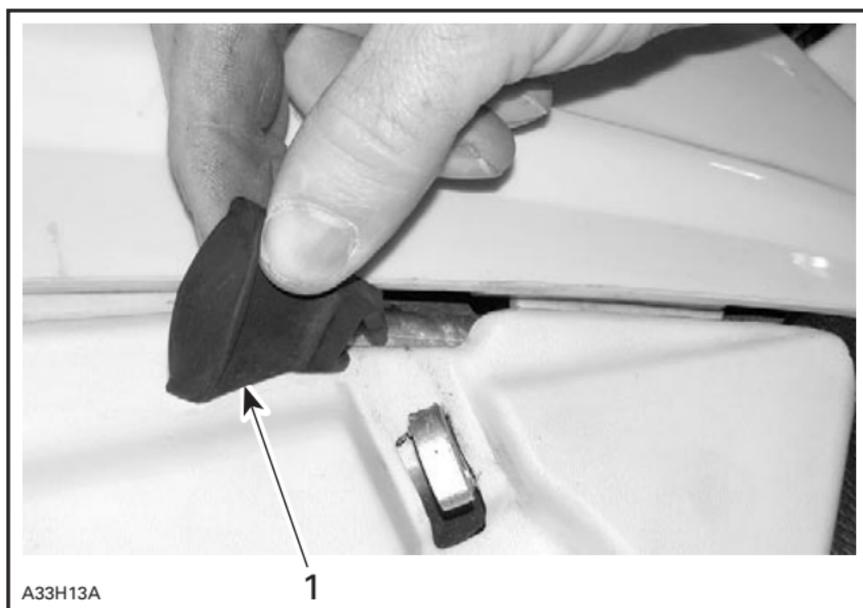
## 32) Hood and Side Panel Latches

To open hood, slightly widen (pull-out) its both sides top portion in order to unhook its anchors from their grommets.



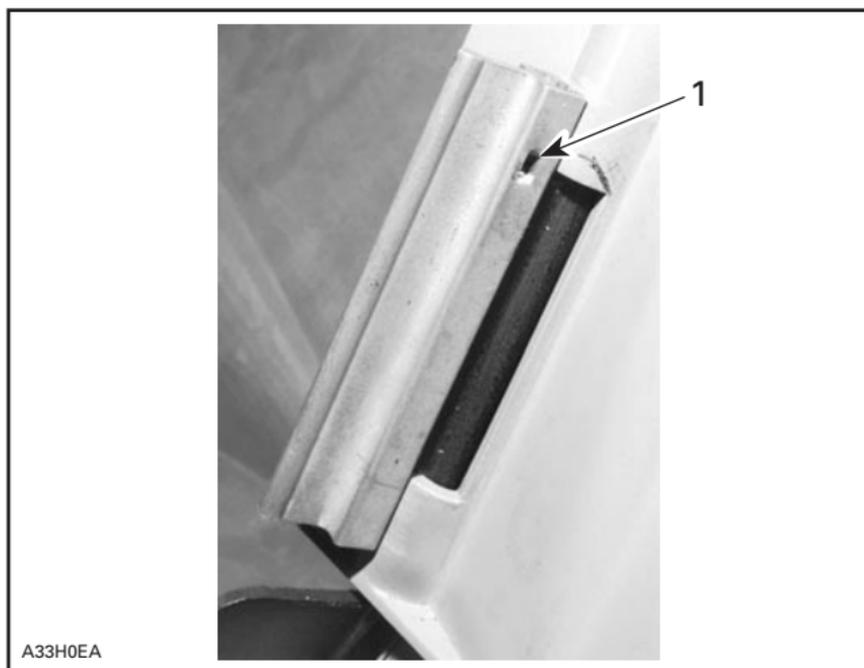
1. Anchors
2. Grommets

To open a side panel, stretch and unhook the latches.



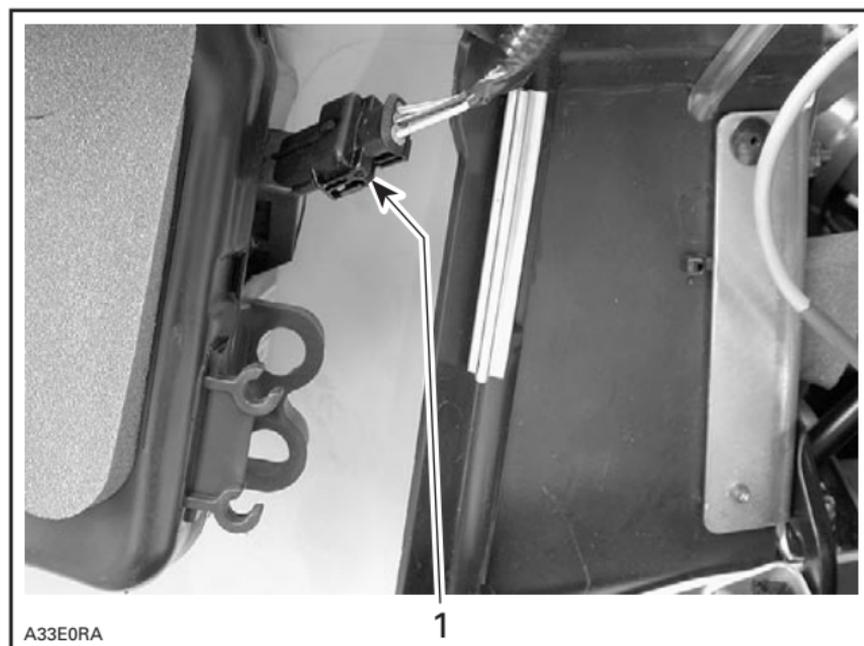
1. Latch

To remove a side panel remove by pulling up both locking devices from hinge.



1. Locking device

For left hand side panel removal, also unplug sensor from air silencer.

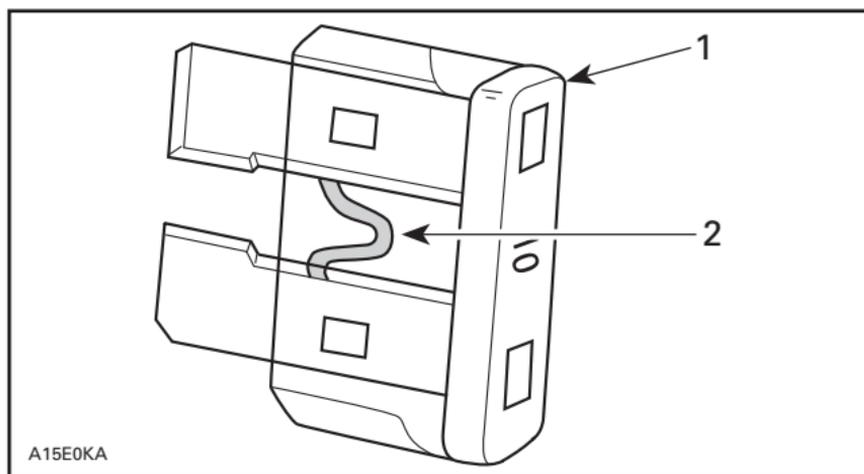


1. Sensor

Reverse opening procedure to close hood and side panels. Properly hook up latches.

### 33) Fuses

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



1. Fuse
2. Check if melted

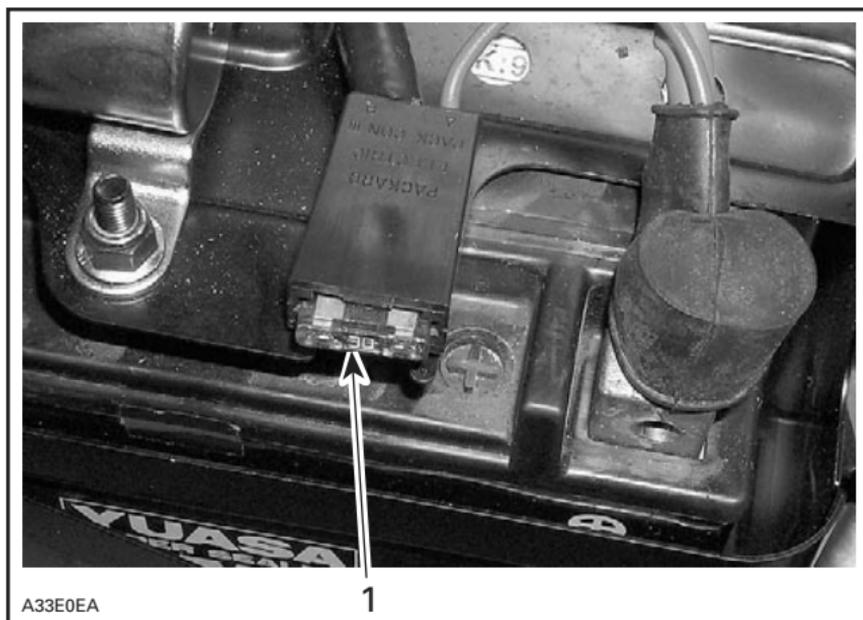
**CAUTION:** Do not use a higher rated fuse as this can cause severe damage to electric components and/or fire.

## **WARNING**

If fuse has burnt out, source of malfunction should be determined and corrected before restarting. See an authorized SKI-DOO dealer for servicing.

### Charging System Fuse

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



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**TYPICAL**

1. Charging system fuse

### **Fuse Box**

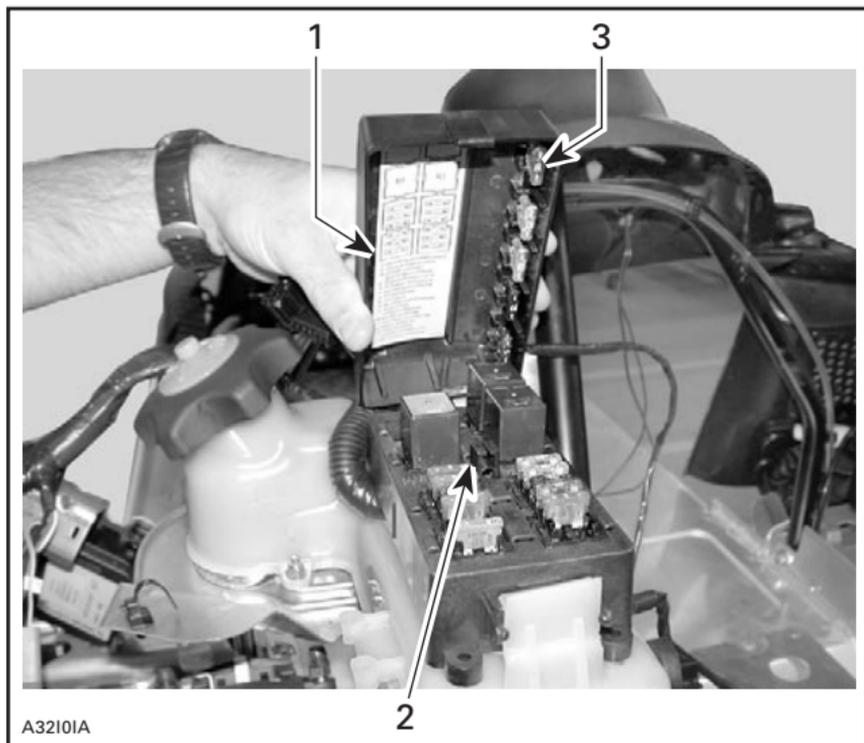
To open fuse box push on cover tab and tilt cover.



A3210KA

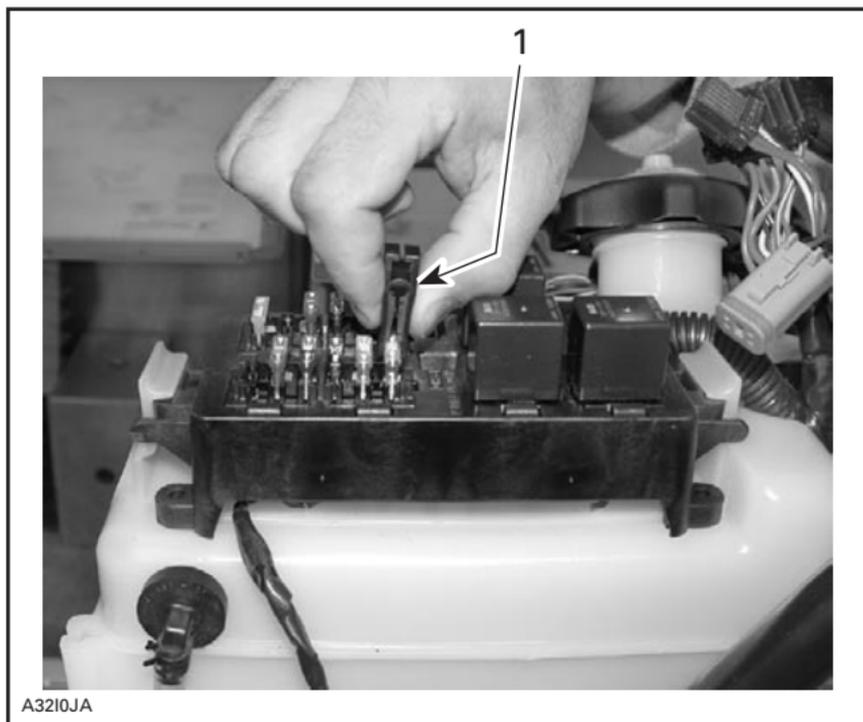
**TYPICAL**

1. Push tab



**TYPICAL**

1. Fuse description decal
2. Fuse remover/installer
3. Spare fuses



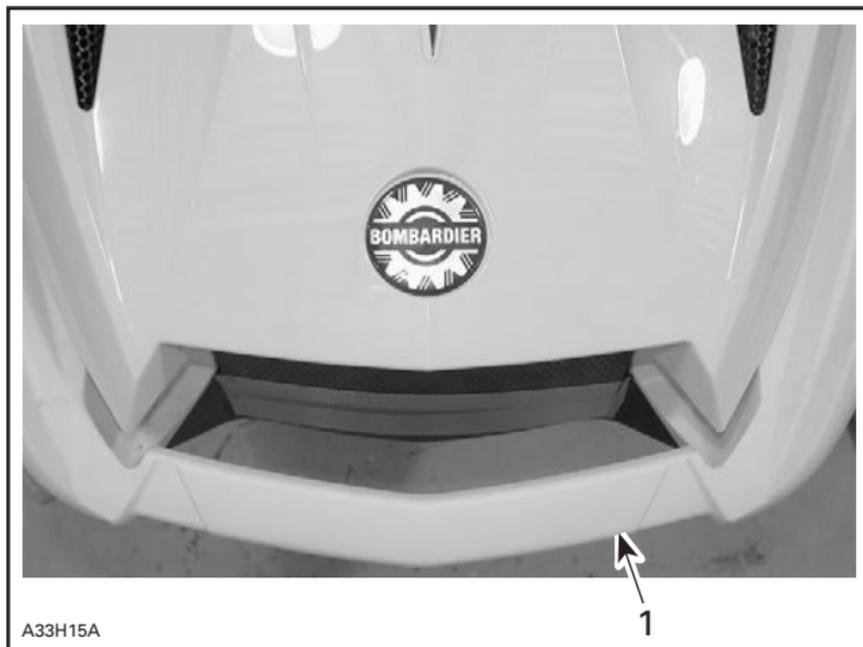
1. Fuse remover/installer

### 34) Front Grab Handle/Front Bumper

To be used whenever front of snowmobile requires manual lifting.

#### **WARNING**

Do not attempt to lift the vehicle by hand alone. Use appropriate lifting device or have assistance to share lifting stress in order to avoid risk of strain injuries.



1. Front grab handle

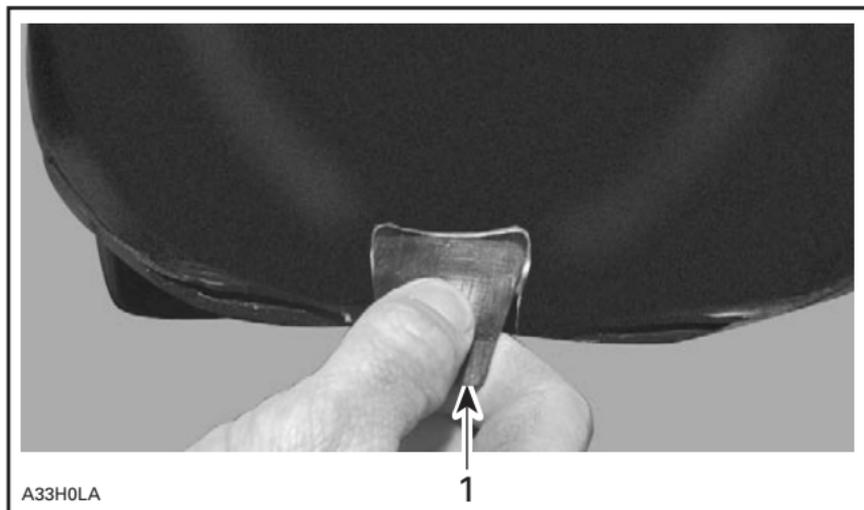
**CAUTION:** Do not use skis to pull or lift snowmobile.

## 35) Storage Compartment

### **WARNING**

All storage compartments must be properly latched and they must not contain any heavy or breakable objects.

Pull latch slightly upward then, backward to unlock cover.



1. Latch

## 36) Rear Rack

### **WARNING**

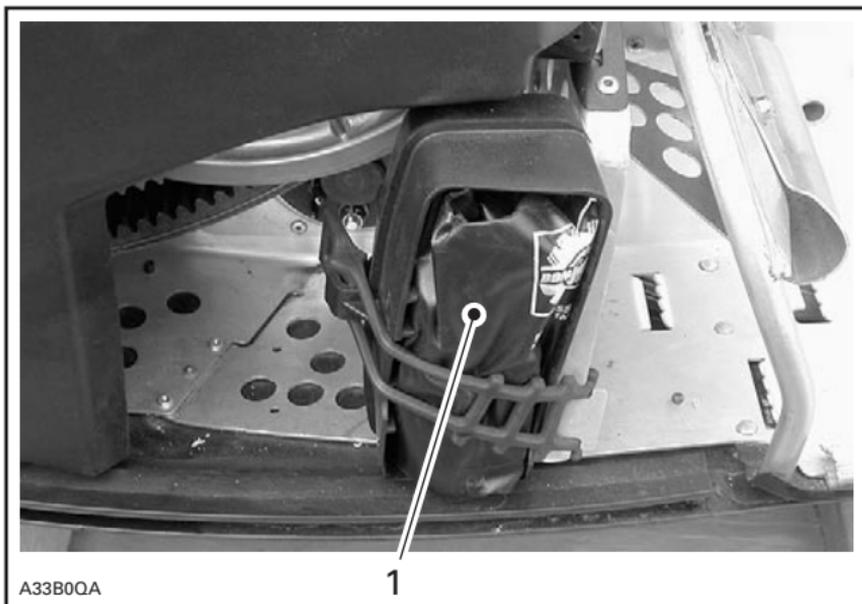
All objects in rear rack must be properly latched. Do not carry any breakable objects. Excessive weight in rack may reduce steering ability.

**CAUTION:** Always readjust suspension according to the load. The capacity of this rack is limited. Ride at very low speed when loaded. Avoid speed over bumps.

## 37) Tool Kit

A tool kit containing tools for basic maintenance is supplied with the vehicle.

Tool bag is located in engine compartment above left hand side toe-hold.



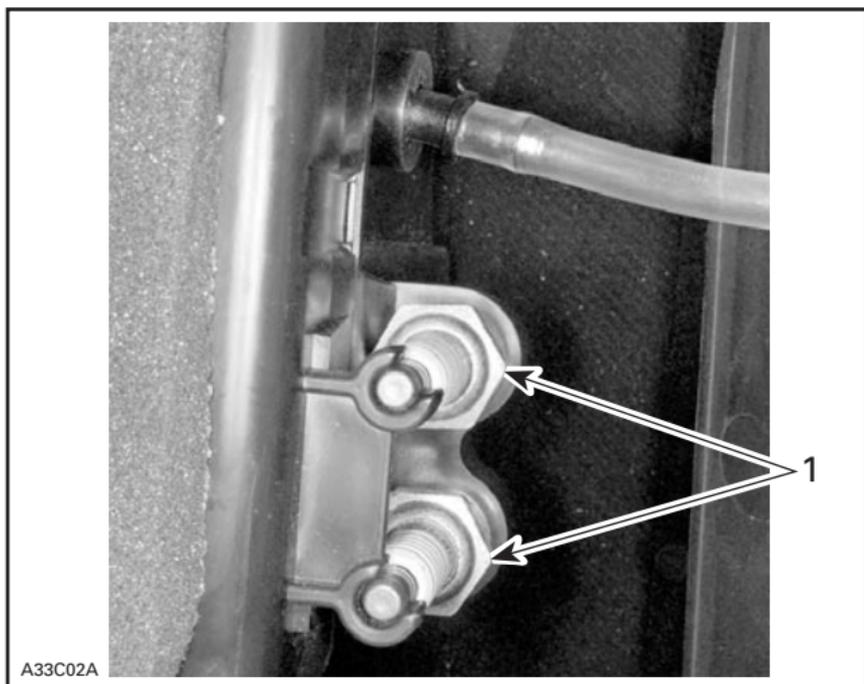
A33B0QA

1

1. Tool kit

### 38) 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.



A33C02A

1

TYPICAL — SPARK PLUG HOLDER ON LEFT HAND SIDE PANEL

1. Spare spark plugs installed in holder

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

**NOTE:** Check spare spark plug gap according to SPECIFICATIONS before installation.

**CAUTION:** Do not attempt to adjust gap on spark plug BR9ECS.

## 39) Shields and Guards

### **WARNING**

Never operate engine without belt guard securely installed or, with hood or access/side panels open or removed.

