

ski-doo[®]

REV[™] G4

Trail / Crossover E-TEC[®] Series

Operator's Guide 2020

Includes
Safety, Vehicle
and Maintenance Information



⚠ WARNING

Read this guide thoroughly.
It contains important safety information.
Minimum recommended operator's age: 16 years old.
Keep this Operator's Guide in the vehicle.

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Original Instructions


WARNING

Disregarding any of the safety precautions and instructions contained in this Operator's Guide, *SAFETY VIDEO* and on-product safety labels could cause injury including the possibility of death!

WARNING

This vehicle may exceed the performance of other vehicles you may have ridden. Take time to familiarize yourself with your new vehicle.

CALIFORNIA PROPOSITION 65 WARNING

 **WARNING:** Operating, servicing and maintaining an off-road vehicle can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle. For more information go to www.p65warnings.ca.gov/products/passenger-vehicle.



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Model	Package	Engine
MX Z	TNT	600R E-TEC
		850 E-TEC
	X	600R E-TEC
		850 E-TEC
	X-RS	600R E-TEC
		850 E-TEC
Renegade	Adrenaline	600R E-TEC
		850 E-TEC
	Enduro	600R E-TEC
		850 E-TEC
	X	600R E-TEC
		850 E-TEC
	X-RS	850 E-TEC
	Backcountry	-
850 E-TEC		
X		600R E-TEC
		850 E-TEC
X-RS		850 E-TEC

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GENERAL INFORMATION

FOREWORD

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

Your dealer is committed to your satisfaction. He has taken training to perform the initial set-up and inspection of your snowmobile as well as completed the final adjustment required to suit your specific weight and riding environment before you took possession.

At delivery, you were informed of the warranty coverage and signed the *PREDELIVERY CHECK LIST* to ensure your new vehicle was prepared to your entire satisfaction.

Know Before you Go

To learn how to reduce the risk for you, your passenger or bystanders being injured or killed, read the following sections before you operate the vehicle:

- SAFETY INFORMATION
- VEHICLE INFORMATION.

Also read all safety labels on your snowmobile and watch attentively your *SAFETY VIDEO* located at www.ski-doo.com/safety.



BRP highly recommend that you take a safety riding course. Please check with your dealer or local authorities for availability in your area.


Failure to follow the warnings contained in this Operator's Guide can result in **SERIOUS INJURY** or **DEATH**.

The proper functioning of a snowmobile depends in part on the surface on which it is driven. Refer to *RIDING CONDITIONS AND YOUR SNOWMOBILE* for details.

Driving on very hard or snow-free surfaces compromises the cooling of the engine and the lubrication of rear suspension components. Avoid prolonged driving on such surfaces.

Safety Messages

The types of safety messages, what they look like and how they are used in this guide are explained as follows:

The safety alert symbol  indicates a potential injury hazard.

WARNING

Indicates a potential hazard, if not avoided, could result in serious injury or death.

CAUTION

Indicates a hazard situation which, if not avoided, could result in minor or moderate injury.

NOTICE Indicates an instruction which, if not followed, could severely damage vehicle components or other property.

About this Operator's Guide

This Operator's Guide has been prepared to acquaint the owner /operator and passenger with this snowmobile and its various controls, safe riding and maintenance instructions.

The following terminology in regards to operator, passenger and vehicle configuration is used as follows throughout this guide:

- **Operator** : refers to the person being behind the controls and driving the snowmobile.
- **Passenger** : refers to a person sitting behind the operator.
- **1-UP** : refers to a model designed for an operator only.
- **2-UP** : refers to a model designed to accommodate **one** passenger.

Keep this Operator's Guide in the vehicle as you can refer to it for things such as maintenance, troubleshooting and instructing others.

Note that this guide is available in several languages. In the event of any discrepancy, the English version shall prevail.

If you want to view and/or print an extra copy of your Operator's Guide, simply visit the following website **www.operatorsguides.brp.com** .

The information contained in this document is correct at the time of publication. BRP, however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, some differences between the manufactured product and the descriptions and/or specifications in this guide may occur. BRP reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring any obligation upon itself.

This Operator's Guide should remain with the vehicle when it's sold.

SAFETY INFORMATION

GENERAL PRECAUTIONS

Avoid Carbon Monoxide Poisoning

All engine exhaust contains carbon monoxide, a deadly gas. Breathing carbon monoxide can cause headaches, dizziness, drowsiness, nausea, confusion and eventually death.

Carbon monoxide is a colorless, odorless, tasteless gas that may be present even if you do not see or smell any engine exhaust. Deadly levels of carbon monoxide can collect rapidly, and you can quickly be overcome and unable to save yourself. Also, deadly levels of carbon monoxide can linger for hours or days in enclosed or poorly ventilated areas. If you experience any symptoms of carbon monoxide poisoning, leave the area immediately, get fresh air and seek medical treatment.

To prevent serious injury or death from carbon monoxide:

- Never run the vehicle in poorly ventilated or partially enclosed areas such as garages, carports or barns. Even if you try to ventilate engine exhaust with fans or open windows and doors, carbon monoxide can rapidly reach dangerous levels.
- Never run the vehicle outdoors where engine exhaust can be drawn into a building through openings such as windows and doors.

Avoid Gasoline Fires and Other Hazards

Gasoline is extremely flammable and highly explosive. Fuel vapors can spread and be ignited by a spark or flame many feet away from the engine. To reduce the risk of fire or explosion, follow these instructions:

- Use only an approved gasoline container to store fuel.
- Strictly adhere to instructions in *VEHICLE FUELING PROCEDURE*.
- Never start or operate the engine if the fuel cap is not properly installed.

Gasoline is poisonous and can cause injury or death.

- Never siphon gasoline by mouth.
- If you swallow gasoline, get any in your eye or inhale gasoline vapor, see your doctor immediately.

If gasoline spills on you, wash with soap and water and change your clothes.

Avoid Burns from Hot Parts

The exhaust system and engine become hot during operation. Avoid contact during and shortly after operation to avoid burns.

Accessories and Modifications

Do not make unauthorized modifications, or use attachments or accessories that are not approved by BRP. Since these changes have not been tested by BRP, they may increase the risk of crashes or injuries, and they can make the vehicle illegal.

Tunnel accessories must be loaded onto vehicle as per instructions provided for each accessories.

Accessory passenger seats approved by BRP and conforming to SSCC standards may be available for certain models. If such a seat is used, you must follow the guidelines and recommendations in regards to a passenger in this guide.

WARNING

Passenger seat must have a strap or handholds and must meet SSCC standards.

See your authorized Ski-Doo dealer for available accessories for your vehicle.

SPECIAL SAFETY MESSAGES

SEVERE INJURY OR DEATH can result if you do not follow these instructions:

- Always make a pre-ride inspection BEFORE you start the engine.
- Throttle mechanism should be checked for free movement and return to idle position before starting engine.
- Always attach tether cord eyelet to clothing before starting the engine.
- Never operate the engine without belt guard and brake disk guard securely installed or, with hood or side panels opened 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.
- Always engage parking brake before starting the engine.
- Everyone is a beginner the first time he sits behind the controls of a snowmobile regardless of previous experience in driving any other type of vehicle. The safe use of your snowmobile depends on many conditions such as visibility, speed, weather, environment, traffic, vehicle condition and the condition of the operator.
- 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.
- Any new operator must read and understand all safety labels on the snowmobile, the Operator's Guide and watch the *SAFETY VIDEO* at www.ski-doo.com/safety before operating the snowmobile. Only allow a new operator to operate the snowmobile in a restricted flat area, at least until he is completely familiar with its operation. If snowmobile operator's training course is offered in your area, have him enroll.
- 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.
- 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 operator's, passenger's or snowmobile's capabilities or intended use.
- BRP recommends the operator has at least 16 years old of age. Verify also your local laws for age and training requirements.
- It is very important to inform any operator, regardless of his experience, of the handling characteristics of this snowmobile. The snowmobile configuration, such as ski stance, ski type, suspension type, track length, width and type vary from a model to another. The snowmobile handling is greatly influenced by these characteristics.
- The novice operator should become familiar with the snowmobile through practice on a level area at slow speeds before venturing far afield.
- Know your local laws. 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. Be aware of the liability property damages and insurance laws regarding your equipment.
- 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.
- Always keep right hand side of the trail.
- Always keep a safe distance from other snowmobiles and bystanders.
- 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 use this vehicle with drugs or alcohol. They slow reaction time and impair judgement.
- Your snowmobile is not designed to be operated on public streets, roads or highways.
- 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.
- 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.
- Never remove any original equipment from your snowmobile. Each vehicle has many built in safety features. Such features include various guards and consoles, plus reflective materials and safety labels.
- 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.
- Always wear an approved safety helmet, eye protection and a face shield. This also applies to your passenger.
- Be aware of inherent risks associated with riding off trails, such as avalanche and other natural or man made hazards or obstacles.
- Tailgating another snowmobile should be avoided. If the snowmobile in front of you slows for any reason, its operator 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.
- 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 water accumulate and freezes 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” with your snowmobile.
- 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.
- In an emergency, the snowmobile engine can be stopped by pressing down on the emergency engine stop switch or by pulling the tether cord cap from the engine cut-off switch, while applying brake.
- Always engage parking brake when vehicle is not in use.
- Never run the engine in a non-ventilated area and/or if vehicle is left unattended.
- Electric start models only: Never charge or boost a battery while installed on snowmobile.
- E-TEC engines: Never attempt any fuel system or electrical system maintenance or repair. Any maintenance or repair of these systems must be performed by an authorized Ski-Doo dealer.
- Never attempt any fuel system or electrical system maintenance or repair. Any maintenance or repair of these systems must be performed by an authorized Ski-Doo dealer.
- Ensure the path behind is clear of obstacles or bystanders before proceeding in reverse.

- Always remove the tether cord cap from engine cut-off switch when vehicle is not in operation in order to prevent accidental engine starting, to avoid unauthorized use by children or others or theft.
- NEVER stand behind or near a rotating track. Debris could be projected causing severe injuries. To remove packed snow or ice, stop engine, tilt and hold vehicle on its side and use wrench tool on the belt guard.
- Do not stud the track unless it has been approved for studs. At speed, a studded track that has not been approved for studs could tear and separate from vehicle. See an authorized Ski-Doo dealer for current specific studding availability and applications.
- You may stud the track on this vehicle model. However, you MUST only use the BRP approved type stud for use on Ski-Doo snowmobiles. DO NOT EVER use conventional studs because the track thickness is thinner than our standard tracks. The stud could tear off of track and separate from vehicle.
- Always wear an approved helmet and follow the same dressing guidelines as those recommended for the operator and described in this guide.
- Make sure that you are able to achieve a stable stance, both feet resting positively on the footboards of footrests with good grip, and that you are able to hold on firmly to the handholds.
- Do not forget, with 2-UP models, the operator is responsible for the safety of the passenger. Always remember that the snowmobile handling, stability and braking distance may be affected when riding with a passenger.
- Before riding the vehicle, ask your passenger to inform you to slowdown or stop immediately if he feels uncomfortable or insecure during the ride. Keep a watchful eye on your passenger while riding.

RIDING THE VEHICLE

Each operator has a responsibility to ensure the safety 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 the other.

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 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. Though not required, it is recommended that an authorized Ski-Doo dealer performs the preseason preparation of your snowmobile. Each visit to your authorized Ski-Doo dealer is a great opportunity for your dealer to verify if your snowmobile is included in any safety campaign. We also urge you to visit your authorized Ski-Doo dealer in a timely manner if you become aware of any safety related campaigns.

See an authorized Ski-Doo dealer for available accessories you may require.

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.

Topic PRE-RIDE INSPECTION moved into its own new SECTION L2

How to Ride

Riding Gear

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

Wear an approved helmet at all times for safety and comfort. 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 that attach to the helmet are indispensable.

Hands should be protected by a pair of snowmobile gloves or mitts which have sufficient insulation and allow 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 a long scarf or loose apparels that could get caught in moving parts.

Carry colored lens goggles.

What to Bring

First aid kit	Provided tool kit
Mobile phone	Knife
Spare spark plugs	Flashlight
Friction tape	Trail map
Spare drive belt	Snack

Rider Position (Forward Operation)

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. Operator and passenger must never attempt this maneuvering by placing 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.

⚠ WARNING

Do not attempt any maneuvers if they are beyond your abilities.

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.



mmo2008-003-001

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.



mmo2008-003-002

Kneeling

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



mmo2008-003-003

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.



mmo2008-003-004

Rider Position (Reverse Operation)

We recommend sitting on your snowmobile when operating in reverse.

Avoid standing up. Your weight could shift forward against throttle lever while operating in reverse, causing an unexpected acceleration.

⚠ WARNING

Unexpected acceleration when snowmobile operates in reverse can cause a loss of control.

Carrying a Passenger

Certain snowmobiles are designed for an operator only (1-UP), and others can allow one passenger (2-UP). Make sure to identify and respect the warnings according to your specific models.

Even when a passenger is allowed, this person must be physically fit for snowmobiling.

WARNING

Any passenger must be able to firmly lay his feet on the footrests and keep his hands on the handholds or seat strap at all times when seated. Respecting those physical criteria is important to ensure that the passenger is stable and to reduce the risks of ejection.

The operator has a responsibility to ensure the safety of his passenger and should inform the passenger about snowmobiling basics.

WARNING

- **Passenger must only sit on designated passenger seat. Never allow anyone to sit between the handlebar and the operator.**
- **Passenger and operator must always wear an approved helmet and warm clothing appropriate for snowmobiling. Make sure that no skin is exposed.**
- **If the passenger feels uncomfortable or insecure for any reason, he must right away inform the operator to slowdown or stop.**

Riding with a passenger on board is different than riding alone. The operator has the benefit of knowing what will be the next maneuver and is able to prepare himself accordingly. The operator also benefits from the support of his grip on the handlebar. In contrast, the passenger has to rely on

the operator's careful and safe operation of the vehicle. In addition, "body english" is limited with a passenger, and the operator can sometimes see more of the trail ahead than the passenger. Therefore, smooth starting and stopping are required with a passenger, and the operator must slow down. The operator must also warn the passenger about side hills, bumps, branches, etc. 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.

 **WARNING**

When riding with a passenger:

- Braking ability and steering control are reduced. Decrease speed and allow extra space to maneuver.
- Adjust suspension according to weight.

For complete information on how to adjust the suspension, please refer to *TUNE YOUR RIDE*.

Riding with a Child

On snowmobiles allowing two passengers (with optional seat), if you have an adult and a child for passenger, BRP recommends that the child sits in the center location. This allows an adult sitting in the rear seat to keep a visual contact with the child and hold him if necessary. In addition, the child is best protected against the wind and cold temperature if seated in the center location.

Use extra caution and go even more slowly with a young passenger. Check frequently to make certain the child has a firm grip and is properly positioned with his feet on the running boards.

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 back of the vehicle 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 an 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.

Avalanche Hazard

When riding on mountainous terrain, you should be aware of the risk of avalanches. Avalanches vary in size and shapes and generally occur in steep terrain and on unstable snow.

New snow, animals, people, wind and snowmobiles can all trigger an avalanche. Avoid high marking or traversing steep terrain when avalanche conditions are possible. When in unstable snow conditions, travel should be restricted to lower angle slopes. Wind formed cornices should be avoided. Staying off unstable conditions is the key to safe mountain riding. Probably most important is to be aware of the conditions and dangers on a daily basis when in the mountains. Check local avalanche forecasts and threats each day before heading out to ride and heed forecasters advice.

You should always carry a snow shovel, probe and avalanche beacon while riding on mountains. We recommend that all mountain riders take a local avalanche safety training course

to become more familiar with snow conditions and learn how to properly use their equipment.

Here are some web sites that can help you finding important information:

- US: www.avalanche.org
- Europe: www.avalanches.org
- Canada: www.avalanche.ca

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 Whiteout Conditions

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 can be a hazardous situation. Be prepared before landing to absorb the shock and brace yourself for the impact. Knees must be flexed to act as shock absorbers. 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.



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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. Before 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.

Riding in a Group

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.

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.

Environment

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 animal's 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.

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 BRP, thank you for doing your share.

There is nothing more exhilarating than snowmobiling. Venturing onto snowmobile trails that cross wild areas 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, BRP 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!

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".

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 ensure 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 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!

TRACTION ENHANCING PRODUCTS

Note: This section is applicable to snowmobiles equipped with a factory installed track that has been approved by BRP for special studs installation.

WARNING

Never stud a track that has not been approved for studs. Installing studs on an unapproved track could increase the risk of the track tearing or severing.

WARNING

You may stud the track on this vehicle model. However, you **MUST** only use the BRP approved type stud for use on these Ski-Doo snowmobiles. **DO NOT EVER** use conventional studs as the track thickness is thinner than other standard tracks. The stud could tear off of track and separate from vehicle. See an authorized Ski-Doo dealer for current specific studding availability and applications.

Using traction enhancing products such as, adjustable or more aggressive ski carbide runners and/or studs on your snowmobile will change its behavior, particularly in terms of manoeuvrability, acceleration, and braking.

Using traction enhancing products gives a better grip on packed snow and ice, but has no noticeable effect on soft snow. For this reason, driving a snowmobile equipped with traction enhancing products requires a certain adaptation period. If your snowmobile is equipped with traction enhancing products, be sure to take plenty of time to get used to the way it handles when turning, accelerating, and braking.

Also, always check local regulations concerning the use of traction enhancing products on snowmobiles. Always drive your snowmobile in a responsible manner, respecting the environment and other people's property.

Manoeuvrability

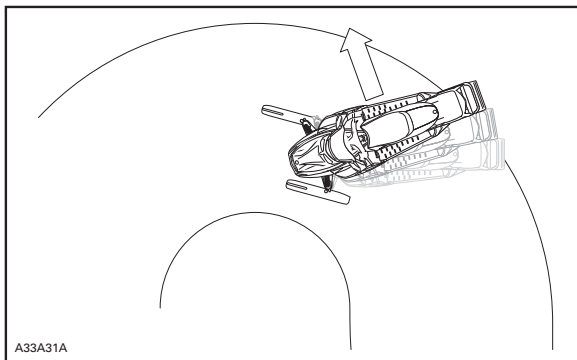
Using traction enhancing products such as, more aggressive ski carbide runners and/or studs makes the snowmobile grip the ground better at both the front and at the rear. The use of carbide runners is therefore required to give the skis a better grip, so that the front and rear of the snowmobile are in balance. While off-the-shelf carbide ski runners are adequate, they don't necessarily give you optimal control, since that depends on your personal preferences, your riding style, and how your suspension is adjusted.

⚠ WARNING

If the front and rear of the snowmobile are out of balance due to an incorrect combination of traction enhancing products, the snowmobile may tend to oversteer or understeer, which could lead to a loss of control.

Oversteering

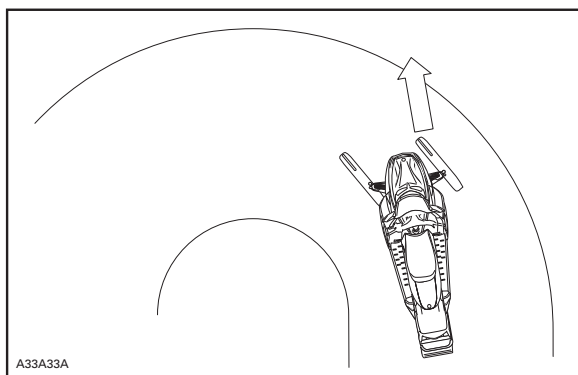
In certain conditions, using more aggressive ski carbide runners without studs on the rear track could make the snowmobile prone to oversteering, see illustration.



OVERSTEERING

Understeering

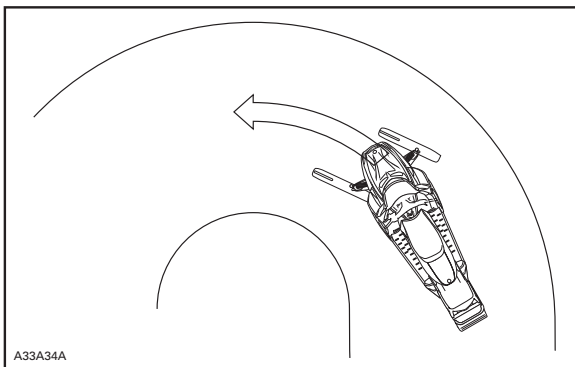
In certain conditions, the use of studs on the track could make the snowmobile prone to understeering if the skis are not equipped with more aggressive ski carbide runners, see illustration.



UNDERSTEERING

Controlled Driving

A balanced combination of carbide ski runners and studs on the track ensures adequate control and better handling, see illustration.



CONTROLLED DRIVING

Acceleration

Using studs on the track will allow your sled to accelerate better on packed snow and ice but will have no noticeable effect on soft snow. This can cause sudden variations in traction under certain conditions.

⚠ WARNING

To prevent surprises that could lead to a loss of control of the snowmobile:

- Always go easy on the throttle.
- NEVER try to spin the track to make the rear of the snowmobile skid.

This could cause debris or ice to be thrown violently backwards, possibly injuring others nearby or on snowmobiles behind you.

Braking

As in the case of acceleration, using studs on the track will give you better braking capacity on packed snow or ice but will have no noticeable effect on soft snow. Braking may thus vary suddenly under certain conditions. Be sure to use restraint

in braking to keep from blocking the track in order to avoid surprises that could lead to a loss of control.

Important Safety Rules

WARNING

To prevent serious injury to individuals near the snowmobile:

- NEVER stand behind or near a moving track.
- Always use a wide-base snowmobile stand with a rear deflector panel if it is necessary to rotate track.
- When the track is raised off the ground, only run it at the lowest possible speed.

Centrifugal force could cause debris, damaged or loose studs, pieces of torn track, or an entire severed track to be violently thrown backwards out of the tunnel with tremendous force.

Effects of Having a Studded Track on the Life of the Snowmobile

The use of traction enhancing products can increase the load and the stress on certain snowmobile components, as well as the vibration level. This can cause premature wear on parts such as belts, brake linings, bearings, chain, chaincase sprocket, and on approved studded tracks, shorten track life. Always proceed with a visual inspection of your track before each use. For more information, refer to *TRACK* in *MAINTENANCE*.

Studs on the track can also cause serious damage to your snowmobile if it is not equipped with the tunnel protectors designed for your particular model. Damage to the electrical wiring or perforation of the heat exchangers are potential hazards, that could cause the engine to overheat and be severely damaged.

⚠ WARNING

If tunnel protectors are excessively worn or not installed, the gas tank could be punctured, causing a fire.

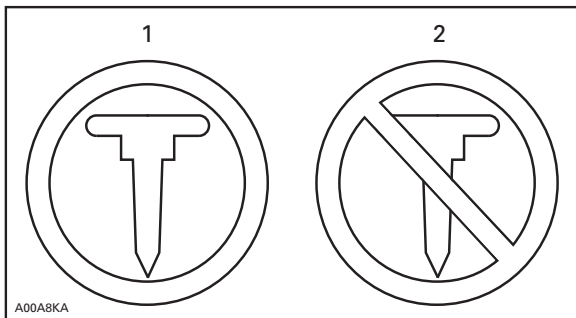
NOTICE Ask your dealer for the appropriate tunnel protectors model and kit number required for your snowmobile.

Note: Consult the BRP limited warranty to find out what warranty limitations are related to the use of studs.

Installation of Studs on BRP Approved Tracks

⚠ WARNING

Never stud a track that has not been approved for studs. Approved tracks can be identified by a stud symbol (see illustration below) molded into the track surface. Installing studs on an unapproved track could increase the risk of the track tearing or severing.

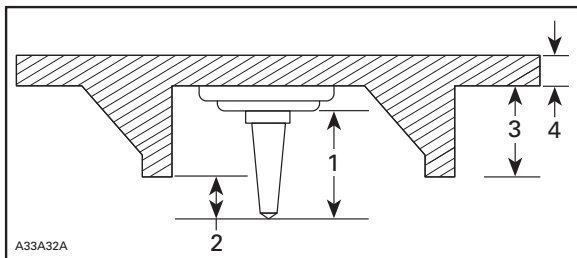


TRACK SYMBOLS

1. *Approved*
2. *NOT Approved*

To ensure safe and proper installation, BRP recommends to have the studs installed by your dealer.

- Use only the BRP approved special studs.
- Never use studs that exceed the height of your snowmobile's track profile by more than 9.5 mm (3/8 in).



INSTALLATION OF STUDS

1. Stud size
2. Penetration range 6.4 mm to 9.5 mm (1/4 in to 3/8 in)
3. Track lug height
4. Track belt thickness

⚠ WARNING

- See an authorized Ski-Doo dealer for current specific studding availability and applications.
- DO NOT EVER use conventional stud because, the track thickness is thinner than our standard tracks and the stud could tear off of track and separate from vehicle.
- Studs should only be installed in the locations indicated by molded bulges in the track surface. Some track models have two types of molded bulges; triangles and circles. See the warning molded into the track surface to know which one to use.
- Never stud a track with a profile of 35 mm (1-3/8 in) or more.
- The number of studs installed must always perfectly match the pattern of molded bulges in the track.
- Always consult the traction product manufacturer's installation instructions and recommendations before having your dealer install studs and runners. It is very important to follow the torque specifications for the stud bolts.

INSTALLING AN INCORRECT NUMBER OF STUDS OR AN IMPROPER INSTALLATION CAN INCREASE THE RISK OF THE TRACK TEARING OR SEVERING.

Maintenance/Replacement

PROCEED WITH A VISUAL INSPECTION OF YOUR TRACK BEFORE EACH USE.

Look for any defects, such as:

- Perforations in the track
- Tears in the track (particularly around traction holes on studded tracks)
- Lugs that are broken or torn off, exposing portions of rods
- Delamination of the rubber
- Broken rods
- Broken studs (studded tracks)
- Bent studs (studded tracks)

- Missing studs
- Studs that are torn off the track
- Missing track guide(s)
- Also, ensure that studs nut are tighten to the recommended torque.

On approved studded tracks, replace broken or damaged studs immediately. If your track shows signs of deterioration, it must be replaced immediately. When in doubt, ask your dealer. Always proceed with a visual inspection of your track before each use.

 **WARNING**

Riding with a damaged track or studs could lead to loss of control.

SAFETY INFORMATION ON THE VEHICLE

Hang Tag(s)

VEHICLE ENGINE DESCRIPTION:
XXXXX

EPA CERTIFIED

NER (NORMALIZED EMISSION RATE) =
ON A 0 TO 10 SCALE, 0 BEING THE CLEANEST


***NOT TO BE REMOVED PRIOR TO SALE**



704901107

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TYPICAL

 **WARNING.** Operating, servicing and maintaining an off-road vehicle can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm.

To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle.

For more information go to
www.P65Warnings.ca.gov/products/passenger-vehicle



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Have you asked your dealer to adjust your suspension to **YOUR** riding style?

- **Limiter strap length**
- **Spring preload**

for more details.

See the operator's guide

-Tune your ride section

*This hangtag may **ONLY** be removed by the customer.



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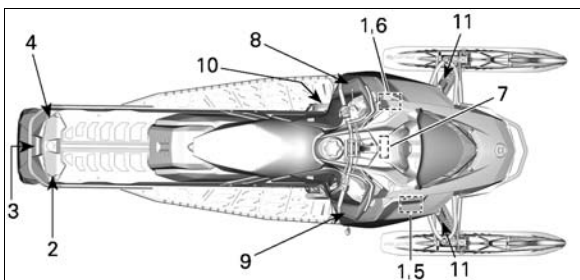
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Vehicle Safety Labels

These labels are affixed to the vehicle for the safety of the operator, passenger or bystanders.

The following labels are on your vehicle and they should be considered permanent parts of the vehicle. If missing or damaged, the decals can be replaced free of charge. See an authorized Ski-Doo dealer.

Note: In the event of any discrepancy between this guide and the vehicle, the safety labels on the vehicle have precedence over the labels in this guide.

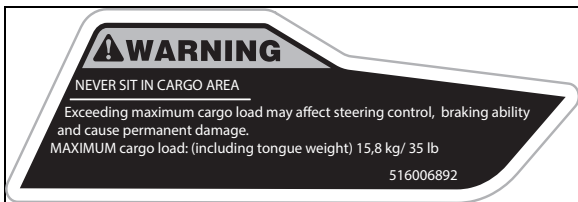


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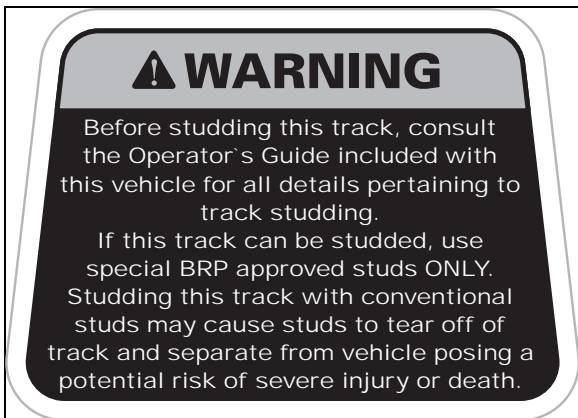
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LABEL 1



EN-516006892-DEC

LABEL 2



EN-516007645-DEC

LABEL 3 - APPLICABLE MODELS



EN-516008594-DEC

LABEL 4



mmo2008-003-007


LABEL 5


<p>⚠ WARNING</p> <p>This guard must ALWAYS be in place when engine is running beware of rotating parts they could cause injuries or catch your clothing.</p>	<p>NOTICE</p> <p>Drive pulley bolt recommended torque 85-92 lbf·ft / 115-125N·m</p> <p>Not applying the recommended torque may result in a major failure of the drive pulley and the engine. Refer to the shop manual for the complete assembly procedure.</p>
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516007667

EN-516007667A-DEC
LABEL 6

Toujours débrancher les
 connecteurs électriques
 des deux injecteurs
 d'essence avant de
 vérifier la production
 d'étincelles. Autrement,
 une étincelle pourrait
 allumer des vapeurs
 d'essence, ce qui
 représenterait un risque
 de feu.


AVERTISSEMENT


WARNING

**Always electrically
 disconnect
 both fuel injectors prior to
 testing for ignition spark.
 Otherwise, fuel vapors
 may ignite in presence of
 a spark creating a fire
 hazard.**

516007661

EN-516007661-DEC
 LABEL 7

All Except Enduro Models

⚠ WARNING

Read and understand all safety labels, locate and read operator's guide and watch the safety video (using the QR code link or visit Ski-Doo web site) before operation.