Your snowmobile is provided with a number of shields and guards. Leave these in place on your vehicle as they are designed to keep clothing and hands out of moving parts and away from hot components. Never attempt to make adjustments to any moving part while the engine is running.

## 40) Adjustable Suspensions

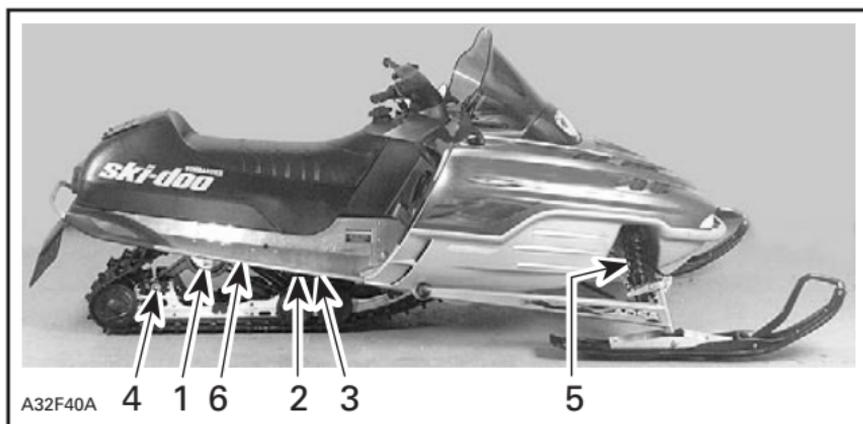
### General

Snowmobile handling and comfort depend upon suspension adjustments.

For factory recommended adjustments refer to decal on belt guard. It describes settings for optimum comfort according to load for your SKI-DOO model.

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

**NOTE:** Some adjustments may not apply to your snowmobile. Use special keys in tool kit.



#### TYPICAL

1. Rear springs for comfort and ride height
2. Center spring for steering behavior
3. Stopper strap for snowmobile weight transfer
4. Coupling blocks — Handling
5. Front springs for handling
6. Rear shock motion ratio — Damping strength

## Guidelines to Adjust Suspension

The following is to fine-tune suspension.

The best way to set up suspension, is to start from factory settings then customize each adjustment one at a time. Adjustments 2 through 6 are interrelated. It may be necessary to readjust center spring after adjusting front springs for instance. Test run the snowmobile under the same conditions; trail, speed, snow, driver riding position, etc. Change one adjustment and retest. Proceed methodically until you are satisfied.

### **WARNING**

Remove tether cord cap before performing any maintenance or adjustment, unless otherwise specified. Vehicle must be parked in a safe place, away from the trail.

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

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

**NOTE:** Some models may come from factory equipped with Take/Apart (T/A) shocks. These can be rebuilt or recalibrated. See an authorized SKI-DOO dealer.

## 1. Rear Springs — Comfort

**IMPORTANT:** Make sure that all objects to be transported are in place in storage compartment and rear rack.

Grab rear bumper and lift until suspension is fully extended. From this point, rear of snowmobile should collapse by 50 to 75 mm (2 to 3 in) when driver and passenger (if so applicable) take place. Measure at rear bumper as shown in next photo.

### **WARNING**

Do not attempt to lift the vehicle by hand alone. Use appropriate lifting device or have assistance to share lifting stress in order to avoid risk of strain injuries.



#### **TYPICAL — PROPER ADJUSTMENT**

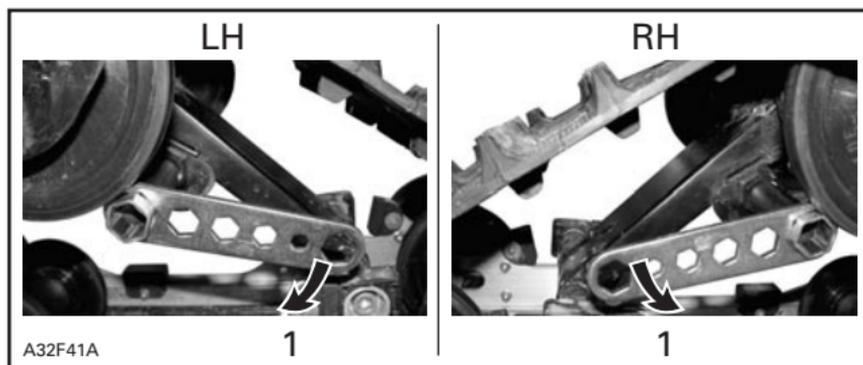
A. From fully extended, rear of suspension has collapsed by 50 to 75 mm (2 to 3 in)



**TYPICAL** — TOO SOFT OF ADJUSTMENT (REAR SUSPENSION IS TOO LOW, IT HAS COLLAPSED MORE THAN 75 mm (3 in))



**CAUTION:** To increase preload, always turn the left side adjustment cam in a clockwise direction, and the right side cam in a counterclockwise direction. Left and right adjustment cams may be at different settings.



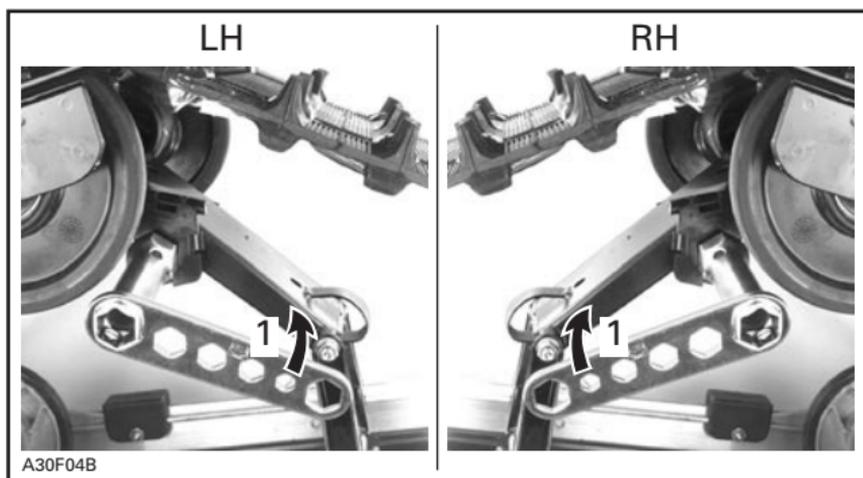
1. Increase spring preload



**TYPICAL** — **TOO HARD OF ADJUSTMENT** (REAR SUSPENSION RUNS TOO HIGH, IT HAS COLLAPSED LESS THAN 50 mm (2 in))



**CAUTION:** To decrease preload, always turn the left side adjustment cam in a counterclockwise direction, the right side cam in a clockwise direction. Left and right adjustment cams may be at different settings.



1. Decrease spring preload

## 2. Center Spring — Steering Behavior

Ride at moderate speed on a trail.

If handlebar is felt too easy or too hard to turn, adjust center spring accordingly.

### **WARNING**

Remove tether cord cap before performing any maintenance or adjustment, unless otherwise specified. Vehicle must be parked in a safe place, away from the trail.



**TYPICAL — GOOD ADJUSTMENT AT MODERATE SPEED**

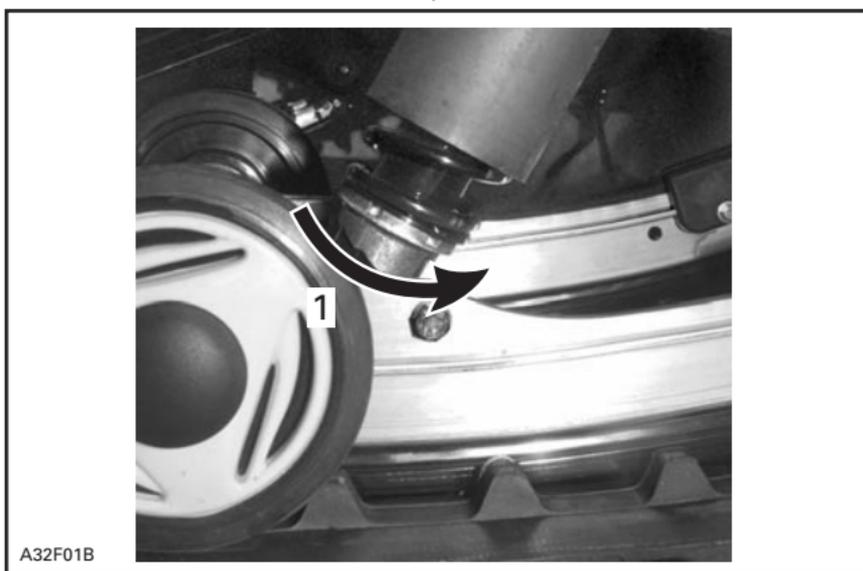
1. Handlebar easy to turn — neutral steering attitude



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**TYPICAL — TOO SOFT OF ADJUSTMENT**

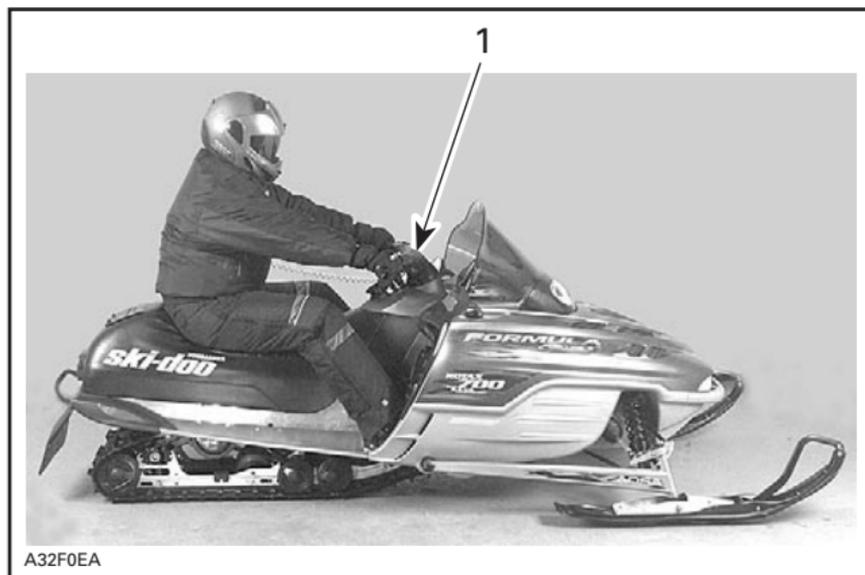
1. Handlebar harder to turn — oversteering altitude



A32F01B

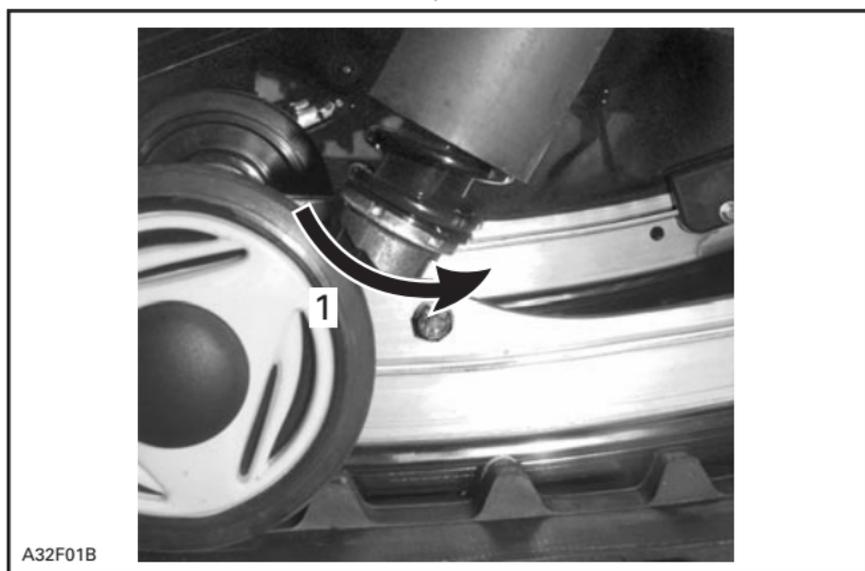
**TYPICAL**

1. Use adjuster wrench provided in tool kit to increase preload



**TYPICAL — TOO HARD OF ADJUSTMENT — TOO MUCH PRELOAD**

1. Handlebar is very easy to turn — understeering attitude



**TYPICAL**

1. Use adjuster wrench provided in tool kit to decrease preload

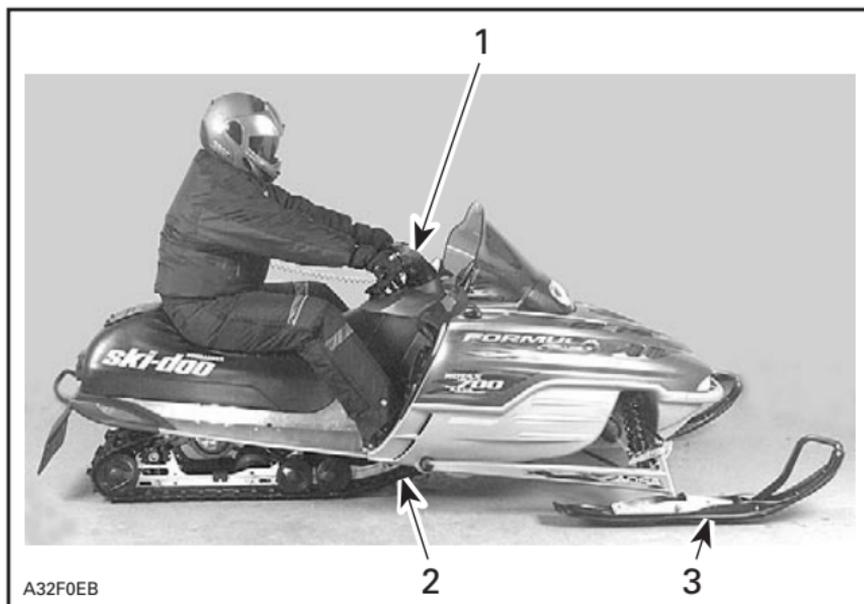
### 3. Stopper Strap — Weight Transfer

Ride at low speed then fully accelerate. Note steering behavior. Adjust stopper strap length accordingly.

## WARNING

Remove tether cord cap before performing any maintenance or adjustment, unless otherwise specified. Vehicle must be parked in a safe place, away from the trail.

**CAUTION:** Whenever stopper strap length is changed, track tension must be readjusted.



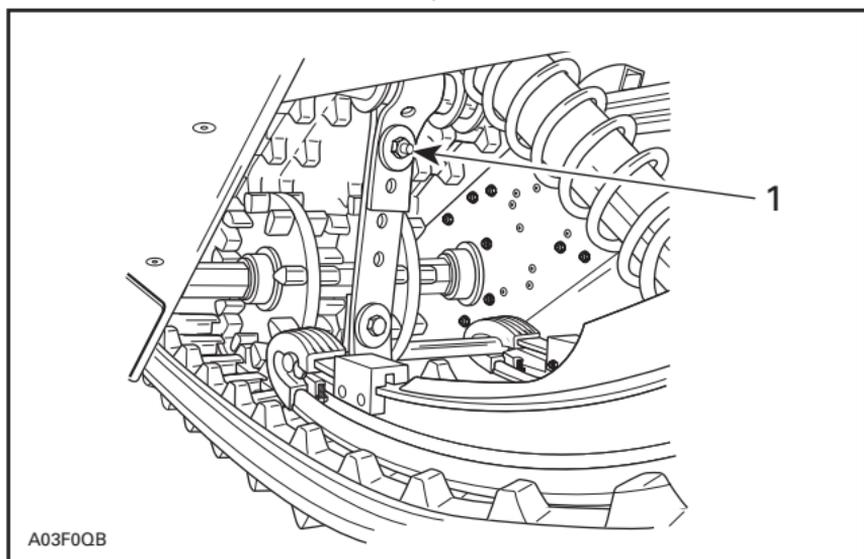
**TYPICAL — GOOD ADJUSTMENT AT FULL ACCELERATION**

1. Comfortable steering
2. Good weight transfer to the track
3. Light pressure of skis on the ground



**TYPICAL — TOO LONG STRAP**

1. Skis lift off the ground



**TYPICAL**

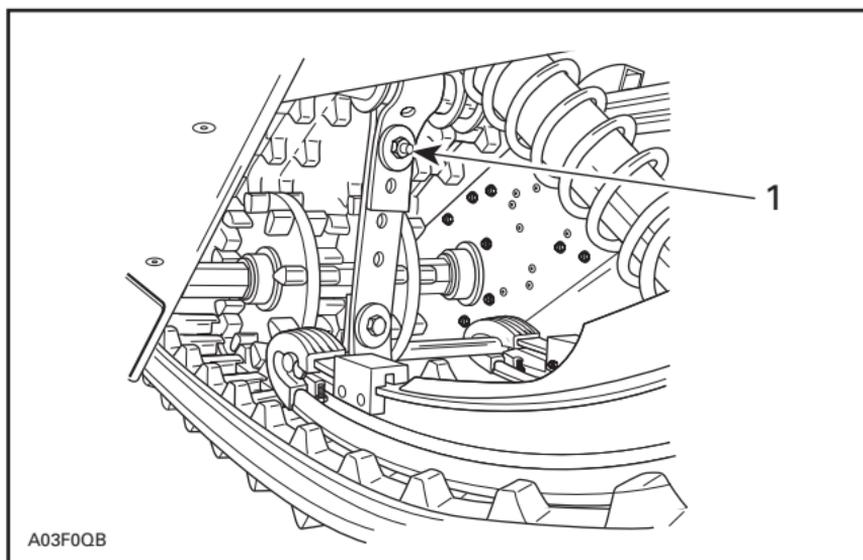
1. Reduce strap length by bolting to a different hole



A32F0EA

**TYPICAL — TOO SHORT STRAP**

1. Heavy steering



A03F0QB

**TYPICAL**

1. Increase strap length by bolting to a different hole

#### 4. Coupling Blocks — Handling

Ride at moderate speed and check for desired handling.

When driver and passenger (if applicable) are seated on vehicle, the coupling blocks should be centered between rubber stoppers. This condition is achieved when a proper rear spring preload is done. See above rear spring adjustment.

If handling requires adjustment, turn both left and right blocks by 90°.

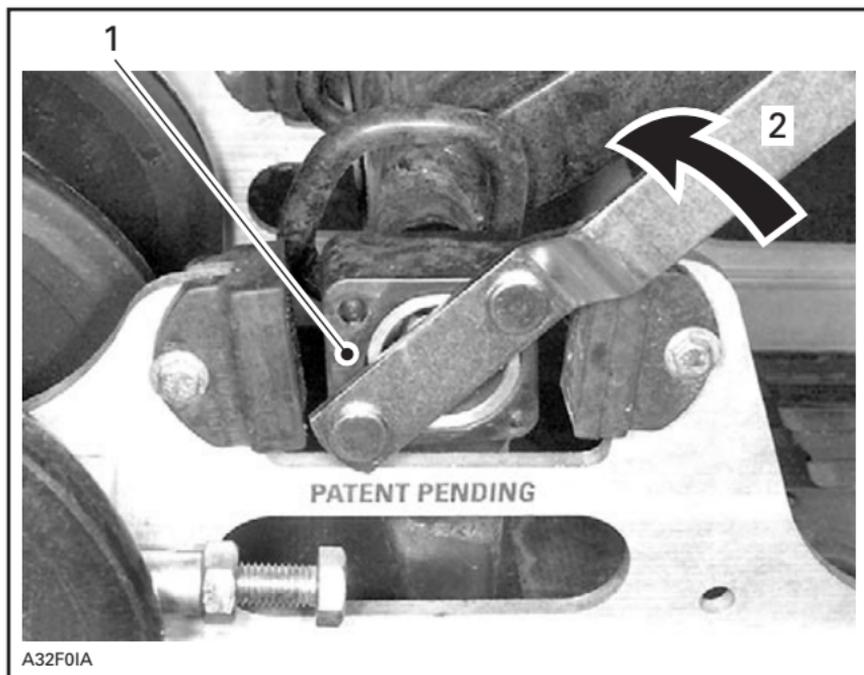
There are only two adjustment positions. Thicker part of block must be facing rearward or downward.

As a general rule, thicker part of block should be facing rearward when riding with a passenger.

### **WARNING**

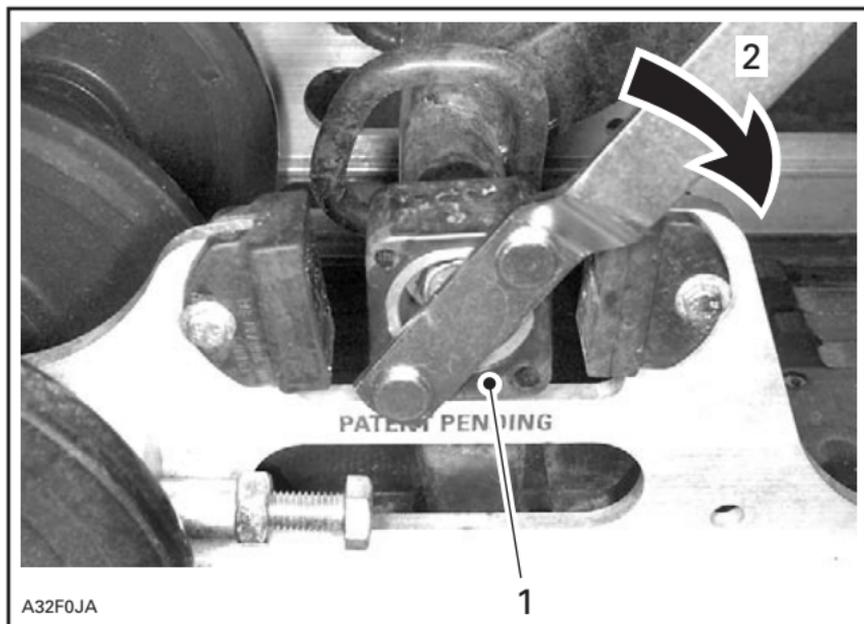
Both blocks must be set at the same position. Otherwise vehicle behavior may be unpredictable and suspension may become warped.

Use tool provided in tool bag to adjust coupling blocks.



**COUPLING BLOCK — RIGHT SIDE VIEW ("R" — RIGHT EMBOSSED ON BLOCK)**

1. Thicker part of block facing rearward (fully coupled suspension) — less track grip and more skis steering
2. Turn block in this direction to adjust to the other position



**COUPLING BLOCK — RIGHT SIDE VIEW (“R” — RIGHT EMBOSSED ON BLOCK)**

1. Thicker part of block facing downward (partly coupled suspension) — more track grip and less skis steering
2. Turn block in this direction to adjust to the other position

## 5. Front Springs — Handling

Ride at moderate speed and check for proper handling.

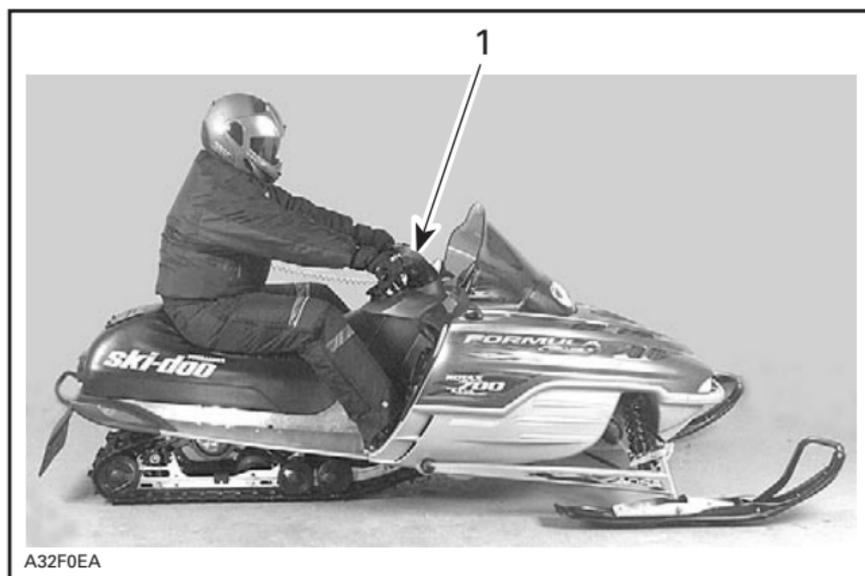
Adjust front springs accordingly.

### **WARNING**

Remove tether cord cap before performing any maintenance or adjustment, unless otherwise specified. Vehicle must be parked in a safe place, away from the trail.

### **WARNING**

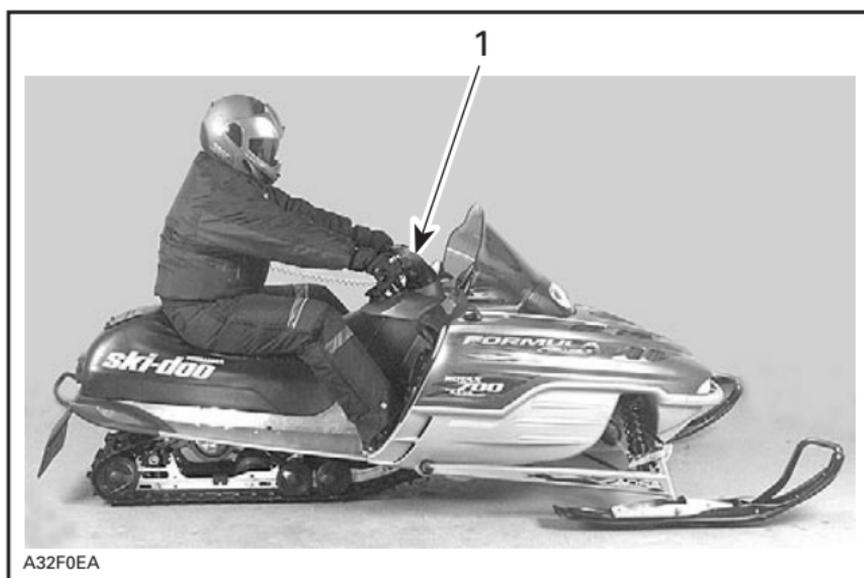
Always adjust both front springs to same position.



#### **TYPICAL — PROPER ADJUSTMENT**

1. Good handling and comfortable steering

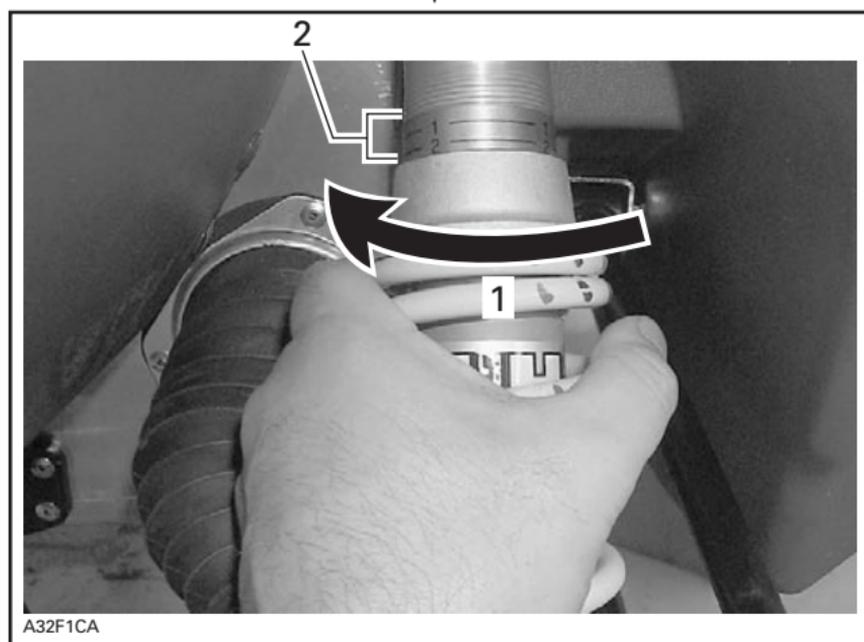
## Some Models



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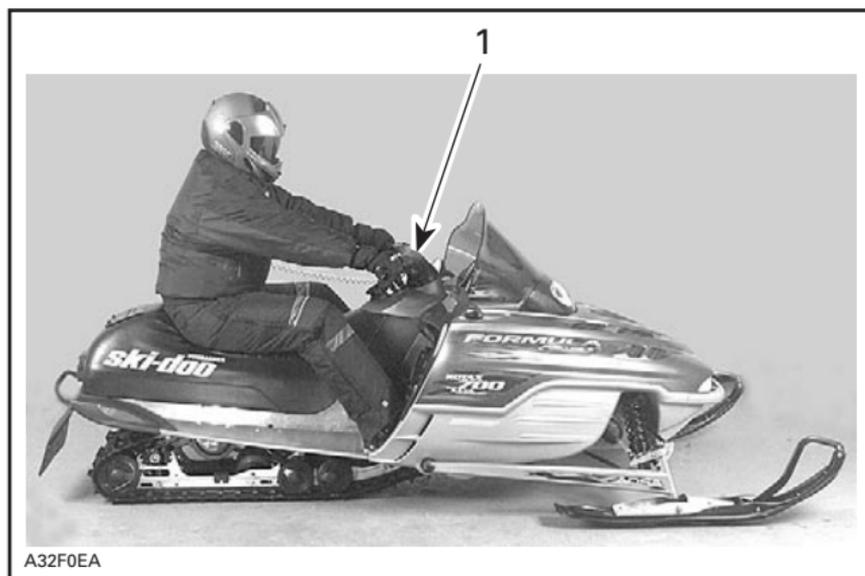
**TYPICAL — TOO SOFT OF ADJUSTMENT**

1. Bad handling



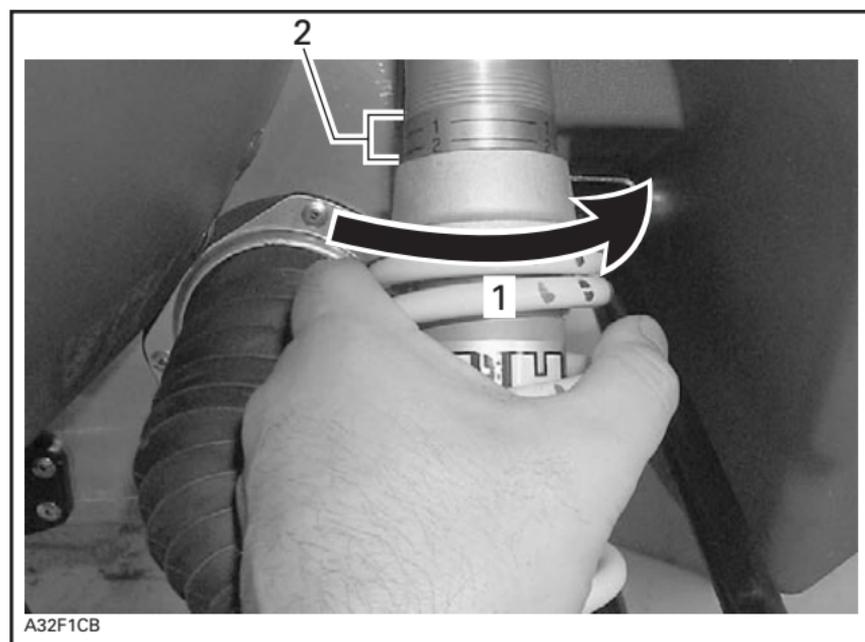
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1. Increase spring preload  
2. Position number



**TYPICAL — TOO HARD OF ADJUSTMENT**

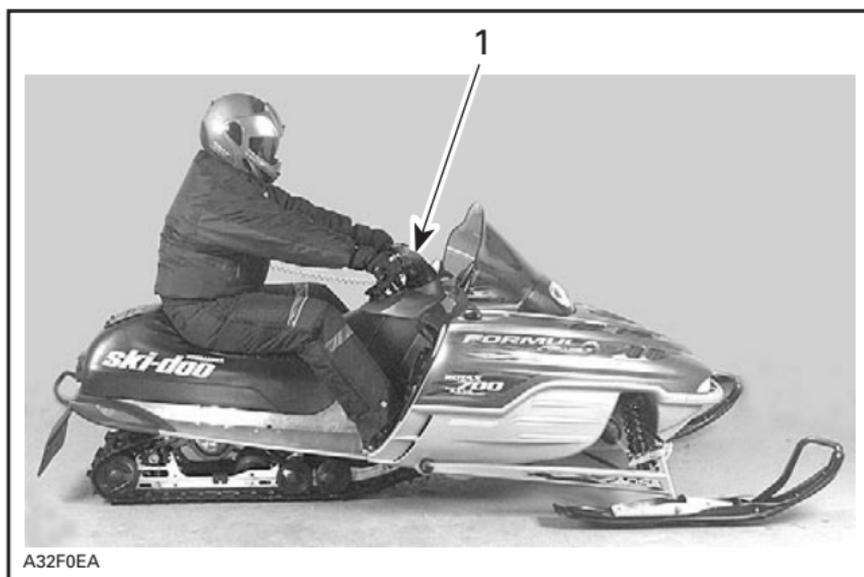
1. Steering hard to turn



1. Decrease spring preload
2. Position number

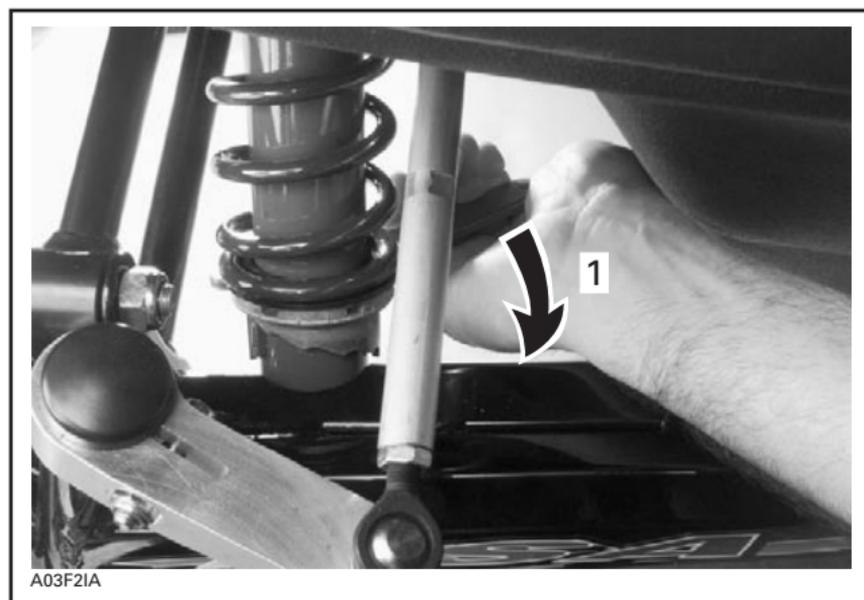
**CAUTION:** Make sure that both front springs are still preloaded when front of vehicle is off the ground.

**Some Models**

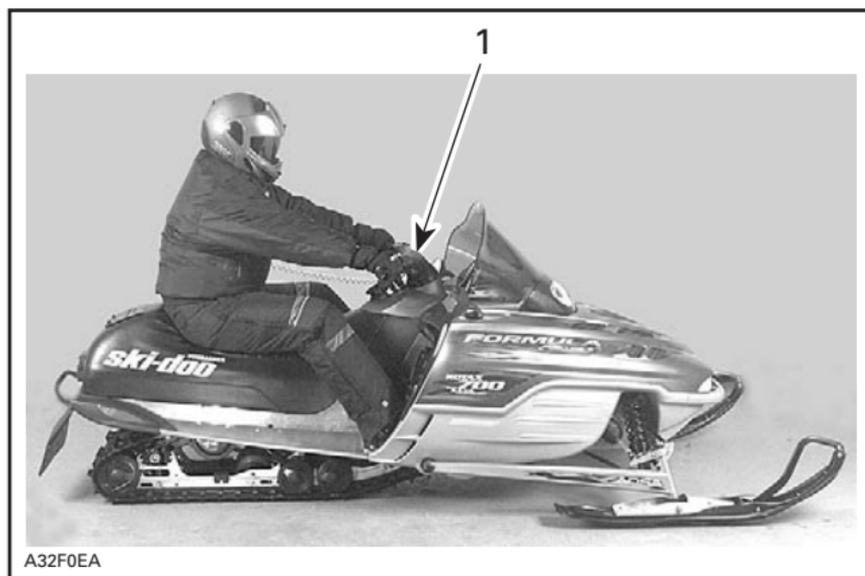


**TYPICAL — TOO SOFT OF ADJUSTMENT**

1. Bad handling

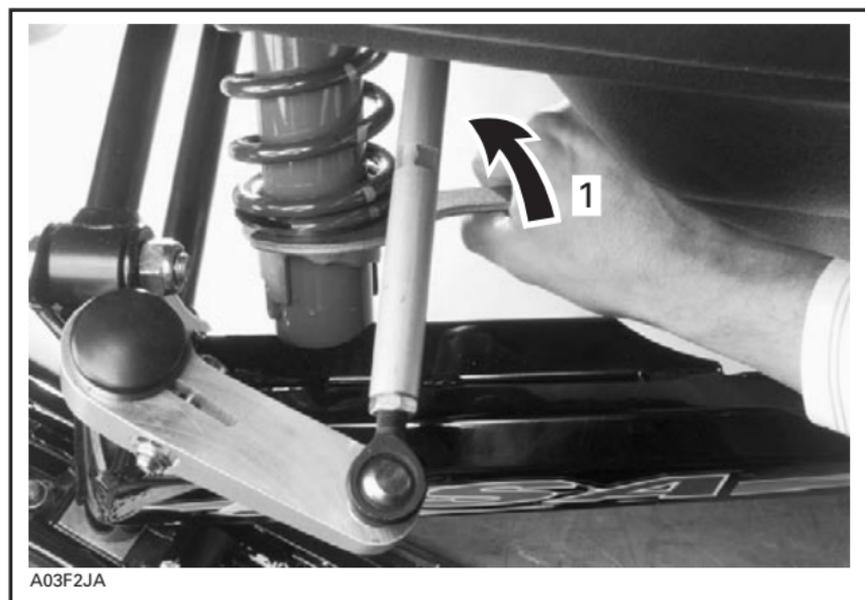


1. Increase spring preload



**TYPICAL — TOO HARD OF ADJUSTMENT**

1. Steering hard to turn

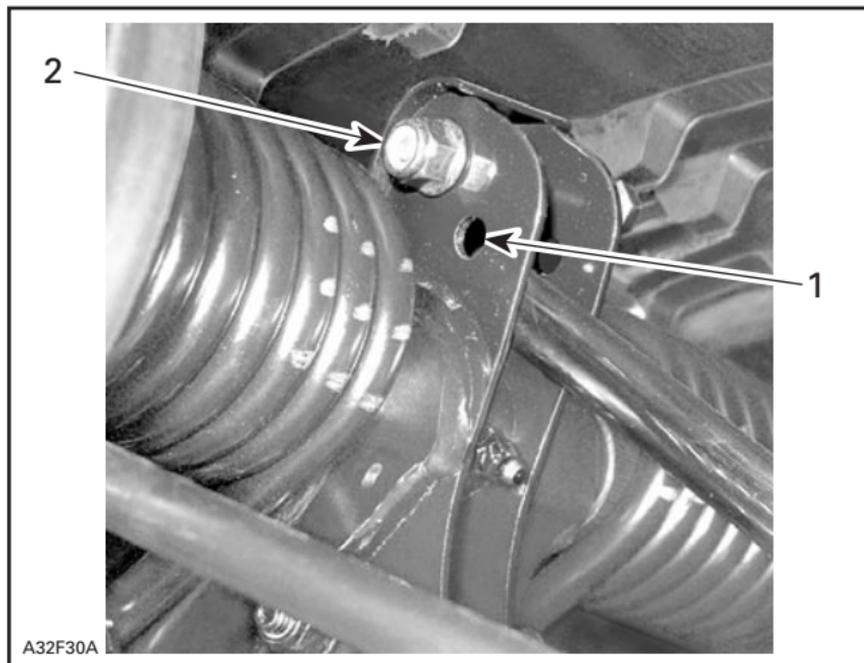


1. Decrease spring preload

## 6. Rear Shock Motion Ratio — Damping Strength

Rear shock motion ratio can be adjusted according to driver and passenger weight and/or trail condition.