- Get familiar with your vehicle. Inexperienced riders may overlook risks and be surprised by vehicle's specific behavior and terrain conditions. Ride slowly.
- Excessive speed and reckless driving can kill !

ALWAYS adjust your speed according to snow conditions and circumstances.

- Steering control and braking ability may be reduced on hard-pack snow, ice or roads. Reduce speed & allow more space to stop or turn.
- Respect laws on minimum operator age. Manufacturer recommends a minimum operating age of 16 years old.
- Never open side panels or hood while engine is running or if vehicle is in motion. Ensure to remove DESS key before opening those.

BEFORE STARTING :

1. Attach tether cord to your clothing.
2. Check proper operation of the throttle and brake levers each time before starting. They must return to their initial position when released.
3. Apply parking brake.
4. Turn handlebars all the way in both directions to check for interference and insure free operation.

AFTER STARTING :

1. Pull-out tether cord to check if engine shuts off.
2. Re-start and push in the emergency engine stop switch to check if engine shuts off.
3. Disengage parking brake before riding to avoid brake fading.



516009232

EN-516009232-DEC_a

LABEL 8

Enduro Models

WARNING

Read and understand all safety labels, locate and read operator's guide and watch the safety video (Using the QR code link or visit Ski-Doo web site) before operation.



- Get familiar with your vehicle. Inexperienced riders may overlook risks and be surprised by vehicle's specific behavior and terrain conditions. Ride slowly.
- Excessive speed and reckless driving can kill!

ALWAYS adjust your speed according to snow conditions and circumstances.

- Steering control and braking ability may be reduced on hard-pack snow, ice or roads. Reduce speed & allow more space to stop or turn.
- Respect laws on minimum operator age. Manufacturer recommends a minimum operating age of 16 years old.
- Never open side panels or hood while engine is running or if vehicle is in motion. Ensure to remove DESS key before opening those.

BEFORE STARTING :

1. Attach tether cord to your clothing.
2. Check proper operation of the throttle and brake levers each time before starting. They must return to their initial position when released.
3. Apply parking brake.
4. Turn handlebars all the way in both directions to check for interference and insure free operation.

AFTER STARTING :

1. Pull-out tether cord to check if engine shuts off.
2. Re-start and push in the emergency engine stop switch to check if engine shuts off.
3. Disengage parking brake before riding to avoid brake fading.




516009482

EN-516009482-DEC
LABEL 8

All Except Enduro Models

▲ WARNING

This vehicle is designed for one (1) operator and as many passengers as there are seats with straps or handgrips installed on the vehicle conforming to SSCC standards.

Ce véhicule a été conçu pour un (1) conducteur et autant de passagers qu'il y a de sièges avec courroies ou poignées installés sur le véhicule et rencontrant la norme SSCC.

When riding with a passenger:

- Braking ability and steering control are reduced.

Decrease speed and allow extra space to maneuver.

- Adjust suspensions according to weight.

REMEMBER: YOU ARE RESPONSIBLE FOR THE SAFETY OF YOUR PASSENGER!

ALL DRIVERS AND PASSENGERS MUST READ THE FOLLOWING:

Avoid surprises!

BE ON THE LOOK-OUT for the unexpected.

Operate defensively.

- Scan constantly for people, objects, conditions and upcoming vehicles.
- Avoid thin ice / open water.
- Use extra caution whenever off-trail.



ALWAYS wear a DOT approved HELMET and clothing appropriate for snowmobiling.



NEVER ride under the influence of alcohol or drugs even as a passenger.



Patent: www.bjz.com/about/bjz/patent.html

516009520

EN-516009520-DEC
LABEL 9

Enduro Models

⚠ WARNING

This vehicle is designed for one (1) operator and as many passengers as there are seats with straps or handgrips installed on the vehicle conforming to SSCC standards.

Ce véhicule a été conçu pour un (1) conducteur et autant de passagers qu'il y a de siège avec courroies ou poignées installées sur le véhicule et rencontrant la norme SSCC.

When riding with a passenger:

- Braking ability and steering control are reduced.

Decrease speed and allow extra space to maneuver.

- Adjust suspension according to weight

REMEMBER : YOU ARE RESPONSIBLE FOR THE SAFETY OF YOUR PASSENGER!


ALL DRIVERS AND PASSENGERS MUST READ THE FOLLOWING :

Avoid surprises!


BE ON THE LOOK-OUT for the unexpected.

Operate defensively.


- Scan constantly for people, objects, conditions and upcoming vehicles.
- Avoid thin ice / open water.
- Use extra caution whenever off-trail.



ALWAYS wear a DOT approved **HELMET** and clothing appropriate for snowmobiling.



NEVER ride under the influence of alcohol or drugs even as a passenger.



516009483

Patent: www.brp.com/en/about-brp/patents.html

EN-516009483-DEC

LABEL 9



EN-516007652-DEC

LABEL 10



mmo2010-003-101_en

LABEL 11 - ON GAS CHARGED SHOCK ABSORBERS

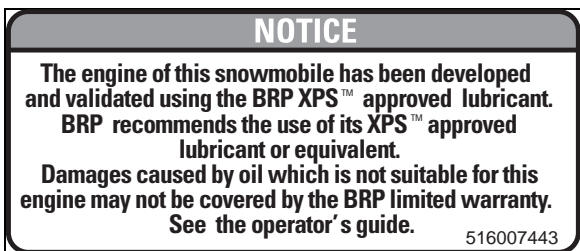
Technical Information Labels

- Install Suspension adjustment tool 1st. (Illustrated Red on label)
- Install Pulley Expander and Headlight adjustment tool 2nd. (Illustrated Blue on label)
- Refer to your operators guide.



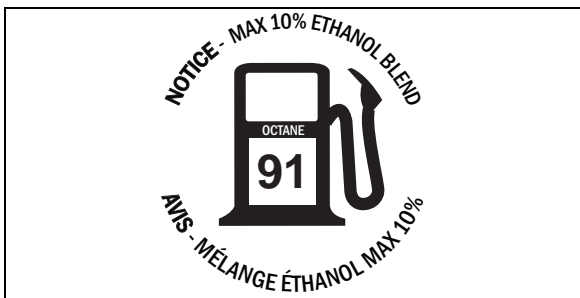
EN_516009956_DEC

LOCATED ON BELT GUARD



516007443

ON OIL RESERVOIR



mmo2013-002-002

ON FUEL CAP - IN COUNTRIES USING PUMP POSTED AKI
(RON+MON)/2 OCTANE RATINGS



DEC 513033943 EN-FR

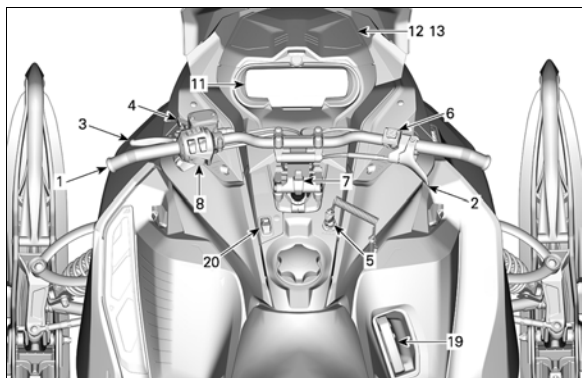
ON FUEL CAP - IN COUNTRIES USING RON OCTANE RATINGS

VEHICLE INFORMATION

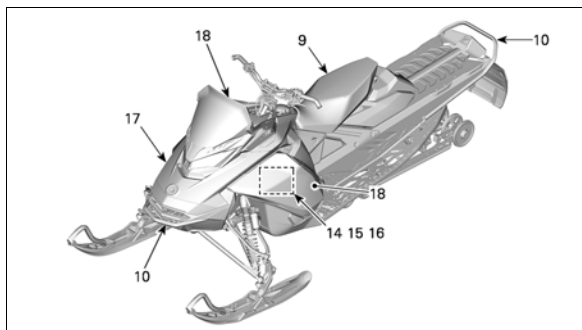
CONTROLS, INSTRUMENTS AND EQUIPMENT

Note: Some features may not apply to your model or could be optional.

Note: Some vehicle safety labels are not shown on illustrations. For information on vehicle safety labels, refer to *SAFETY INFORMATION ON THE VEHICLE*.



520002103-001



520002103-002

1) 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.

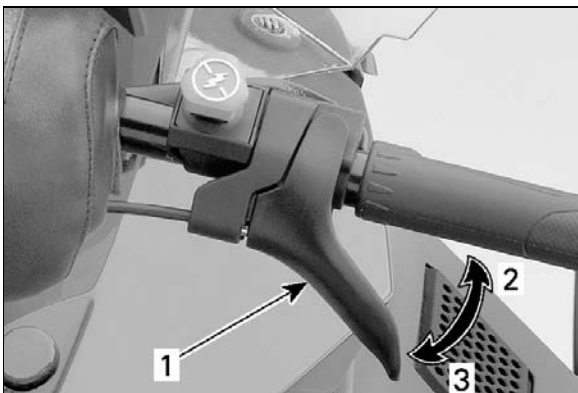
WARNING

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

2) Throttle Lever

Throttle lever is located on the RH side of handlebar.

Designed to be thumb activated. When squeezed, it increases the engine speed. When released, engine speed returns automatically to idle.



mmo2008-008-011_b

TYPICAL

1. Throttle lever
2. To accelerate
3. To decelerate

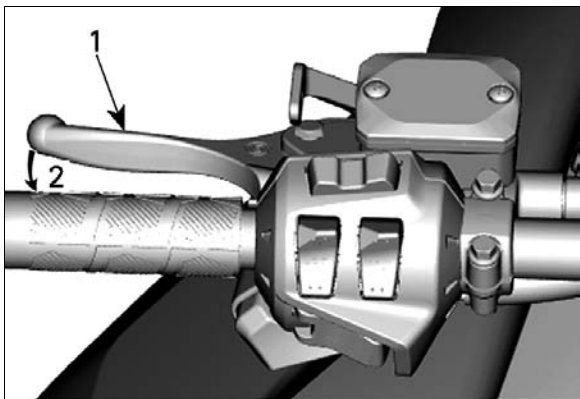
⚠ WARNING

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

3) Brake Lever

Brake lever is located on the LH side of handlebar.

When squeezed, brake is applied. When released, it automatically returns to the rest. Braking effect is proportional to the pressure applied on the lever and to the type of terrain and its snow coverage.



mmo2014-004-001_a

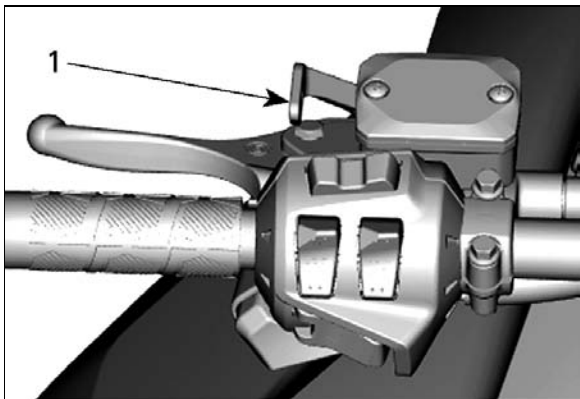
TYPICAL

1. Brake lever
2. To apply brake

4) Parking Brake Lever

Parking brake lever is located on the LH side of handlebar.

Parking brake should be used whenever snowmobile is parked.



mmo2014-004-001_b

TYPICAL

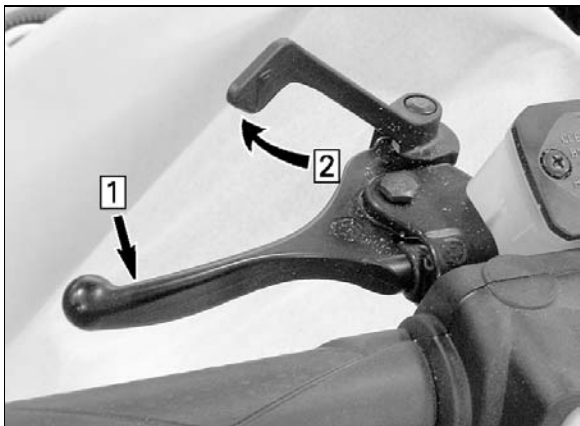
1. Parking brake lever

⚠ 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 Parking Brake

Apply and hold brake, then lock brake lever using the parking brake lever as shown.



mmo2009-005-006_a

TYPICAL — ENGAGE MECHANISM

Step 1: Apply and hold brake

Step 2: Lock brake lever using parking brake lever

To Release Parking Brake

Squeeze brake lever. Parking brake lever will automatically return to its original position. Always release parking brake before riding.

5) Engine Cut-off Switch (D.E.S.S. Post)

The engine cut-off switch, also known as D.E.S.S. post, is located on the console.

The D.E.S.S. key must be securely snapped on the engine cut-off switch to allow vehicle operation.

Note: After engine starting, 2 short beeps should be heard if a programmed D.E.S.S. key (tether cord cap) is correctly snapped on engine cut-off switch. If another beep code is heard, refer to *MONITORING SYSTEM* for D.E.S.S. malfunction codes information.

Pulling the D.E.S.S. key from the post shuts the engine off.

 **WARNING**

Always attach the tether cord eyelet to clothing before starting the engine.

D.E.S.S. (Digitally Encoded Security System)

The tether cord cap has an integrated D.E.S.S. key to provide you and your snowmobile with the equivalent security of a conventional lock key.

The D.E.S.S. key contains an electronic chip which features a unique permanently memorized digital code.

Your authorized Ski-Doo dealer has programmed the D.E.S.S. of your snowmobile to recognize the D.E.S.S. key in the tether cord cap to allow vehicle operation.

If another tether cord is used without programming the D.E.S.S., the engine will start but will not reach drive pulley engagement speed to move vehicle.

Make sure the tether cord cap is free of dirt or snow.

D.E.S.S. Flexibility

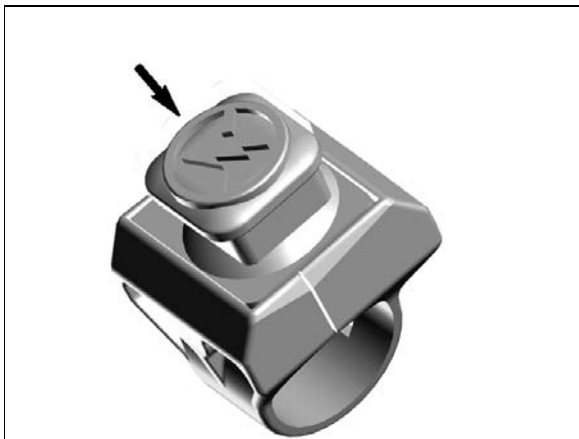
The D.E.S.S. of your snowmobile can be programmed by your authorized Ski-Doo dealer to accept up to 8 different keys.

We recommend the purchase of additional tether cords from your authorized Ski-Doo dealer. If you have more than one D.E.S.S. equipped Ski-Doo snowmobile, each can be programmed by your authorized Ski-Doo dealer to accept the other vehicles D.E.S.S. keys.

6) Emergency Engine Stop Switch

The emergency engine stop switch is located on the RH side of handlebar.

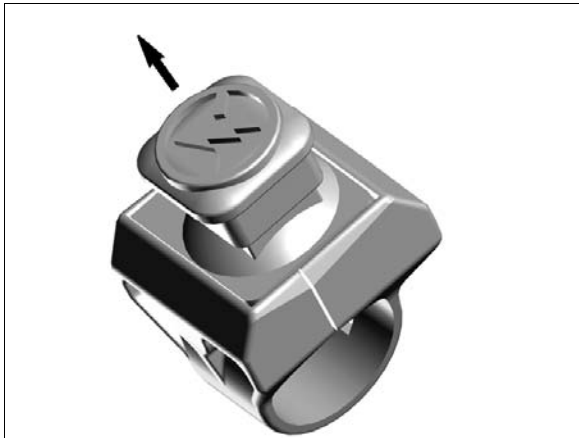
To stop the engine in an emergency, push the switch down in OFF position and simultaneously apply the brake.



mmo2016-008-202_a

OFF POSITION

To allow engine starting, pull the switch up in ON position.



mmo2016-008-201_a

ON POSITION

All operators of the snowmobile should familiarize themselves with the function of the emergency engine stop switch by

using it several times on first outing and whenever stopping the engine thereafter. This engine stopping 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.

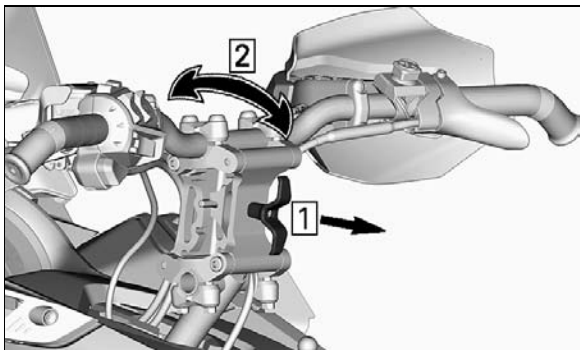
7) Adjustable Handlebar Riser (If Equipped)

⚠ WARNING

Always stop engine before adjusting handlebar.

The handlebar can be set in four different positions.

To change handlebar position, pull lever and position handlebar as desired.

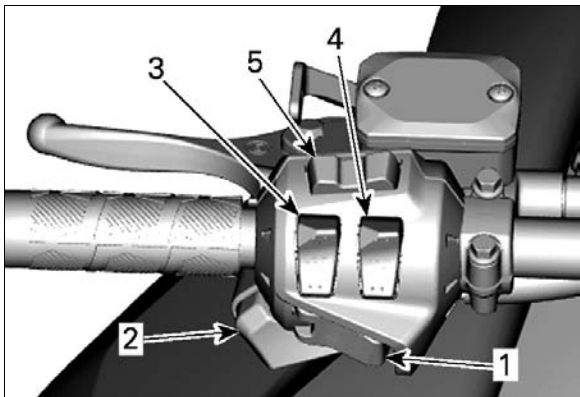


520001663-014_a

Move the handlebar back and forth to make sure mechanism is securely engaged.

8) Handlebar Multifunction Switch

Multifunction switch is located on the LH side of handlebar.



mmo2014-004-001_c

TYPICAL

1. Start/Electronic Reverse button
2. Headlights dimmer switch
3. Heated grips switch
4. Heated throttle lever switch
5. Menu/set button (If equipped)

Start/Electronic Reverse Button

On electric start models, press to start engine. Refer to *ENGINE STARTING PROCEDURE* in *BASIC PROCEDURES*.

Once engine is started, press to engage the electronic reverse. Refer to *REVERSE (RER)* in *BASIC PROCEDURES* for procedure.

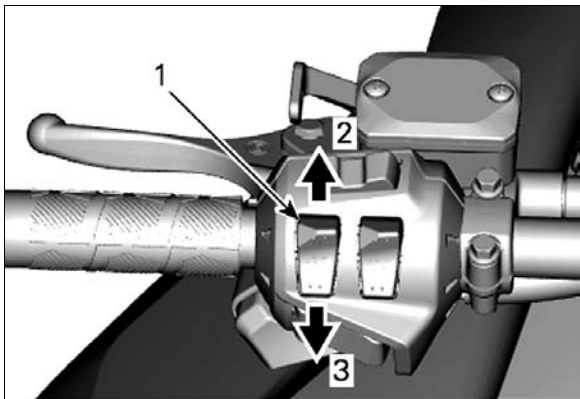
Headlights Dimmer Switch

Press to select HI or LOW beam. Lights are automatically ON when the engine is running.

Heated Grips Switch

Note: Under 2000 RPM, heated grips will be limited at 50%.

Depress switch as required to select heating intensity to keep your hands at a comfortable temperature.



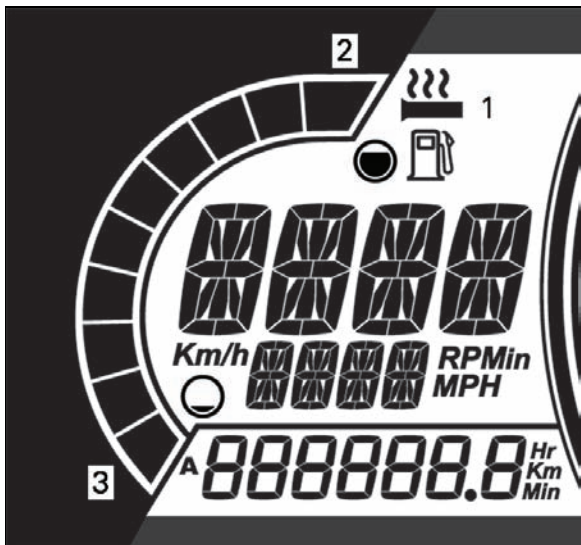
mmo2014-004-001_d

VARIABLE INTENSITY

1. Heated grip switch
2. Increase heat
3. Decrease heat

The heating intensity is displayed via the digital display.

Note: There are ten intensity settings. When released, display will return to fuel level.



619900974-707

TYPICAL

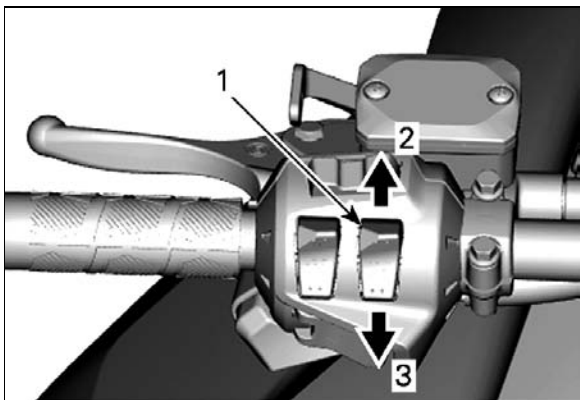
1. Heated grip icon
2. More heat
3. Less heat

Heated grips will be in OFF position when there are no bars displayed on the gauge.

Heated Throttle Lever Switch

Note: Under 2000 RPM, heated throttle lever will be limited at 50%.

Depress switch as required to select heating intensity to keep your thumb at a comfortable temperature.

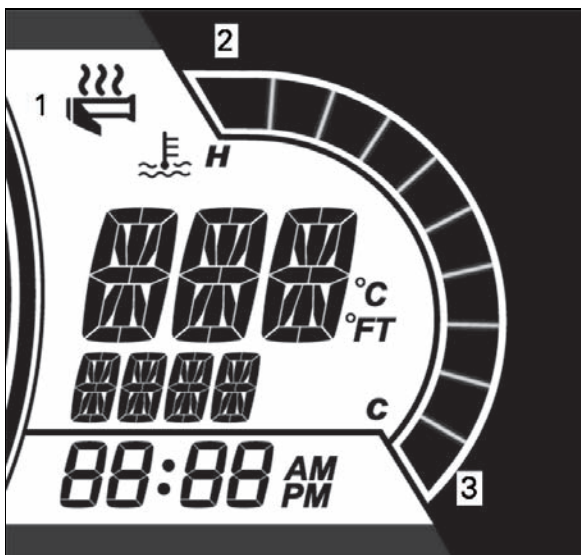


mmo2014-004-001_e

VARIABLE INTENSITY

1. *Heated throttle lever switch*
2. *Increase heat*
3. *Decrease heat*

Note: There are ten intensity settings. When released, display will return to engine coolant temperature.



619900974-708

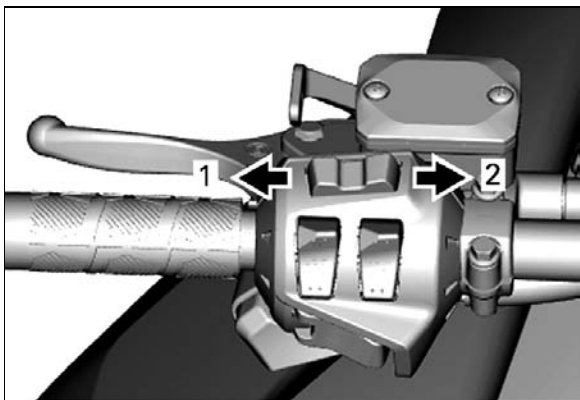
TYPICAL

1. Heated grip icon
2. More heat
3. Less heat

Heated throttle lever will be in OFF position when there are no bars displayed on the gauge.

Menu/Set Button (If equipped)

This button is used to manage the information displayed on the multifunction gauge.



mmo2014-004-001_f

MENU/SET BUTTON

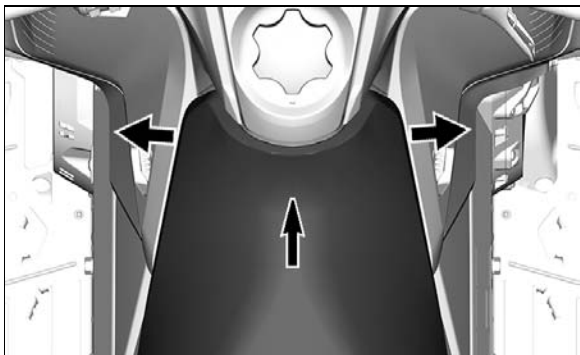
1. *Menu function*
2. *SET function*

Refer to *GAUGE* for complete information.

9) Seat

Seat Removal

While pushing in the center of the seat towards front, pull on both sides, to unlock.



520001663-001_a

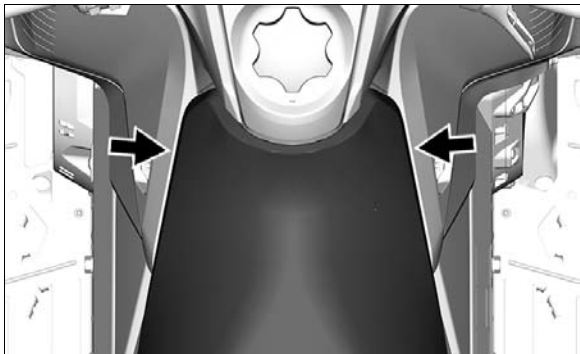
Slide seat rearwards to remove it.

Seat Installation

NOTICE Riding the vehicle with any objects between the seat and the fuel tank could damage the fuel tank. NEVER place any objects between seat and fuel tank.

Place seat over the hooks, then slide it forward.

Securely engage both ball studs at front.



520001663-001_b

⚠ WARNING

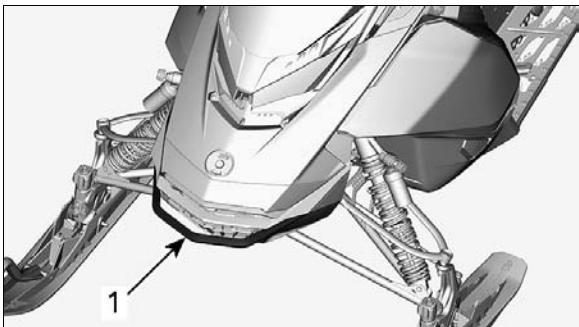
Make sure seat is securely latched before riding.

10) Front and Rear Bumpers

To be used whenever snowmobile requires manual lifting.

⚠ CAUTION

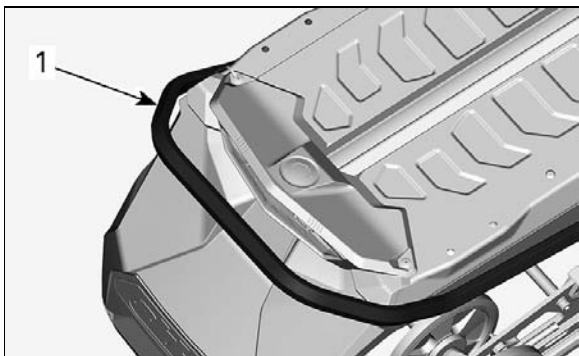
Beware of injuries by using proper lifting techniques, notably using your legs force. Do not attempt to lift the rear of vehicle if it is above your limits. Use appropriate lifting device or have assistance to share lifting stress if possible.



520001663-004_a

TYPICAL

1. Front bumper



520001663-005_a

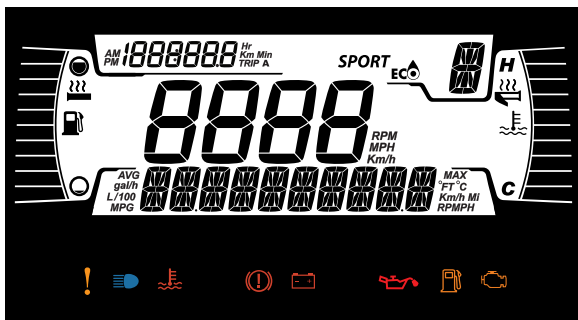
TYPICAL

1. Rear bumper

NOTICE Do not use skis to pull or lift snowmobile.

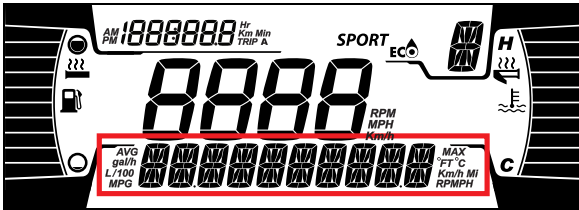
11) Gauge

4.5" Digital display.



619900974-706

Lower Display



619900974-700

May display the following:

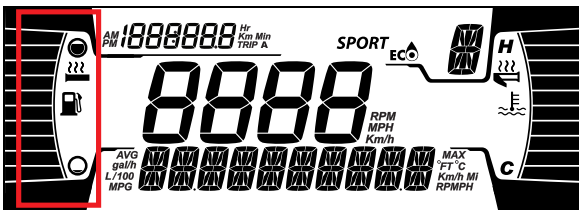
- RPM
- Speed
- Engine Temperature
- Fuel Statistics
- Settings
- Messages
- Outside temperature (if equipped)

Use LOWER button to change the displayed information.

The SPEED STAT display shows the maximum and the averaged speed. Hold LOWER button for 3 seconds to reset.

When the SPEED display is chosen, the RPM is shown in the TRIP display.

Left Lateral Display

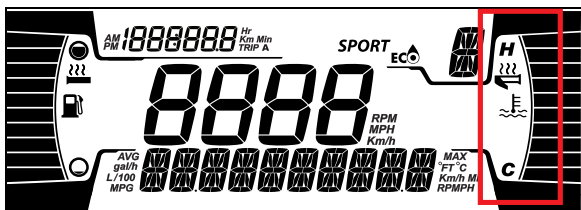


619900974-701

The left lateral display includes:

- Fuel level indicator
- Heated Grip level

Right Lateral Display

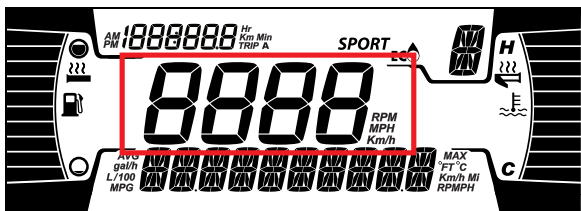


619900974-702

The right lateral display includes:

- Engine Temperature
- Heated throttle indicator

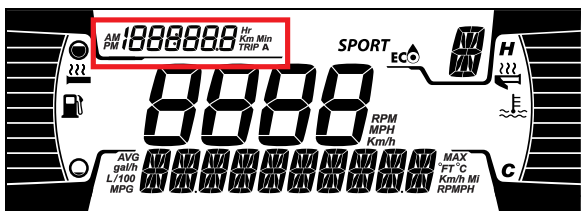
Central Display



619900974-703

Display the RPM of engine or vehicle speed in Km/h or MPH.