There are two adjustment positions.



1. *Soft position*
2. *Firm position*

### **WARNING**

Remove tether cord cap before performing any maintenance or adjustment, unless otherwise specified. Vehicle must be parked in a safe place, away from the trail.

To adjust, remove nut, move bolt to desired position. Install a new nut and torque it to 24 N•m (18 lbf•ft).

### **WARNING**

Never reuse elastic stop nut. Always install a new one.

## Suspension 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 SKI-DOO dealer.</li><li>– Reduce ski ground pressure.<ul style="list-style-type: none"><li>• Reduce front suspension spring preload.</li><li>• Increase center spring preload.</li><li>• Reduce rear spring preload.</li></ul></li></ul>
Snowmobile seems 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 center spring preload.</li><li>• Increase rear spring preload.</li><li>• Increase front suspension spring preload.</li></ul></li></ul>
Steering feels too heavy	<ul style="list-style-type: none"><li>– Reduce ski ground pressure.<ul style="list-style-type: none"><li>• Reduce front suspension spring preload.</li><li>• Increase center spring preload.</li></ul></li></ul>
Rear of snowmobile seems too stiff	<ul style="list-style-type: none"><li>– Reduce rear spring preload.</li></ul>
Rear of snowmobile seems too soft	<ul style="list-style-type: none"><li>– Increase rear spring preload.</li></ul>
Rear suspension front shock absorber is frequently bottoming	<ul style="list-style-type: none"><li>– Lengthen stopper strap.</li><li>– Increase center spring preload.</li></ul>
Track spins too much at start	<ul style="list-style-type: none"><li>– Lengthen stopper strap.</li><li>– Move thicker part of coupling block downward.</li></ul>

### In Deep Snow

When operating the snowmobile in deep snow, it may be necessary to vary stopper strap length 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.

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## FUEL AND OIL

### Recommended Fuel

Use premium unleaded gasoline, available from most service stations or oxygenated fuel containing less than 10% of ethanol or 5% of methanol. The gasoline used must have an octane number  $(R + M)/2$  of 91 or higher.

**NOTE:** In most service station pump octane number corresponds to  $(R + M)/2$  octane number.

**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. Do not mistake oil reservoir cap for fuel tank cap. Oil reservoir cap is identified OIL.

### **WARNING**

Always stop the engine before refueling. Fuel is inflammable and explosive under certain conditions. Always work in a well ventilated area. Do not smoke or allow open flames or sparks in the vicinity. Open cap slowly. If a differential pressure condition is noticed (whistling sound heard when loosening fuel tank cap) have vehicle inspected and/or repaired before further operation. Do not overfill or top off the fuel tank before placing the vehicle in a warm area. As temperature increases, fuel expands and might overflow. Always wipe off any fuel spillage from the vehicle. Periodically verify fuel system.

### Fuel System Antifreeze

When using oxygenated fuel, additional gas line antifreeze or water absorbing additives are not required and should be not used.

When using non-oxygenated fuel, we highly recommend the use of isopropyl base gas line antifreeze in a proportion of 150 mL (5 U.S. oz) of gas line antifreeze added to 40 liters (10-1/2 U.S. gal) of gas.

This precaution is in order to reduce the risk of frost buildup in carburetor(s) which may lead, in certain cases, to high fuel consumption or severe damage to engine.

**NOTE:** Use only **methyl hydrate free** gas line antifreeze.

## Recommended Oil

**CAUTION:** Use only injection oil that flows at - 40°C (- 40°F). Do not mismatch oil reservoir cap with fuel tank cap. Oil reservoir cap is identified OIL.

Oil is contained in the injection oil reservoir.

Use only two-stroke engine injection oil sold by authorized SKI-DOO dealers.

MODEL	OIL TYPE
2-TEC SDI	BOMBARDIER FORMULA XP-S II ①

① **CAUTION:** The BOMBARDIER Formula XP-S II oil is specially formulated and tested for the severe requirements of these engines. Use of any other brand two-stroke oil may void the limited warranty. Use only BOMBARDIER FORMULA XP-S II oil. There is no known equivalent on the market for the moment. If a high quality equivalent were available, it could be used.

The BOMBARDIER FORMULA XP-S II synthetic injection oil provides superior lubrication, reduced engine component wear and oil deposit, thus maintaining maximum-level performance and antifriction properties. This synthetic injection oil meets the latest ASTM and JASO standards by ensuring high biodegradability and low exhaust smoke.

**CAUTION:** Never use four-stroke petroleum or synthetic motor oil and never mix these with outboard motor oil. Do not use NMMA TC-W, TC-W2 or TC-W3 outboard two-stroke engine oils or ashless two-stroke engine oils. Avoid mixing different brands of API TC oil as resulting chemical reactions may cause severe engine damage.

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

**CAUTION:** Check level and refill every time you refuel. Do not mismatch oil reservoir cap with fuel tank cap. Install cap that is identified OIL.

### **WARNING**

Do not overfill. Reinstall cap and fully tighten. Wipe off any oil spills. Oil is highly flammable.

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## BREAK-IN PERIOD

### Engine

**CAUTION:** A break-in period of 10 operating hours — 500 km (300 miles) — is required before running the snowmobile at full throttle.

During break-in period, maximum throttle should not exceed 3/4. However, brief full acceleration and speed variations contribute to a good break-in.

**CAUTION:** Engine overheating, continued wide open throttle runs and prolonged cruising without speed variations should be avoided, this can cause engine damage during the break-in period.

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of recommended injection oil should be added to fuel for the first full filling of fuel tank. Have spark plugs cleaned after engine break-in.

### Belt

A new drive belt requires a break-in period of 50 km (30 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 — 500 km (300 miles) — or 30 days after the purchase, whichever comes first, your snowmobile be checked by an authorized SKI-DOO dealer. This inspection will also 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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## PRE-OPERATION CHECK

### **WARNING**

The pre-operation check is very important prior to operating the vehicle. Always check the proper operation of critical controls, safety features and mechanical components before starting. If not done as specified here, severe injury or death might occur.

- Remove snow and ice from body including seat, footrests, lights, controls and instruments.
- Verify that track and idler wheels are not frozen and free to turn.

### **WARNING**

Always use a wide base snowmobile mechanical stand to properly support vehicle during any track verification. Slowly accelerate engine in order to rotate track at very low speed when it is not on ground.

- 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.
- Check the parking device. Apply parking brake and check if it operates properly.
- Activate the throttle control lever several times to check that it operates easily and smoothly.

### **WARNING**

Test the throttle lever operation each time before starting the engine. The lever must return to its original position once released. Otherwise, do not start engine.

- Check operation of tether and engine cut-out switches, ignition switch, headlamp switch (HI-LO), taillight, brake light and pilot lamps.
- Verify that skis and steering operate freely. Check corresponding action of skis versus handlebar.

- Check fuel and injection oil for levels and leaks. Replenish as necessary and see an authorized SKI-DOO dealer in case of any leaks.
- Verify that air filter(s) is free of snow, if so equipped.
- All storage compartments must be properly latched and they must not contain any heavy or breakable objects. Hood must be also properly latched.

## **WARNING**

All adjustable features should be positioned at optimal setting. Securely tighten all adjustment locks.

- Make certain your snowmobile is pointed away from people or objects before you start it. No one is to be standing in front of or in back of the snowmobile.
- Be warmly dressed with clothing designed for snowmobiling.

## PRE-OPERATION CHECK LIST

ITEM	OPERATION	✓
Body including seat, footrests, lights, controls and instruments	Check that there is no snow or ice.	
Track and idler wheels	Check for free movement.	
Brake lever	Check proper action.	
Parking device	Check proper action.	
Throttle lever	Check proper action.	
Switches and lights	Check proper action. Tether cord must be attached to driver clothing eyelet.	
Skis and steering	Check for free movement and proper action.	
Fuel and oil	Check for proper level and leaks.	
Air filter	Check that there is no snow or ice.	
Adjustable features	Check for optimal adjustment and securely tightened adjustment locks.	
Storage compartment	Check for proper latching and no heavy or breakable objects.	
Vehicle vicinity	Snowmobile must be pointed away from people or objects. No one is to be standing in front of or in back of the snowmobile.	
Clothing	Be warmly dressed with clothing designed for snowmobiling.	

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## OPERATING INSTRUCTIONS

### **WARNING**

Proceed with pre-operation check list before riding.

## Principle of Operation

### Propulsion

Depressing throttle lever increases engine RPM causing the drive pulley to engage. Depending on models engine RPM must be between 2500 and 4200 before drive pulley engagement will occur.

Outer sheave of drive pulley moves toward inner sheave, forcing drive belt to move upward on the drive pulley and simultaneously forcing the sheaves apart on the driven pulley.

The driven pulley senses the load on the track and limits the belt movement. The result is an optimized speed ratio between engine RPM and the speed of the vehicle at any time.

### **WARNING**

Never operate engine without belt guard securely installed or, with hood or access/side panels open or removed.

Power is transferred to the track through the chaincase or gearbox and drive axle.

### **WARNING**

Always use a wide-base snowmobile mechanical stand to properly support vehicle during any track verification. Slowly accelerate engine in order to rotate track at very low speed when it is not on ground.

### Turning

Handlebar controls the steering of the vehicle. As the handlebar is rotated to right or left, the skis are turned right or left to steer the snowmobile.

## Stopping

Before riding your snowmobile, you should understand how to stop it. This is done by releasing the throttle and gradually depressing the brake lever on the left side of the handlebar. In an emergency, you may stop your vehicle by pressing the engine cut-out switch located near the throttle control and applying the brake. Remember, a snowmobile cannot "stop on a dime". Braking characteristics vary with deep snow, packed snow or ice. If the track is locked during hard braking, skidding may result.

## Starting the Engine

- Re-check throttle control lever operation.
- Ensure that the engine cut-out switch is in the ON position.
- Ensure that the tether cord cap is in position and that the cord is attached to your clothing eyelet.

### **WARNING**

Do not apply throttle while starting.

## Initial Cold Starting and Warm Engine Starting

Grab starter handle firmly and crank engine.

### **WARNING**

Do not apply throttle while starting.

## Emergency Starting

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

Remove belt guard.

### **WARNING**

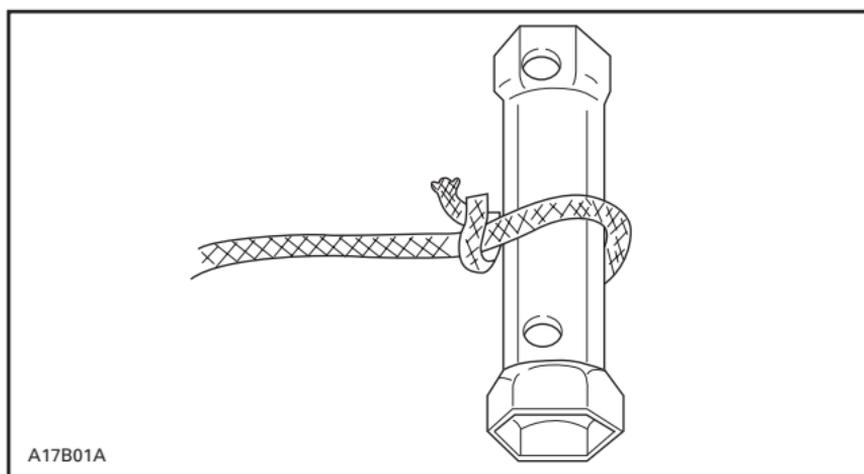
Do not wind starting rope **around** your hand. Hold rope by the handle only. Do not start the snowmobile by the drive pulley unless it is a true emergency situation. Have the snowmobile repaired as soon as possible.



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Attach one end of emergency rope to rewind handle.

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



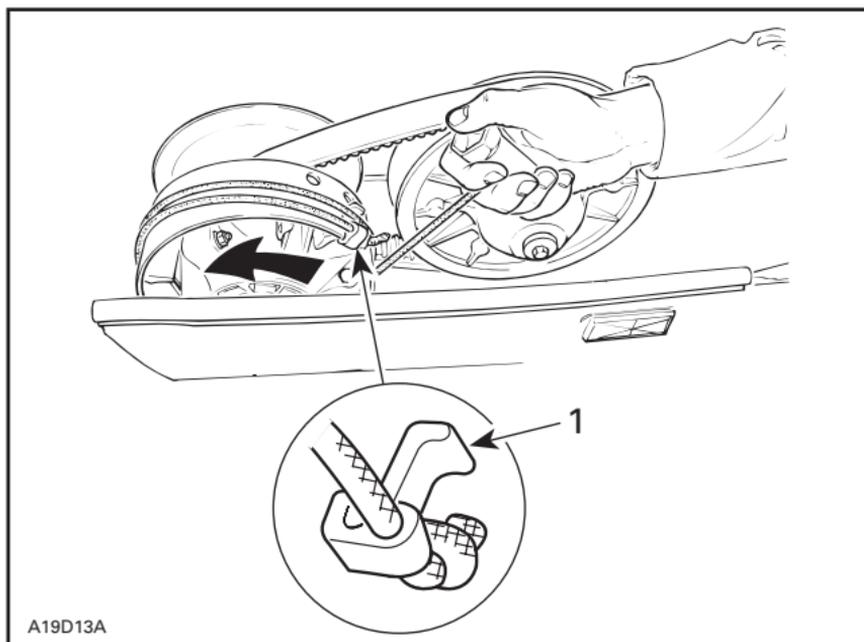
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*TYPICAL*

Attach the other end of emergency rope to the starter clip supplied in the tool kit.

Hook up clip on drive pulley.

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



**TYPICAL**

1. Clip

Pull the rope using a sharp, crisp pull so the rope comes free of the drive pulley.

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.

## **Shutting Off the Engine**

Release throttle lever and wait until engine has returned to idle speed.

Shut off the engine using either engine cut-out switch or tether cut-out switch.

## **WARNING**

Always remove tether cord cap when vehicle is not in operation in order to prevent accidental engine starting or to avoid unauthorized use by children or others or theft.

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## VEHICLE WARM-UP

Before every ride, vehicle has to be warmed up as follows.

Snowmobile must be securely supported by the rear bumper using a wide-base snowmobile mechanical stand. Track must be 100 mm (4 in) off the ground.

Attach tether cord to operator's clothing eyelet.

Start engine and allow it to warm up two or three minutes at idle speed.

Release parking brake.

### **WARNING**

**Make sure wide-base snowmobile mechanical stand is stable. Stay clear of the front of vehicle and the track. Do not use too much throttle during warm-up or when track is free-hanging.**

Apply throttle until drive pulley engages. Let track rotate at low speed for several turns. The lower the vehicle temperature is the longer vehicle warm-up should be.

Shut-off the engine and remove the wide-base snowmobile mechanical stand.

Skis may be frozen on the ground. Grab both skis one at a time by their loops and lift their front end slightly off the ground.

After restarting engine, the vehicle can be driven at low speed for the first 2 or 3 minutes of riding. After that, it may be driven up to the legal speed limit as per normal safety practices.

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## RIDING THE VEHICLE

At this point you are acquainted to the specifics of these models of snowmobile and you are instructed about the control locations and operation.

Before starting out on your first ride with this vehicle, read the following safety information as you will be informed about the safe operating practices.

Although the mere reading of such information does not eliminate the hazard, its understanding and heeding of all of the warnings and cautions will promote the safe use of the vehicle.

Before venturing on the trails, operate the snowmobile in a restricted flat area until you are completely familiar with its operation and feel comfortable that you can safely tackle a more demanding task. Have an enjoyable and safe ride.

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## HOW TO RIDE

Your riding position and balance are the two basic principles of making your snowmobile go where you want it to. When turning on the side of a hill, you and your passenger must be ready to shift body weight to help it turn in the desired direction. Driver and passenger must never assist by place their feet outside of the vehicle. Experience will teach you how much lean to put into turns at different speeds and how much you will have to lean into a slope to maintain proper balance.

Generally, the riding position for best balance and control is sitting. However, the posting, kneeling or standing positions are also used under certain conditions.

The novice driver should become familiar with the snowmobile through practice on a level area at slow speeds before venturing afield.

### **WARNING**

Do not attempt any maneuvers if they are beyond your level ability.

#### **Sitting**

Feet on the running boards, body midway back on seat is an ideal position when operating the snowmobile over familiar, smooth terrain. Knees and hips should remain flexible to absorb shocks.



A30H02A

## Posting

A semi-sitting position with the body off the seat and the feet under the body in a sort of squatting posture, thus allowing the legs to absorb the shocks when traveling over uneven terrain. Avoid abrupt stops.



## Kneeling

This position is achieved by placing one foot firmly on the running board and the opposite knee on the seat. Avoid abrupt stops.



## Standing

Place both feet on the running boards. Knees should be flexed to absorb the shock from surface bumps. This is an effective position to see better and to shift weight as conditions dictate. Avoid abrupt stop.



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## TERRAIN/RIDING VARIATIONS

### Groomed Trail

On a maintained trail, sitting is the most preferred riding position. Do not race and, above all, keep to the right hand side of the trail. Be prepared for the unexpected. Observe all trail signs. Do not zigzag from one side of the trail to the other.

### Ungroomed Trail

Unless there has been a fresh snowfall you can expect "washboard" and snowdrift conditions. Taken at excessive speeds, such conditions can be physically harmful. Slow down. Hold on the handlebar and assume a posting position. Feet should be under the body assuming a crouched position to absorb any jarring effect. On longer stretches of "washboard" trails, the kneeling position of one knee on the seat can be adopted. This provides a certain amount of comfort, while at the same time keeps the body loose and capable of vehicle control. Beware of hidden rocks or tree stumps partially hidden by a recent snowfall.

### Deep Snow

In deep "powder" snow, your vehicle could begin to "bog" down. If this occurs, turn in as wide an arc as possible and look for a firmer base. If you do get "bogged", and it happens to everyone, do not spin your track as this makes the vehicle sink deeper. Instead, turn the engine off, get off and move the vehicle rear onto new snow. Then tramp a clear path ahead of the vehicle. A few feet will generally suffice. Restart the engine. Assume the standing position and rock the vehicle gently as you steadily and slowly apply the throttle. Depending on whether the front or rear end of the vehicle is sinking, your feet should be placed on the opposing end of the running boards. Never place foreign material beneath the track for support. Do not allow anyone to stand in front of, or to the rear of, the snowmobile with the engine running. Stay away from the track. Personal injury will result if contact is made with the revolving track.

## **Frozen Water**

Traveling frozen lakes and rivers can be fatal. Avoid waterways. If you are in a unfamiliar area, ask the local authorities or residents about the ice condition, inlets, outlets, springs, fast moving currents or other hazards. Never attempt to operate your snowmobile on ice that may be too weak to support you and the vehicle. Operating a snowmobile on ice or icy surfaces can be very dangerous if you do not observe certain precautions. The very nature of ice is foreign to good control of a snowmobile or any vehicle. Traction for starting, turning or stopping is much less than that on snow. Thus, these distances can be multiplied manyfold. Steering is minimal, and uncontrolled spins are an ever present danger. When operating on ice, drive slowly with caution. Allow yourself plenty of room for stopping and turning. This is especially true at night.

## **Hard Packed Snow**

Don't underestimate hard packed snow. It can be difficult to negotiate as both skis and track do not have as much traction. Best advice is to slow down and avoid rapid acceleration, turning or braking.

## **Uphill**

There are two types of hills you can encounter — the open hill on which there are few trees, cliffs or other obstacles, and a hill that can only be climbed directly. On an open hill, the approach is to climb it by side hilling or slaloming. Approach at an angle. Adopt a kneeling position. Keep your weight on the uphill side at all times. Maintain a steady, safe speed. Continue as far as you can in this direction, then switch to an opposite hill angle and riding position.

A direct climb could present problems. Choose the standing position, accelerate before you start the climb and then reduce throttle pressure to prevent track slippage.

In either case, vehicle speed should be as fast as the incline demands. Always slow down as you reach the crest. If you cannot proceed further, don't spin your track. Turn the engine off, free the skis by pulling them out and downhill, place the rear of the snowmobile uphill restart the engine and ease it out with slow even throttle pressure. Position yourself to avoid tipping over, then descend.

## **Downhill**

Downhill driving requires that you have full control of your vehicle at all times. On steeper hills, keep your center of gravity low and both hands on the handlebar. Maintain slight throttle pressure and allow the machine to run downhill with the engine operating. If a higher than safe speed is reached, slow down by braking but apply the brake with frequent light pressure. Never jam the brake and lock the track.