Trip Display



619900974-705

This display shows trip informations:

- Cumulative distance odometer
- Trip A hours
- Trip A distance (Km or mph)
- Vehicle hour meter
- Clock (If battery equipped)

Use UPPER button to change the displayed information.

Warning Lamps and Indicators







The following indicator lamps will alert you to a vehicle condition that may become serious. Some lamps will illuminate when starting the vehicle to make sure they work. If any lamps remain on after starting the vehicle, refer to the respective system warning lamp for further information.



Note: Some warning indicators appear in the display of the multifunction gauge and function the same as an indicator lamp but do not display when starting the vehicle.

Telltale Lights - Lower Bar



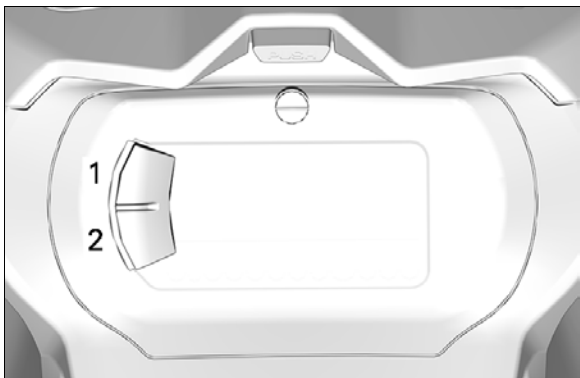
619900974-809

Lights	Description
	ORANGE - Vehicle malfunction
	BLUE - The high beam are selected
	RED - The engine temperature is too high.
	RED - Parking brake is engaged or malfunction of the brake system
	RED - The battery voltage too low or problem with the electrical system
	RED - Low oil

Lights	Description
	<p>ORANGE - Low fuel level</p>
	<p>ORANGE</p> <p>Turn on : Malfunction of the vehicle emissions control system</p> <p>Blink : Engine problems, the limp home mode is activated. Have the vehicle serviced immediately.</p>

Settings

Setup



520002114-102

1. Upper button (S)
2. Lower button (M)

Using LOWER button, Select **SETTINGS** and hold to enter setting menu.

Reset Stats

Using LOWER button, select **RESET STAT** and hold to reset.

Unit Selection

This multifunction gauge is factory preset in Imperial units but it is possible to change it to Metric units.

Using LOWER button, Select **UNITS** to change the clock.

Setting Clock

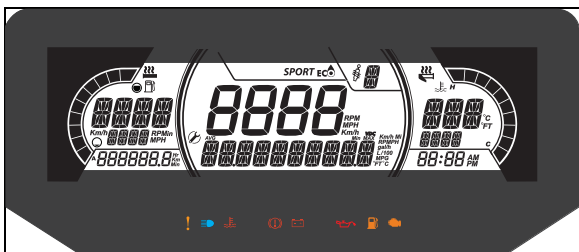
Using LOWER button, Select **CLOCK** to change the clock.

1. Press LOWER button to select clock display.
2. Push and hold LOWER button for 1 second.
3. Press LOWER button to select 12:00 AM PM or 24:00 time base.
4. Push and hold LOWER button to acknowledge selection.
5. Press LOWER button to change hours (hours flash).
6. Push and hold LOWER button to acknowledge hour selection.
7. Press LOWER button to switch to minutes (minutes flash).
8. Push and hold LOWER button to acknowledge minutes selection.

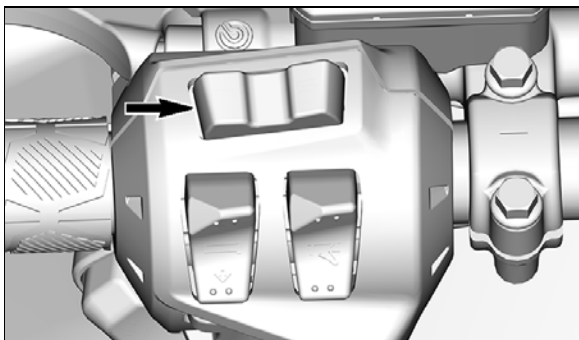
Setting Language

The gauge display language can be changed. Refer to an authorized Ski-Doo dealer for language availability and to setup the gauge to your preference.

7.2" Digital Display

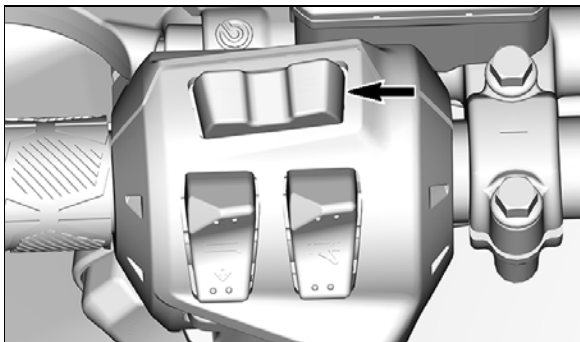


619900975-500



619900975-006

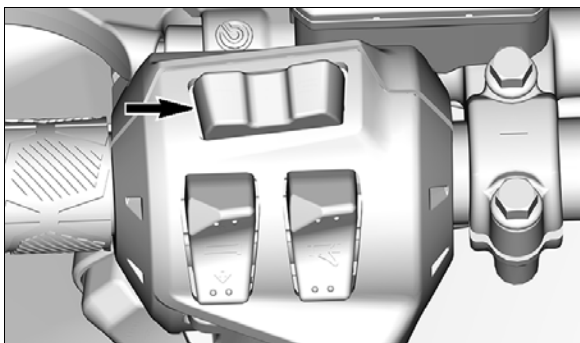
MENU (M) BUTTON



619900975-007

SET (S) BUTTON

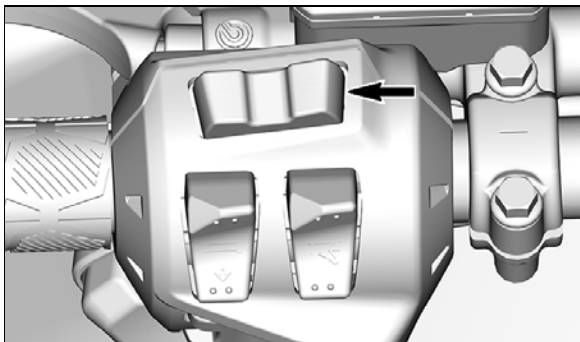
1. Select the upper or center display by using the MENU (M) button on the multifunction switch.



619900975-006

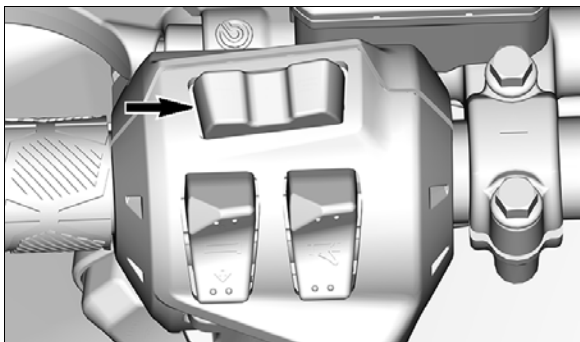
MENU (M) BUTTON

2. While the desired display is flashing, navigate through the display, by using the SET (S) button on the multifunction switch.



619900975-007
SET (S) BUTTON

Once the desired information is displayed, press the MENU (M) button or wait 5 seconds to confirm.



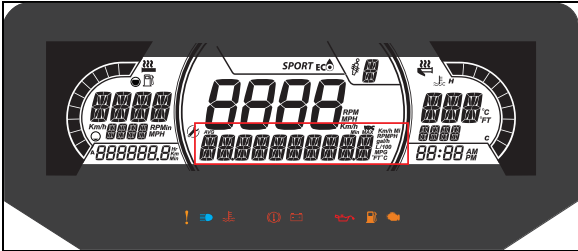
619900975-006
MENU (M) BUTTON

To reset

- Average speed
- Top speed
- Total fuel consumption

Press and hold the SET (S) button while display is flashing.

Lower Display



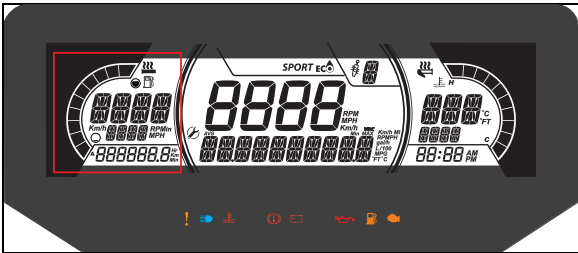
619900975-501

May display the following:

- Settings
- Messages

The SPEED display shows the Maximum and the averaged speed. Hold MENU button for 3 seconds to reset.

Left Lateral Display

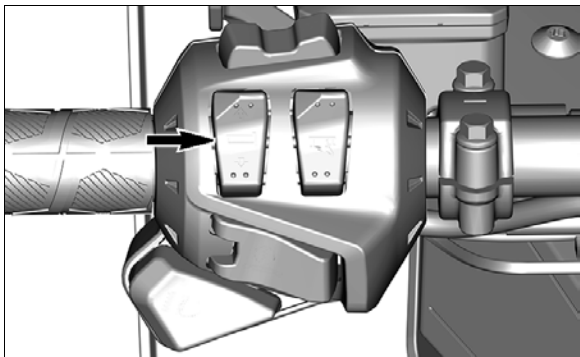


619900975-502

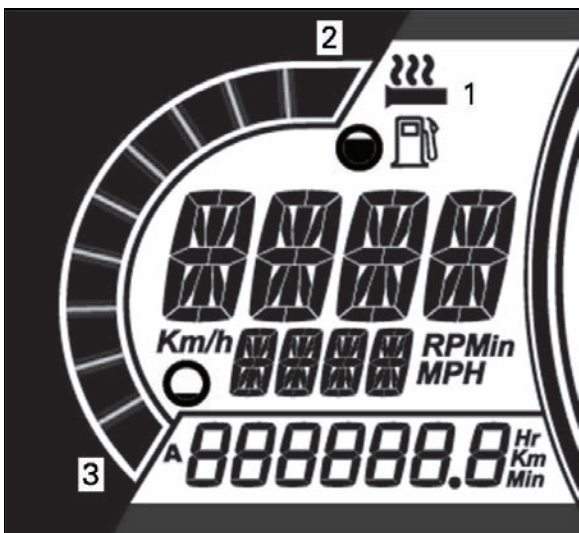
The left lateral display includes:

- RPM
- Speed
- Fuel level indicator
- Heated Grip level
- Trip A Hrs and KM
- Cumulative hours
- Speed

- RPM
- Odometer



619900975-004

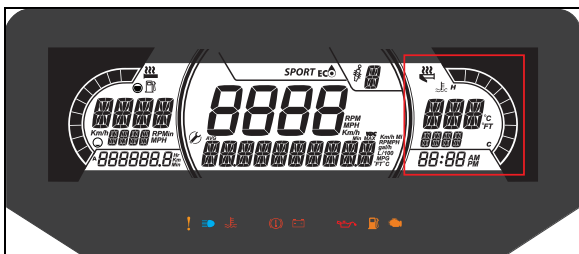


619900974-802

HEATING INTENSITY DISPLAY

1. Heated Grip icon
2. More heat
3. Less heat

Right Lateral Display

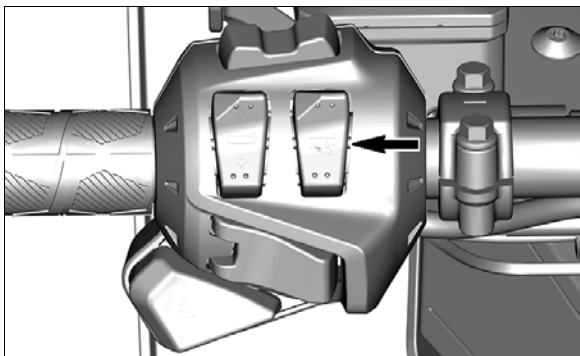


619900975-503

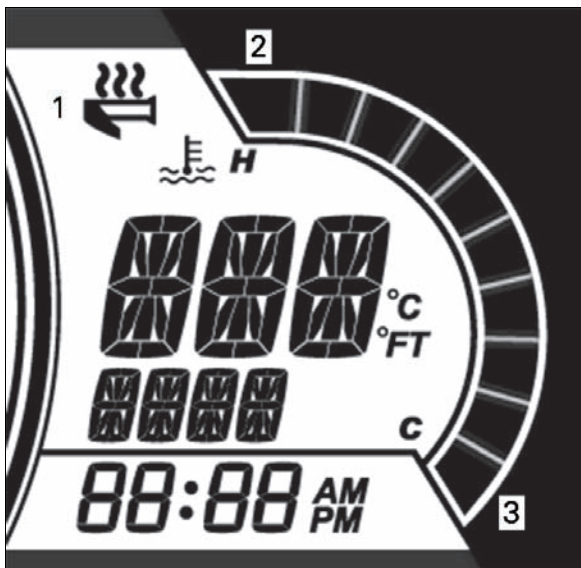
The right lateral display includes:

- Engine Temperature

- Heated throttle indicator
- Clock

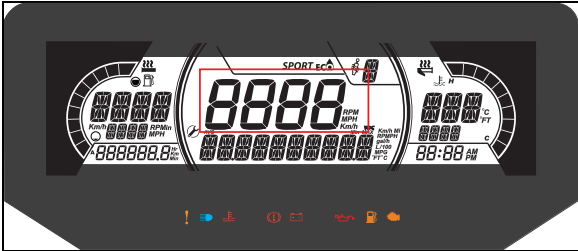


619900975-005



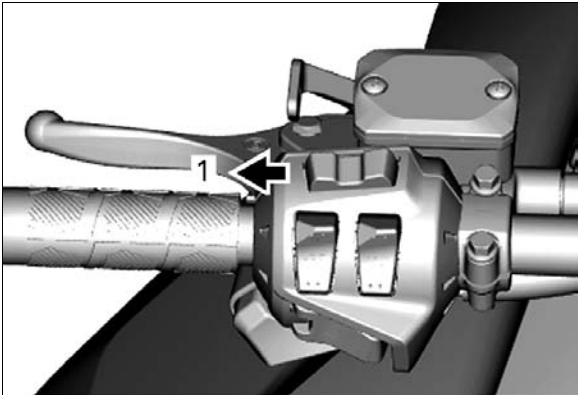
619900974-803

Central Display



619900975-504

Display the vehicle speed in Km/h (or MPH) or the RPMs.
Refer to *SETTINGS*

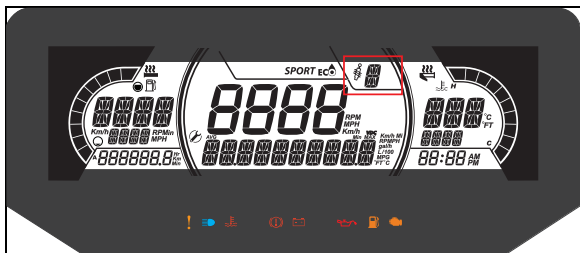


mmo2014-004-001_h

TYPICAL

1. MENU (M) button

ACS Suspension Position Display (if equipped)



619900974-505

This display shows suspension setting.

The suspension is calibrated from 1 to 5, 1 being the softest setting.



619900974-805

Refer to *TUNE YOUR RIDE* section for proper adjustment procedure.

Settings

Setup

Using MENU button, Select **SETTINGS** and hold to enter setting menu. Various options are available such as swapping the SPEED and RPM in the Central Display.

Unit Selection

This multifunction gauge is factory preset in Imperial units but it is possible to change it to Metric units.

Using MENU button, Select **UNITS** and hold button to change units.

Setting Clock

Using MENU button, Select **CLOCK** and hold to change units.

1. Press MENU button to select clock display.
2. Push and hold MENU button for 1 second.
3. Press MENU button to select 12:00 AM PM or 24:00 time base.
4. Push and hold MENU button or OK button to acknowledge selection.
5. Press MENU button to change hours (hours flash).
6. Push and hold MENU button or OK button to acknowledge hour selection
7. Push MENU button to switch to minutes (minutes flash).
8. Press MENU button to change minutes.

Setting Language

The gauge display language can be changed. Refer to an authorized Ski-Doo dealer for language availability and to setup the gauge to your preference.

Warning Lamps and Indicators









The following indicator lamps will alert you to a vehicle condition that may become serious. Some lamps will illuminate when starting the vehicle to make sure they work. If any lamps remain on after starting the vehicle, refer to the respective system warning lamp for further information.

Note: Some warning indicators appear in the display of the multifunction gauge and function the same as an indicator lamp but do not display when starting the vehicle.

Telltale Lights - Lower Bar



619900974-809

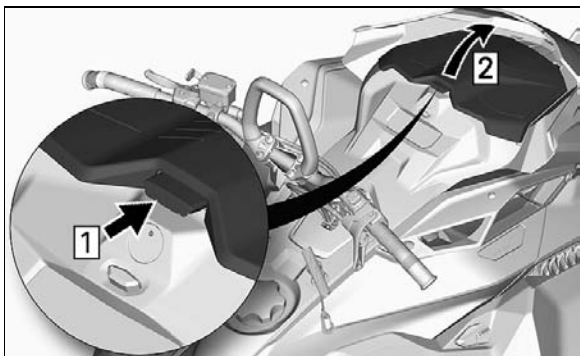
Lights	Description
	ORANGE - Vehicle malfunction
	BLUE - The high beam are selected
	RED - The engine temperature is too high
	RED - Parking brake is engaged or malfunction of the brake system
	RED - The battery voltage too low or problem with the electrical system
	RED - Low oil
	ORANGE - Low fuel level
	<p>ORANGE</p> <p>Turn on : Malfunction of the vehicle emissions control system</p> <p>Blink : Engine problems, the limp home mode is activated. Have the vehicle serviced immediately.</p>

12) Storage Compartments

A storage compartment is located at the front of the vehicle, above the gauge.

The Operator's Guide and the emergency starter rope are in the front storage compartment.

To open, push the button and lift the cover.



520001496-005_a

TYPICAL

Note: When closing, make sure cover is secured properly. You will hear a "clac".

On select models, a storage compartment is located at the rear of the seat, above the battery cover.

To open, turn the latch counterclockwise.

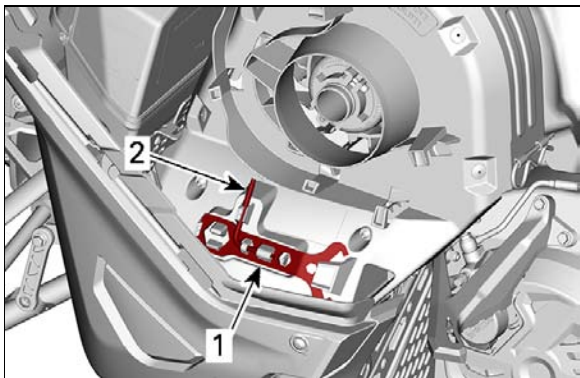
13) Operator's Guide

The Operator's Guide should be stored in the *STORAGE COMPARTMENT*.

14) Tools

A part of the drive belt guard is designed to hold the tools allowing for basic maintenance.

The tools are supplied with the vehicle. They should always be installed in their proper location and orientation.



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DRIVE BELT GUARD TOOLS LOCATION

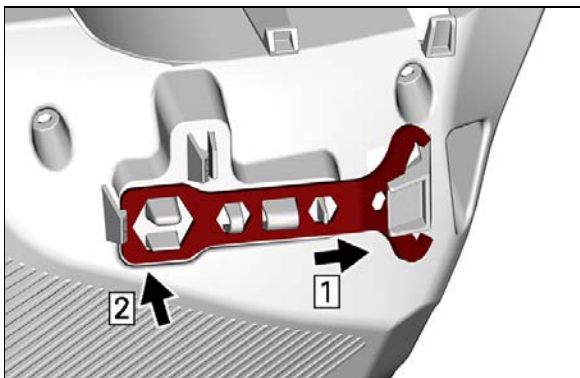
1. *Suspension adjustment tool*
2. *Pulley expander*

Install in the following sequence:

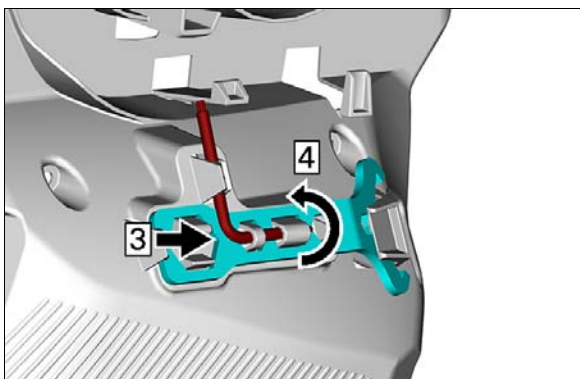
1. Slide the Suspension adjustment tool open end under retaining tab.
2. Press the closed end on the retaining tabs.
3. Slide the Pulley expander and headlight adjustment tool short end into hole.
4. Rotate and clip long end in place.

⚠ CAUTION

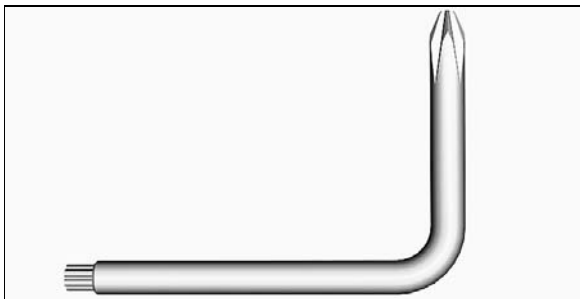
Make sure tools are secured properly. Tools may detach and cause damage to rotating parts.



520002104-500

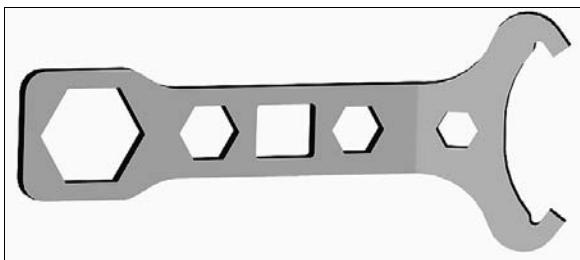


520002104-501



520001798-008

PULLEY EXPANDER



520001663-022

SUSPENSION ADJUSTMENT TOOL

15) Drive Belt Guard

Drive Belt Guard Removal

WARNING

NEVER operate engine:

- Without shields and belt guard securely installed.
- With hood and/or side panels opened or removed.

NEVER attempt to make adjustments to moving parts while engine is running.

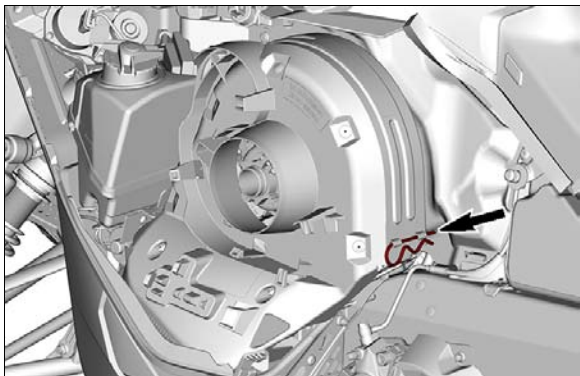
Note: Belt guard is purposely made slightly oversize to maintain tension on its pins and retainers preventing undue

noise and vibration. It is important that this tension be maintained when reinstalling.

Remove tether cord cap from engine cut-off switch.

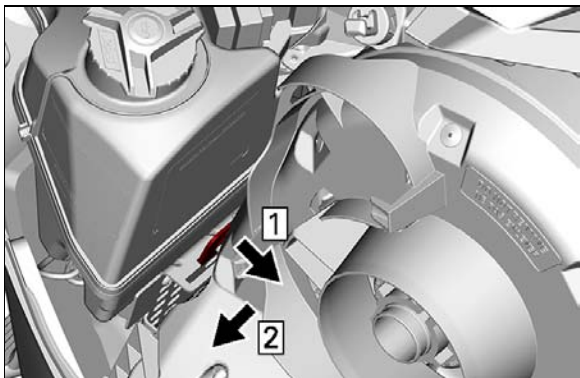
Open the LH side panel. See procedure in this section.

Remove retaining pin.



520002104-200

Slide belt guard rear and outward.



520002104-201

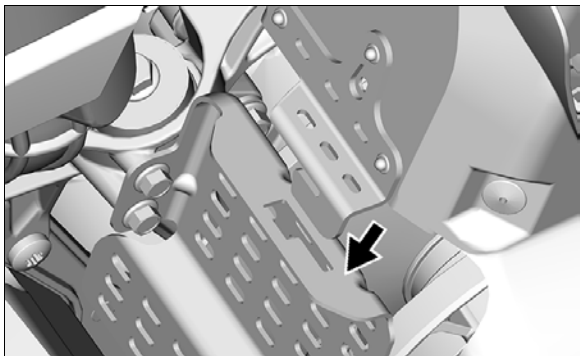
Step 1: Slide rearward

Step 2: Slide outward

Lift belt guard out.

Drive Belt Guard Installation

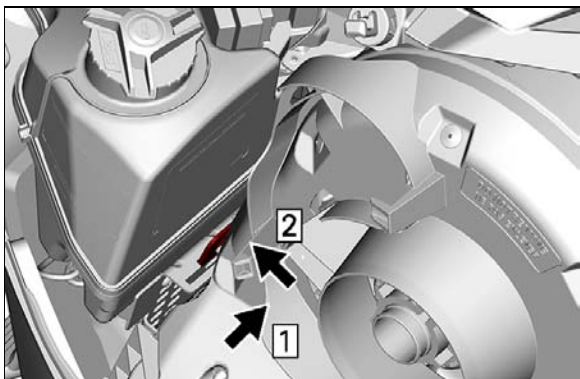
Insert belt guard tab in front support slot.



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PARTS REMOVED FOR CLARITY

Push drive belt guard toward engine then toward front of vehicle.

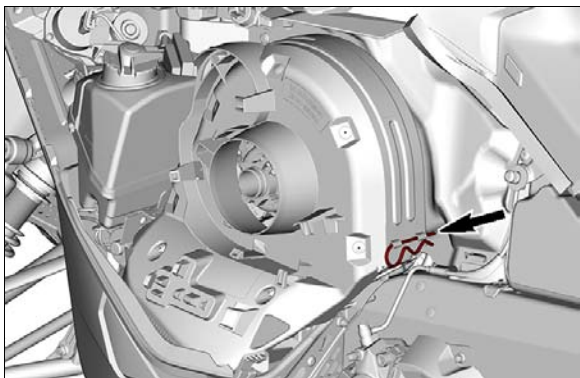


520002104-202

Step 1: Slide toward engine

Step 2: Slide toward front of vehicle

Position the rear portion of the belt guard over the retainer and secure it using the retaining pin.

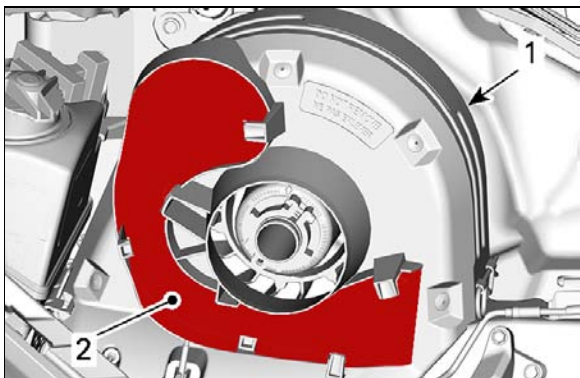


520002104-200

16) Spare Drive Belt Holder

A spare drive belt can be stored in a holder located on the drive belt guard.

Note: The spare drive belt is not supplied with the snowmobile. Position spare drive belt into drive belt guard slot.



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1. Drive belt guard
2. Slot

Secure in place by sliding it behind the tabs.

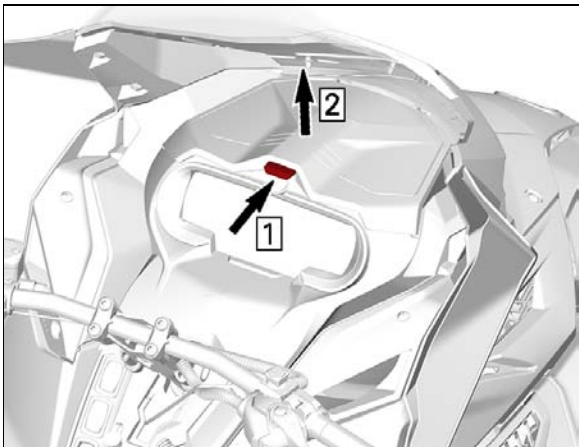


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17) Upper Body Module (Hood)

Upper Body Module Removal

1. Remove the windshield.
2. Open the storage compartment.



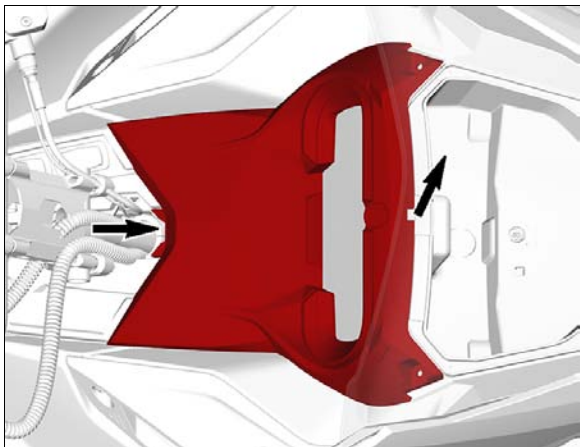
619900974-004

3. Remove the gauge support retaining screws.



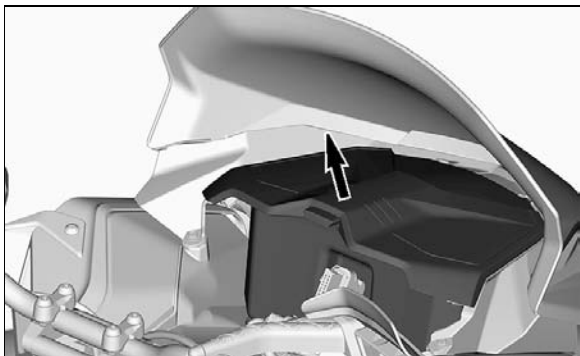
619900974-008

4. Lift the front of the gauge support, then slide it forward to remove it.



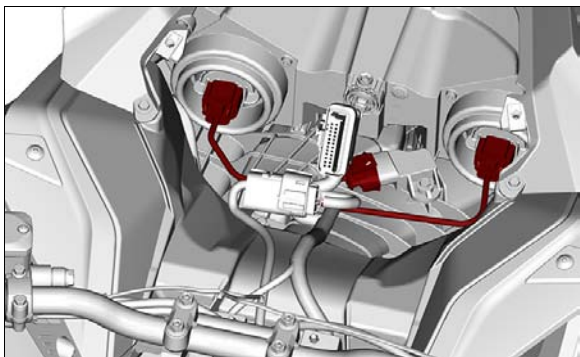
619900974-009

5. Disconnect the gauge and remove from vehicle.
6. Remove the storage compartment.



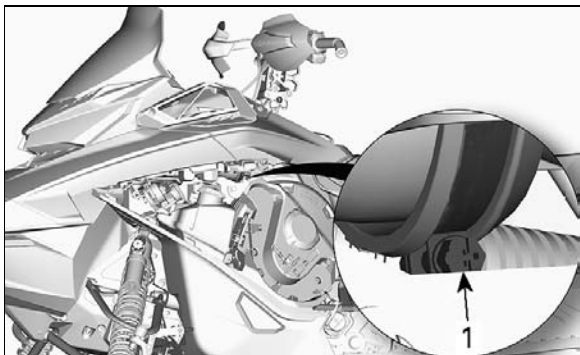
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7. Disconnect the MAPTS and headlight connectors.