## **Side Hill**

When crossing a side hill or traversing up or downhill, certain procedures must be followed. All riders should lean towards the slope as required for stability. The preferred operating positions are the kneeling position, with the knee of the down hill leg on the seat and the foot of the uphill leg on the running board, or the posting position. Be prepared to shift your weight quickly as needed. Side hills and steep slopes are not recommended for a beginner or a novice snowmobiler.

## **Slush**

Slush should be avoided at all times. Always check for slush before starting across any lake or river. If dark spots appear in your tracks, get off the ice immediately. Ice and water can be thrown rearward into the path of a following snowmobile. Getting a vehicle out of a slush area is strenuous and in some cases, impossible.

## **Fog or Whiteouts**

On land or water, fog or visibility-limiting snow can form. If you have to proceed into the fog or heavy snow, do so slowly with your lights on and watch intently for hazards. If you are not sure of your way, do not proceed. Keep a safe distance behind other snowmobilers to improve visibility and reaction time.

## **Unfamiliar Territory**

Whenever you enter an area that is new to you, drive with extreme caution. Go slow enough to recognize potential hazards such as fences or fence posts, brooks crossing your path, rocks, sudden dips, guy wires and countless other obstacles which could result in a termination of your snowmobile ride. Even when following existing tracks, be cautious. Travel at a speed so you can see what is around the next bend or over the top of the hill.

## **Bright Sunshine**

Bright sunny days can considerably reduce your vision. The glare from sun and snow may blind you to the extent that you cannot easily distinguish ravines, ditches or other obstacles. Goggles with colored lenses should always be worn under these conditions.

## **Unseen Obstruction**

There may be obstructions hidden beneath the snow. Driving off established trails and in the woods requires reduced speed and increased vigilance. Driving too fast in an area can make even minor obstacles very hazardous. Even hitting a small rock or stump could throw your snowmobile out of control and cause injury to its riders. Stay on established trails to reduce your exposure to hazards. Be safe, slow down and enjoy the scenery.

## **Hidden Wires**

Always be on the lookout for hidden wires, especially in areas that may have been farmed at one time or another. Too many accidents have been caused by running into wires in the fields, guy wires next to poles and roads, and into chains and wires used as road closures. Slow speeds are a must.

## **Obstacles and Jumping**

Unplanned jumps of snowdrifts, snowplow ridges, culverts or indistinguishable objects can be dangerous. You can avoid them by wearing the proper color lenses or face shields and by operating at a lower speed.

Jumping a snowmobile is an unsafe and dangerous practice. However, if the trail does suddenly drop away from you, crouch (stand) towards the rear of the vehicle and keep the skis up and straight ahead. Apply partial throttle and brace yourself for the impact. Knees must be flexed to act as shock absorbers.

## Turning

Depending on terrain conditions, there are two preferred ways to turn or corner a snowmobile. For most snow surfaces, “body english” is the key to turning. Leaning towards the inside of the turn and positioning body weight on the inside foot will create a “banking” condition beneath the track. By adopting this position and positioning yourself as far forward as possible, weight will be transferred to the inside ski.

On occasion, you will find that the only way to turn the vehicle about in deep snow is to pull the snowmobile around. Do not over-exert yourself. Get assistance. Remember to always lift using your legs as opposed to your back.



## Road Crossing

In some cases, you will be approaching the road from a ditch or snowbank. Choose a place where you know you can climb without difficulty. Use the standing position and proceed with only as much speed needed to crest the bank. Stop completely at the top of the bank and wait for all traffic to clear. Judge the drop to the roadway. Cross the road at a 90° angle. If you encounter another snowbank on the opposite side, position your feet near the rear of the vehicle. Remember, your snowmobile is not designed to operate on bare pavement and steering on this type of surface is more difficult.

## **Railroad Crossing**

Never ride **on** railroad tracks. It is illegal. Railroad tracks and railroad rights-of-way are private property. A snowmobile is no match for a train. When **crossing** a railroad track, stop, look and listen.

## **Night Rides**

The amount of natural and artificial light at a given time can effect your ability to see or to be seen. Nighttime snowmobiling is delightful. It can be a unique experience if you acknowledge your reduced visibility. Before you start, make certain your lights are clean and work properly. Drive at speeds that will allow you to stop in time when you see an unknown or dangerous object ahead. Stay on established trails and **never** operate in unfamiliar territory. Avoid rivers and lakes. Guy wires, barbed wire fences, cabled road entrances and other objects such as tree limbs are difficult to see at night. Never drive alone. Always carry a flashlight. Keep away from residential areas and respect the right of others to sleep.

## **Safari Riding**

Before starting out, designate a "trail boss" to lead the party and another person to follow-up at the end of the party. Ensure that all members of the party are aware of the proposed route and destination. Make certain that you are carrying all necessary tools and equipment and that you have sufficient fuel to complete the trip. Never overtake the trail boss or, for that matter, any other snowmobile. Use down-the-line hand signals to indicate hazards or intent of direction change. Assist others whenever necessary.

It is always **IMPORTANT** to keep a safe distance between each snowmobile. Always maintain a safe interval and allow sufficient stopping distance. Don't be a tailgater. Know the position of the machine ahead.

## **Signals**

If you intend to stop, raise either hand straight above your head. A left turn is indicated by extending your left hand straight out in the proper direction. For right turns, extend the left arm and raise the hand to a vertical position so it forms a right angle at the elbow. Every snowmobiler should relay any signal to the ones behind.

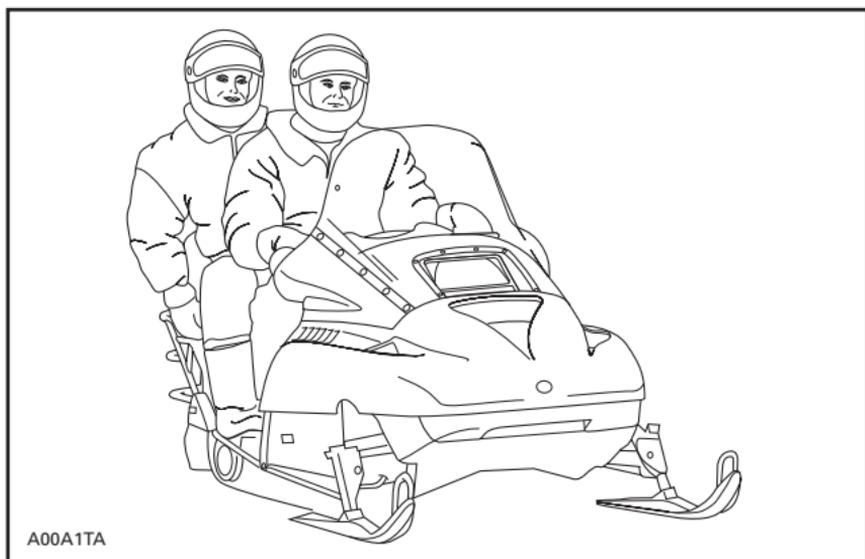
## Carrying a Passenger

Each operator has a responsibility to ensure the safety of his passenger. If your snowmobile is so designed and you are carrying a passenger (if snowmobile is specifically designed or equipped), you should inform him of snowmobiling basics. Make sure that you instruct your passenger to maintain a firm grab of the passenger strap or grips. Never carry more than one passenger. Overloading is dangerous and the machine is not designed for it. Since "body english" is limited and you see more of the trail ahead than your passenger, slow down. An unforeseen bump can leave you passenger-less. Remind your passenger to lean into the turn with you, without causing the vehicle to topple. Be extremely careful, go more slowly and check the passenger frequently.

Never allow anyone to sit between the handlebar and the operator.

Use extra caution and go more slowly with young passengers. Check frequently to make certain the child has a firm grip and is properly positioned with his feet on the running boards. Smooth starting and stopping are required. You have the benefit of knowing before you start as well as the additional support of your grip on the handlebar.

Your passenger has to rely on your careful and safe operation of the vehicle. Use moderate speeds. Warn passengers of side hills, bumps, branches, etc. Also, be certain that you and your passenger are warm enough and that no skin is exposed.



## **Trail Stops**

Whenever possible, pull off the trail when you stop. This will reduce the hazard to other snowmobilers using the trail.

## **Trails and Signs**

Trail signs are used to control, direct or regulate the use of snowmobiles on trails. Become familiar with all signs used in the area where you are snowmobiling.

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## **POST-OPERATION CARE**

Shut off the engine. Install rear of vehicle on a wide-base snowmobile mechanical stand.

Remove snow and ice from rear suspension, track, front suspension, mechanism and skis.

Protect vehicle with a snowmobile cover.

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## SPECIAL OPERATIONS

### Riding at High Altitudes

If you ride at altitudes above 600 m (2000 ft), your snowmobile should have modifications. Refer to an authorized SKI-DOO dealer.

**CAUTION:** Do not change original factory calibration if snowmobile is used below 600 m (2000 ft).

### Engine Overheating

Engine overheating pilot lamp will light up if engine is too hot.

Reduce snowmobile speed and run snowmobile in loose snow or stop engine immediately.

Check for adequate coolant level. See an authorized SKI-DOO dealer.

### Fuel Flooded Engine

 **WARNING**

Do not hold throttle partially or fully open when starting a gas flooded engine.

Install new spark plugs and restart engine.

### Rear Suspension Slider Shoe Sticking

Slider shoes are cooled and lubricated by snow. When riding at moderate or high speed on a thin-snow-covered surface, slider shoes may stick on metallic track guides.

Run snowmobile on a surface covered by snow or drive snowmobile at very slow speed.

Have slider shoes inspected by an authorized SKI-DOO dealer.

# ***MAINTENANCE INFORMATION***

# PERIODIC MAINTENANCE CHART

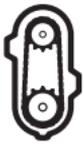
## WARNING

Observe WARNINGS and CAUTIONS mentioned throughout this guide which are pertinent to the item being checked. When component conditions seem less than satisfactory, replace with genuine BOMBARDIER parts or approved equivalents.

Some items may not apply to your particular model. Refer to MAINTENANCE in *Shop Manual* for more details.

- ① 10-HOUR OR 500 km (300 m.) INSPECTION  
(to be performed by an authorized SKI-DOO dealer)
- ② WEEKLY OR EVERY 240 km (150 m.)
- ③ MONTHLY OR EVERY 800 km (500 m.)
- ④ ONCE A YEAR OR EVERY 3200 km (2000 m.)
- ⑤ ONCE A YEAR OR EVERY 6000 km (3700 m.)
- ⑥ STORAGE (to be performed by an authorized SKI-DOO dealer)
- ⑦ PRESEASON PREPARATION  
(to be performed by an authorized SKI-DOO dealer).

PERIODIC MAINTENANCE CHART		①	②	③	④	⑤	⑥	⑦
	Rewind Starter and Rope						I,L,C	I
	Engine Nuts and Screws	I			I		I	
	Exhaust System	I		I			I	
	Engine Lubrication						L	
	Cooling System	I			I			I
	Coolant	I					R	
	Condition of Seals (3)						I	I
	RAVE Valves (3)				C			
	Injection Oil Filter			I			R	
	Injection Oil Pump	A			A			A
	Fuel Stabilizer						R	
	Fuel Filter							R
	Fuel Lines and Connections	I					I	I
	Throttle Cable	I			I		I	I
	Air Filter			C				C
	Fuel Injection System (visual inspection)				I			
	Throttle Body Bores and Throttle Plates (3)							C

PERIODIC MAINTENANCE CHART		①	②	③	④	⑤	⑥	⑦
	Drive Belt	I	I					I
	Drive and Driven Pulleys	I		I	C		I	C
	Tightening Torque of Drive Pulley Screw	I			I			I
	Driven Pulley Preload	I			I		I	
	Brake Fluid	I	I				R	I
	Brake	I	I				I	I
	Drive Chain Tension	A		A			A	
	Countershaft Lubrication (2)	L		L			L	
	Chaincase Oil	I		I			R	I
	Drive Axle End Bearing (2)	L		L			L	
	Steering and Front Suspension Mechanism (2)	A,I,L		A,I	L		A,I,L	
	Wear and Condition of Skis and Runners	I	I				I	
	Suspension Adjustments	AS REQUIRED						
	Suspension (2)	I		I,L			I,L	
	Suspension Stopper Strap				I		I	
	Track	I		I			I	
	Track Tension and Alignment	A	AS REQUIRED					
	EMS Fault Codes (3)	I				I		
	Spark Plugs (1) (3)	I		I				R
	Battery (if so equipped)	I		I			I	I
	Headlamp Beam Aiming				A			A
	Wiring Harnesses, Cables and Lines (3)	I		I			I	
	Operation of Lighting System (HI/LO beam, brake light, etc.), Test Operation of Engine Cut-Out Switch and Tether Cut-Out Switch	I	I				I	
	Rags in Air Intake and Exhaust System						R	C
	Engine Compartment	C		C			C	
	Vehicle Cleaning and Protection	C		C			C	

A = ADJUST

I = INSPECT (clean, inspect, repair, adjust and lubricate)

L = LUBRICATE

R = REPLACE

C = CLEAN

- (1) Before installing new spark plugs at preseason 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.
- (2) Lubricate whenever the vehicle is used in wet conditions (wet snow, rain, puddles).
- (3) Emission-related.

## FLUID LEVELS

### **WARNING**

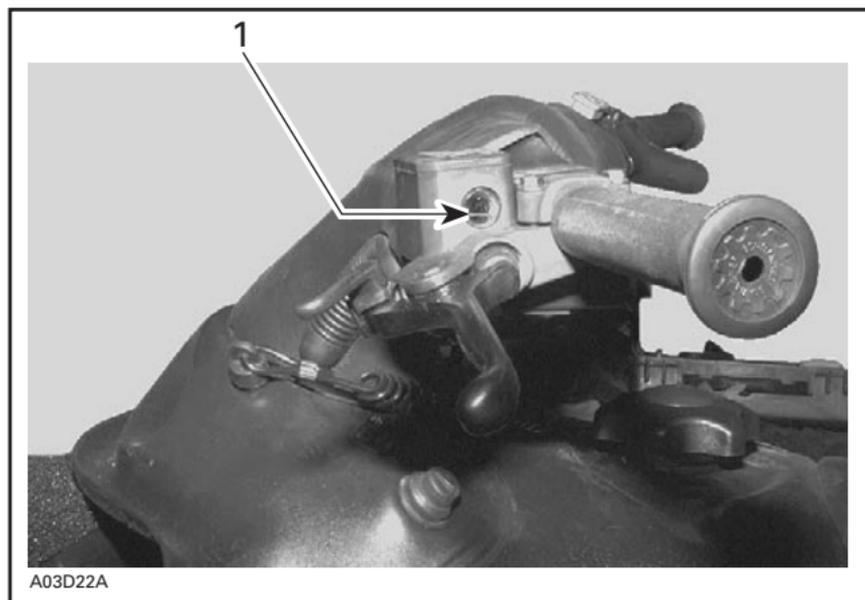
It is recommended that the assistance of an authorized SKI-DOO dealer be periodically obtained on other components/systems not covered in this guide. Unless otherwise specified, engine must be cold and not running. Remove tether cord cap before performing any maintenance or adjustment, unless otherwise specified. Vehicle must be parked in a safe place, away from the trail.

**CAUTION:** Vehicle must be on a level surface before checking any fluid levels.

### **Brake System**

Check brake fluid (DOT 4) in reservoir for proper level. Add fluid (DOT 4) as required.

**CAUTION:** Use only DOT 4 brake fluid from a sealed container. Never use any other types of fluid.



**TYPICAL — BRAKE FLUID RESERVOIR**

1. Minimum

## Chaincase Oil Level

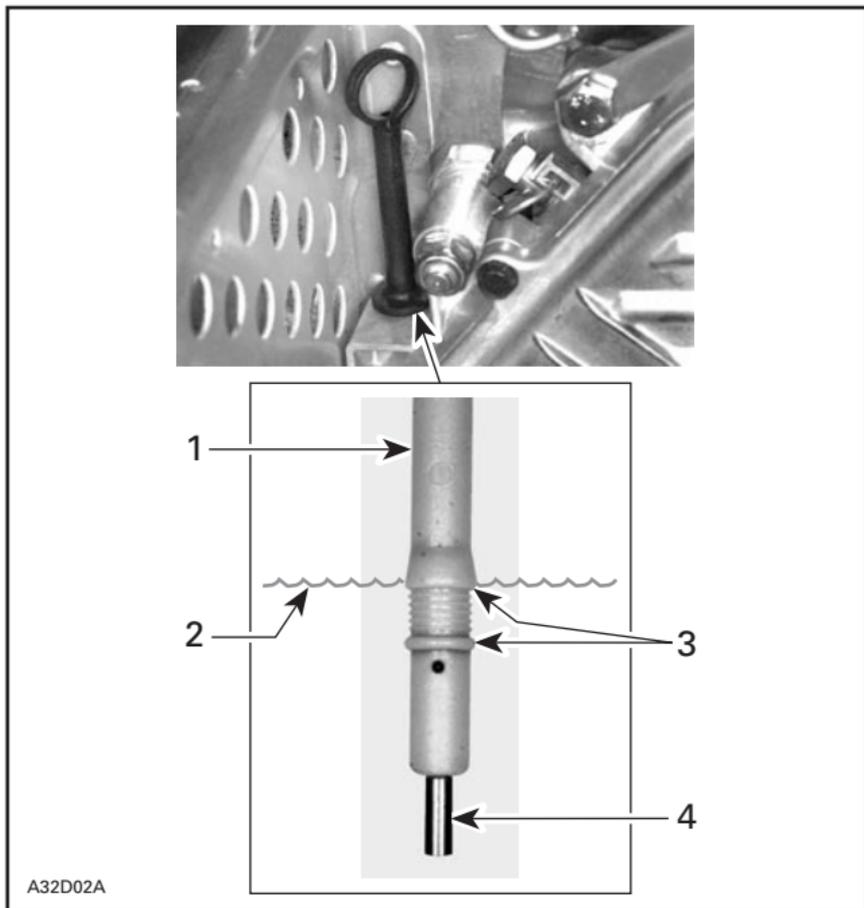
With snowmobile on a level surface, check the oil level by removing dipstick. Oil level must be between lower and upper marks.

**NOTE:** It is normal to find metallic particles stuck to dipstick magnet. If bigger pieces of metal are found, see an authorized SKI-DOO dealer.

Remove metal particles from magnet.

Refill up to upper mark using recommended oil, refer to SPECIFICATIONS.

**CAUTION:** Do not use unrecommended types of oil when servicing. Do not mix synthetic oil with other types of oil.



A32D02A

### TYPICAL

1. Dipstick
2. Oil level
3. Level between marks
4. Magnet

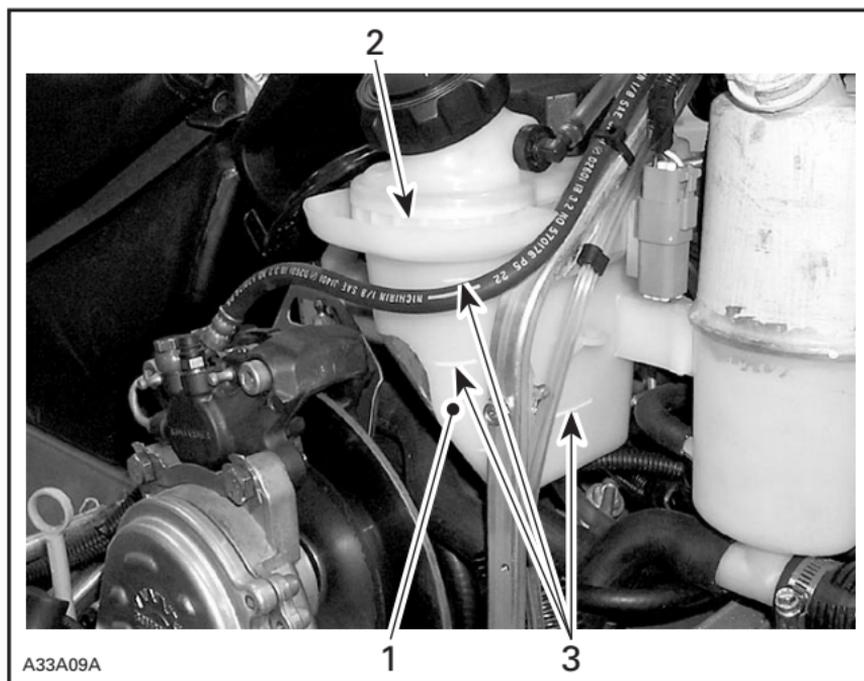
## Oil Injection System

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

**CAUTION:** Never allow oil reservoir to be almost empty. Do not mismatch oil reservoir cap with fuel tank cap. Install cap that is identified OIL.

### **WARNING**

Check level and refill every time you refuel. Be careful not to overfill. Wipe off any spillage. Oil is highly flammable when heated.



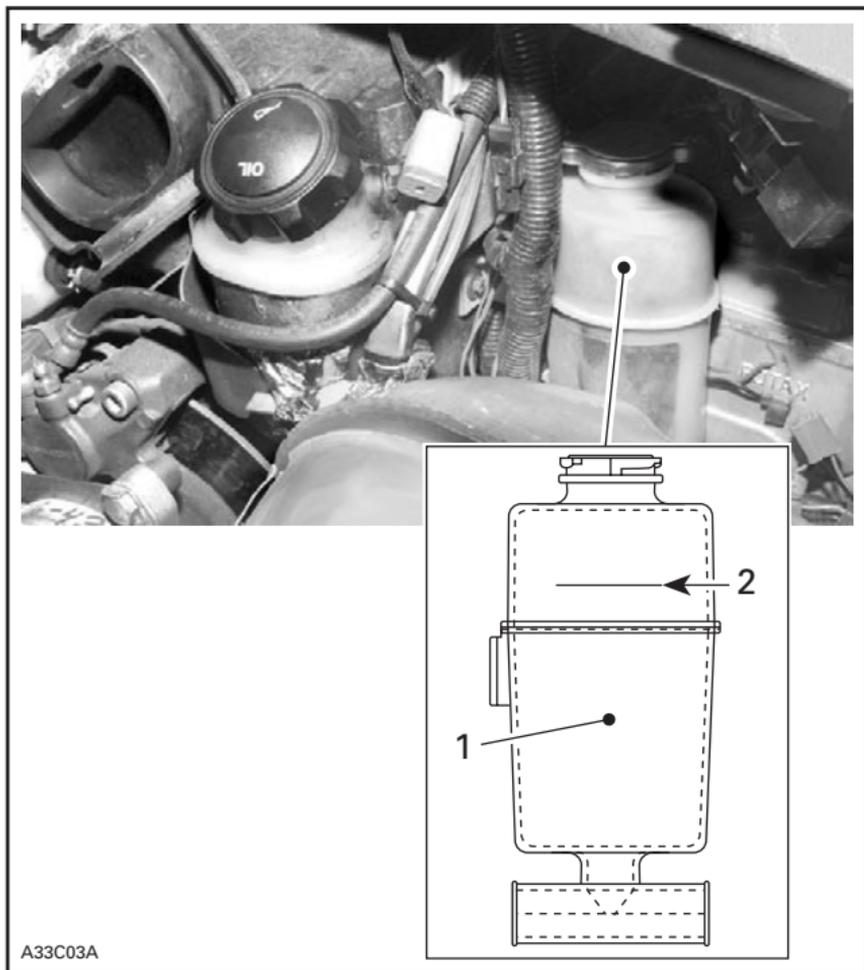
1. Injection oil reservoir
2. Maximum level indicator: 13 mm (1/2 in) from top
3. Level marks (1/4, 1/2, 3/4)

## Cooling System

Check coolant level at room temperature. Liquid should be at COLD LEVEL line (engine cold) of coolant tank.

**NOTE:** When checking level at low temperature it may be slightly lower than mark.

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



A33C03A

1. Coolant tank
2. COLD LEVEL line

## Battery Electrolyte

These vehicles are equipped with a maintenance-free battery. Electrolyte level can not be checked.

### **WARNING**

Battery BLACK negative cable must always be disconnected first and connected last.

### **WARNING**

Never charge or boost battery while installed. Battery electrolyte contains sulfuric acid which is corrosive and poisonous. In case of contact with skin, flush with water and call a physician immediately.

### **WARNING**

Should the battery casing be damaged, wear a suitable pair of non-absorbent gloves when removing the battery by hand.

**CAUTION:** Should any electrolyte spillage occur, immediately wash off with a solution of baking soda and water to prevent damage to vehicle components.

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# **MAINTENANCE FOR EPA CERTIFIED ENGINES**

Maintenance, replacement, or repair of the emission control devices and systems may be performed by any snowmobile SI (spark ignition) engine repair establishments or individual.

## **Engine Emissions Information**

### **Manufacturer's Responsibility**

Beginning with 2004 model year engines, snowmobile manufacturers of snowmobile engines may determine the exhaust emission levels for each engine horsepower family and certify these engines with the United States of America Environmental Protection Agency (EPA). An emissions control information label, showing emission levels and engine specifications, must be placed on each vehicle at the time of manufacture.

Bombardier Recreational Products certified the following engines to applicable EPA snowmobile standards:

600 HO SDI

### **Dealer's Responsibility**

When performing service on all 2004 and more recent certified SKI-DOO snowmobiles that carry an emissions control information label, adjustments must be kept within published factory specifications.

Replacement or repair of any emission related component must be executed in a manner that maintains emission levels within the prescribed certification standards.

Dealers are not to modify the engine in any manner that would alter the horsepower or allow emission levels to exceed their predetermined factory specifications.

Exceptions include manufacturer's prescribed changes, such as altitude adjustments for example.

### **Owner Responsibility**

The owner/operator is required to have engine maintenance performed to maintain emission levels within prescribed certification standards.

The owner/operator is not to, and should not allow anyone to modify the engine in any manner that would alter the horsepower or allow emissions levels to exceed their predetermined factory specifications.

## **EPA Emission Regulations**

All new 2004 and more recent certified SKI-DOO snowmobiles manufactured by Bombardier are certified to the EPA as conforming to the requirements of the regulations for the control of air pollution from new snowmobile engines. This certification is contingent on certain adjustments being set to factory standards. For this reason, the factory procedure for servicing the product must be strictly followed and, whenever practicable, returned to the original intent of the design.

The responsibilities listed above are general and in no way a complete listing of the rules and regulations pertaining to the EPA requirements on exhaust emissions for snowmobile products. For more detailed information on this subject, you may contact the following locations:

### **VIA U.S. POSTAL SERVICE:**

Office of Mobile Sources  
Engine Programs and Compliance Division  
Engine Compliance Programs  
Group (6403J)

401 M St. NW  
Washington, DC 20460

### **VIA EXPRESS or COURIER MAIL:**

Office of Mobile Sources  
Engine Programs and Compliance Division  
Engine Compliance Programs  
Group (6403J)

501 3<sup>rd</sup> St. NW  
Washington, DC 20001

### **EPA INTERNET WEB SITE:**

[www.epa.gov](http://www.epa.gov)

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## MAINTENANCE

### **WARNING**

It is recommended that the assistance of an authorized SKI-DOO dealer be periodically obtained on other components/systems not covered in this guide. Unless otherwise specified, engine must not be running and cold. Remove tether cord cap before performing any maintenance or adjustment, unless otherwise specified. Vehicle must be parked in a safe place, away from the trail.

### **Vehicle Cleaning and Protection**

Remove any dirt or rust.

To clean the entire vehicle, use only flannel cloths or equivalent.

**CAUTION:** It is necessary to use flannel cloths or equivalent on windshield and hood to avoid damaging further surfaces to clean.

To clean the entire vehicle, including bottom pan and metallic parts use Heavy duty cleaner (P/N 293 110 001 (spray can 400 g) and P/N 293 110 002 (4 L)).

**CAUTION:** Do not use Heavy duty cleaner on decals or vinyl.

For vinyl and plastic parts use Vinyl & Plastic Cleaner (P/N 413 711 200 (6 x 1 L)).

To remove scratches on windshield or hood use BOMBARDIER Scratch Remover Kit (P/N 861 774 800).

**CAUTION:** Never clean plastic parts or hood with strong detergent, degreasing agent, paint thinner, acetone, products containing chlorine, etc.

Clean sheaves of both pulleys using Pulley flange cleaner (P/N 413 711 809).

Inspect the hood and repair any damage.

Touch up all metal spots where paint has been scratched off. Spray all metal parts including shock chromed rods with BOMBARDIER LUBE (P/N 293 600 016).

Wax the hood and the painted portion of the frame for better protection.

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

**CAUTION:** The snowmobile has to be stored in a cool and dry place and covered with an opaque tarpaulin. This will prevent sun rays and grime from affecting plastic components and vehicle finish.

Lift rear of vehicle until track is clear of the ground. Install on a wide-base snowmobile mechanical stand.

## **WARNING**

Do not attempt to lift the vehicle by hand alone. Use appropriate lifting device or have assistance to share lifting stress in order to avoid risk of strain injuries.

**NOTE:** Do not release track tension.

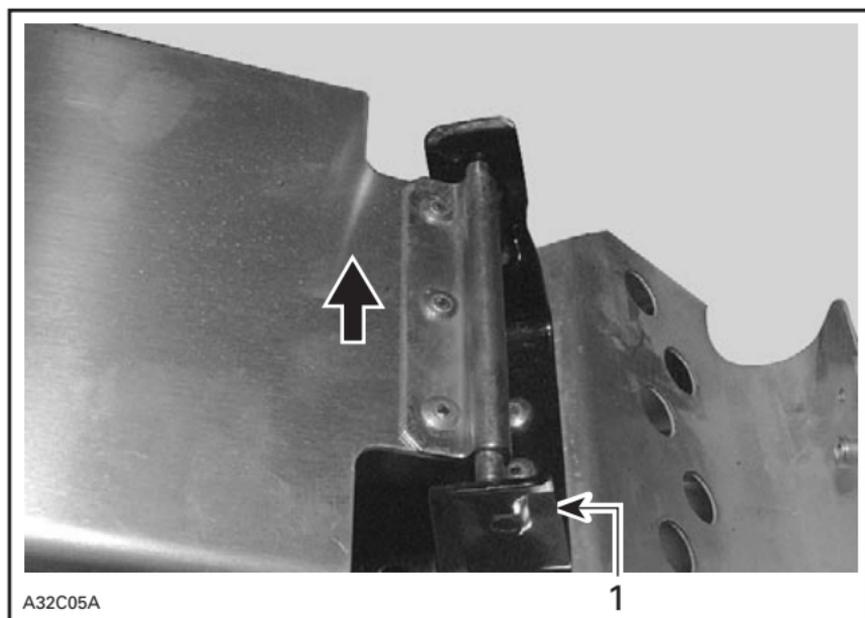
## **Belt Guard Removal and Installation**

### **WARNING**

Engine should be running only when belt guard is secured in place.

**NOTE:** Belt guard is purposely made slightly oversize to maintain tension on its pins and retainers preventing undue noise and vibration. It is important that this tension be maintained when reinstalling.

1. Remove tether cord cap. Open engine compartment.
2. Open retainer to release pin then pull belt guard out of vehicle.

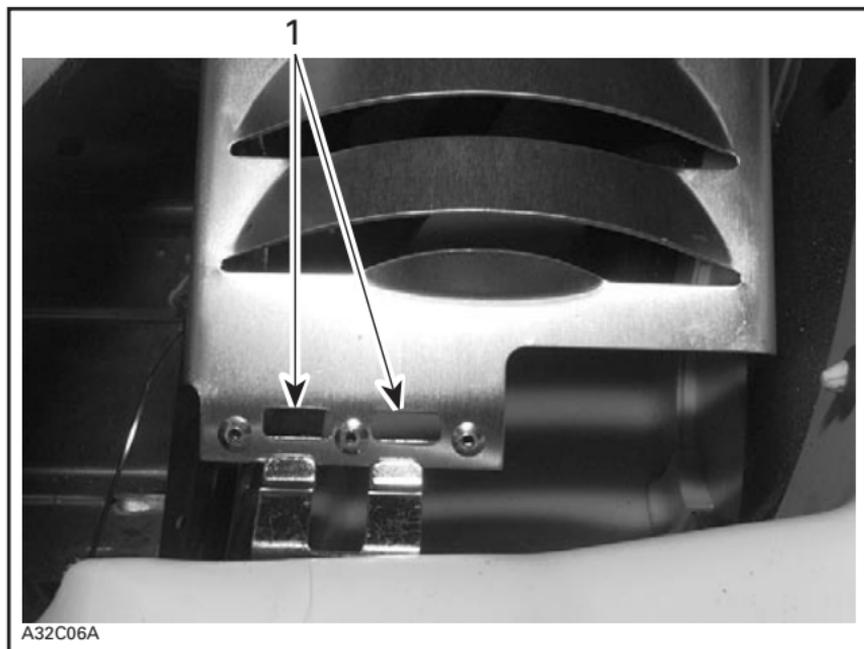


**TYPICAL**

1. Pin retainer

When reinstalling belt guard, position its cut-away toward front of snowmobile. Refer to decal in belt guard.

Place belt guard slots over tabs first, then snap the other end in retainer.



*TYPICAL*

1. Slots

## Drive Belt Removal/Installation

### **WARNING**

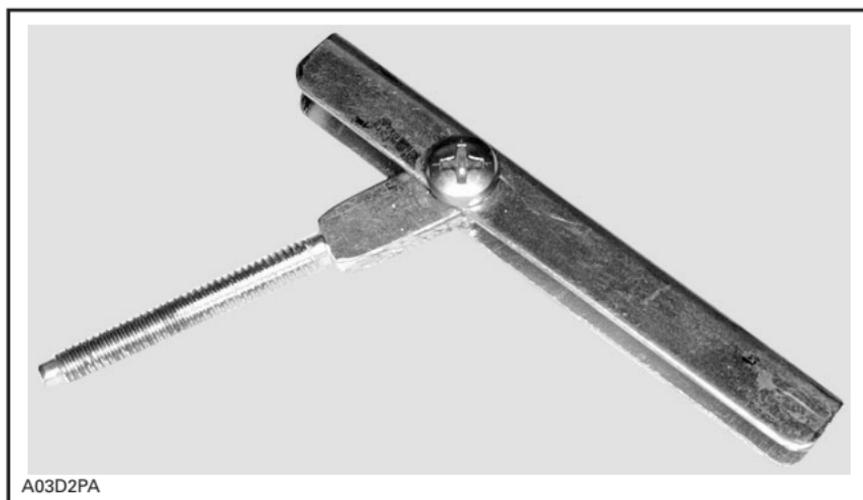
Remove tether cord cap before performing any maintenance or adjustment, unless otherwise specified. Vehicle must be parked in a safe place, away from the trail.

### Removal

**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, for this purpose.

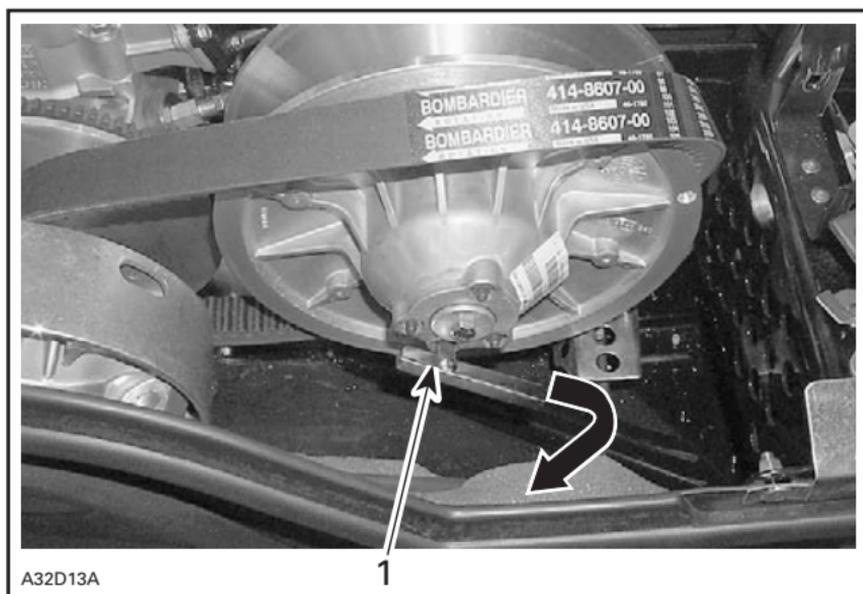
Remove tether cord cap. Open engine compartment and remove belt guard.

Open the driven pulley with the drive belt installer/remover provided in tool bag.



**DRIVE BELT INSTALLER/REMOVER**

Screw drive belt installer/remover in the free threaded hole and tighten to open the pulley. Remove belt.

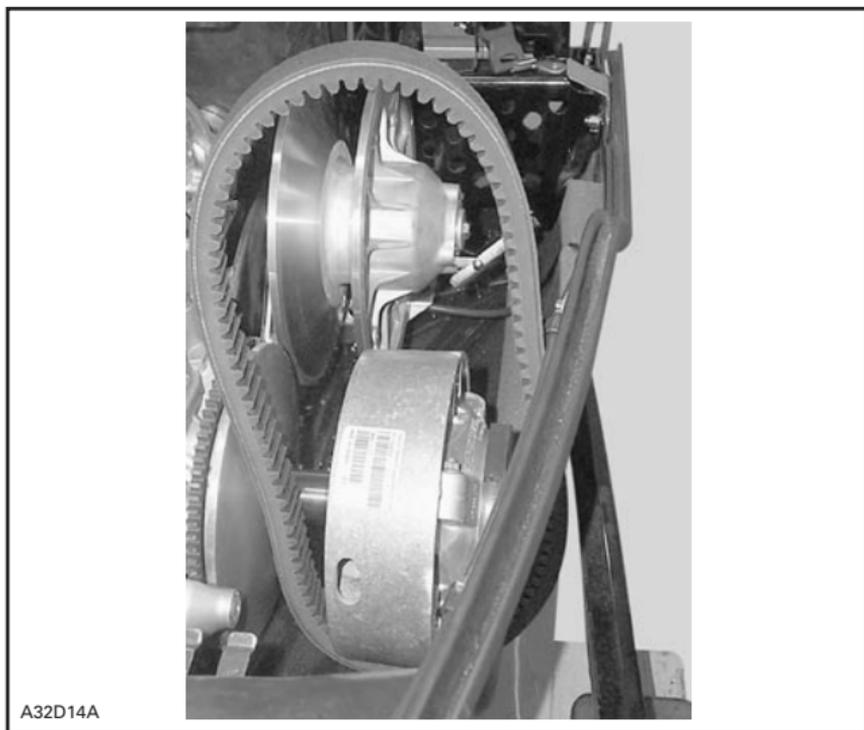


**TYPICAL**

1. Tighten to open pulley

Slip the belt over the top edge of the sliding half of driven pulley, as shown in previous photo.

Slip belt under drive pulley then, remove it from vehicle.



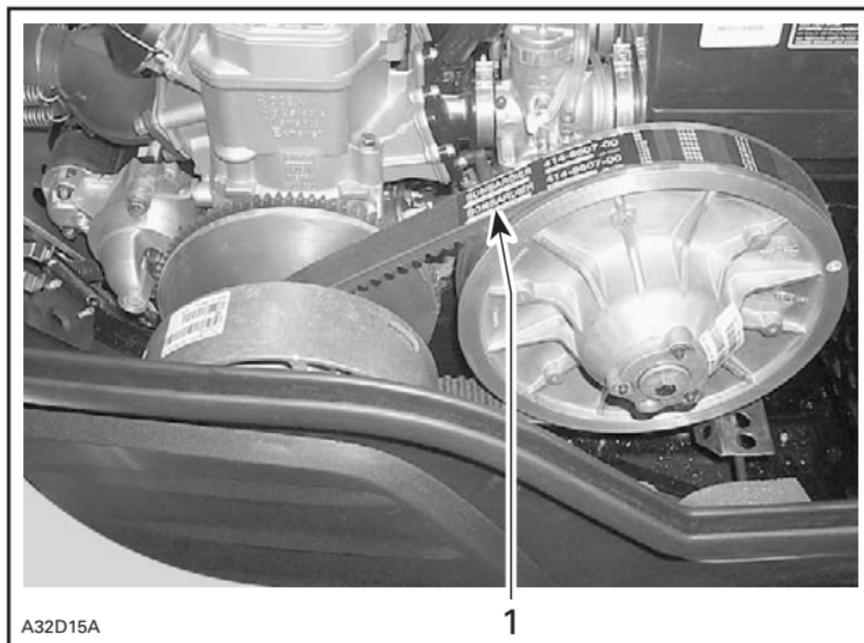
*TYPICAL*

Clean sheaves of both pulleys using pulley flange cleaner (P/N 413 711 809).

### **Installation**

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. See arrow on belt.



**TYPICAL**

1. Arrow pointing front of vehicle

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

To install the drive belt, first place belt between drive pulley sheaves. Then, between driven pulley sheaves, finishing with bottom.