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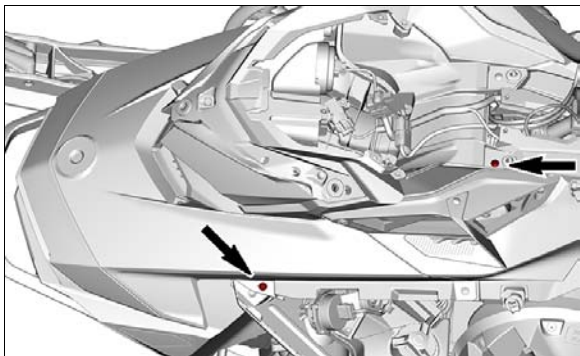
8. Loosen the air intake duct clamp.



520001663-026_a

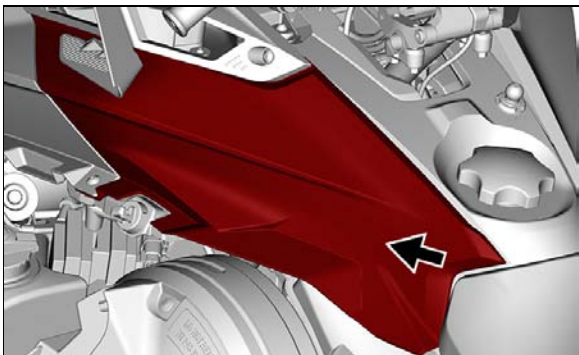
1. *Clamp*

9. Remove the upper body module retaining screws on both sides.



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10. Free the rear end hooks of the upper body module from the slots in the console.



mnr2017-051-015_a

11. Remove the upper body module.
 - 11.1 Grab the upper body module in the gauge support section.
 - 11.2 Pull the module forward.
 - 11.3 Remove the module from the vehicle.

Upper Body Module Installation

1. At front, insert the upper body module tabs into the upper bottom pan openings.



mnr2017-051-016

2. Lower the rear end of the upper body module.

3. Insert the rear end hooks of the upper body module into the slots in the console.

Note: Make sure the air intake duct is positioned correctly in the boot.

4. Tighten air intake duct clamp.
5. On both sides, install the upper body module retaining screws.

Tightening Torque	
Upper body screws	1.8 ± 0.2 Nm (16 ± 2 lbf-in)

6. Connect the manifold air pressure and temperature sensor (MAPTS) connector.
7. Connect the headlight connectors.
8. Install the storage compartment but leave the cover open.
9. Install gauge, secure with the screws.

Tightening Torque	
Gauge screws	2.3 ± 0.2 Nm (20 ± 2 lbf-in)

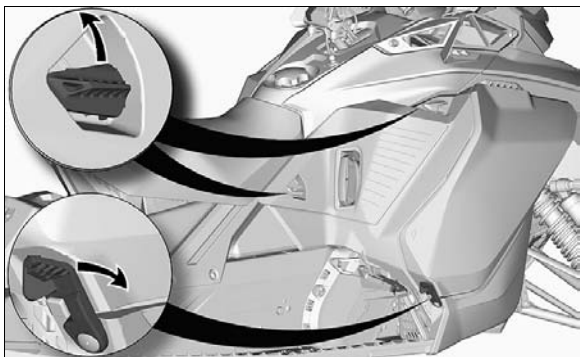
18) Side Panels

WARNING

Never operate engine with side panels opened or removed from vehicle.

Side Panels Opening and Closing

Unlock all latches, then open panel.



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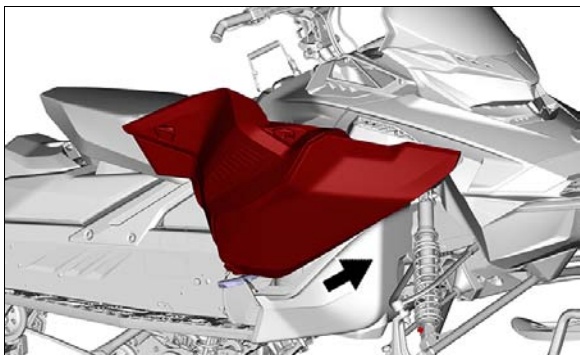
TYPICAL

When closing panel, make sure latches are locked securely.

Side Panels Removal

Open side panel.

Pull the hinges off the bottom pan.



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TYPICAL

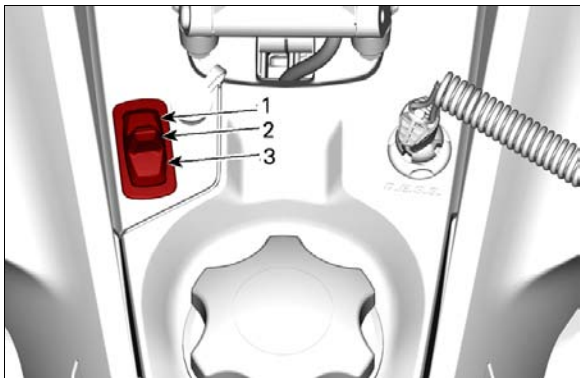
19) Rewind Starter Handle (If Equipped)

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.

Note: The maximum torque that can be transmitted to the engine by the rewind starter is 80 Nm (59 lbf-ft). The maximum force that can be exerted on the on the rope is 2 200 N (494.6 lbf).

20) Heated Seats Switch (On Applicable Models)

The heated seat switch is located on the console to the left of the steering column.



520001896-013_a

ENDURO MODELS

1. *Hi*
2. *OFF*
3. *Low*

FUEL

Fuel Requirements


NOTICE Always use fresh gasoline. Gasoline will oxidize; the result is loss of octane, volatile compounds, and the production of gum and varnish deposits which can damage the fuel system.

Alcohol fuel blending varies by country and region. Your vehicle has been designed to operate using the recommended fuels, however, be aware of the following:

- Use of fuel containing alcohol above the percentage specified by government regulations is not recommended and can result in the following problems in the fuel system components:
 - Starting and operating difficulties.
 - Deterioration of rubber or plastic parts.
 - Corrosion of metal parts.
 - Damage to internal engine parts.
- Inspect frequently for the presence of fuel leaks or other fuel system abnormalities if you suspect the presence of alcohol in gasoline exceeds the current government regulations.
- Alcohol blended fuels attract and hold moisture which may lead to fuel phase separation and can result in engine performance problems or engine damage.

Recommended Fuel

Use unleaded gasoline containing MAXIMUM 10% ethanol. The gasoline must have the following minimum octane requirements.

fuel type	engine	min. octane rating
Fuel with NO ethanol	850 E-TEC 600R E-TEC	91 AKI (RON+MON)/2 95 RON
Fuel which may contain up to 10% MAX ethanol	850 E-TEC 600R E-TEC	91 AKI (RON+MON)/2 95 RON 

NOTICE Never experiment with other fuels. Engine or fuel system damages may occur with the use of an inadequate fuel.

NOTICE Do NOT use fuel from fuel pumps labeled E85.

Use of fuel labeled E15 is prohibited by U.S. EPA Regulations.

Fuel Antifreeze Additives

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, isopropyl base gas line antifreeze can be used in a proportion of 150 ml (5 fl oz (US)) of gas line antifreeze added to 40 l (10.6 U.S. gal.) of gas.

This precaution is in order to reduce the risk of frost buildup in fuel system components which may lead, in certain cases, to severe damage to engine.

Note: Use only methyl hydrate free gas line antifreeze.

Vehicle Fueling Procedure

⚠ WARNING

Always stop engine before refueling.

⚠ WARNING

- Fuel is flammable and explosive under certain conditions.
- Never use an open flame to check fuel level.
- Never smoke or allow flame or spark in vicinity.
- Always work in a well-ventilated area.

1. Stop engine.
2. Have operator and passenger get off vehicle.

⚠ WARNING

Do not allow anyone seated on the vehicle while fueling.

3. Unscrew slowly the fuel reservoir cap counterclockwise to stabilize pressure before removing it.

Note: A short whistling sound is normal.



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TYPICAL

1. Fuel tank cap

4. Insert the spout into the filler neck.
5. Pour fuel slowly so that air can escape from the tank and prevent fuel flow back. Be careful not to spill fuel.
6. Stop filling when the fuel reaches the bottom of filler neck. **Do not overfill.**

 **WARNING**

Never top up the fuel tank before placing the vehicle in a warm area. As temperature increases, fuel expands and may overflow.

7. Fully tighten fuel reservoir cap clockwise.

 **WARNING**

Always wipe off any small fuel spillage from the vehicle. If a major spillage occurs, remove side panels to remove fuel vapors from engine compartment before starting.

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

INJECTION OIL

Recommended Injection Oil

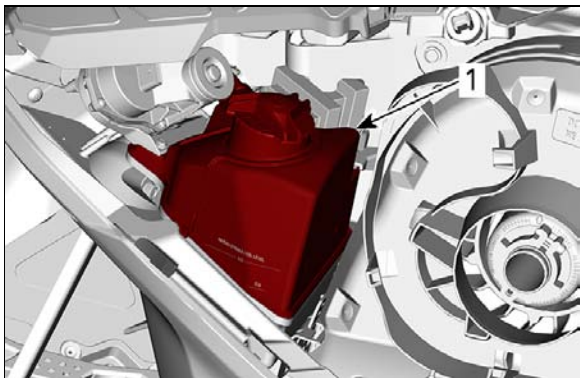
Rotax® engines were developed and validated using the XPS™ oil. BRP recommends the use of its XPS injection oil or an equivalent at all time. Damages caused by the use of an injection oil not suitable for this 2-stroke direct fuel injection engine may not be covered by the BRP Limited Warranty.

Recommended Injection Oil
XPS 2T E-TEC Synthetic Oil
If the Recommended XPS Injection Oil is Not Available
Use a 2-stroke lubricant designed for snowmobiles meeting or exceeding the following lubricant industry specifications: <ul style="list-style-type: none">- JASO FD (M345-2004)- SAE Grade 4 (F / M 4)

Injection Oil Level Verification

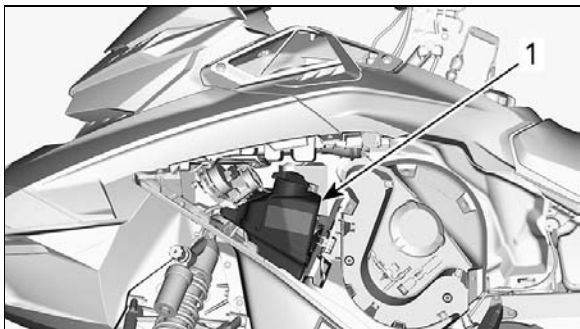
The injection oil reservoir is located behind the LH side panel. See *CONTROLS, INSTRUMENTS AND EQUIPMENT* for opening procedure.

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



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1. Oil reservoir



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1. Oil reservoir

Marks on the tank indicates "3/8" and "1/2" of the total amount of oil.

NOTICE Check level and refill every time you refuel.

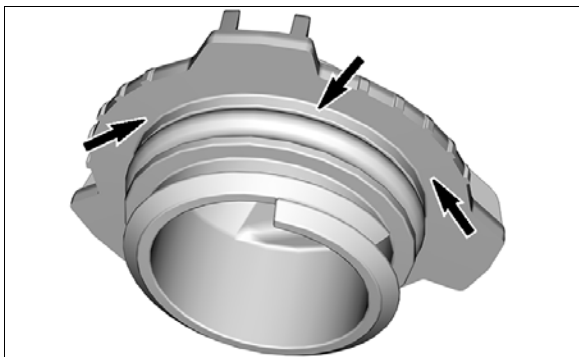
To Add Injection Oil

Remove injection oil reservoir cap.

Add injection oil.

Note: Do not overfill.

Wipe the reservoir cap seal and flange area.



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Reinstall cap.

NOTICE Do not overtighten.

⚠ WARNING

Wipe off any oil spills. Oil is highly flammable when heated.

BREAK-IN PERIOD

Operation During Break-In

Engine

During the break-in period:

- Avoid prolonged full throttle operation.
- Avoid sustained accelerations.
- Avoid prolonged cruising speeds.
- Avoid engine overheating.

However, brief accelerations and speed variations contribute to a good break-in.

During a predetermined period, the engine management system controls some engine parameters.

The duration is based on fuel volume. It will take approximately two fuel tanks to complete the break-in.

During this period:

- The engine performance and behavior will not be optimal.
- The fuel and oil consumption will be higher.

Drive Belt

A new drive belt requires a break in period of 50 km (30 mi).

During the break-in period:

- Avoid strong acceleration and deceleration.
- Avoid pulling a load.
- Avoid high speed cruising.

If the vehicle creeps, lower the drive belt height from the preliminary setting. Refer to *DRIVE BELT* in *MAINTENANCE PROCEDURE*.

BASIC PROCEDURES

Engine Starting Procedure

Procedure

1. Apply parking brake.
2. Recheck throttle control lever operation.
3. Put your helmet on.
4. Ensure that the tether cord cap (D.E.S.S. key) is installed on the engine cut-off switch (D.E.S.S. post) and that the cord is attached to your clothing eyelet.
5. Ensure that the emergency engine stop switch is in the ON position (up).

WARNING

Never depress throttle while starting engine.

6. Release parking brake.

Note: For an initial cold start, do not release parking brake. Perform the *VEHICLE WARM-UP* procedure.

Depress the START/RER button to engage the electric starter and start the engine. Release button immediately when engine has started.

NOTICE Do not engage electric starter for more than 10 seconds at a time. A rest period should be observed between the cranking cycles to allow electric starter to cool down.

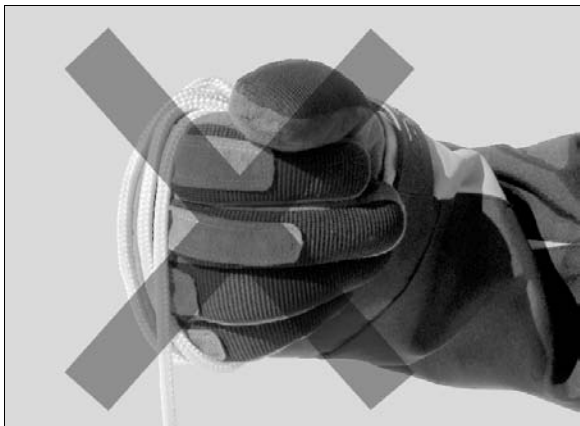
Emergency Starting

The engine can be started with the emergency starter rope supplied in the storage compartment, see *CONTROLS, INSTRUMENTS AND EQUIPMENT*.

Remove the drive belt guard, see *CONTROLS, INSTRUMENTS AND EQUIPMENT*.

⚠ WARNING

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

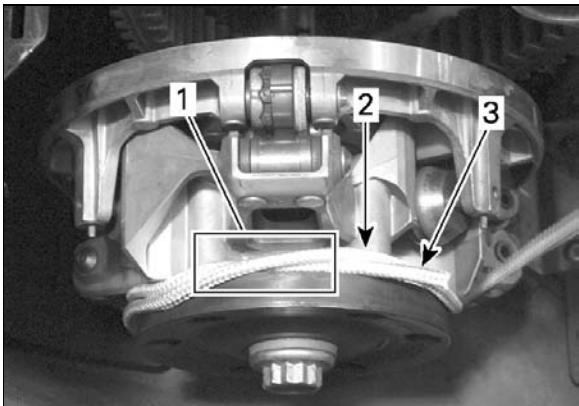


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Attach one end of emergency rope to the rewind handle.

Note: The suspension adjustment tool can be used as an emergency handle.

Cross the rope on the first turn as shown.

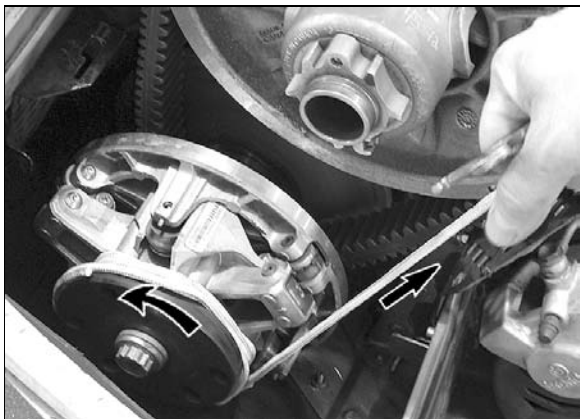


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1. *Rope crossed*
2. *Rope to be winded*
3. *Rope end*

Wind rope two turns counterclockwise tightly around the drive pulley where shown.

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



520001663-013_b

TYPICAL

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.

Vehicle Warm-Up

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

1. Start engine as explained in *ENGINE STARTING PROCEDURE* above.
2. Allow engine to warm up one or two minutes at idle speed.

Note: Engine will shut down after approximately 12 minutes of idling.

3. Disengage parking brake.
4. Apply throttle until drive pulley engages. Drive at low speed the first two or three minutes.

NOTICE If vehicle does not move when throttle is applied, stop engine, remove tether cord cap from the engine cut-off switch, then do the following.

- Check if skis are stuck on the ground. Lift one ski at a time by the handle, then put it down.
- Check if track is stuck on the ground. Lift rear of snowmobile enough to clear track from the ground, then drop.
- Check rear suspension for hard snow or ice accumulation that could interfere with track rotation. Clean the area.

 **CAUTION**

Beware of injuries by using proper lifting techniques, notably using your legs force. Do not attempt to lift the rear of vehicle if it is above your limits.

 **WARNING**

Make sure tether cord cap is removed before standing in front the vehicle, getting close to the track or rear suspension components.

Note: Warm-up is electronically controlled. During this period (up to 10 minutes depending on ambient temperature), engine RPM is limited.

Reverse (RER)

When the engine is running, depressing the RER button will slow down engine RPM to almost a stop and advance the ignition timing to invert crankshaft rotation.

- Engine will automatically shift into forward when restarting after stopping or stalling.
- Shifting procedure will take place only when the engine is running.
- If engine is running at a speed above 4300 RPM, the function of the RER button is disabled.
- It is recommended to warm up the engine to its normal operating temperature before shifting.

Shifting in Reverse

1. Bring vehicle to a complete stop.
2. Apply and hold brake. Remain seated, refer to *RIDER POSITION (REVERSE OPERATION)* in *RIDING THE VEHICLE* for posture information.
3. With engine at idle speed, press and release the RER button.
4. Wait until reverse beeper sounds, then gently depress throttle lever.

WARNING

Engaging the reverse mode is done by depressing the RER button when the engine is running. Wait until the reverse alarm sounds and the RER pilot lamp comes on in the analog/digital gauge before operating throttle to proceed in reverse. The reverse speed 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.

Shifting in Forward

1. Bring vehicle to a complete stop.
2. Apply and hold brake.
3. Press and release the RER button.
4. RER pilot lamp will stop.
5. Apply throttle slowly and evenly. Allow drive pulley to engage then accelerate carefully.

Shutting Off the Engine

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

Shut off the engine using either the emergency engine stop switch or by pulling off the tether cord cap from the engine cut-off switch.

 **WARNING**

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

RIDING CONDITIONS AND YOUR SNOWMOBILE

Altitude

At factory, your snowmobile was calibrated to be used within an altitude range (height above the sea level). For your model's factory calibration, refer to the following table.

MODEL	FACTORY CALIBRATION
All models (North America)	Sea level up to 600 m (2,000 ft)

MODEL	FACTORY CALIBRATION
All models (Europe)	Sea level up to 600 m (2,000 ft)

If your snowmobile is to be used at an altitude outside the specified range, have it calibrated accordingly by an authorized Ski-Doo dealer.

NOTICE An inappropriate altitude calibration would decrease performance and may cause serious damage to the snowmobile.

Temperature

The engine management of these engines provides the optimum air/fuel ratio for all temperatures.

SPECIAL OPERATION

Towing an Accessory

Always use a rigid tow bar to tow an accessory. Any towed accessory should have reflectors on both sides and at the rear. Check local laws for brake light(s) requirements.

WARNING

Never tow an accessory with a rope. Always use a rigid tow bar. Using a rope would result in a collision between the object and the snowmobile and possibly in a tip over in case of a rapid deceleration or on a downward slope.

Towing Another Snowmobile

If a snowmobile is disabled and must be towed use a rigid tow bar. Remove the drive belt from disabled snowmobile, refer to *DRIVE BELT* in *MAINTENANCE PROCEDURES* and tow at moderate speed.

NOTICE Always remove the drive belt of the snowmobile that is to be towed to prevent damage to its belt and drive system.

In an emergency situation only, if a rigid tow bar is not available, a rope can be used. Proceed with extra caution. In some areas, it may be illegal to do so. Check with state or local authorities.

Remove the drive belt, attach the rope to the ski legs (spindles), have someone sit on the towed snowmobile to activate the brake, and tow at low speed.

NOTICE In order to prevent damage to the steering system, never attach the tow rope to the ski handles.

WARNING

Never ride at high speed when towing a disabled snowmobile. Proceed slowly with extra caution.

TUNE YOUR RIDE

Snowmobile handling and comfort depend upon multiple adjustments.

WARNING

Suspension adjustment could affect vehicle handling. Always take time to familiarize yourself with the vehicle's behavior after any suspension adjustment have been made. Always adjust LH and RH suspension components to the same setting.

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

Note: Some adjustments may not apply to your snowmobile.

WARNING

Before proceeding with any suspension adjustment, remember:

- Park in a safe place.
- Remove the tether cord cap from the engine cut-off switch.
- Use appropriate lifting device or have assistance to share lifting stress. If a lifting device is not used, use proper lifting techniques, notably using your legs force.
- Do not attempt to lift the front or rear of vehicle if it is above your limits.
- Support front of vehicle off the ground with a suitable device before adjusting suspension.
- Support rear of vehicle off the ground with a wide-base snowmobile stand with a rear deflector panel.
- Make sure support device is stable and secure.

The best way to set up the suspension is to customize each adjustment one at a time. Various adjustments 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, operator riding position, etc. Proceed methodically until you are satisfied.

Following are guidelines to fine-tune suspension. Use suspension adjustment tool provided in the tool kit.

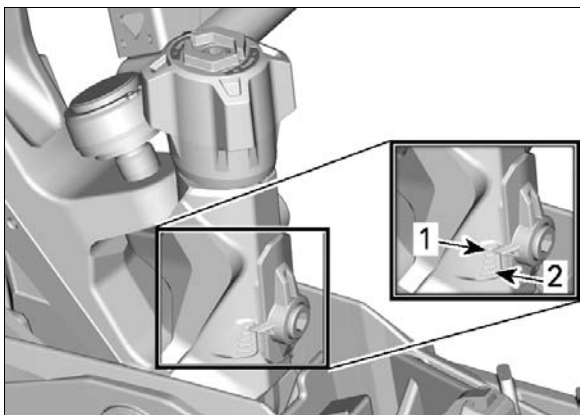
Ski Runner Depth Setting (Pilot TS Skis)

Pilot TS skis enables the rider to dial in the amount of ski bite for conditions and riding style.

A knob adjacent to the ski leg raises or lowers the ski runner.

Ski behavior depends largely on trail conditions but also on ski runner adjustment. Same as drivers behavior adapts to trail condition change.

Ski runner bottom face conditions must be regularly checked especially if the snow condition is marginal such as a lack of snow, presence of rocks or sand. Snowmobile must be driven slowly when on paved surfaces in order to prevent overheating of the ski runner bottoms and as such, damage to carbide inserts. Ski runners must be replaced as soon as any of the carbide inserts are worn out or missing. Worn out runner usage may lead to damage of ski sole.



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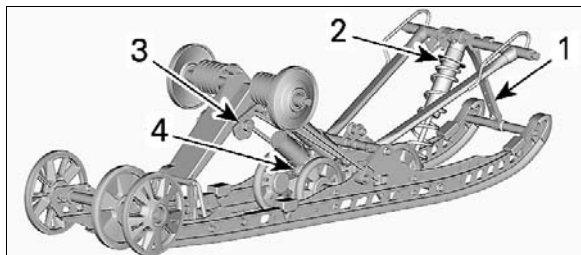
PILOT TS SKIS ADJUSTMENT KNOB

1. Position 1
2. Position 5

Pilot ts ski adjustability

Position	Lateral grip	Handling	Possible understeering	Possible oversteering
1	*	*	***	
2	**	**	**	
3	***	***	*	*
4	****	****		**
5	*****	*****		***

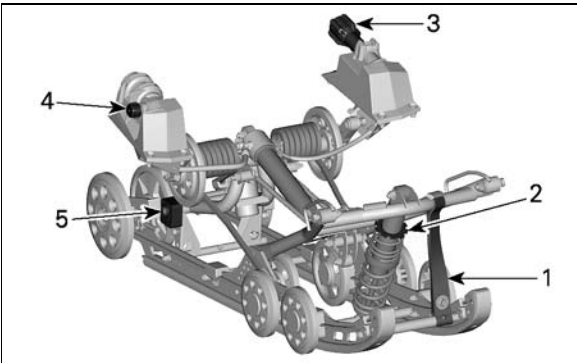
Rear Suspension Adjustments



520001798-007_a

CMOTION

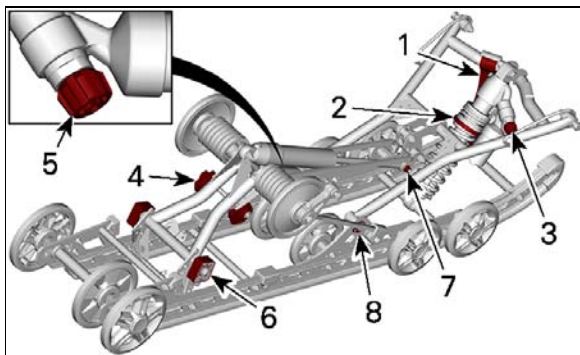
1. Stopper strap
2. Center spring
3. Rear spring
4. Rear shock absorber



520001798-009_a

RMOTION WITH QUICK ADJUST- ADJUSTABLE COMPONENTS

1. *Stopper strap*
2. *Center spring*
3. *Rear spring*
4. *Rear shock absorber*
5. *Coupling blocks (RH side shown)*



520002316-008

RMOTION WITHOUT QUICK ADJUST- ADJUSTABLE COMPONENTS

1. Stopper strap
2. Center spring
3. Center shock absorber
4. Rear spring
5. Rear shock absorber
6. Coupling blocks (RH side shown)
7. Rear shock lower pivot (rMotion and rMotion-X)
8. Front arm (rMotion-X)

NOTICE Whenever adjusting rear suspension, check track tension and adjust if necessary.

Stopper Strap

Stopper strap length has an effect on the amount of weight the center spring has to carry especially during acceleration, therefore on the front end uplift.

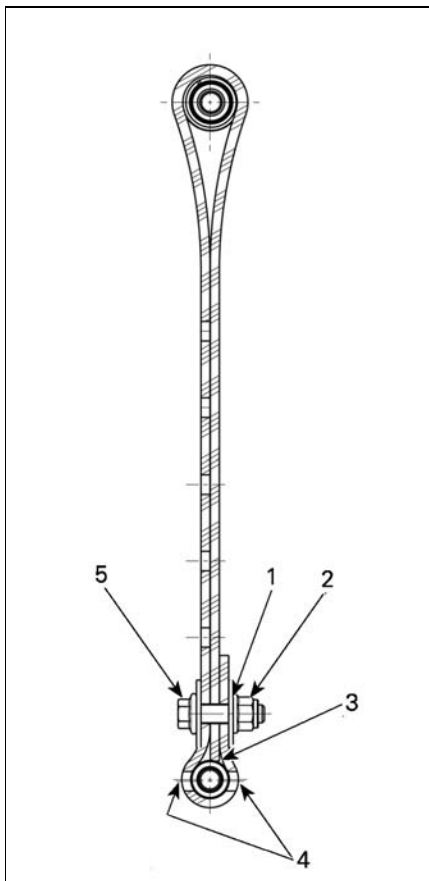
Stopper strap length also has an effect on center spring travel.

NOTICE Whenever stopper strap length is changed, track tension must be checked.

Action	Result
Increasing stopper strap length	Lighter ski pressure under acceleration
	More center spring travel

Action	Result
Increasing stopper strap length	More bump absorption capability
Decreasing stopper strap length	Heavier ski pressure under acceleration
	Less center spring travel
	Less bump absorption capability

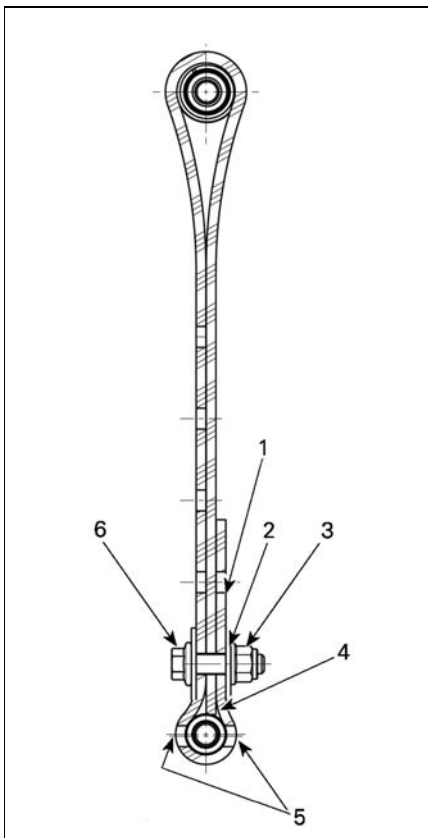
Note: Stopper strap could be set to position 1, 2, 3, 4 and 5. Below are illustrations for position 1, 2, 3. Smaller numbers correspond to a longer strap setting.



mmo2015-007-102_b

STOPPER STRAP POSITION 1 (1ST HOLE, LONGEST)

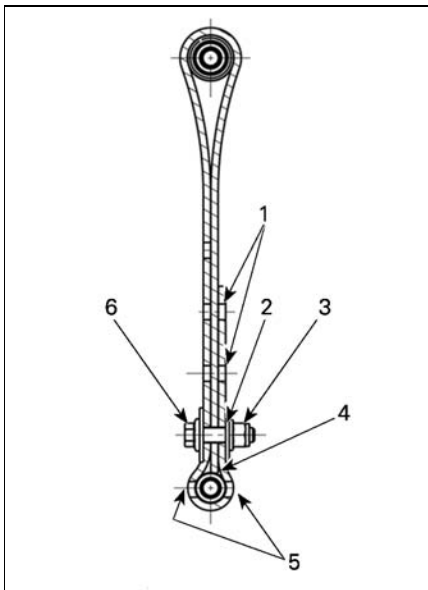
1. 1st hole from end
2. Towards rear
3. Tip of strap touching strap axis
4. Two holes left open between screw head and nut
5. Towards front



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STOPPER STRAP POSITION 2 (2ND HOLE)

1. Free hole
2. 2nd hole from end
3. Towards rear
4. Tip of strap touching strap axis
5. Two holes left open between screw head and nut
6. Towards front



mmo2015-007-103_b

STOPPER STRAP POSITION 3 (3RD HOLE)

1. *Free holes*
2. *3rd hole from end*
3. *Towards rear*
4. *Tip of strap touching strap axis*
5. *Two holes left open between screw head and nut*
6. *Towards front*

Note: Decreasing the stopper strap length may reduce comfort. If too much weight transfer is felt, try to correct it by adjusting the coupling blocks first. Always install stopper strap bolt as close as possible to the lower shaft.

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.

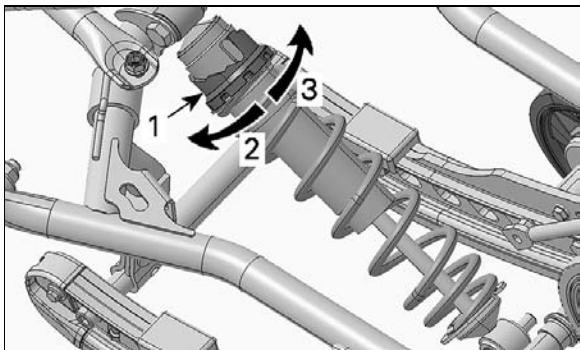
Generally, a longer stopper strap setting gives better performance in deep snow on a flat landscape.

Center Spring

Center spring preload has an effect on steering effort, handling and bump absorption.

Also, since center spring preload adjustment puts more or less pressure on the front of the track, it has an effect on the performance in deep snow.

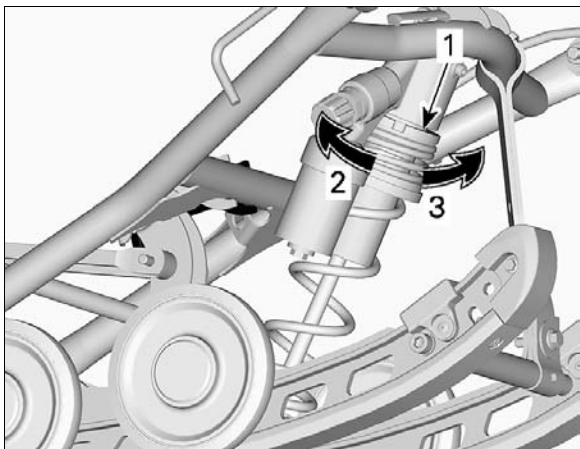
Action	Result
Increasing preload	Lighter steering
	More bump absorption capability
	Better deep snow starts
	Better deep snow performance and handling
Decreasing preload	Heavier steering
	Less bump absorption capability
	Better trail handling



mmo2010-003-015_a

TYPICAL - CAM TYPE

1. *Spring preload adjustment cam*
2. *Decrease preload*
3. *Increase preload*



mmo2012-005-807_b

TYPICAL - RING TYPE

1. *Spring preload adjustment ring*
2. *Increase preload*
3. *Decrease preload*

Note: Use the suspension adjustment tool provided with the vehicle.

Rear Spring

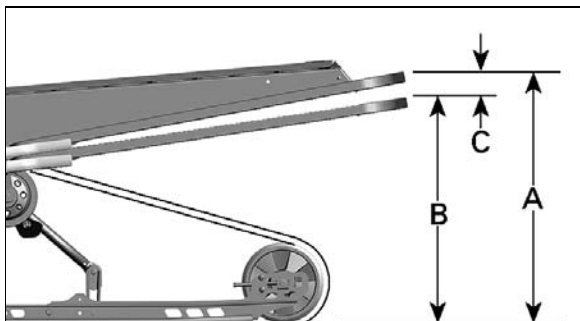
Rear spring preload has an effect on comfort, ride height and load compensation.

Also, adjusting rear spring preload shifts more or less weight to the snowmobile front end. As a result, more or less weight is applied to the skis. This has an effect on performance in deep snow, steering effort and handling.

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

Action	Result
Increasing preload	Firmer rear suspension
	Higher rear end
	More bump absorption capability
	Heavier steering
Decreasing preload	Softer rear suspension
	Lower rear end
	Less bump absorption capability
	Lighter steering
	Better performance and handling in deep snow

Refer to the following to determine if preload is correct.



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TYPICAL - PROPER ADJUSTMENT

- A. Suspension fully extended
- B. Suspension has collapsed with operator, passenger and load added
- C. Distance between dimension "A" and "B", see table below

C	What to do
50 mm to 75 mm (2 in to 3 in)	No adjustment required
More than 75 mm (3 in)	Adjusted too soft. Increase preload
Less than 50 mm (2 in)	Adjusted too firm. Decrease preload

Note: If the specification is unattainable with the original springs, see an authorized Ski-Doo dealer for other available springs.

rMotion Without Quick Adjust

To increase spring preload using tool, always turn the left side adjustment cam in a clockwise direction, and the right side cam in a counterclockwise direction.

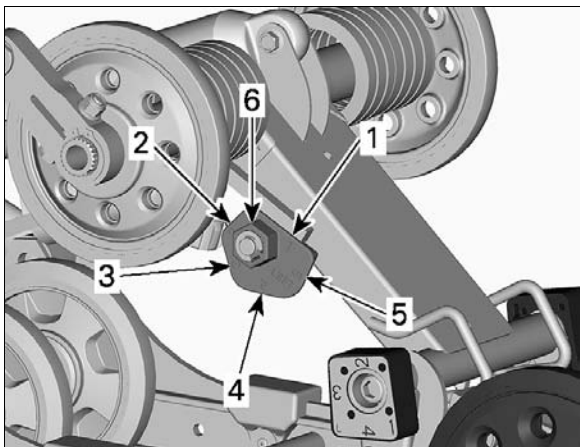
⚠ CAUTION

Never set preload cams directly from position 5 to 1 or directly from position 1 to 5.

⚠ WARNING

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

The adjustment cams have 5 different settings, 1 being the softest.



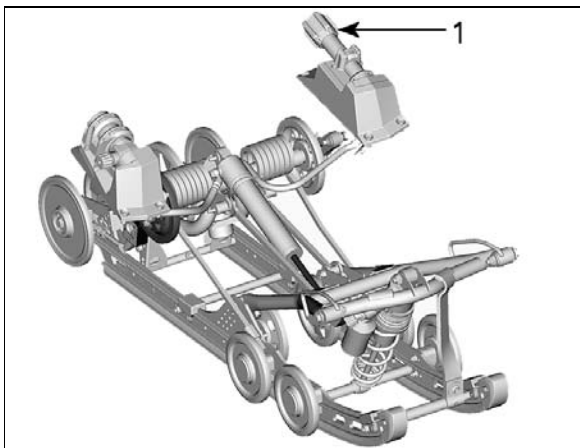
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RMOTION WITHOUT QUICK ADJUST - LH SIDE SHOWN

1. Position 1
2. Position 2
3. Position 3
4. Position 4
5. Position 5
6. Adjustment nut

rMotion - With Quick Adjust

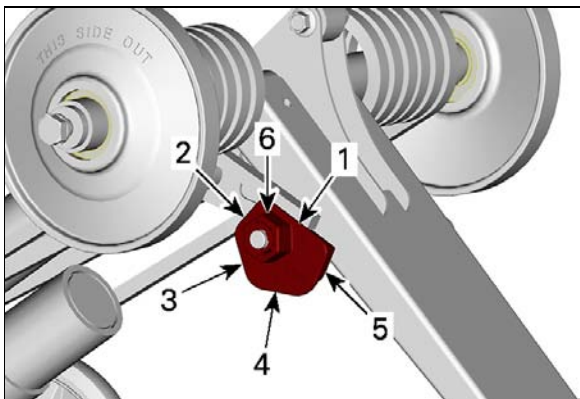
Turn the left side knob to adjust the spring preload.



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RMOTION WITH QUICK ADJUST

1. LH side knob to adjust spring preload



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CMOTION - LH SIDE SHOWN

1. Position 1
2. Position 2
3. Position 3
4. Position 4
5. Position 5
6. Adjustment nut

Action	Result
Increasing preload	Firmer rear suspension
	Higher rear end
	More bump absorption capability
	Heavier steering
Decreasing preload	Softer rear suspension
	Lower rear end
	Less bump absorption capability
	Lighter steering
	Better performance and handling in deep snow

Center Shock Absorber

Center Shock Compression Damping (If Equipped)

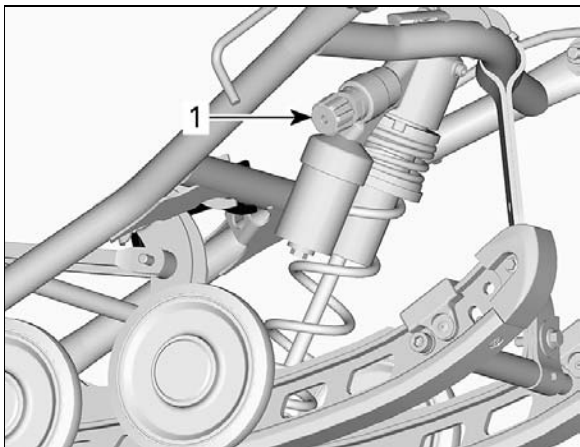
Note: Both low and high speed compression damping are adjusted simultaneously.

Low speed compression damping controls how the shock absorber reacts to a low suspension velocity (slow compression strokes, in most cases when riding at lower speeds).

High speed compression damping controls how the shock absorber reacts to a high suspension velocity (quick compression strokes, in most cases when riding at higher speeds).

Action	Result on big and small bumps
Increasing compression damping force	Firmer compression damping
Decreasing compression damping force	Softer compression damping

To adjust, turn clockwise to increase damping force and counterclockwise to decrease damping force.



mmo2012-005-807_a

1. Center shock compression damping adjustment knob

Front Arm Adjustments (rMotion-X)

The lower pivot of the front arm can be set to 2 different positions on the rMotion-X suspension.

The lower pivot adjustment has an effect on vehicle handling during acceleration.

Front Arm Lower Pivot Position	
Upper	Factory setting. Best for cornering under acceleration.
Lower	Does not keep as much pressure on skis while engine is pulling. Best for bumpy trail under acceleration.

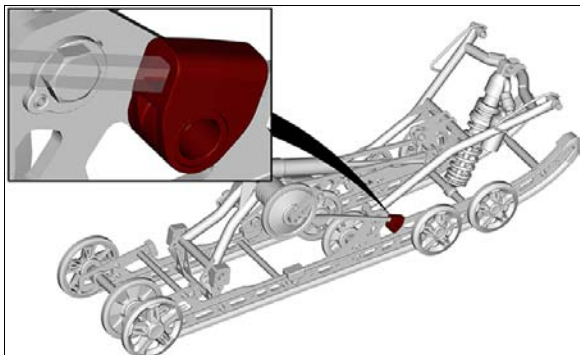
To change the front arm lower pivot position, proceed as follows:

1. Lift rear of the vehicle and support it off the ground.

2. Release the track tension. Refer to *TRACK TENSION ADJUSTMENT* in *MAINTENANCE PROCEDURES*.
3. Set rear spring preload to minimum. Refer to *REAR SPRING*.
4. Firmly hold the spring support and remove the spring support screw.

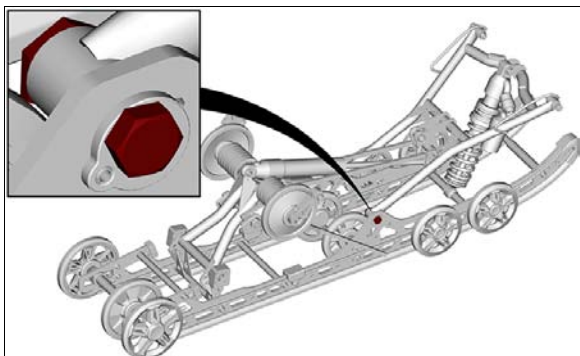
⚠ CAUTION

Spring support are spring loaded.



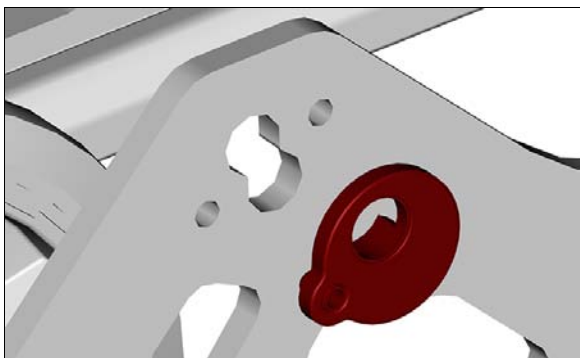
520002316-001

5. Remove the front arm lower screw.

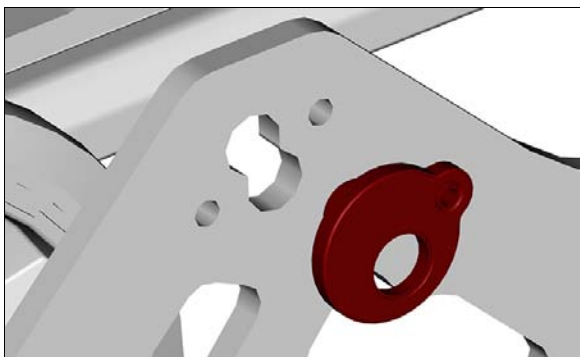


520002316-002

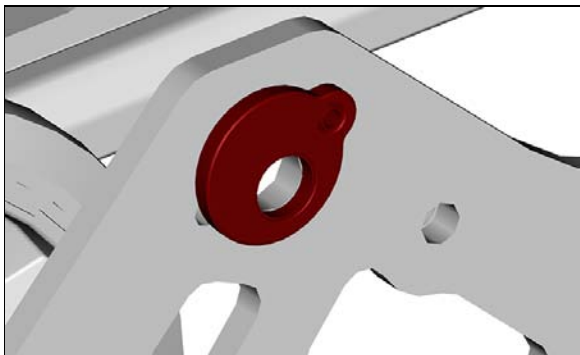
6. Remove the cam, pivot 180°, reinstall in the rail.



520002316-003



520002316-004



520002316-005

7. Reinstall the arm with a new screw and tighten to specification.
8. Reinstall the spring support with a new nut and tighten to specification.

Tightening Torque	
Arm pivot screw	125 ± 10 Nm (92 ± 7 lbf-ft)
Rear spring support nut	24.5 ± 3.5 Nm (18 ± 3 lbf-ft)

9. Repeat the steps for the other side.
10. Adjust the rear spring settings.
11. Adjust the track tension.

Rear Shock Absorber

Rear Shock Position (rMotion and rMotion-X)

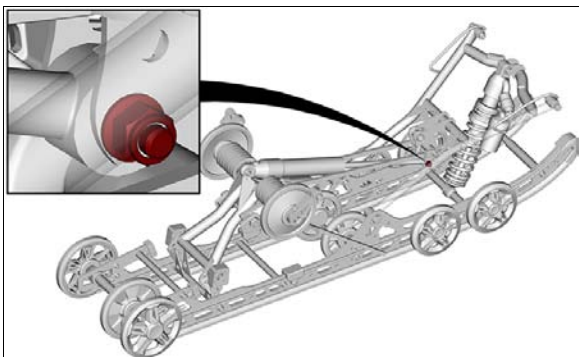
The lower pivot of the rear shock can be set to 2 different positions on the rMotion and rMotion-X suspensions.

Rear Shock Lower Pivot Position

Upper	Softer absorption
Lower (From factory)	Reference absorption

To change the shock lower pivot position, proceed as follows:

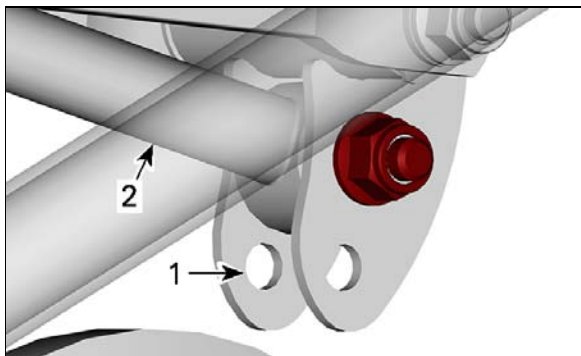
1. Lift rear of the vehicle and support it off the ground.
2. Remove stopper strap screw to release tension.
3. Remove the shock lower screw and nut.



520002316-006

Note: It may be necessary to lower the vehicle and slightly compress the suspension to remove the load.

4. Align shock with the upper hole.
5. Install the screw with a new nut and tighten to specification.



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1. Lower position (from factory)
2. Shock rod in upper position

6. Reinstall stopper strap screw with a new nut.

Tightening Torque	
Rear shock lower nut	24.5 ± 3.5 Nm (18 ± 3 lbf-ft)
Stopper strap nut	10 ± 2 Nm (89 ± 18 lbf-in)

7. Verify track tension and adjust if required.

Rear Shock Compression Damping (If Equipped)

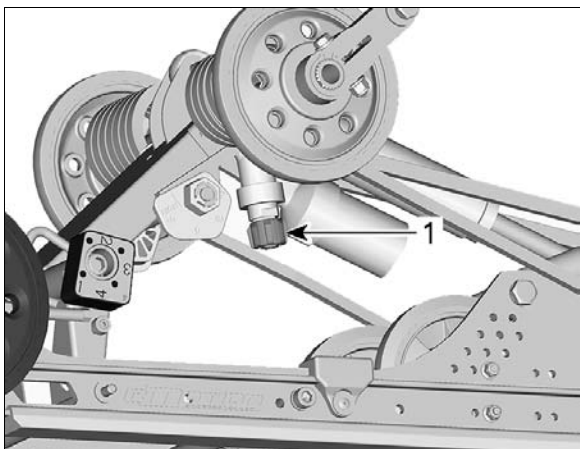
Note: Both low and high speed compression damping are adjusted simultaneously.

Low speed compression damping controls how the shock absorber reacts to a low suspension velocity (slow compression strokes, in most cases when riding at lower speeds).

High speed compression damping controls how the shock absorber reacts to a high suspension velocity (quick compression strokes, in most cases when riding at higher speeds).

Turning	Action	Result on big and small bumps
Clockwise	Increasing compression damping force	Firmer compression damping
Counter Clockwise	Decreasing compression damping force	Softer compression damping

To adjust, turn the adjuster button located on the oil reservoir on shock clockwise to increase compression damping force and counterclockwise to decrease compression damping force.



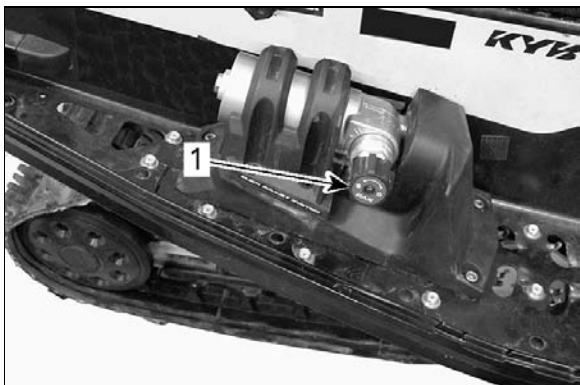
mmo2012-005-808_a

TYPICAL - RMOTION WITHOUT QUICK ADJUST

1. Compression damping adjustment button

rMotion With Quick Adjust

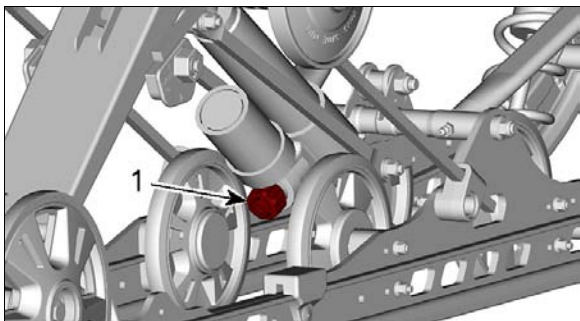
Turn the right side knob to adjust the shock compression speed.



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TYPICAL - RMOTION WITH QUICK ADJUST - RH SIDE

1. Knob to adjust low/high speed compression damping



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TYPICAL - CMOTION

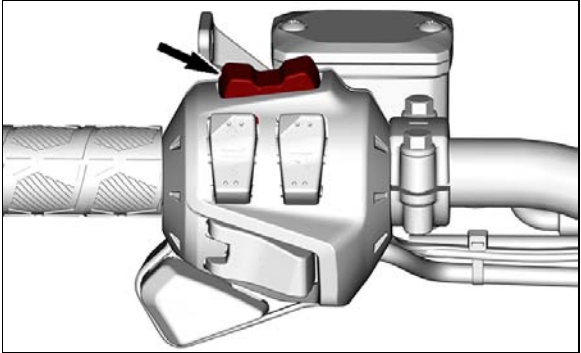
1. Compression damping adjustment button

Rear Shock Absorber (ACS)

The operator can adjust the comfort and ride height by adjusting the air pressure inside the air shock absorber.

To adjust, proceed as follows:

1. Start engine.
2. Press and hold MODE (M) button until requested setting flash



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3. Set suspension mode by pressing the MODE (M) button to cycle through settings.
4. The desired set point appears on the display. To confirm, press the MENU (M) button or wait 5 seconds.



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ACS SETTING 3

Coupling Blocks (rMotion)

Coupling blocks adjustment has an effect on vehicle handling during acceleration only.

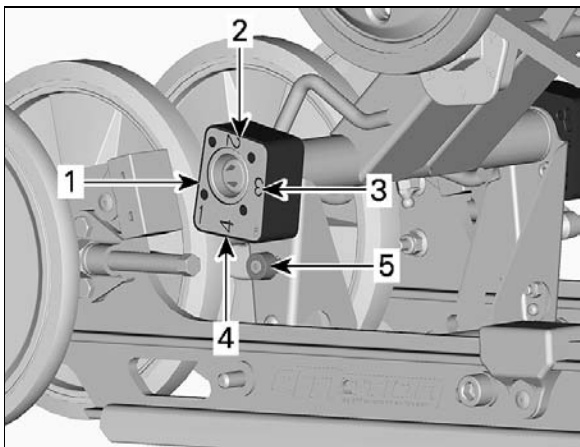
Note: A high coupling block setting will reduce both comfort and transfer under acceleration.

To adjust, push on release button under cam and turn coupling block to the desired setting.

Place the desired setting number towards rubber stopper. No tools required.

WARNING

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



mmo2012-005-806_a

COUPLING BLOCK - RIGHT SIDE VIEW(R - RIGHT EMBOSSED ON BLOCK)

1. *Position 1 (minimum)*
2. *Position 2*
3. *Position 3*
4. *Position 4 (maximum)*
5. *Release button*

Coupling Blocks Setting

Position	use
1	More ski lift during acceleration - and best comfort
2	Intermediate setting
3	Intermediate setting
4	Less ski lift during acceleration - and some comfort loss

Front Suspension Adjustments

Ski Stance (If Equipped)

Ski stance can be set to different width.

Proceed as follows to change the stance setting:

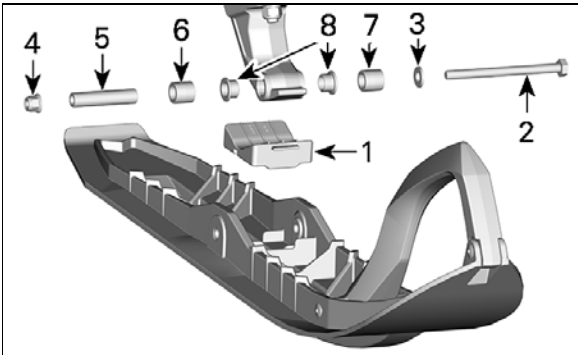
1. Lift the front of vehicle.
2. Remove the ski bolt.
3. Place the spacer according to the desired stance. Refer to tables and illustrations.

WARNING

Proceed to the same setting for both skis.

Models with Single Spacer

Ski Stance Settings - Single Spacer		
Narrow	Place the spacer on the inside of the ski leg	Improve handling in deep snow
Wide	Place the spacer on the outside of the ski leg	Improve stability on trail



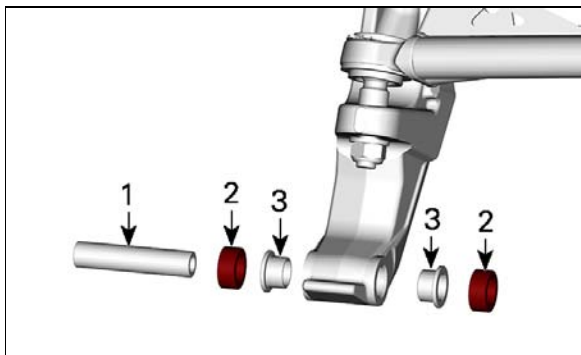
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LH SIDE SHOWN

1. Ski stopper
2. M10 x 130 screw
3. M10 flat washer
4. M10 flanged nut
5. Ski axel
6. Narrow adjustment
7. Wide adjustment

Models with Double Spacers

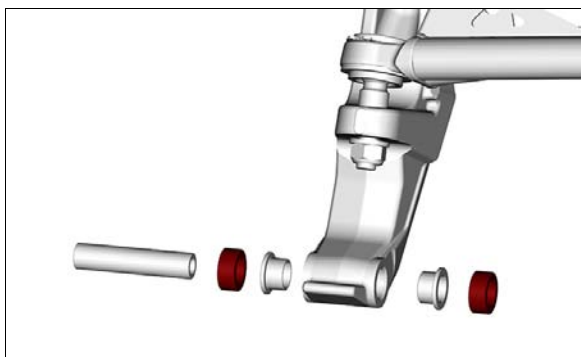
Ski Stance Settings - Double Spacers		
Narrow	Place both spacers on the inside of the ski leg	Allows snowmobile to fit in narrow spaces
Middle	Place one spacer on each side of the ski leg	Best handling on icy surfaces
Wide*	Place both spacers on the outside of the ski leg	Best overall handling on trail
* Make sure the overall width complies with your local regulations		



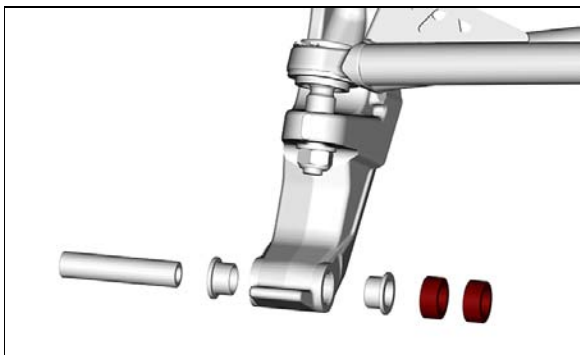
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LH SIDE SHOWN

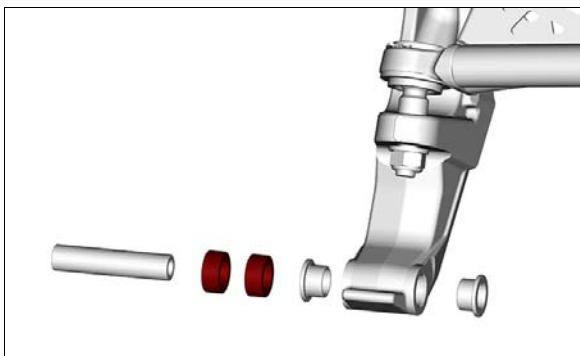
1. Ski axle
2. Spacers
3. Ski leg bushings



fbl2017-004-003



fbl2017-004-004



fbl2017-004-005

All Models

4. Tighten nut to the specified torque.

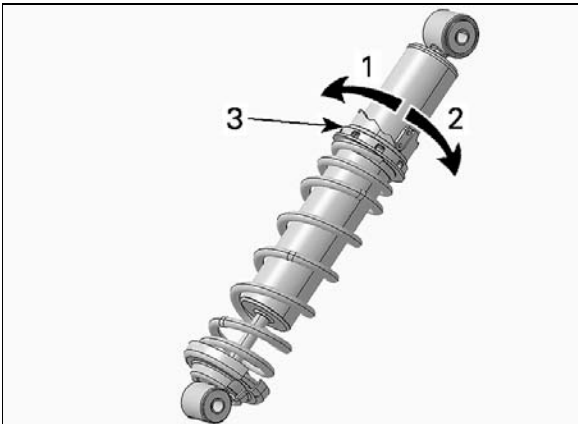
Tightening Torque	
Ski nut	$48 \pm 6 \text{ Nm}$ $(35 \pm 4 \text{ lbf-ft})$

Front Springs

Front spring preload has an effect on front suspension firmness.