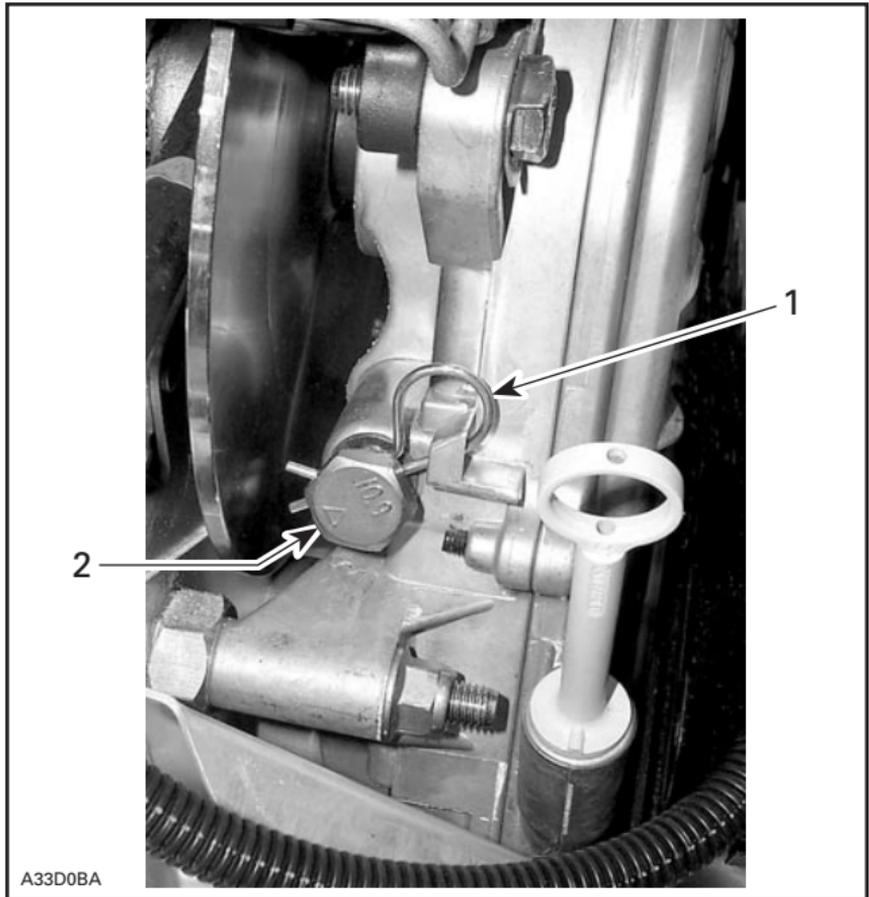
Remove drive belt installer/remover. Reinstall belt guard.

Close engine compartment.

## Drive Chain Tension

Remove hair pin.

Fully tighten tensioner adjustment screw by hand, then back off only far enough for hair pin to engage in locking hole.



**TYPICAL**

1. Hair pin
2. Adjustment screw

## Drive Pulley Adjustment

### **WARNING**

Remove tether cord cap before performing any maintenance or adjustment, unless otherwise specified. Vehicle must be parked in a safe place, away from the trail.

### **General**

The drive pulley is factory calibrated to transmit maximum engine power at a predefined RPM. Refer to SPECIFICATIONS at the end of this guide. Factors such as ambient temperature, altitude or surface condition may vary this critical engine RPM thus affecting snowmobile efficiency.

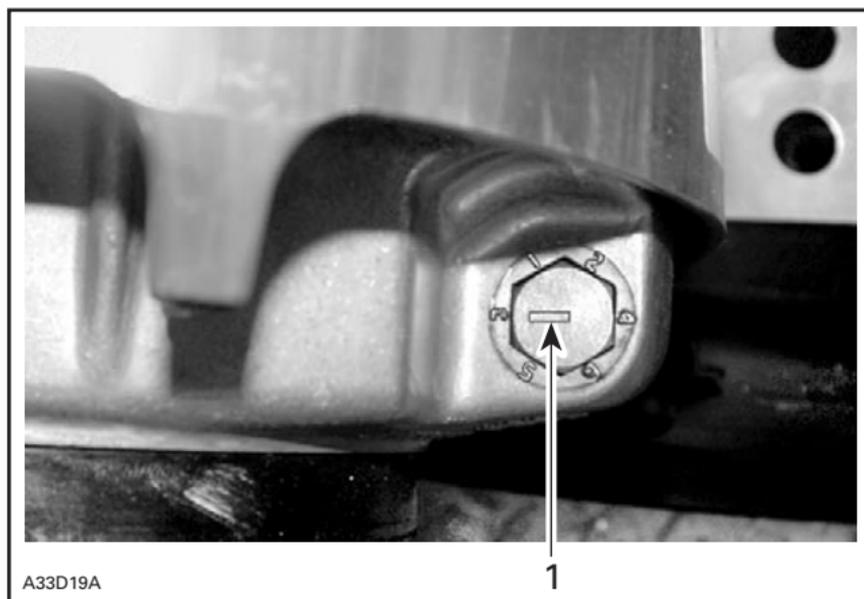
This adjustable drive pulley allows setting maximum engine RPM in the vehicle to maintain maximum power.

Calibration screws should be adjusted so that actual maximum engine RPM in vehicle matches with the maximum horsepower RPM.

**NOTE:** Use precision digital tachometer for engine RPM adjustment.

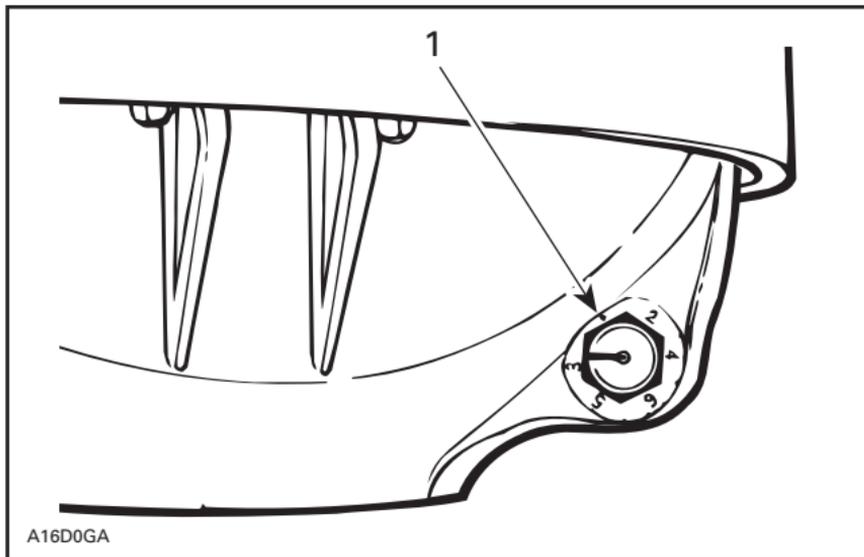
**NOTE:** The adjustment has an effect on high RPM only.

Calibration screw has a notch on top of its head.



1. Notch

There are 6 positions numbered 1 to 6. On TRA drive pulley, note that in position 1 the number is substituted by a dot (due to its location on casting).



#### **TRA DRIVE PULLEY**

1. Position 1 (not numbered)

Each position modifies maximum engine RPM by about 200 RPM.

Lower position numbers decrease engine RPM in steps of 200 RPM and higher position numbers increase it in steps of 200 RPM.

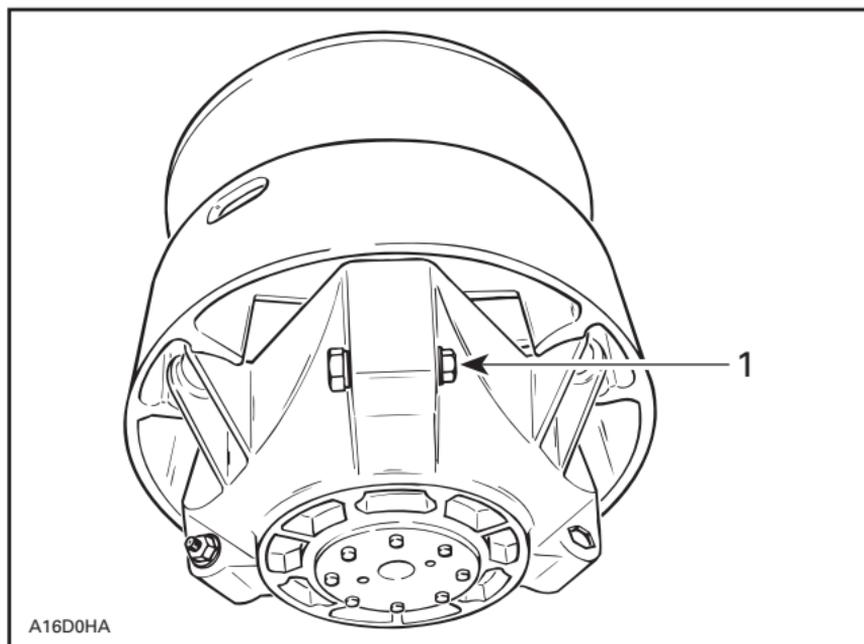
Example:

Calibration screw is set at position 4 and is changed to position 6. So maximum engine RPM is increased by 400 RPM.

#### **Adjustment**

Just loosen locking nut enough to pull calibration screw **partially** out and adjust to desired position. Do not completely remove the locking nut. Torque locking nuts to 10 N•m (89 lbf•in).

**CAUTION:** Do not completely remove calibration screw otherwise inside washer will fall off. Always adjust all 3 calibration screws and make sure they are all set at the same number.



A16D0HA

**TYPICAL**

1. Loosen just enough to permit rotating of calibrate screw

**⚠ WARNING**

Always reinstall belt guard. Do not operate engine with hood open or belt guard removed. Improper servicing, modification or poor adjustment may affect drive pulley performance and belt life. Always refer to the *Shop Manual* or obtain SKI-DOO dealer advice before servicing or modifying the drive or driven pulleys. Always respect maintenance schedules.

**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 SKI-DOO dealer.

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

## Brake Condition

### **WARNING**

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. Periodically verify the condition/wear of the brake pads.

## Brake Adjustment

No adjustment is provided for hydraulic brake. See an authorized SKI-DOO dealer if any problems.

## 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. Extensive riding on ice or sanded snow, will create excessive heat build-up and cause premature slider shoe wear.

## Suspension Stopper Strap Condition

Inspect stopper strap for wear and cracks, bolt and nut for tightness. If loose inspect holes for deformation. Replace as required. Torque nut to 7 N•m (62 lbf•in).

## Track Condition

### **WARNING**

Remove tether cord cap before performing any maintenance or adjustment, unless otherwise specified. Vehicle must be parked in a safe place, away from the trail.

Remove tether cord cap.

Lift the rear of the snowmobile and support it with a wide-base snowmobile mechanical stand. 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 SKI-DOO dealer.

## **WARNING**

Do not modify track, including by the installation of traction enhancing products. At speed it may cause the track to tear and separate from vehicle posing a risk of severe injury or death. Do not operate or rotate a track if torn, damaged or excessively worn (exposed fibers).

### **Track Tension and Alignment**

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

#### **Tension**

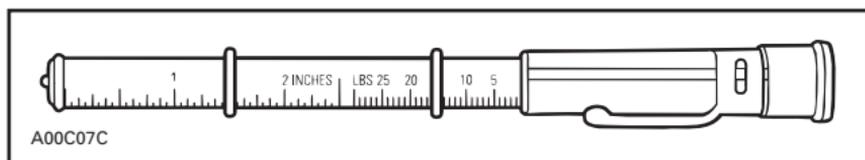
**NOTE:** Ride the snowmobile in snow about 15 to 20 minutes prior to adjusting track tension.

Remove the tether cord cap.

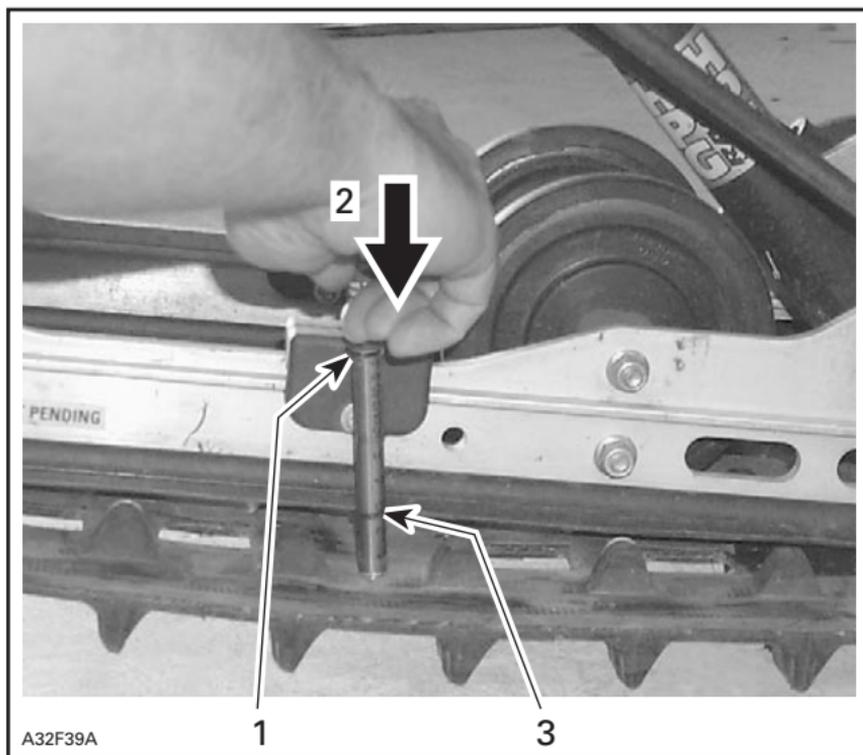
Lift rear of snowmobile and support it with a wide-base **snowmobile mechanical stand**.

Allow the suspension to extend normally and check gap half-way between front and rear idler wheels. Measure between slider shoe bottom and inside of track. The gap should be as given in SPECIFICATIONS at the end of this guide. If the track tension is too loose, track will have a tendency to thump.

**NOTE:** A belt tension tester (P/N 414 348 200) may be used to measure deflection as well as force applied.



*BELT TENSION TESTER*



**TYPICAL**

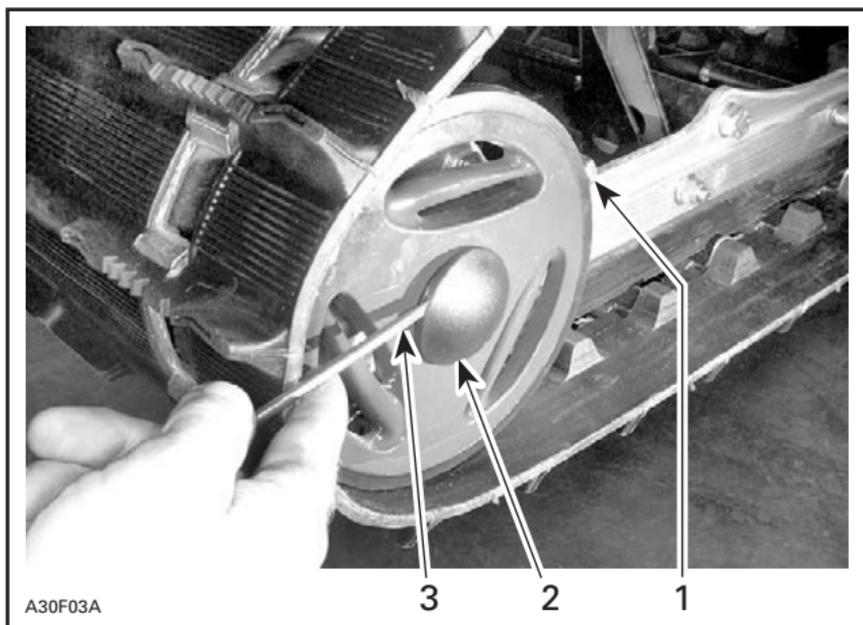
1. Top tool O-ring positioned at 7.3 kg (16 lb)
2. Push on top portion of tool until it contacts the top O-ring
3. Measured track deflection

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

**To adjust track tension:**

- Remove the tether cord cap.
- Remove wheel caps.
- Loosen the rear idler wheel retaining screws.
- Turn adjustment screws to adjust.

If correct tension is unattainable, contact an authorized SKI-DOO dealer.



#### TYPICAL

1. Adjustment screw
2. Retaining screw
3. Wheel cap removal

- Retighten retaining screws.
- Check track alignment as described below.

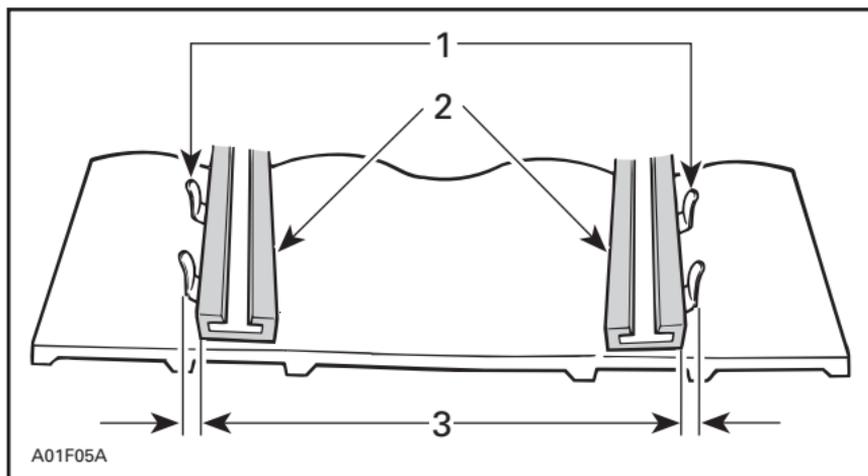
### Alignment

## **WARNING**

Before checking track alignment, ensure that the track is free of all particles which could be thrown out while track is rotating. Keep hands, tools, feet and clothing clear of track. Ensure no one is standing in close proximity to the snowmobile. Never rotate track at high speed.

Start the engine and accelerate slightly so that track barely turns. This must be done in a short period of time (15 to 20 seconds).

Check that the track is well centered; equal distance on both sides between edges of track guides and slider shoes.



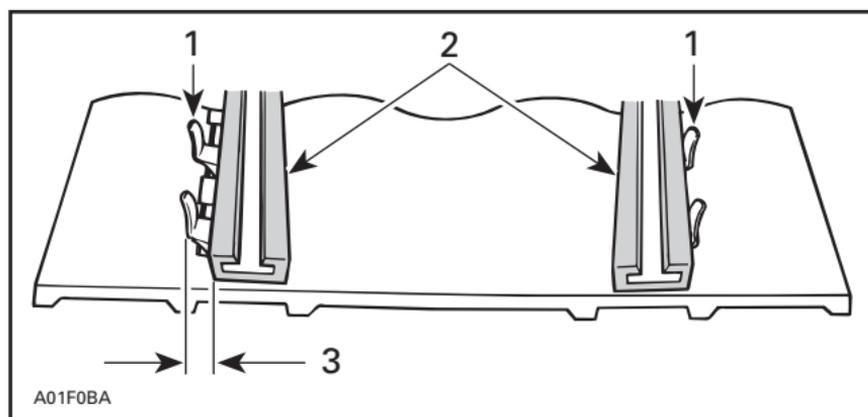
1. Guides
2. Slider shoes
3. Equal distance

**To Adjust Track Alignment:**

**⚠ WARNING**

Remove tether cord cap before performing any maintenance or adjustment, unless otherwise specified. Vehicle must be parked in a safe place, away from the trail.

- Remove the tether cord cap.
- Loosen rear idler wheel retaining screws.
- Tighten the adjustment screw on side where the slider shoe is the farthest from the track insert guides.



1. Guides
2. Slider shoes
3. Tighten on this side

Tighten retaining screws.

## **WARNING**

Properly tighten wheel retaining screws, otherwise wheel may come off and cause track to “lock”.

Restart engine and rotate track slowly to recheck alignment.

Reposition snowmobile on ground.

Install rear wheel caps.

## **Steering and Front Suspension**

Visually inspect steering and front suspension for tightness of components (steering arms, control arms and links, tie rods, ball joints, ski bolts, ski legs, etc.). If necessary, contact an authorized SKI-DOO dealer.

## **Wear and Condition of Skis and Runners**

Check the condition of the skis, ski runners and ski runner carbides (if so equipped). If worn, contact an authorized SKI-DOO dealer.

## **WARNING**

Excessively worn skis and/or ski runners will adversely affect snowmobile control.