Front spring preload also has an effect on the steering behavior.

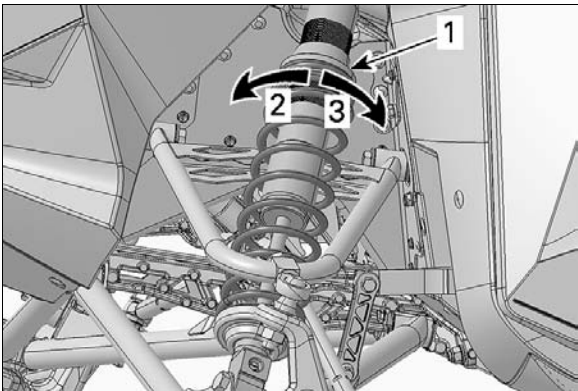
Action	Result
Increasing preload	Firmer front suspension
	Higher front end
	More precise steering
	More bump absorption capability
Decreasing preload	Softer front suspension
	Lower front end
	Lighter steering
	Less bump absorption capability



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CAM TYPE - HPG SHOCK ABSORBER

1. *Decrease preload*
2. *Increase preload*
3. *Spring preload adjustment cam*



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TYPICAL - RING TYPE

1. *Spring preload adjustment ring*
2. *Increase preload*
3. *Decrease preload*

Front Shock Absorber

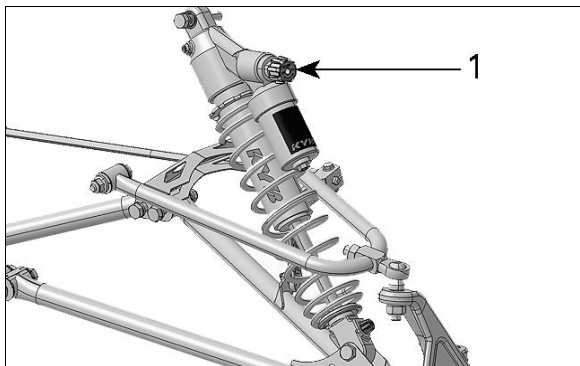
Front Shock Compression Damping (KYB PRO Series Only)

Note: Both low and high speed compression damping are adjusted simultaneously.

Low speed compression damping controls how the shock absorber reacts to a low suspension velocity (slow compression strokes, in most cases when riding at lower speeds).

High speed compression damping controls how the shock absorber reacts to a high suspension velocity (quick compression strokes, in most cases when riding at higher speeds).

To adjust, turn the adjuster button located on the reservoir.



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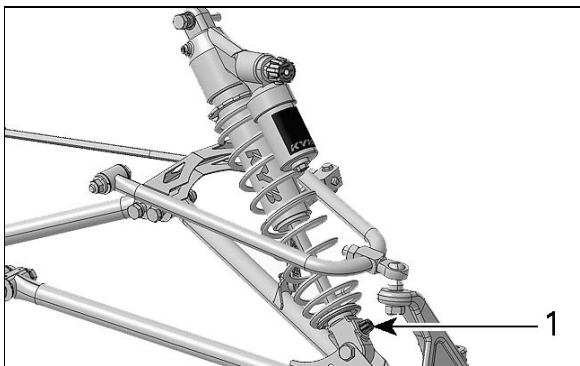
1. Compression damping adjuster button

Turning	Action	Result on big and small bumps
Clockwise	Increasing compression damping force	Firmer compression damping
Counter Clockwise	Decreasing compression damping force	Softer compression damping

Shock Rebound Damping (KYB PRO R Series Only)

Rebound damping controls how the shock absorber restrains the extension stroke.

To adjust, turn the adjuster button or slot located at the bottom of the shock absorber.



mmo2012-005-814_c

1. Rebound adjuster button

Turning	Action	Result on big and small bumps
Clockwise	Increasing rebound damping force	Firmer rebound damping (slower extension speed)
Counter Clockwise	Decreasing rebound damping force	Softer rebound damping (faster extension speed)

Note: In repetitive short small bumps (ripple), it is recommended to use a lower rebound damping setting.

Adjustment Tips According to Vehicle Behavior

Problem	Corrective measures
Front suspension darting	Check ski alignment. <ul style="list-style-type: none">- Reduce front suspension spring preload.- Increase center spring preload.- Reduce rear spring preload.
Steering feels too heavy at steady speeds	<ul style="list-style-type: none">- Reduce front suspension spring preload.- Increase center spring preload.
Steering feels too heavy during acceleration	<ul style="list-style-type: none">- Set coupling blocks to a lower position.- Reduce rear spring preload.- Lengthen limiter strap.
Too much ski lift during cornering or acceleration	<ul style="list-style-type: none">- Set coupling blocks to a higher position.- Shorten limiter strap.- Increase rear spring preload.
Rear of snowmobile seems too stiff	<ul style="list-style-type: none">- Reduce rear spring preload.- Reduce compression damping adjustment if equipped
Rear of snowmobile seems too soft	<ul style="list-style-type: none">- Increase rear spring preload.

Problem	Corrective measures
Rear suspension is frequently bottoming	<ul style="list-style-type: none"> - Increase compression damping adjustment if equipped. - Increase rear spring preload. - Increase center spring preload. - Lengthen limiter strap. - Increase compression damping adjustment if equipped.
Snowmobile seems to pivot around its center	<ul style="list-style-type: none"> - Reduce center spring preload. - Increase rear spring preload. - Increase front suspension spring preload. - Shorten limiter strap.
Track spins too much at start	<ul style="list-style-type: none"> - Set coupling blocks to a lower position. - Lengthen limiter strap.
Ski diving in deep snow	<ul style="list-style-type: none"> - Install ski tip enlarger.

VEHICLE TRANSPORTATION

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 requirements. Ensure the hitch and safety chains are secure and the brake, turn indicators and clearance lights all function.

WARNING

Do not tow the vehicle facing backwards. If the vehicle is towed facing backwards, the wind may cause damage to the windshield or even loss of the windshield.

PRE-RIDE INSPECTION

PRE-RIDE INSPECTION

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.

Before Starting the Engine

1. Remove snow and ice from body including lights, seat, footrests, controls and instruments.
2. Verify that air silencer prefilter is free of snow.
3. Verify that skis and steering operate freely. Check corresponding action of skis versus handlebar.
4. Check fuel and injection oil (if applicable) for levels and leaks. Replenish if necessary and in case of any leaks; you should seek service from an authorized Ski-Doo dealer, repair shop, or person of your own choosing for maintenance, repair, or replacement. Please refer to the *US EPA EMISSION-RELATED WARRANTY* contained herein for information about warranty claims.
5. All storage compartments must be properly latched and they must not contain any heavy or breakable objects. Hood and side panels must be also properly latched.
6. Activate the throttle control lever several times to check that it operates easily and smoothly. It must return to idle position when released.
7. Activate the brake lever and make sure the brake fully applies before the brake control lever touches the handlebar grip. It must fully return when released.
8. Apply parking brake and check if it operates properly. Leave parking brake applied.
9. Inspect drive belt condition and height, refer to *DRIVE BELT* in *MAINTENANCE PROCEDURES*.

After Engine is Started


For proper engine starting procedure, refer to the appropriate *ENGINE STARTING PROCEDURE*.

1. Check headlights high beam and low beam, taillight, stop light and pilot lamps operation.

Note: You may need to detach tether cord from your clothes to check lights. In such a case, attach cord as soon as you get back at the controls of the snowmobile.

2. Check the engine cut-off switch (by pulling tether cord cap) and emergency engine stop switch operation.
3. Release parking brake.
4. Refer to *VEHICLE WARM UP* and follow instructions.

Pre-Ride Check List

ITEM	OPERATION	
Body including seat, footrests, lights, air filter, controls and instruments	Check condition and remove snow or ice.	
Skis and steering action	Check for free movement and proper operation.	
Fuel and injection oil (if applicable)	Check for proper level and no leaks.	
Coolant	Check for proper level and no leaks.	
Brake fluid	Check for proper level and no leaks.	

Storage compartment	Check for proper latching and no heavy or breakable objects.	
Track	Check condition and remove snow or ice.	
Throttle lever	Check for proper operation.	
Brake lever	Check for proper operation.	
Parking brake, Brake	Check for proper operation.	
Emergency engine stop switch and engine cut-off switch (tether cord cap)	Check for proper action. Tether cord must be attached to operator clothing eyelet.	
Lights	Check for proper operation.	
Ski runners	Check for proper operation.	
Slider shoes	Check for proper operation.	
Drive belt	Check for cracks, fraying or abnormal wear and proper height.	

MAINTENANCE

MAINTENANCE SCHEDULE

Maintenance is very important for keeping your vehicle in safe operating condition.

The maintenance schedule does not exempt the pre-ride inspection.

WARNING

Failure to properly maintain the vehicle according to the maintenance schedule and procedures can make it unsafe to operate.

EPA Regulation - Canadian and USA Vehicles

A repair shop or person of the owner's choosing may maintain, replace, or repair emission control devices and systems. These instructions do not require components or service by BRP or authorized Ski-Doo dealers.

Although an authorized Ski-Doo dealer has an in-depth technical knowledge and tools to service your vehicle, the emission-related warranty is not conditioned on the use of an authorized Ski-Doo dealer or any other establishment with which BRP has a commercial relationship.

Proper maintenance is the owner's responsibility. A warranty claim may be denied if, among other things, the owner or operator caused the problem through improper maintenance or use.

For emission-related warranty claims, BRP is limiting the diagnosis and repair of emission-related parts to the authorized Ski-Doo dealers. For more information, please refer to the *US EPA EMISSIONS PERFORMANCE WARRANTY* contained in the *WARRANTY* section.

You must follow the instructions for fuel requirements in the fueling section of this manual. Even if gasoline containing greater than ten volume percent ethanol is readily available, the US EPA issued a prohibition against the use of gasoline containing greater than 10 vol% ethanol that applies to this vehicle. The use of gasoline containing greater than 10 vol% ethanol with this engine may harm the emission control system.

**Every Year at preseason or 3 000 km
(2,000 mi)
(Whichever Comes First)**

Perform pre-ride inspection

Check fault codes

Charge battery

Adjust drive chain

Adjust and align track

Inspect brake hose, pads and disk

Check coolant density

Inspect drive belt

Visually inspect and clean drive pulley

Inspect and clean driven pulley

Lubricate rear suspension. Lubricate whenever the vehicle is used in wet conditions (rain, puddles)

Inspect exhaust system and check for leaks

Tighten exhaust manifold screws to specified torque

Inspect fuel lines, oil lines and connections

Inspect front suspension

Inspect rear suspension (including stopper straps and slider shoes)

Inspect tie-rod ends and ski alignment

Adjust headlight beam aiming

**Every 2 Years or 6 000 km (4,000 mi)
(Whichever Comes First)**

Replace brake fluid

Inspect throttle cable

Clean and lubricate rewind starter (on applicable models)

Every 2 Years or 6 000 km (4,000 mi) (Whichever Comes First)

Replace chaincase oil

Inspect engine rubber mounts

Every 3 Years Or 10 000 km (6,000 mi) (Whichever Comes First)
--

Replace spark plugs

Inspect oil injection pump strainer and clean if needed

Clean RAVE valves

Every 5 Years

Replace engine coolant

Replace in-line fuel filter

MAINTENANCE PROCEDURES

This section includes instructions for basic maintenance procedures.

WARNING

Turn off the engine, remove tether cord cap and follow these maintenance procedures when performing maintenance. If you do not follow proper maintenance procedures you can be injured by hot parts, moving parts, electricity, chemicals or other hazards.

WARNING

Should removal of a locking device be required (e.g. lock tabs, self-locking fasteners, etc.) when undergoing disassembly/assembly, always replace with a new one.

Engine Coolant

WARNING

Never open coolant tank cap when engine is hot.

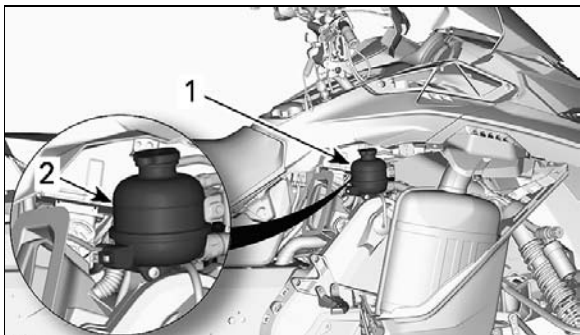
Engine Coolant level Verification

Open the RH side panel, see *CONTROLS, INSTRUMENTS AND EQUIPMENT*.

Check coolant level at room temperature with the cap removed. Liquid should be at cold level line of coolant tank.

Note: When checking level at low temperature it may be slightly lower than the mark.

If additional coolant is necessary or if entire system has to be refilled, refer to an authorized Ski-Doo dealer, repair shop or person of your own choosing.



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1. Coolant reservoir
2. COLD line

Recommended Engine Coolant

Recommended Coolant
Extended Life Pre-Mixed Coolant
Alternative, if not available
Distilled water and antifreeze solution (50% distilled water, 50% antifreeze)

NOTICE Always use ethylene-glycol antifreeze containing corrosion inhibitors specifically for internal combustion aluminum engines.

Exhaust System

Exhaust System Verification

The muffler tail pipe should be centered with the exit hole in the bottom pan. Exhaust system must be free of rust or leaks. Make sure that all parts are securely in place.

Check retaining springs condition and replace if necessary.

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.

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

Spark Plugs

Spark plugs inspection or replacement may be performed by an authorized Ski-Doo dealer, repair shop, or person of your own choosing. Spark plugs inspection or replacement requires an in-depth technical knowledge. Though not required, it is recommended that an authorized Ski-Doo dealer performs spark plugs inspection or replacement.

Brake Fluid

Recommended Fluid

Use only DOT 4 brake fluid from a sealed container. An opened container may be contaminated or may have absorbed moisture from the air.

WARNING

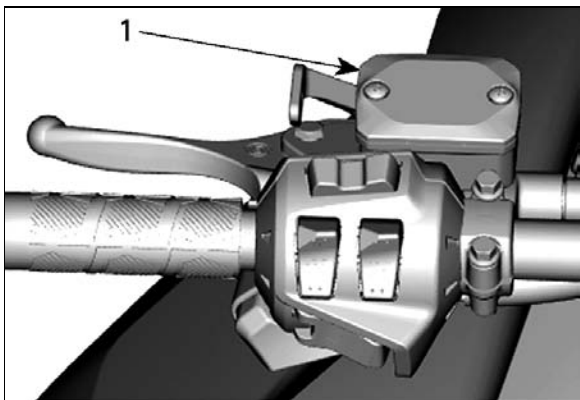
Use only DOT 4 brake fluid from a sealed container. To avoid serious damage to the braking system, do not use fluids other than the recommended one, nor mix different fluids for topping up.

NOTICE Brake fluid can damage painted and plastic parts. Handle with care. Rinse thoroughly in case of spillage.

Brake Fluid Level Verification

NOTICE Vehicle must be on a level surface before checking any fluid levels.

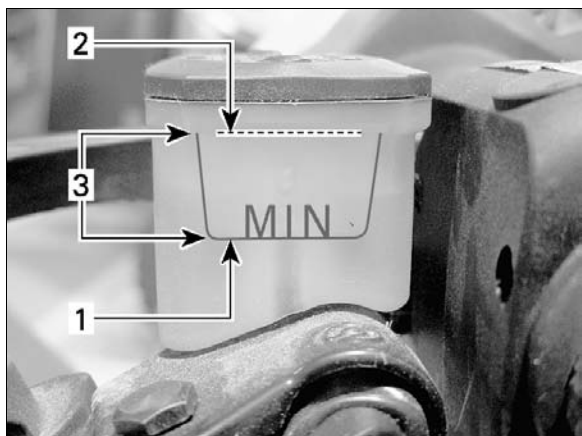
Check brake fluid (DOT 4) in reservoir for proper level. Add fluid (DOT 4) as required.



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TYPICAL

1. Brake fluid reservoir



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TYPICAL

1. Minimum
2. Maximum
3. Operating range

 **CAUTION**

Avoid getting brake fluid on skin or eyes - it may cause severe burns. In case of contact skin, wash thoroughly. In case of contact with the eyes, immediately rinse with plenty of water for at least 10 minutes and then consult a doctor immediately.

Chaincase Oil

Recommended Chaincase Oil

Recommended Chaincase Oil
XPS Synthetic chaincase oil

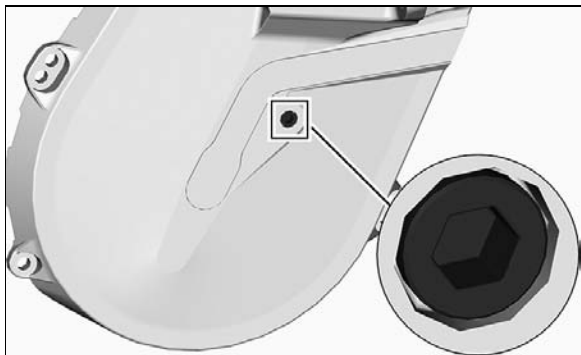
NOTICE If the recommended XPS chaincase oil is not available, use a 75W140 gear oil that meets the API GL-5 specification. The chaincase of this snowmobile has been developed and validated using the XPS™ Synthetic chaincase oil. BRP strongly recommends the use of its XPS Synthetic chaincase oil at all times. Damages caused by oil which is not suitable for the chaincase will not be covered by the BRP limited warranty.

Access to Chaincase

Open RH side panel, refer to *CONTROLS, INSTRUMENTS AND EQUIPMENT*.

Chaincase Oil Level Verification

With the vehicle on a level surface, check the oil level by removing the check plug.



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CHECK PLUG

Oil level must reach the threaded hole.

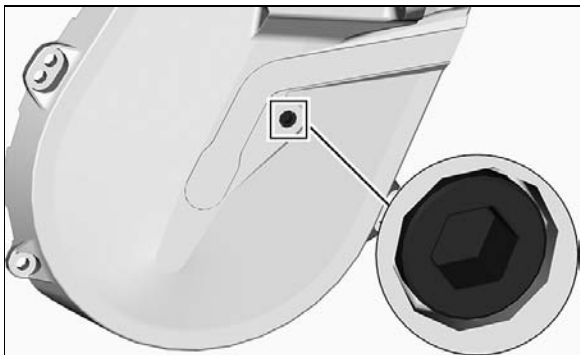
If level is correct, reinstall check plug and tighten to the specified torque.

Tightening Torque	
Check plug	6 ± 1 Nm (53 ± 9 lbf-in)

If level is insufficient, See *CHAINCASE FILLING PROCEDURE*.

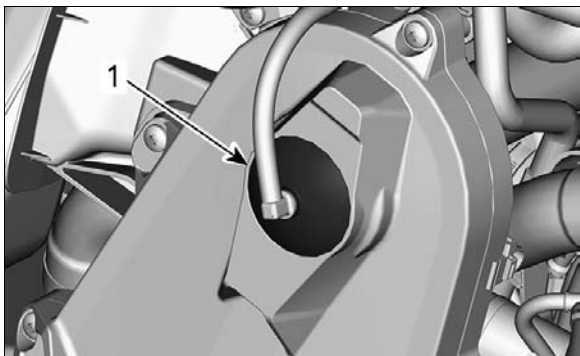
Chaincase Filling Procedure

Remove the check plug.



520001663-011_a
CHECK PLUG

Remove the filler cap.



520001663-010_a
TYPICAL - TOP OF CHAINCASE
1. Filler cap

Pour recommended oil in the filler hole until oil comes out by the check plug hole.

Reinstall check plug and tighten to the specified torque.

Tightening Torque	
Check plug	6 ± 1 Nm (53 ± 9 lbf-in)

Reinstall the filler cap.

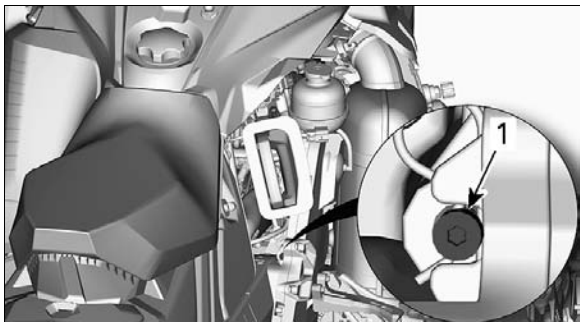
Drive Chain

Access to Chaincase

Open RH side panel, refer to *CONTROLS, INSTRUMENTS AND EQUIPMENT*.

Drive Chain Adjustment

Using the Torx end of the driven pulley expander, GENTLY turn tensioner clockwise to eliminate the play.



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Do not force the tensioner in.

Note: Do not remove the hair cotter pin.

NOTICE Overtightening the drive chain could result in severe damage to the chaincase components.

Drive Belt

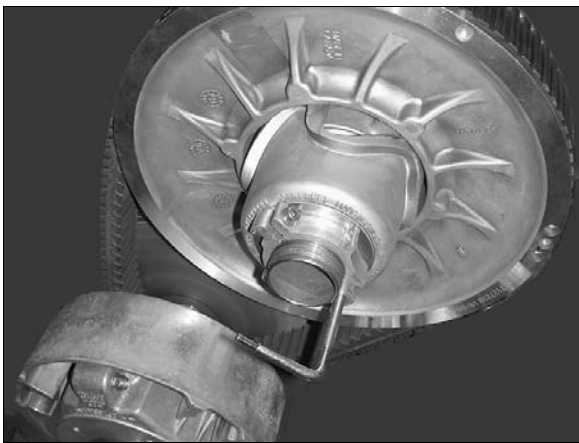
Drive Belt Inspection

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.

Drive Belt Replacement

Drive Belt Removal

1. Remove tether cord cap from engine cut-off switch.
2. Remove drive belt guard, refer to *CONTROLS, INSTRUMENTS AND EQUIPMENT*.
3. Insert the driven pulley expander provided in the threaded hole on the adjuster hub as shown.



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TYPICAL - PULLEY EXPANDER INSTALLED ON ADJUSTER HUB

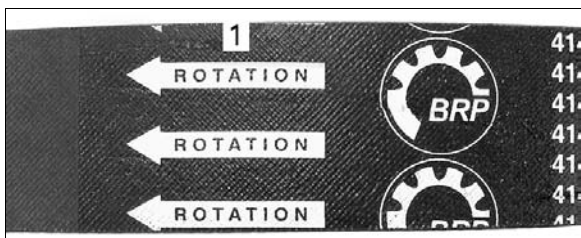
4. Open the driven pulley by screwing the tool in.
5. Remove the drive belt by slipping it over the top of the driven pulley, then over the drive pulley.

Drive Belt Installation

1. If necessary, open the driven pulley, refer to *DRIVE BELT REMOVAL* above.
2. Slip the belt over the drive pulley, then over the driven pulley.

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

Note: The maximum drive belt life span is obtained when belt is installed with arrows in the direction of rotation.



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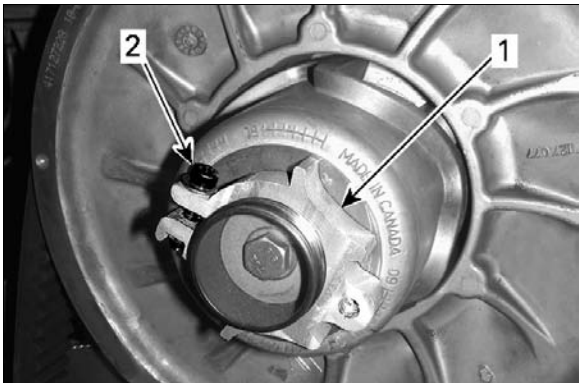
1. To be pointed in the direction of rotation
3. Unscrew and remove the driven pulley expander from the pulley.
4. Rotate the driven pulley several times to properly set the belt between the sheaves.
5. If a new belt was installed, an adjustment will be required for the proper belt height. Refer to *DRIVE BELT HEIGHT ADJUSTMENT* below.
6. Install belt guard, refer to *CONTROLS, INSTRUMENTS AND EQUIPMENT*.
7. Close side panel, refer to *CONTROLS, INSTRUMENTS AND EQUIPMENT*.

Drive Belt Height Adjustment

The drive belt height must be checked every time a new drive belt is installed and as part of the pre-ride inspection.

To adjust the drive belt height, proceed as follows:

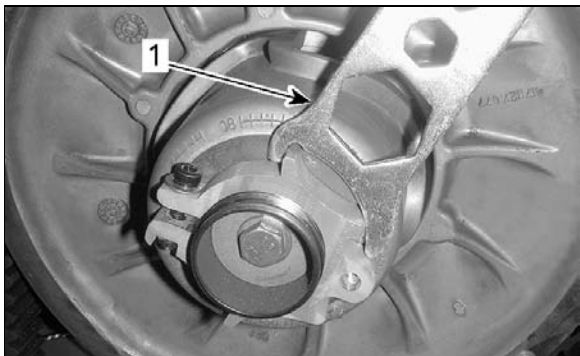
1. Remove tether cord cap from engine cut-off switch.
2. Remove drive belt guard.
3. Loosen the clamping bolt.



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1. *Adjuster hub*
2. *Clamping bolt*

4. Using the suspension adjustment tool provided, turn the ring 1/4 turn at a time then rotate the driven pulley to properly set the drive belt between the pulley sheaves.



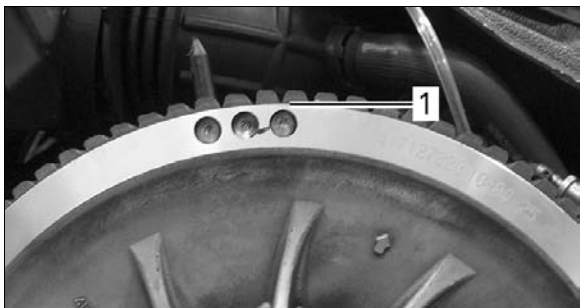
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1. *Suspension adjustment tool*

Note: The adjustment ring has left hand treads.

600R E-TEC

Repeat step 4 until the lowest portion of the cogs on the external surface of drive belt is even with the driven pulley edge.



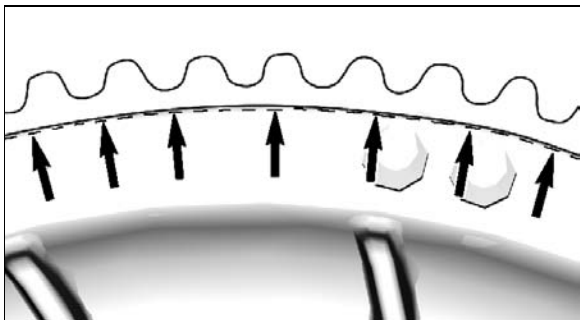
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TYPICAL - PRELIMINARY SETTING

1. *Lowest portion of cogs even with external surface of drive belt*

850 E-TEC

Repeat step 4 until the cord of drive belt is just hidden by the driven pulley edge.

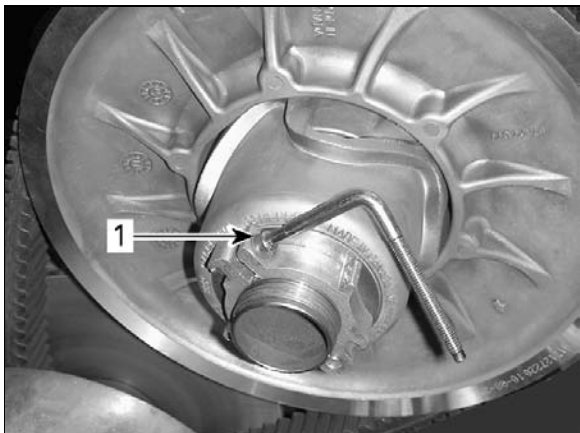


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Note: Turning the ring counterclockwise lowers the drive belt in the pulley. Turning the ring clockwise raises the drive belt in the pulley.

5. Firmly tighten the clamping bolt. If possible, tighten to specified torque using a torque wrench.

Tightening Torque	
Clamping bolt	5.5 ± 0.5 Nm (49 ± 4 lbf-in)



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TYPICAL

1. Clamping bolt

6. Install drive belt guard.

7. Install side panel.

Note: These settings are correct as a preliminary adjustment for most models. In some cases, when starting the engine, the vehicle could creep, indicating that the drive belt is too tight.

If the vehicle creeps, lower the drive belt height from the preliminary setting. Repeat procedure until creeping stops.

Reverse Activation

Note: The reverse may not activate if the belt is positioned too high in the driven pulley. If reverse activation does not work properly, ensure the drive belt is properly adjusted. Adjust the drive belt lower in the driven pulley if needed.

Drive Pulley

Drive Pulley Adjustment

WARNING

Remove tether cord cap from engine cut-off switch before performing any adjustment. Vehicle must be parked in a safe place, away from the trail.

WARNING

NEVER disassemble or modify the drive pulley. Improper assembly or modifications could cause the pulley to explode violently under the stress generated by the high rotational speed. See your Ski-Doo dealer to maintain or service the drive pulley. Improper servicing or maintenance may affect performance and reduce belt life. Always respect maintenance schedules.

The drive pulley is factory calibrated to transmit maximum engine power at a predefined RPM. 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 to maintain maximum power.

Ramp cams should be adjusted so that actual maximum engine RPM matches the maximum horsepower RPM. Refer to *SPECIFICATIONS (ENGINE)*.

Note: Use a precision digital tachometer for engine RPM adjustment.

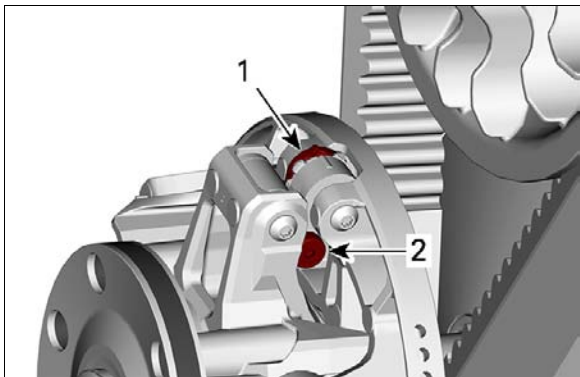
There are 5 positions in which the ramp cam can be set.

Each position modifies the 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.

Procedure

1. Refer to *CONTROLS, INSTRUMENTS AND EQUIPMENT* and remove:
 - LH side panel
 - Drive pulley guard
2. Locate the cam and the pivot screw on the drive pulley.



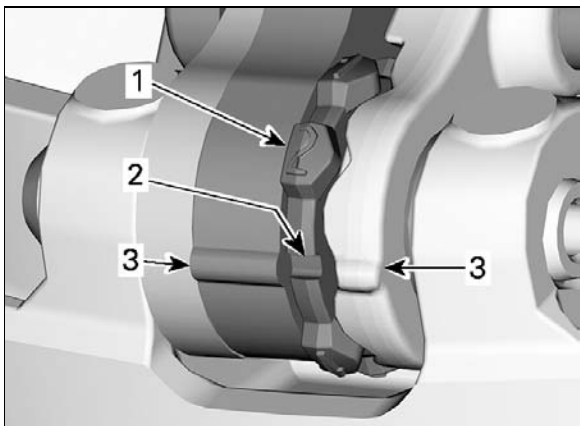
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TYPICAL

1. Cam
2. Pivot screw

The cam position is identified as follows:

- Positions 1, 2, 4 and 5 are numbered.
- Position 3 (middle) is identified by a notch.
- There are notches on each side of the cam used as pointers.

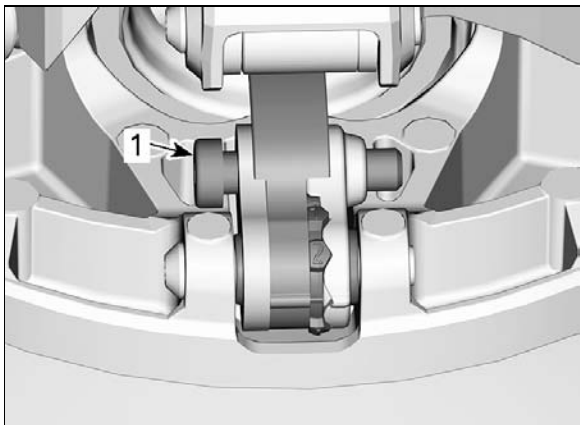


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1. *Numbered position*
2. *Position 3 - Notch*
3. *Pointers*

To adjust, proceed as follows for all 3 cams:

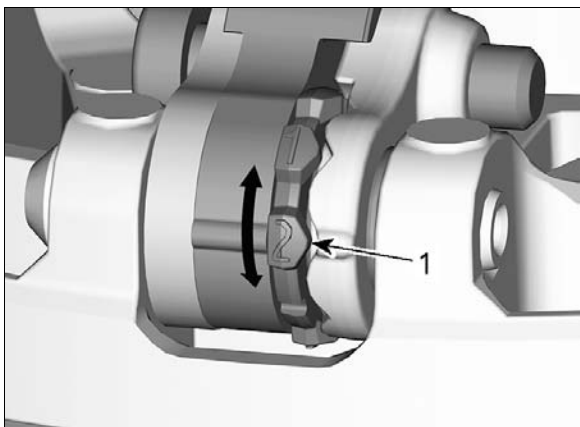
3. Using the Allen end of the driven pulley expander, loosen the pivot screw.



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1. *Pivot screw*

4. Move the right lever aside to be able to turn the cam.
5. Turn cam to the desired position.



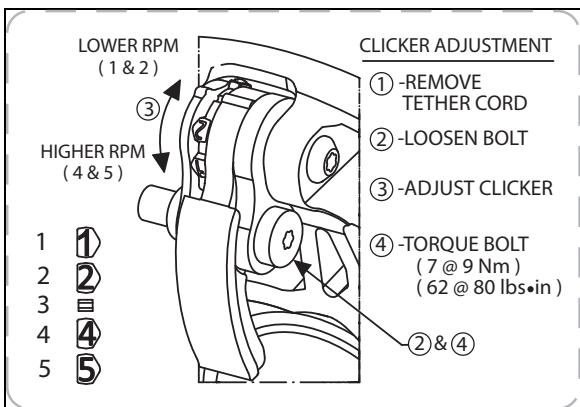
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1. *Desired cam position (here #2)*

6. Tighten the pivot screw.

Tightening Torque	
Pivot	5 ± 1 Nm (44 ± 9 lbf-in)

NOTICE Always adjust all 3 cams to the same setting.



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Track

Track Condition

⚠ WARNING

Remove tether cord cap from engine cut-off switch 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 from engine cut-off switch.

Lift the rear of the snowmobile and support it with a wide-base snowmobile mechanical stand with a rear deflector panel. 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.

Snowmobiles Equipped with Traction Enhancing Products

If your snowmobile is equipped with a BRP approved studded track, **PROCEED WITH A VISUAL INSPECTION OF YOUR TRACK BEFORE EACH USE.**

Look for any defects, such as:

- Perforations in the track
- Tears in the track (particularly around traction holes on studded tracks)
- Lugs that are broken or torn off, exposing portions of rods
- Delamination of the rubber
- Broken rods
- Broken studs (studded tracks)
- Bent studs (studded tracks)
- Missing studs
- Studs that are torn off the track
- Missing track guide(s)
- Also, ensure that studs nut are tighten to the recommended torque.

On approved studded tracks, replace broken or damaged studs immediately. If your track shows signs of deterioration, it must be replaced immediately. When in doubt, ask your dealer.

WARNING

Riding with a damaged track or studs could lead to a loss of control.

For complete information on traction enhancing products, refer to *TRACTION ENHANCING PRODUCTS* in *SAFETY INFORMATION* at the beginning of this Operator's Guide.

Track Tension and Alignment

Note: Track tension and alignment are interrelated. Do not adjust one without the other.

! WARNING

To prevent serious injury to individuals near the snowmobile:

- NEVER stand behind or near a moving track.
- Always use a wide-base snowmobile stand with a rear deflector panel if it is necessary to rotate track.
- When the track is raised off the ground, only run it at the lowest possible speed.

Centrifugal force could cause debris, damaged or loose studs, pieces of torn track, or an entire severed track to be violently thrown backwards out of the tunnel with tremendous force, possibly resulting in the loss of a leg or other serious injury.

Track Tension Verification

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

1. Remove tether cord cap from engine cut-off switch.
2. Lift rear of vehicle and support it off the ground.

! CAUTION

Use proper lifting techniques, notably using your legs force. Do not attempt to lift the rear of vehicle if it is above your limits.

3. Allow rear suspension to fully extend.
4. Use the Tensiometer (P/N 414 348 200).



414348200

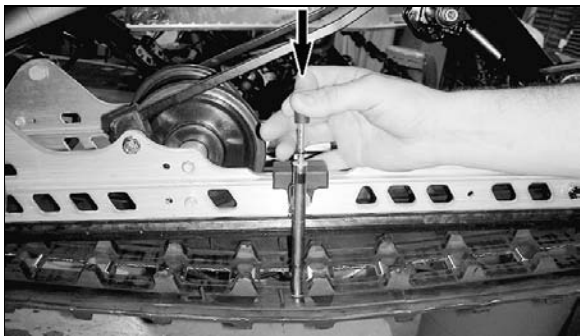
5. Set deflection between 30 mm and 35 mm (1-3/16 in and 1-3/8 in) using bottom O-ring.



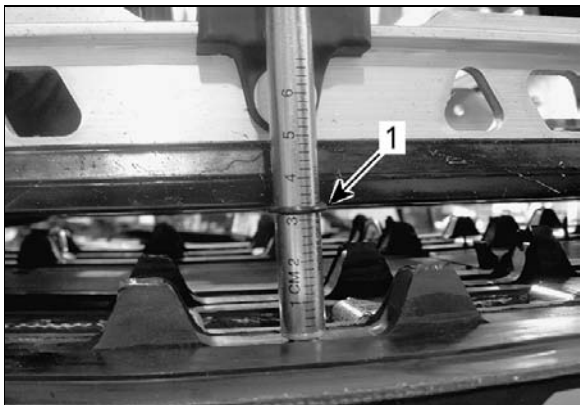
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DEFLECTION SETTING

1. *Bottom O-ring set to specification*
6. Place upper O-ring to 0 kgf (0 lbf).
7. Position the tensiometer on track, halfway between front and rear idler wheels.
8. Push the tensiometer downwards until bottom O-ring (deflection set earlier) be aligned with the bottom of slider shoe.



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mmr2009-133-002_a

1. Deflection O-ring aligned with slider shoe

9. Read load recorded by the upper O-ring on the tensiometer.



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LOAD READING

1. Upper O-ring

10. Load reading must be as per the following table.

Track Adjustment Specification	
Track deflection setting	3.2 cm (1.26 in)
Track load reading	6 kgf to 8.5 kgf (13 lbf to 19 lbf)

11. If load reading is not in accordance with the specification, adjust track tension. Refer to *TRACK TENSION ADJUSTMENT*.

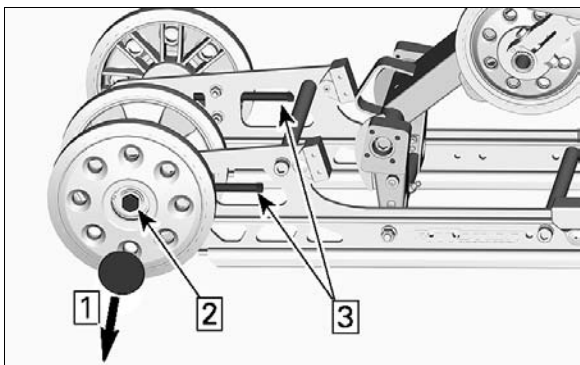
Track Tension Adjustment

1. Remove tether cord cap from engine cut-off switch.

⚠ CAUTION

Use proper lifting techniques, notably using your legs force. Do not attempt to lift the rear of vehicle if it is above your limits.

2. Remove wheel caps.
3. Loosen the rear axle screw or, on 2 idler wheel models, the rear axel nut.
4. Tighten or loosen both adjustment screws (equally) to increase or decrease track tension.



520001663-027_a

Step 1: Remove cap

Step 2: Loosen the axle screw or nut

Step 3: Tighten or loosen adjustment screws

5. If correct tension is unattainable, contact an authorized Ski-Doo dealer.
6. Retighten the rear axle fasteners to specification.

Tightening Torque	
Rear idler wheel retaining screws (3 wheels and 4 wheels models)	48 ± 6 Nm (35 ± 4 lbf-ft)
Rear idler wheel retaining nut and screw (2 idler wheels models)	24.5 ± 3.5 Nm (18 ± 3 lbf-ft)

7. Check track alignment as described below.

Track 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. Always lift the snowmobile on a wide-base stand with a rear deflector panel. Ensure no one is standing in close proximity to the snowmobile, especially at the rear of the track. Never rotate track at high speed.

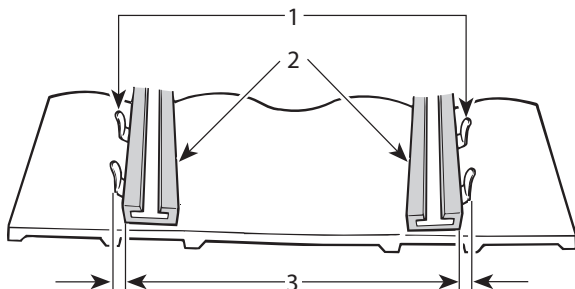
Centrifugal force could cause debris, damaged or loose studs, pieces of torn track, or an entire severed track to be violently thrown backwards out of the tunnel with tremendous force.

1. Lift rear of vehicle and support it off the ground.

CAUTION

Use proper lifting techniques, notably using your legs force. Do not attempt to lift the rear of vehicle if it is above your limits.

2. Start engine and accelerate slightly so that track slowly turns. This must be done in a short period of time (15 to 20 seconds).
3. Check that the track is well centered; equal distance on both sides between edges of track guides and slider shoes.

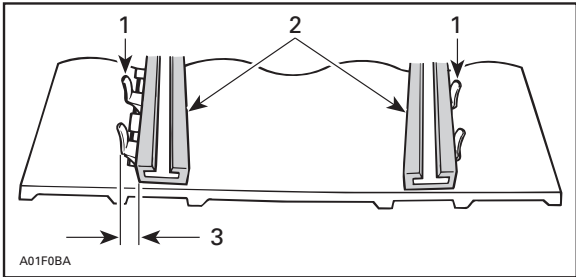


1. Guides
 2. Slider shoes
 3. Equal distance
4. To correct track alignment:
- 4.1 Stop engine.
 - 4.2 Remove tether cord cap from engine cut-off switch.

⚠ WARNING

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

- 4.3 Loosen the rear axle nut.
- 4.4 Tighten 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

5. Tighten the rear axle nut.

⚠ WARNING

Properly tighten wheel retaining bolt, otherwise wheel may come off and cause track to "lock".

6. Restart engine and rotate track slowly to recheck alignment.
7. Tighten the rear axle nut to specified torque.

Tightening Torque	
Rear idler wheel retaining screws (3 wheels and 4 wheels models)	48 ± 6 Nm (35 ± 4 lbf-ft)
Rear idler wheel retaining nut and screw (2 idler wheels models)	24.5 ± 3.5 Nm (18 ± 3 lbf-ft)

8. Reposition snowmobile on the ground.

Suspension

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

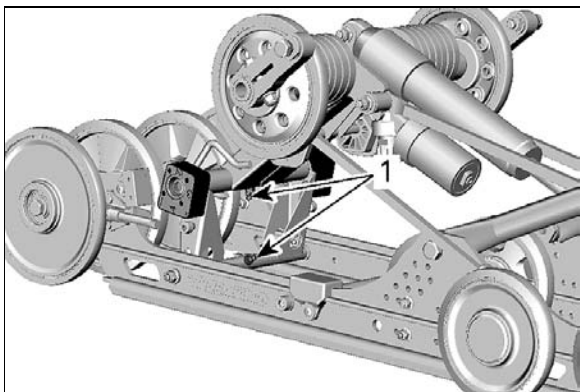
Inspect stopper straps for wear and cracks, bolt and nut for tightness. If loose inspect holes for deformation. Replace as required. Tighten nut to specification.

Tightening Torque	
Stopper strap nut	10 ± 1 Nm (89 ± 9 lbf-in)

Suspension Lubrication

Lubricate the following suspension pivots at grease fittings. Refer to *MAINTENANCE SCHEDULE* for maintenance frequency.

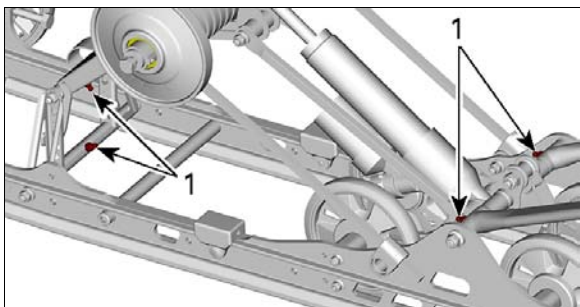
Suspension Grease
XPS Synthetic Suspension Grease



mnr2012-005-001_a

RMOTION

1. Grease fitting



520001798-005_a

CMOTION

1. Grease fitting

Steering and Front Suspension Condition

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.

Skis

Wear and Condition of Skis and Runners

Check the condition of the skis and ski runner carbides. If worn, contact an authorized Ski-Doo dealer.

WARNING

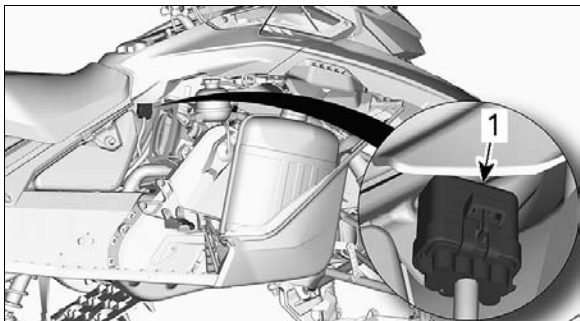
Excessively worn skis and/or ski runners will adversely affect snowmobile control.

Fuses

Access to Fuse Block

Open RH side panel, refer to *CONTROLS, INSTRUMENTS AND EQUIPMENT*.

Fuses Location



520001663-024_a

1. Fuse block

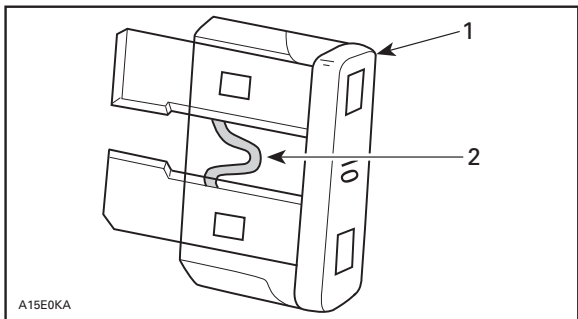
Unlock fuse block from its cover.

Fuse identification	Amperage Rating
Start/RER	5 A
Battery	30 A
Accessories	25 A
Cluster	15 A

Fuse Inspection

Check fuse condition and replace it if necessary.

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



1. Fuse
2. Check if melted

⚠ WARNING

Do not use a higher rated fuse.

⚠ WARNING

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

Headlights

Headlights Bulb Replacement

1. Open the storage compartment.



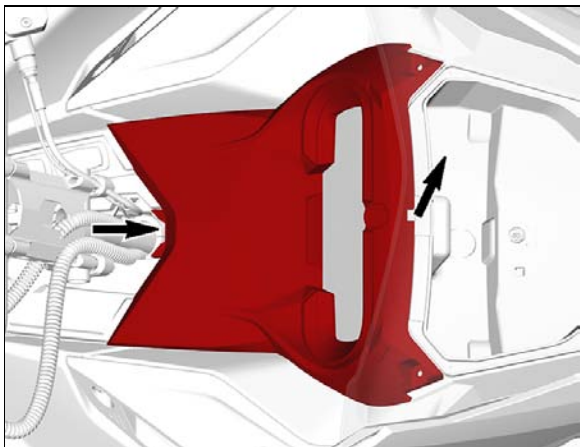
520001663-006_a

2. Remove the gauge support retaining screws.



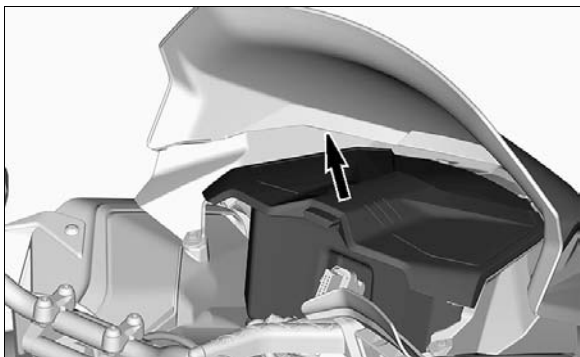
619900974-008

3. Lift the front of the gauge support, then slide it forward to remove it.



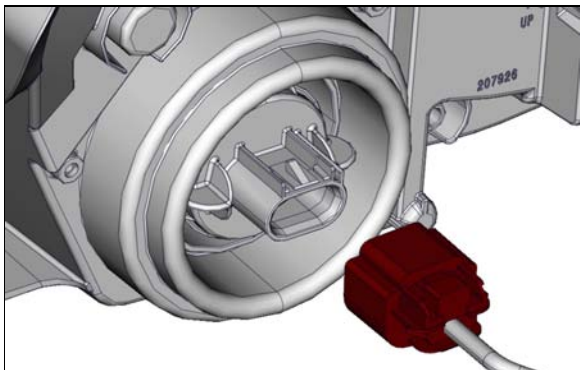
619900974-009

4. Set gauge support aside.
5. Remove the storage compartment.



520001663-017_a

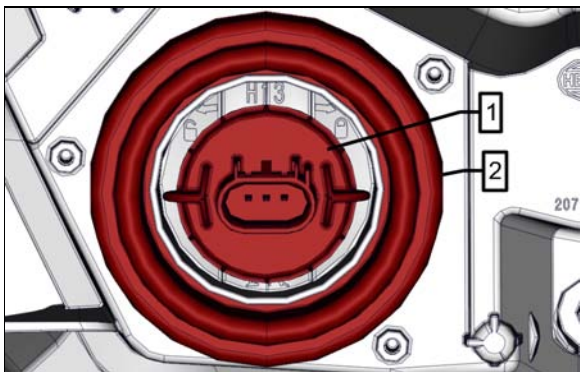
6. Disconnect bulb connector.



mnr2017-036-006

7. Unlock bulb by turning it counterclockwise.
8. Pull bulb out.

Note: Ensure bulb seal stays in place.



mnr2017-036-008

1. Bulb
2. Bulb seal

Install a new bulb using the reverse of the removal procedure.

NOTICE Never touch glass portion of an halogen bulb with bare fingers, it shortens its operating life. If glass is touched,

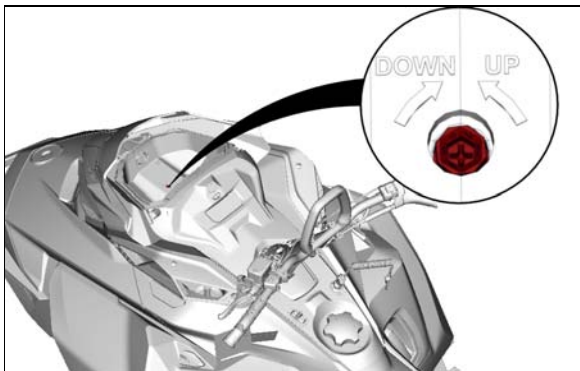
clean it with isopropyl alcohol which will not leave a film on the bulb.

Check headlights operation.

Headlights Beam Aiming

Open the storage compartment, see *FRONT STORAGE COMPARTMENT*.

Turn the adjustment screw to reach desired beam height.



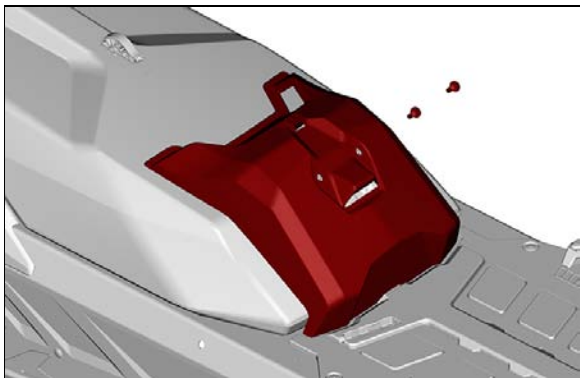
mnr2017-036-005

Removing Battery

WARNING

Battery BLACK (-) cable must always be disconnected first and connected last. Never charge or boost battery while installed on vehicle.

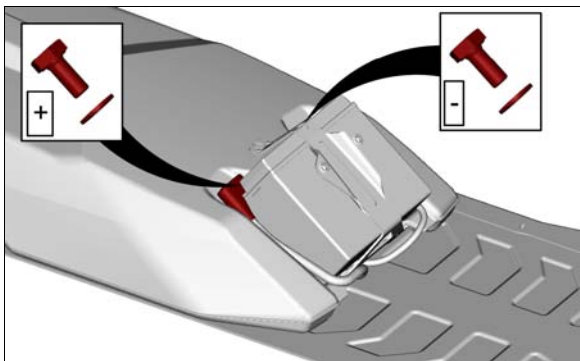
1. Remove seat.
2. Remove battery cover.



520001896-020_a

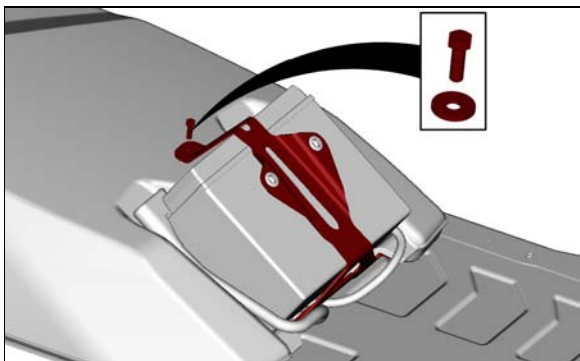
TYPICAL

3. Disconnect negative before positive terminal.



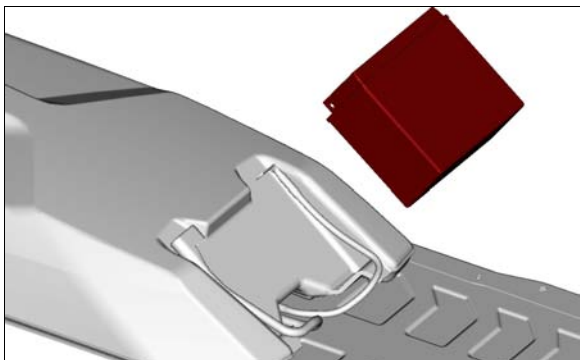
mnr2017-032-002

4. Remove battery hold down bracket.



mmr2017-032-003

5. Remove battery.



mmr2017-032-004

Installing Battery

The installation is the reverse of the removal procedure. However, pay attention to the following details.

Tightening Torque	
Battery bracket screw	5 ± 0.5 Nm (44 ± 4 lbf-in)
Battery post screw	10 ± 1 Nm (89 ± 9 lbf-in)
Battery cover screw	7 ± 1 Nm (63 ± 9 lbf-in)

Reinstall the seat, backrest and cargo box if applicable.

VEHICLE CARE

Post-Operation Care

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

WARNING

Make sure D.E.S.S. key is removed from D.E.S.S. post before standing in front the vehicle, getting close to the track or rear suspension components.

Always cover your snowmobile when leaving it outside overnight or during extended periods of inactivity. This will protect it from frost and snow as well as help retain its appearance.

Vehicle Cleaning and Protection

Wash snowmobile with water mixed with a mild detergent. Use only microfiber cloths or an equivalent.

NOTICE Never use a high pressure washer to clean the vehicle. **USE LOW PRESSURE ONLY (like a garden hose).**

NOTICE Never use XPS Brake and Parts Cleaner or any petroleum based cleaners on plastic parts.

Non Compatible Cleaning Products

material type	non-compatible cleaning Products
All plastics, vinyls, painted steel and aluminium.	BRAKE AND PARTS CLEANER OR ANY PETROLEUM BASE CLEANING PRODUCTS

Compatible Cleaning Products

material type	cleaning Product
All plastics, vinyls, painted steel and aluminium.	Soapy water XPS Spray Cleaner and Polish XPS All Purpose Cleaner

For more information and products, Visit the XPS Products website at www.xpslubricants.com

STORAGE

During summer, or when a snowmobile is not in use for more than three months, proper storage is necessary.

Storage
Clean the vehicle
Add fuel stabilizer to fuel following the product manufacturer recommendations. Run the engine after adding the product to the fuel
Lubricate engine
Lubricate brake lever pivot
Lubricate rear suspension
Charge battery monthly to keep it fully charged during storage (on models with electric starter)
Block muffler outlet with rags
Lift rear of vehicle until track is clear of the ground. Do not release track tension

CAUTION

Use appropriate lifting device or have assistance to share lifting stress. If a lifting device is not used, use proper lifting techniques, notably using your legs force. Do not attempt to lift the rear of vehicle if it is above your limits.

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

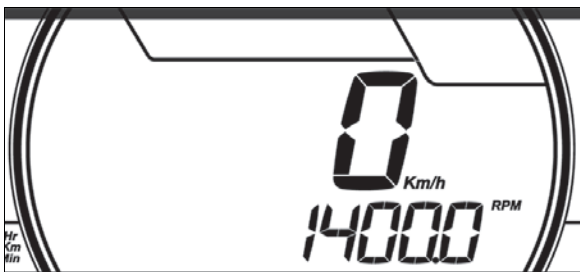
NOTICE Fuel stabilizer should be added prior to engine lubrication to ensure carburetor protection against varnish deposits.

Engine Storage Mode

Like other engines, the E-TEC has to be properly lubricated at storage for internal parts protection. The E-TEC system offers a built-in engine storage lubrication function (summerization) that can be initiated by the operator.

To engage procedure, do the following:

1. Place the vehicle in a well ventilated area.
2. Start the engine and let it run at idle speed until it reaches its operating temperature (watch the coolant temperature on the display or verify the rear heat exchanger becomes warm).
3. Push the SET (S) button to select odometer mode.

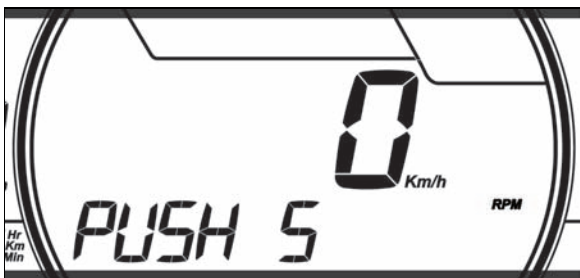


619900974-808

TYPICAL - 7.2" DIGITAL DISPLAY SHOWN

Note: The storage mode does not function in other modes (trip A, trip B and hr trip).

4. Repeatedly depress the HI/LOW beam switch rapidly, then, **while doing this**, press and hold the **SET button** until PUSH "S" appears on the display.



619900974-806

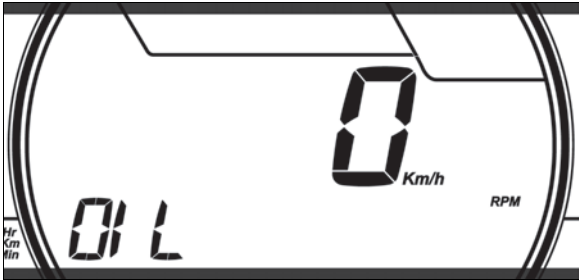
TYPICAL - 7.2" DIGITAL DISPLAY SHOWN

5. Release all buttons when gauge displays **PUSH (S)** appears.

6. Again, press and hold the SET (S) button for 2 - 3 seconds.

Note: The gauge will display OIL when the storage procedure is initiated.

7. When gauge displays **OIL**, release button and wait for the lubrication function to end.



619900974-807

TYPICAL - 7.2" DIGITAL DISPLAY SHOWN

Do not touch anything during engine lubrication cycle.

The engine lubrication function takes approximately 1 minute. During this time the engine RPM will increase slightly to approximately 1600 RPM and the oil pump will "oil flood" the engine.

At the end of engine lubrication procedure, the ECM will turn the engine off.

Remove tether cord cap from engine cut-off switch.

NOTICE Do not start the engine during storage period.