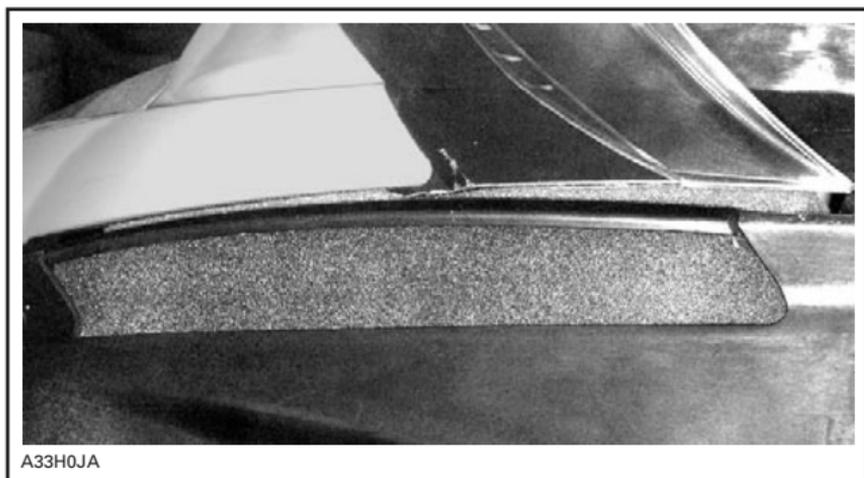
## **Exhaust System**

The tail pipe of the muffler should be centered with the exit hole in the bottom pan. Exhaust system must be free of rust or leaks. Make sure that gear clamps are properly tightened.

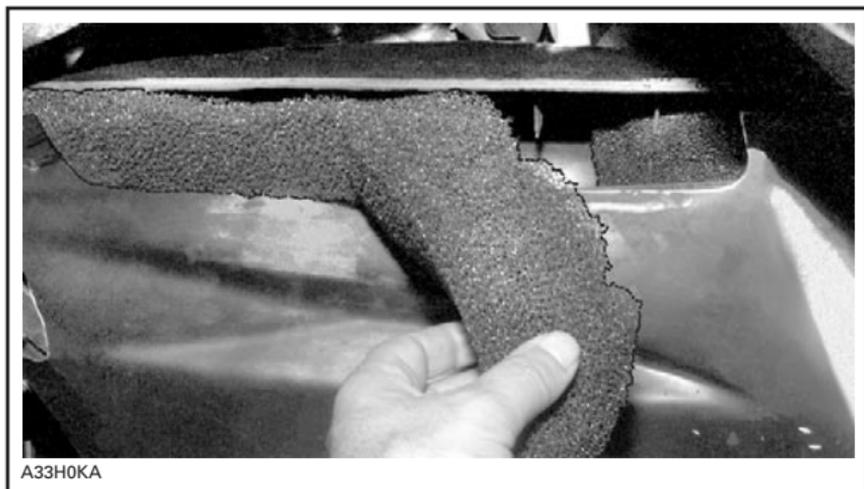
The exhaust system is designed to reduce noise and to improve the total performance of the engine. Modification may be in violation of local laws.

**CAUTION:** If any exhaust system component is removed, modified or damaged, severe engine damage may result.

## Air Filter Cleaning



*AIR FILTER LOCATION*



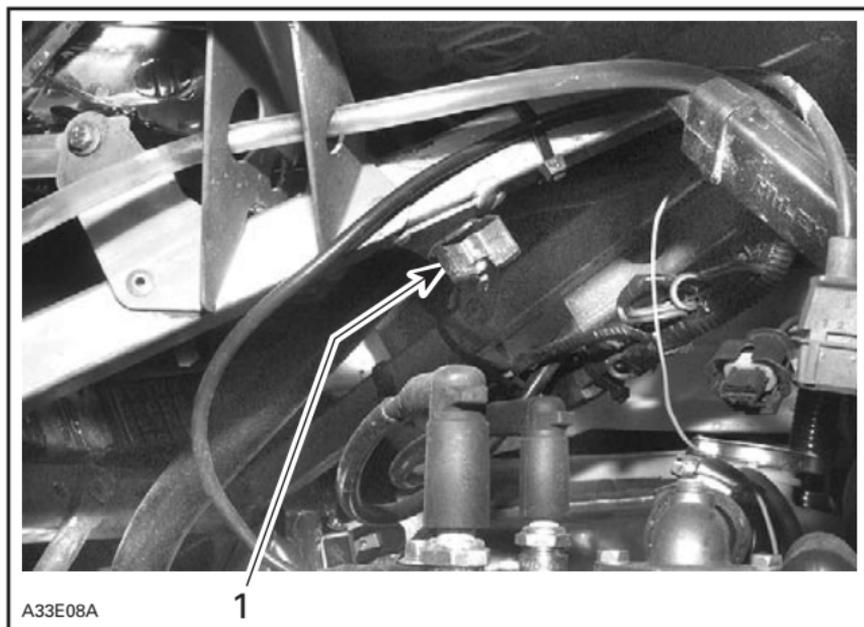
*REMOVAL OF FILTER FROM ITS GRILL*

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

**CAUTION:** Snowmobile engines have been calibrated with the filters installed. Operating the snowmobile without them may cause engine damage.

## Headlamp Beam Aiming

Open left side panel. Turn knob to adjust beam height.



*TYPICAL*

1. Knob

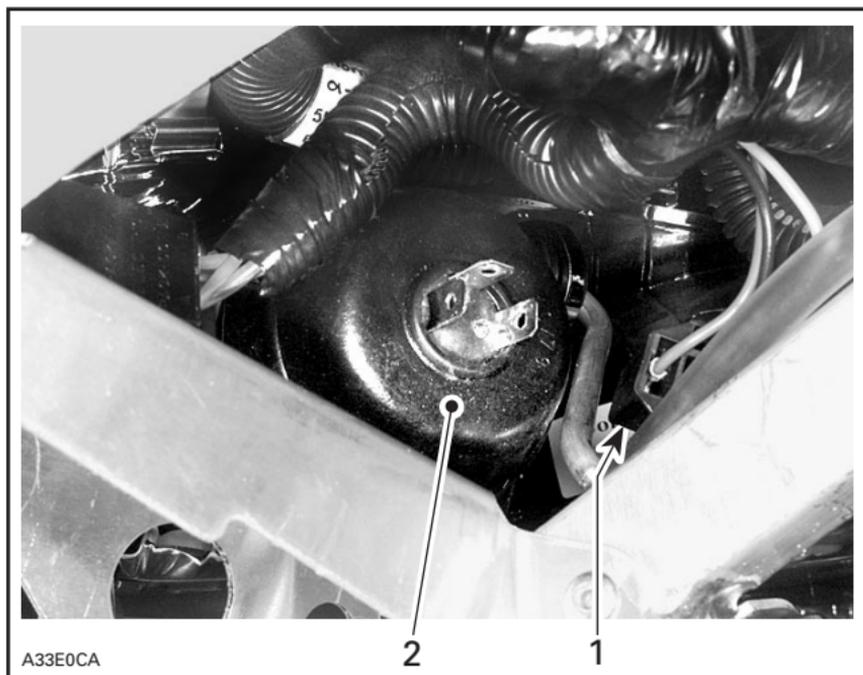
## Bulb Replacement

Always check light operation after bulb replacement.

### Headlamp

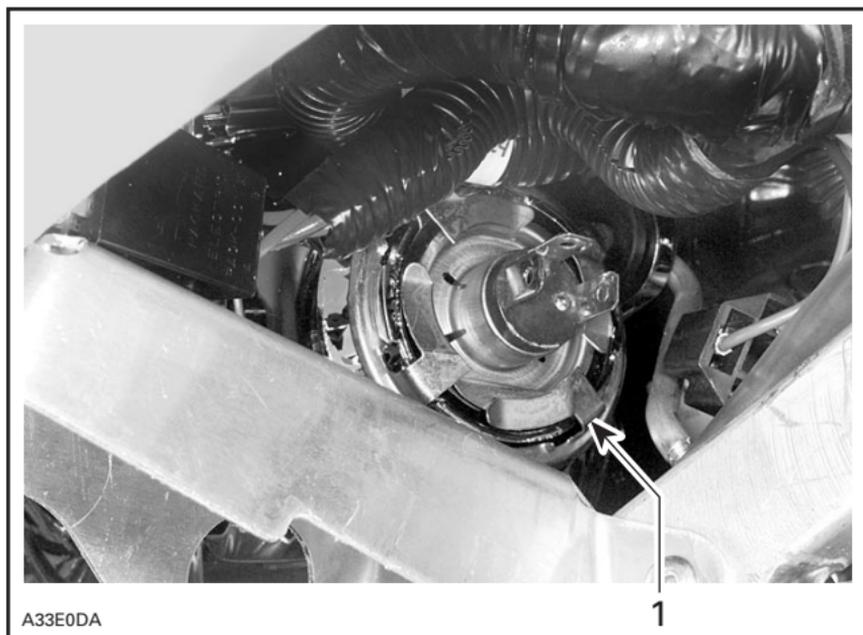
**CAUTION:** Never touch glass portion of an halogen bulb with bare fingers, it shortens its operating life. If glass is touched, clean it with isopropyl alcohol which will not leave a film on the bulb.

Unplug burnt bulb connector. Remove the rubber boot.



1. Bulb connector
2. Rubber boot

Turn bulb locking ring counterclockwise to remove it. Detach the bulb and replace. Properly reinstall parts.



1. Locking ring

## **Taillight**

If taillight bulb is burnt, expose the bulb by removing the red plastic lens. To remove, unscrew the 2 lens screws.

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## **TOWING THE VEHICLE**

First remove drive belt from vehicle to be towed.

A rope is not suitable to tow. Use a rigid bar and tow at very low speed.

Have all passengers get out of a towed snowmobile and walk across roads. Each towed vehicle should have reflectorized material on each side and on the rear.

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## **TRANSPORTING THE VEHICLE**

Make sure that oil reservoir and fuel tank caps are properly installed.

Tilt bed trailers can easily be equipped with a winch mechanism to afford maximum safety in loading. Simple as it may seem, never drive your snowmobile onto a tilt bed trailer or any other kind of trailer or vehicle. Many serious accidents have resulted from driving up and over a trailer. Anchor your vehicle securely, front and rear, even on short hauls. Be certain all equipment is securely fastened. Cover your snowmobile when trailering to prevent road grime from causing damage.

Be certain your trailer meets state or provincial requirement. Ensure the hitch and safety chains are secure and the brake, turn indicators and clearance lights all function.

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## STORAGE AND PRESEASON PREPARATION

### **WARNING**

Have an authorized SKI-DOO dealer inspect fuel and oil systems integrity as specified in PERIODIC MAINTENANCE CHART.

### **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, refer to an authorized SKI-DOO dealer.

### **Engine Cooling System**

Antifreeze should be replaced for the storage period to prevent antifreeze deterioration.

The antifreeze replacement and a density test should be performed by an authorized SKI-DOO dealer.

**CAUTION:** Improper antifreeze mixture might allow freezing of the liquid in the cooling system if vehicle is stored in area where freezing point is reached. This would seriously damage the engine. Failure to replace the antifreeze for storage may allow its degradation that could result in poor cooling when engine will be used.

**CAUTION:** Do not run engine during storage period.

### **Preseason Preparation**

Refer to an authorized SKI-DOO dealer.

**CAUTION:** On so equipped models, have carburetor(s) cleaned-up before restarting engine.

# TROUBLESHOOTING

## Monitoring Beeper Coded Signals

CODED SIGNALS	POSSIBLE CAUSE	REMEDY
2 short beeps (when engine is started). DESS/RER pilot lamp also blinks.	Confirms that proper tether cord cap is installed. Engine can rev above pulley engagement.	Normal condition.
1 short beep every 1.5 seconds (when engine is started). DESS/RER pilot lamp also blinks. Engine cannot reach pulley engagement speed. Vehicle cannot be driven.	Bad DESS system connection. Defective tether cord cap. Dirt or snow in tether cord cap. Defective DESS post.	Reinstall tether cord cap correctly over post. Use another programmed tether cord cap. Clean tether cord cap. Replace DESS post.
1 long beep per second.	Reverse is selected.	Vehicle can be driven in reverse.
3 short beeps per second. DESS/RER pilot lamp also blinks. Engine cannot reach pulley engagement speed. Vehicle cannot be driven.	Wrong tether cord cap is installed.	Install proper tether cord cap. Program key into electronic module.
3 short beeps per second. Engine overheating pilot lamp also blinks.	Engine is overheating.	Stop engine immediately and allow to cool. Check cooling system.
3 short beeps per second.	Low battery voltage.	Check battery and charging system.

CODED SIGNALS	POSSIBLE CAUSE	REMEDY
4 short beeps every 2 minutes. Oil pilot lamp also lights up.	Low oil level.	Check oil level and replenish as soon as possible.
Battery pilot lamp lights up.	No charging.	Check battery and charging system.
4 short beeps every 2 minutes.	Too high battery voltage.  DESS system has detected a shorted key installed on DESS post.	Check battery and charging system.  Use another programmed tether cord cap.

**SYMPTOM: *Engine is cranked but fails to start.***

POSSIBLE CAUSES	WHAT TO DO
1. Engine cut-out switch in OFF position or tether cord cap away from post.	Place engine cut-out switch in the ON position and install tether cord cap on post.
2. Mixture not rich enough to start cold engine.	Check fuel tank level and check starting procedure.
3. Flooded engine (spark plug wet when removed).	Remove wet spark plug, turn engine cut-out 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 SKI-DOO dealer.
4. No fuel to the engine (spark plug dry when removed).	Check fuel tank level; 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 SKI-DOO dealer.
5. Spark plug/ignition (no spark).	Remove spark plug(s) then reconnect to spark cap. Check that engine cut-out switch is at the ON position and the tether cut-out cord cap is snapped over the receptacle. Start engine with spark plug(s) grounded to engine away from spark plug hole. If no spark appears, replace spark plug. If trouble persists, contact an authorized SKI-DOO 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 multi-cylinder engines). If no pulsating resistance is felt, it suggests a major loss of compression. Contact an authorized SKI-DOO dealer.

**SYMPTOM: Engine lacks acceleration or power.**

POSSIBLE CAUSES	WHAT TO DO
1. DESS did not read tether cord cap code. DESS pilot lamp blinks once every 1.5 seconds. Engine can not exceed 3000 RPM.	Properly install.
2. DESS has read a different code than the one programmed. DESS pilot lamp blinks rapidly (3 times per second). Engine can not exceed 3000 RPM.	Install a tether cord cap (key) for which this snowmobile was programmed.
3. Fouled or defective spark plug.	Check item 5 of ENGINE TURNS OVER BUT FAILS TO START.
4. Lack of fuel to engine.	Check item 4 of ENGINE TURNS OVER BUT FAILS TO START.
5. Faulty engine management system (EMS).	Contact an authorized SKI-DOO dealer.
6. 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. Replace drive belt.
7. Drive and driven pulleys require servicing.	Contact an authorized SKI-DOO dealer.
8. Engine is overheating.	On liquid cooled engines, check coolant level, pressure cap, thermostat and for air locks in cooling system. If overheating persists, contact an authorized SKI-DOO dealer.

**SYMPTOM: Engine backfires.**

POSSIBLE CAUSES	WHAT TO DO
1. DESS did not read tether cord cap code. DESS/RER pilot lamp blinks once every 1.5 seconds. Engine can not exceed 3000 RPM.	Properly install.
2. DESS has read a different code than the one programmed. DESS pilot lamp blinks rapidly (3 times per second). Engine can not exceed 3000 RPM.	Install a tether cord cap (key) for which this snowmobile was programmed.
3. Faulty spark plug (carbon accumulation).	See item 5 of ENGINE TURNS OVER BUT FAILS TO START.
4. Engine is running too hot.	See item 6 of ENGINE LACKS ACCELERATION OR POWER.
5. Ignition timing is incorrect or there is an ignition system failure.	Contact an authorized SKI-DOO dealer.

**SYMPTOM: Engine misfires.**

POSSIBLE CAUSES	WHAT TO DO
1. DESS did not read tether cord cap code. DESS/RER pilot lamp blinks once every 1.5 seconds. Engine can not exceed 3000 RPM.	Properly install.
2. DESS has read a different code than the one programmed. DESS pilot lamp blinks rapidly (3 times per second). Engine can not exceed 3000 RPM.	Install a tether cord cap (key) for which this snowmobile was programmed.
3. Fouled/defective/worn spark plugs.	Clean/verify spark plug gap and identification number. Replace as required.
4. Too much oil supplied to engine.	Improper oil pump adjustment, refer to an authorized SKI-DOO dealer. On pre-mixed models only, improper fuel/oil mixture. Drain fuel tank and refill with appropriate mixture ratio.
5. Water in fuel.	Drain fuel system and refill with fresh fuel.

**SYMPTOM: *Snowmobile cannot reach full speed.***

POSSIBLE CAUSES	WHAT TO DO
1. DESS did not read tether cord cap code. DESS/RER pilot lamp blinks once every 1.5 seconds. Engine can not exceed 3000 RPM.	Properly install.
2. DESS has read a different code than the one programmed. DESS pilot lamp blinks rapidly (3 times per second). Engine can not exceed 3000 RPM.	Install a tether cord cap (key) for which this snowmobile was programmed.
3. Drive belt.	Check item 6 of ENGINE LACKS ACCELERATION OR POWER.
4. Incorrect track adjustment.	See MAINTENANCE and/or an authorized SKI-DOO dealer for proper alignment and tension adjustments.
5. Pulleys misaligned.	Contact an authorized SKI-DOO dealer.
6. Engine.	See items 1, 2, 6 and 7 of ENGINE LACKS ACCELERATION OR POWER.

# SPECIFICATIONS

MODEL		MX-Z RENEGADE 600 HO SDI R
<b>Engine</b>		
– Maximum power engine speed	± 100 RPM	8000
<b>Drive Belt</b>		
– Part number		417 300 197
– Wear limit width	mm (in)	34.2 (1-11/32)
<b>Spark Plug</b>		
– Type		NGK BR 9 ECS
– Gap	± 0.05 mm (± .002 in)	0.80 (.031) ⑦
<b>Track</b>		
– Tension	mm (in)	30 - 35 (1-3/16 - 1-3/8) ①
– Alignment		②
<b>Fuel</b>		
– Type		③
– Tank capacity	L (U.S. gal)	37 (9.8)
<b>Oil (engine)</b>		
– Type		④
– Tank capacity	L (U.S. oz)	3.5 (118)
<b>Chaincase Oil</b>		
– Type		⑤
– Capacity	mL (U.S. oz)	250 (8.5)
<b>Coolant</b>		
– Type		⑥
– Capacity	L (U.S. oz)	4.3 (145)
<b>Brake System Fluid</b>		
– Type		DOT 4 ⑧
① to ⑧ and N.A.: See at end of specifications.		
Because of its ongoing commitment to product quality and innovation, Bombardier reserves the right, at any time, to make changes in design and specifications and/or to make additions to, or improvements in its products without imposing any obligation upon itself to install them on its products previously manufactured.		

- ① Measure gap between slider shoe and bottom inside of track when exerting a downward pull of 7.3 kg (16 lb) to the track.
  - ② Equal distance between edges of track guides and slider shoes.
  - ③ Premium unleaded gasoline with a minimum octane number of 91 (R + M)/2.
  - ④ BOMBARDIER Formula XP-S II synthetic injection.
  - ⑤ Bombardier synthetic chaincase oil (P/N 413 803 300 — 12 x 355 mL).
  - ⑥ Bombardier premixed coolant (P/N 413 711 802 — 16 x 1 L).
  - ⑦ **CAUTION: Do not attempt to adjust gap on spark plug BR 9 ECS.**
  - ⑧ SRF (DOT 4) (P/N 293 600 063) or GTLMA (DOT 4) (P/N 293 600 062).
- N.A.: Not applicable

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## **PRIVACY OBLIGATIONS/DISCLAIMER**

We wish to inform you that your coordinates will be used for safety and warranty purposes. Sometimes, we also use the coordinates of our clients to inform them about our products and to present them offers. Should you prefer not to receive information on our products, services and offers, please let us know by writing to the address below.

Also note that, from time to time, carefully selected and trustworthy organizations may be permitted to use the coordinates of our clients to promote quality products and services. If you prefer not to have your name and address released, please let us know by writing to the address below:

### **Bombardier Inc. Recreational Products**

Warranty Department  
75 J.A. Bombardier Street  
Sherbrooke, Québec J1L 1W3  
Canada

Fax Number (819) 566-3590

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## **CHANGE OF ADDRESS OR OWNERSHIP**

If your address has changed or if you have sold or given your vehicle to anyone, be sure to fill out and mail the card provided on next page.

Such notification is necessary for your safety or the safety of any subsequent owner, 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 mail the *Change of Ownership Card* 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 of theft.

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



AFFIX  
PROPER  
POSTAGE

**BOMBARDIER**  
RECREATIONAL PRODUCTS  
WARRANTY DEPARTMENT  
75 J.A. BOMBARDIER ST.  
SHERBROOKE (QUEBEC)  
CANADA J1L 1W3

520 000 494

CA

OPERATOR'S GUIDE, MX Z RENEGADE 600 HO SDI/ENGLISH  
GUIDE DU CONDUCTEUR, MX Z RENEGADE 600 HO SDI/ANGLAIS

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