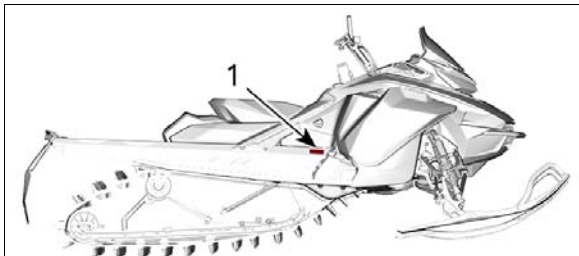
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TECHNICAL INFORMATION

VEHICLE IDENTIFICATION

Vehicle Description Decal


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



520002104-001

TYPICAL

1. Vehicle description decal

BOMBARDIER RECREATIONAL PRODUCTS Inc. Date <input type="text"/>	
VIN. / NIV. <input type="text"/>	Description <input type="text"/>
	Type: SNO/MNG <input type="text"/>
ASSEMBLED IN CANADA / ASSEMBLÉ AU CANADA	

516009002

EN-516009003-DEC

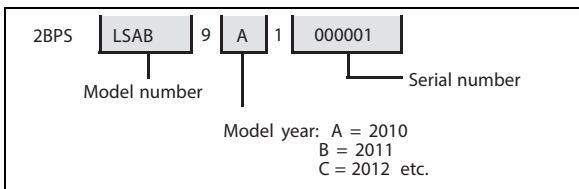
Identification Numbers

The main components of your snowmobile (engine and frame) are identified by different identification 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. We strongly recommend that you take note of all the identification numbers on your snowmobile and supply them to your insurance company.

Vehicle Identification Number (VIN)

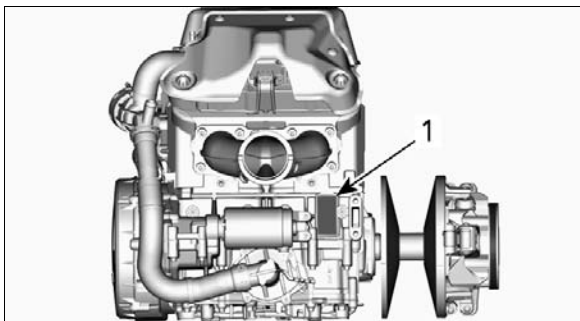
VIN is scribed on vehicle description decal. See above. It is also engraved on tunnel near vehicle description decal.

Model number and model year are part of the information found in the VIN. See illustration.



520002095-010

Engine Identification Number Location

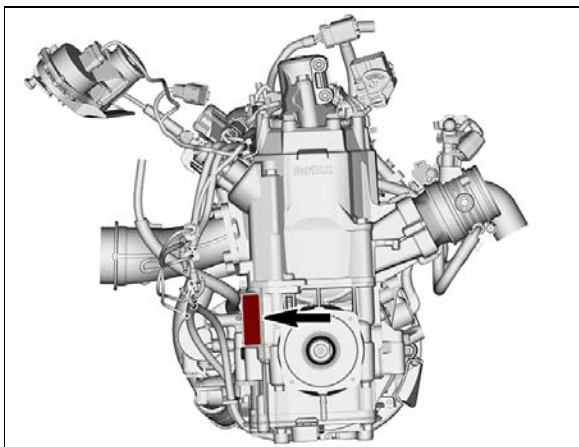


520001663-025_a

1. Engine identification number


Regulation (EU) 2016/1628 applicable for Non-Road Mobile Machineries

Vehicles who comply to Regulation (EU) 2016/1628 (NRMM) are identified on the engine.



NRMM_E-TEC_MY20

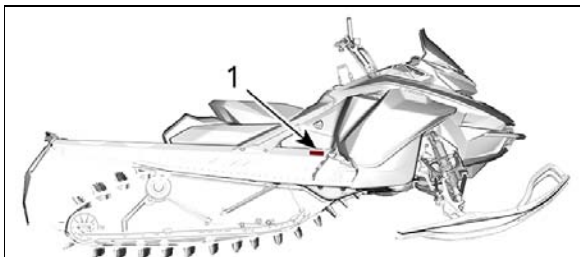
TYPICAL

	Rotax	#	M#####
		Prod. date:	MM-YYYY
		Family type:	#####
		e13	SMB/P V-####

EN-516009861-DEC

NRMM IDENTIFICATION LABEL


Depending on your particular vehicle configuration, an additional NRMM identification decal may be installed on the tunnel, near the chaincase.



520002104-001

RH SIDE OF TUNNEL

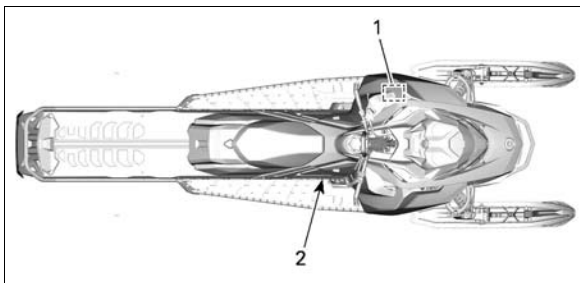
1. *NRMM label*

 	Bombardier Recreational Products Inc. 565 de la Montagne, Valcourt, QC, Canada J0E 2L0	# M##### Prod. date: MM-YYYY Family type: ##### [e13] SMB/P V-####	

EN-516009917-DEC



NRMM IDENTIFICATION ON VEHICLE

VEHICLE COMPLIANCE LABELS



520001496-101_b

EPA Compliance Label

	EMISSION CONTROL INFORMATION		
	THIS VEHICLE IS CERTIFIED TO OPERATE ON UNLEADED GASOLINE AND MEETS XXXX U.S. EPA REGULATIONS FOR SNOWMOBILE SI ENGINES.		
ENGINE FAMILY	XXXXXXXXXXXXX	FAMILLE DE MOTEUR	
PERMEATION FAMILY	XXXXXXXXXXXXX	FAMILLE DE PERMÉATION	
FEL	XX g/kW-hr HC XXX g/kW-hr CO X.X g/ m ² / day	LIMITE DES ÉMISSIONS DES FAMILLES	
ENGINE DISPLACEMENT	XXX cm ³	CYLINDRÉE	
EXHAUST EMISSION CONTROL SYSTEM	XXXX	SYSTÈME DE CONTRÔLE DES ÉMISSIONS	
RENSEIGNEMENTS SUR LE DISPOSITIF ANTIPOLLUTION			
CE VÉHICULE EST CERTIFIÉ POUR FONCTIONNER À L'ESSENCE SANS PLOMB ET IL RÉPOND AUX NORMES XXXX DE L'EPA DES É.-U. POUR LES MOTONEIGES À MOTEUR SI.			
SEE OPERATOR'S GUIDE FOR MAINTENANCE SPECIFICATIONS VOIR GUIDE DU CONDUCTEUR POUR LES SPÉCIFICATIONS D'ENTRETIENS			
BOMBARDIER RECREATIONAL PRODUCTS INC. 6865			

516006865

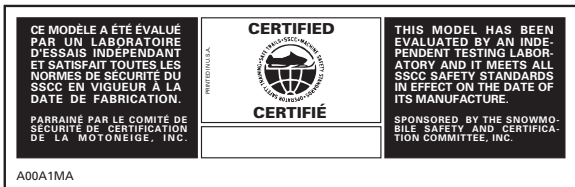
LABEL 1 - IN ENGINE COMPARTMENT

SSCC Label

Safety standards for snowmobiles have been adopted by the Snowmobile Safety and Certification Committee (SSCC) of which BRP 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.

The following label shows that an independent testing laboratory has verified compliance with the SSCC safety standards.



LABEL 2

NOISE EMISSION AND VIBRATION VALUES (ALL COUNTRIES EXCEPT CANADA/UNITED STATES)

MODEL		850 E-TEC	600R E-TEC
NOISE EMISSION AND VIBRATION VALUES¹			
Noise	Sound power level (L_{WA})	100 dB (Uncertainty (K_{wa}) 3 dB)	98.3 dB (Uncertainty (K_{wa}) 3 dB)
	Sound pressure (L_{pA})	86 dB (Uncertainty (K_{pA}) 3 dB)	86.2 dB (Uncertainty (K_{pA}) 3 dB)
Vibration	Hand-arm system	<2.5 m/s ²	3.11 m/s ²
	Whole body at seat	<0.5 m/s ²	<0.5 m/s ²
¹ : Noise emission and Vibration values are measured in accordance with Standard ISMA 1, annexes A and B, v.1 (2014) to v.4 (2018) on a grass surface, at neutral or without belt.			

EC DECLARATION OF CONFORMITY

The EC-Declaration of Conformity does not appear in this version of the Operator's Guide.

Please refer to the printed version that was delivered with your vehicle.

EAC DECLARATION OF CONFORMITY

*Left blank for Eurasian Conformity
mark where applicable*

EPA CERTIFIED ENGINES

Engine Emissions Information

Manufacturer's Responsibility

Beginning with **2007 model year engines**, snowmobile manufacturers of snowmobile engines need to 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.

Dealer's Responsibility

When performing service on a 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 Ski-Doo snowmobiles manufactured by BRP 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:

MAIL:

U.S. Environmental Protection Agency
Certification Division
Gasoline Engine Compliance Center
2000 Traverwood Drive
Ann Arbor MI 48105
USA

INTERNET WEB SITE:

www.epa.gov/otaq/

RADIO FREQUENCY DIGITALLY ENCODED SECURITY SYSTEM (RF D.E.S.S. KEY)

This device complies with FCC Part 15 and Industry Canada license exempt RSS standard(s).

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

IC Registration Number: 12006A-M01456

FCC ID: 2ACERM01456

We, the party responsible for compliance, declare under our sole responsibility that the device is in conformity with the provisions of the following Council Directive: 2014/53/EU. To which this declaration relates is in conformity with the essential requirements and other relevant requirements. The product is in conformity with the following directives, harmonized standards and regulations:

Radio Equipment Directive (RED) 2014/53/EU and Harmonized Standards:

EN 300 330-2, EN 60950-1

SPECIFICATIONS - ENGINE

Engine	850 E-TEC
Engine type	Rotax 850 E-TEC liquid cooled with reed valves and electronic RAVE
Number of cylinder	2
Bore	82 mm (3.228 in)
Stroke	80.4 mm (3.165 in)
Displacement	849 cm ³ (51.81 in ³)
Maximum power engine speed	7900 ± 100 RPM

Engine	600R E-TEC
Engine type	Rotax 600R E-TEC liquid cooled with reed valves and electronic RAVE
Number of cylinder	2
Bore	72.3 mm (2.85 in)
Stroke	73 mm (2.87 in)
Displacement	599.4 cm ³ (36.6 in ³)
Maximum power engine speed	8100 ± 100 RPM

Fuel System		
Fuel delivery	850 E-TEC	E-TEC direct injection with integrated auxiliary injection system
	600R E-TEC	E-TEC direct injection
Idle speed (not adjustable)		1200 ± 200 RPM

Electrical System		
Lighting system output		30 A @ 14.5 V 1340 W @ 6000 RPM
Spark plug	Type	NGK ILKR8Q7 (engine and spark plug threads are indexed)
	Gap	Not adjustable 0.6 mm to 0.7 mm (.024 in to .028 in)

Lubrication System		
Oil injection pump type		Electronic
Injection oil	Type	Scandinavia: 2T E-TEC synthetic oil (eur) (P/N 779281) All other countries: 2T E-TEC synthetic oil (P/N 779126)
	Quantity	3.4 l (3.6 qt(liq.,US))

SPECIFICATIONS - VEHICLE

Cooling System		
Coolant	Type	Scandinavia: Extended life pre-mixed coolant (eur) (P/N 779223) All other countries: Extended life pre-mixed coolant (P/N 779150) or or coolant specifically formulated for aluminum engines. Ethyl glycol and distilled water (50%/50%).

Fuel System			
Fuel pump			In-tank electrical
Fuel	Type		Premium unleaded gasoline (fuel which may contain up to 10% MAX ethanol)
	Octane rating	Inside North America	91 Pump Posted AKI (R+M)/2)
		Outside North America	95 (RON)
Fuel tank capacity			36 l (9.5 U.S. gal.)

Electrical System	
Battery	12 V, 18 A•h
Headlamp	2 x 60/55 W (H-13)
Taillight and stoplight	2.6 W / 139m W LED
Fuses	Refer to <i>FUSES</i> in <i>MAINTENANCE</i>

Drive System		
Chain-case oil	Type	Scandinavia: Synthetic chaincase oil (eur) (P/N 779185) All other countries: Synthetic chaincase oil (P/N 779156)
	Capacity	350 ml (12 fl oz (US))
Chain drive ratio	MXZ TNT MXZ X	27/45
	Backcountry Backcountry X	21/45
	Renegade Enduro 600R E-TEC	23/45
	Renegade Enduro 850R E-TEC	25/45
	MXZ X-RS Renegade X-RS	25/45

Drive System			
Chain drive ratio	MXZ 600R E-TEC	23/45	
Drive pulley	Type	pDrive	
	Engage-ment RPM	Renegade Adrenaline 850 E-TEC Renegade Enduro 850 E-TEC Renegade X 850 E-TEC Renegade X-RS	2900 ± 100 RPM
		Renegade Enduro 600R E-TEC Renegade Adrenaline 600R E-TEC Renegade X 600R E-TEC MXZ TNT 600R E-TEC MXZ X 600R E-TEC MXZ X-RS 600R E-TEC Backcountry 600R E-TEC	3400 ± 100 RPM
		MXZ TNT 850 E-TEC MXZ X 850 E-TEC MXZ X-RS 850 E-TEC	3200 ± 100 RPM

Drive System			
Drive pulley	Engage-ment RPM	Backcountry 850 E-TEC Backcountry X Backcountry X-RS	3300 ± 100 RPM
Driven pulley	Type		QRS
Drive sprocket number of teeth			8
Track	Width	All MXZ, Renegade and Backcountry	38 cm (15 in)
		Backcountry X Backcountry X-RS	38 cm (15 in) or 406 mm (16 in)
	Length	All MXZ, All Renegade	326.9 cm (129 in)
		All Renegade	348.7 cm (137 in)
		All Backcountry excl. X-RS	370.8 cm (146 in)
		Backcountry X-RS	370.8 cm (146 in) OR 391.2 cm (154 in)
	Profile height	All MXZ All Renegade	31.8 mm (1.25 in) OR 38 mm (1.5 in)
		Backcountry Backcountry X Backcountry X-RS	40.6 mm (1.6 in) OR 50 mm (2 in) OR 63.5 mm (2.5 in)

Drive System		
Track adjustment	Deflection	3.2 cm (1.26 in)
	Force	6.0 kgf to 8.5 kgf (13 lbf to 19 lbf)

Brake System		
Brake fluid	Type	DOT 4
	Quantity	65 ml (2.2 fl oz (US))

Brake System		
Brake	Type	Single 200 mm cross drilled carbon steel disc
Brake fluid	Type	DOT 4
	Quantity	65 ml (2.2 fl oz (US))
Caliper		Fixed twin pistons (2 x 40mm)
Brake pad material		Organic
Minimum brake pad thickness (includes backing plate)		5 mm (.197 in)
Minimum brake disc thickness		4.5 mm (.177 in)
Maximum brake disc warpage		0.25 mm (.01 in)

Front Suspension		
Suspension type	All except Renegade X-RS (late intro)	RAS 3
	Renegade X-RS late intro	RAS-X
Suspension maximum travel	MXZ TNT Renegade Adrenaline Backcountry Backcountry X Backcountry X- RS Renegade En- duro	220 mm (8.7 in)
	MXZ X Renegade X	233 mm (9.2 in)
	MXZ X-RS Renegade X-RS except late intro MXZ 600R E- TEC	255 mm (10 in)
	Renegade X-RS late intro	265 mm (10.4 in)
Shock absorber type	MXZ X-RS Renegade X-RS except late intro Backcountry X- RS	KYB Pro 36 R EA
	Renegade X-RS late intro	KYB Pro 36 EA
	All others	HPG Plus

Rear Suspension		
Suspension type	All MXZ All Renegade except X-RS late intro	rMotion
	Renegade X-RS late intro	rMotion-X
	All Backcountry	cMotion
Suspension maximum travel Measured at rear arm	All MXZ	272 mm (10.7 in)
	All Renegade except X-RS late intro	270 mm (10.6 in)
	Renegade X-RS late intro	291 mm (11.5 in)
	All Backcountry	239 mm (9.4 in)
Shock absorber type (Center)	Renegade Adrenaline Renegade En- duro Backcountry	HPG
	MXZ TNT MXZ X Renegade X Backcountry X	HPG Plus
	MXZ X-RS Renegade X-RS (all) Backcountry X- RS	KYB PRO 40 EA
Shock absorber type (Rear)	Renegade Adrenaline Backcountry	HPG
	MXZ TNT	HPG Plus

Rear Suspension		
Shock absorber type (Rear)	Renegade X MXZ X Backcountry X	KYB PRO 36 EA
	MXZ X-RS Renegade X-RS (all) Backcountry X-RS	KYB PRO 40 EA
	Renegade Enduro	ACS (Air Controlled Suspension)
ACS pneumatic pressure range	Renegade Enduro	0.35 to 6.9 (5 PSI to 100 PSI)

Weight and Dimensions		
Mass (dry)	MXZ TNT 850 E-TEC MXZ X 850 E-TEC	215 kg (473 lb)
	MXZ TNT 600R E-TEC MXZ X 600R E-TEC	212 kg (466 lb)
	Renegade Adrenaline 600R E-TEC Backcountry 850 E-TEC	217 kg (478 lb)
	Backcountry 600R E-TEC Backcountry X-RS (146 in.)	214 kg (471 lb)
	Backcountry X-RS (154 in.)	220 kg (484 lb)

Weight and Dimensions		
Mass (dry)	MXZ X-RS 600R E-TEC Renegade Adrenaline 850 E-TEC	221 kg (487 lb)
	Renegade X 850 E-TEC	219 kg (483 lb)
	MXZ X-RS 850 E-TEC	224 kg (494 lb)
	Renegade X 600R E-TEC	216 kg (475 lb)
	MXZ X-RS 600R E-TEC	221 kg (488 lb)
	Renegade X- RS 850 E-TEC	226 kg (497 lb)
	Backcountry X 850 E-TEC	209 kg (461 lb)
Mass (dry) (cont'd)	Renegade En- duro 600R E- TEC	231 kg (508 lb)
	Renegade En- duro 850 E- TEC	234 kg (515 lb)
Overall length	All MXZ	292.5 cm (115 in)
	All Renegade	303.8 cm (119.6 in)
	Backcountry Backcountry X Backcountry X- RS (146 in)	311.0 cm (122.4 in)
	Backcountry X- RS (154 in)	331.2 cm (130.4 in)

Weight and Dimensions		
Overall width	All MXZ All Renegade	121.7 cm (47.9 in)
	All Backcountry	114 cm (44.9 in) to 118 cm (46.5 in)
Overall height	MXZ X-RS Renegade X- RS	122.2 cm (48.1 in)
	Backcountry X- RS	122.9 cm (48.4 in)
	MXZ TNT MXZ X Renegade Adrenaline Renegade X	126.7 cm (49.9 in)
	Backcountry Backcountry X	127.4 cm (50.2 in)
	Renegade En- duro	133.1 cm (52.4 in)
Ski stance	All MXZ All Renegade	107.7 cm (42.4 in)
	Backcountry Backcountry X Backcountry X- RS	97.5 cm (38.4 in) or 102 cm (40.2 in)

TROUBLE- SHOOTING

TROUBLESHOOTING GUIDELINES

Electric starter does not work

1. Emergency engine stop switch in OFF position or tether cord cap not installed on engine cut-off switch.
 - *PLACE THE EMERGENCY ENGINE STOP SWITCH IN THE ON POSITION AND INSTALL TETHER CORD CAP (ON ENGINE CUT-OFF SWITCH).*
2. Throttle applied while attempting an engine start.
 - *RELEASE THROTTLE WHILE CRANKING.*

Engine is cranking but fails to start

1. No fuel to the engine.
 - *CHECK FUEL TANK LEVEL, ADD FUEL IF NECESSARY.*
2. System voltage too low.
 - *CONTACT AN AUTHORIZED SKI-DOO DEALER.*

Engine RPM does not reach clutch engagement point

1. D.E.S.S. did not read D.E.S.S. key code in the tether cord cap. D.E.S.S. pilot lamp blinks (slow short beeps/repetitive).
 - *PROPERLY INSTALL TETHER CORD CAP.*
2. D.E.S.S. has read a different code than the one programmed. D.E.S.S. pilot lamp blinks rapidly (fast short beeps/repetitive).
 - *INSTALL A TETHER CORD CAP FOR WHICH THIS SNOWMOBILE WAS PROGRAMMED.*
3. ECM does not recognize the D.E.S.S. key.
 - *REFER TO AN AUTHORIZED SKI-DOO DEALER.*

Engine lacks acceleration or power

1. Engine warm-up in progress.
 - *DRIVE VEHICLE AT LOW SPEEDS FOR A FEW MINUTES.*
2. Engine break-in period not completed.
 - *COMPLETE BREAK-IN PERIOD.*
3. Drive and driven pulleys require servicing.
 - *CONTACT AN AUTHORIZED SKI-DOO DEALER.*
4. Engine overheats.

- CHECK COOLANT LEVEL, SEE MAINTENANCE PROCEDURES.
 - CHECK HEAT EXCHANGERS CLEANLINESS. CLEAN IF NECESSARY.
5. 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.
6. Incorrect track adjustment.
- SEE MAINTENANCE PROCEDURES AND/OR AN AUTHORIZED SKI-DOO DEALER FOR PROPER ALIGNMENT AND TENSION ADJUSTMENTS.
7. R.A.V.E. valves problem.
- SEEK SERVICE FROM AN AUTHORIZED SKI-DOO DEALER, REPAIR SHOP, OR PERSON OF YOUR OWN CHOOSING FOR MAINTENANCE, REPAIR, OR REPLACEMENT. PLEASE REFER TO THE US EPA EMISSIONS-RELATED WARRANTY CONTAINED HEREIN FOR INFORMATION ABOUT WARRANTY CLAIMS.
8. Fuel pressure too low.
- SEEK SERVICE FROM AN AUTHORIZED SKI-DOO DEALER, REPAIR SHOP, OR PERSON OF YOUR OWN CHOOSING FOR MAINTENANCE, REPAIR, OR REPLACEMENT. PLEASE REFER TO THE US EPA EMISSIONS-RELATED WARRANTY CONTAINED HEREIN FOR INFORMATION ABOUT WARRANTY CLAIMS.

Engine backfires

1. Engine is running too hot.
 - SEE ITEM 4 OF ENGINE LACKS POWER.
2. Ignition timing is incorrect or there is an ignition system failure.
 - SEEK SERVICE FROM AN AUTHORIZED SKI-DOO DEALER, REPAIR SHOP, OR PERSON OF YOUR OWN CHOOSING FOR MAINTENANCE, REPAIR, OR REPLACEMENT. PLEASE REFER TO THE US EPA EMISSIONS-RELATED WARRANTY CONTAINED HEREIN FOR INFORMATION ABOUT WARRANTY CLAIMS.
3. Exhaust system leak.

- *SEEK SERVICE FROM AN AUTHORIZED SKI-DOO DEALER, REPAIR SHOP, OR PERSON OF YOUR OWN CHOOSING FOR MAINTENANCE, REPAIR, OR REPLACEMENT. PLEASE REFER TO THE US EPA EMISSIONS-RELATED WARRANTY CONTAINED HEREIN FOR INFORMATION ABOUT WARRANTY CLAIMS.*
4. Fuel pressure too low.
- *SEEK SERVICE FROM AN AUTHORIZED SKI-DOO DEALER, REPAIR SHOP, OR PERSON OF YOUR OWN CHOOSING FOR MAINTENANCE, REPAIR, OR REPLACEMENT. PLEASE REFER TO THE US EPA EMISSIONS-RELATED WARRANTY CONTAINED HEREIN FOR INFORMATION ABOUT WARRANTY CLAIMS.*

Engine misfires

1. Water in fuel.
 - *DRAIN FUEL SYSTEM AND REFILL WITH FRESH FUEL.*
2. RAVE valves malfunction.
 - *HAVE RAVE VALVES SYSTEM INSPECTED. SEEK SERVICE FROM AN AUTHORIZED SKI-DOO DEALER, REPAIR SHOP, OR PERSON OF YOUR OWN CHOOSING FOR MAINTENANCE, REPAIR, OR REPLACEMENT. PLEASE REFER TO THE US EPA EMISSIONS-RELATED WARRANTY CONTAINED HEREIN FOR INFORMATION ABOUT WARRANTY CLAIMS.*

Heated grips/thumb warmers are not working

1. Engine RPM is too low.
 - *MAKE SURE ENGINE RPM IS ABOVE 2000.*

Engine has shut down

1. The engine shuts down after long periods of idling.
 - *DO NOT LET ENGINE IDLE TOO LONG. REFER TO VEHICLE WARM-UP IN OPERATING INSTRUCTION.*

MONITORING SYSTEM

Pilot Lamps, Messages and Beeper Codes

Gauge pilot lamp(s) will inform you if an anomaly occurs or to inform you of a particular condition.

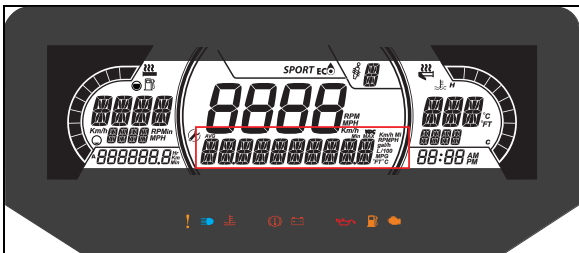


619900974-809

TYPICAL — PILOT LAMPS

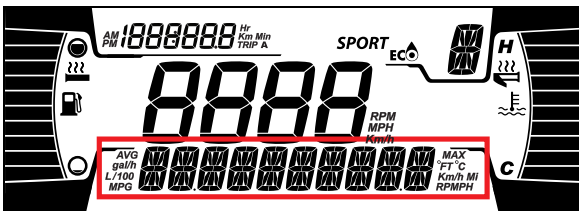
Pilot lamp can flash alone or in combination with another lamp.

On the multifunction analog/digital gauge, the center display is used as a complement of the pilot lamps to give you a brief description if an anomaly occurs or to inform you of a particular condition.



619900975-501

7.2" DIGITAL LOWER DISPLAY



619900974-700


4.5" DIGITAL LOWER DISPLAY




Messages will be displayed with a beep code and pilot lamp(s).


Beeper codes will be heard and messages will be displayed to catch your attention.


See table below for details.

Note: Some of the listed pilot lamps and messages do not apply to all models.

Pilot Lamp ON	Beeper	Message Display	Description
	4 short beeps every 30 seconds	HIGH ENGINE TEMPERATURE	Engine is overheating, reduce snowmobile speed and run in loose snow or stop engine immediately and let engine cool down. Check coolant level, refer to <i>MAINTENANCE</i> . If coolant level is correct and overheating persists, contact an authorized Ski-Doo dealer. Do not run the engine if condition persists.
		MUFFLER OVERHEAT	Reduce speed or stop engine. Let engine cool down and restart. If overheating persists, contact an authorized Ski-Doo dealer. Do not run the engine if condition persists.

Pilot Lamp ON	Beeper	Message Display	Description
	Short beeps repeating rapidly	HIGH ENGINE TEMPERATURE	Critical overheat. Stop engine immediately and let engine cool down. Check coolant level, refer to <i>MAINTENANCE</i> . If coolant level is correct and overheating persists, contact an authorized Ski-Doo dealer. Do not run the engine if condition persists.
		MUFFLER OVERHEAT	Critical overheat. Stop engine immediately and let engine cool down. If overheating persists, contact an authorized Ski-Doo dealer. Do not run the engine if condition persists.
		ECM OVERHEAT	
	4 short beeps every 5 minutes	BATT VOLT	Indicate a low or high battery voltage condition. See an authorized Ski-Doo dealer as soon as possible.
	4 short beeps	CHECK ENGINE	Engine fault, see an authorized Ski-Doo dealer, repair shop or person of your own choosing as soon as possible.

Pilot Lamp ON	Beeper	Message Display	Description
	—	—	Displayed when brake is applied for more than 15 seconds while throttle lever is squeezed and vehicle is moving at more than 5 km/h (3 mi/h).
—	4 short beeps every 5 minutes	KNOCK	<p>Engine detonation (RPM is limited when this condition occurs).</p> <ul style="list-style-type: none"> - Ensure recommended fuel is used. - Check fuel quality, replace if necessary. - If fault still occurs, contact an authorized Ski-Doo dealer, repair shop, or person of your own choosing.
—	4 short beeps every 5 minutes	REV LIMIT	Engine RPM limited for protection when certain faults occur.
—	—	OVER REV	Indicates that maximum engine RPM is reached. Check clutch calibration.

Pilot Lamp ON	Beeper	Message Display	Description
—	Short beeps repeating rapidly	SHUT-DOWN	Shutdown procedure in force due to engine overheating or fuel pump problem.
DESS	2 short beeps	—	Good key, vehicle ready to operate.
	Short beeps, repeating slowly	WRONG KEY	Unable to read key (bad connection). Make sure the key is clean and correctly snapped on post.
	Short beeps repeating rapidly	BAD KEY	Invalid key or key not programmed. Use the proper key for the vehicle or have the programmed.
	—	—	Fuel level sensor problem.
(blinking)			

Fault Codes

On the multifunction analog/digital gauge, fault codes can be displayed on the center display.

To read any active fault code, press and hold MENU (M) Button and simultaneously depress the HI/LOW beam switch repeatedly several times.

If two or more codes are registered, use SET (S) or MENU (M) to scroll.

To exit the fault codes mode, press and hold MENU (M) button. Contact an authorized Ski-Doo dealer for code signification.

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WARRANTY

BRP LIMITED

WARRANTY USA AND CANADA: 2020 SKI-DOO® SNOWMOBILES

SCOPE OF THE LIMITED WARRANTY

Bombardier Recreational Products Inc. (“**BRP**”)* warrants its 2020 Ski-Doo snowmobiles sold by authorized BRP dealers (as defined below) in the United States of America (“USA”) and in Canada from defects in material or workmanship for the period and under the conditions described below. This limited warranty will become null and void if: (1) the snowmobile was used for racing or any other competitive activity, at any point, even by a previous owner; or (2) the snowmobile has been altered or modified in such a way so as to adversely affect its operation, performance or durability, or has been altered or modified to change its intended use.

Non-factory installed parts and accessories are not covered under this limited warranty. Please refer to the applicable parts and accessories limited warranty text.

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 BRP 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 BRP. BRP reserves the right to modify this limited 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.

EXCLUSIONS – ARE NOT WARRANTED

The following are not warranted under any circumstances:

- 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 or accessories not manufactured or approved by BRP or resulting from repairs done by a person that is not an authorized servicing BRP 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 studs installed on tracks if the installation does not conform to BRP's instructions.

WARRANTY COVERAGE PERIOD

This limited 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 the following period:

TWELVE (12) CONSECUTIVE MONTHS, for private or commercial use owners. However, the warranty coverage period on a snowmobile delivered between June 1st and December

1st of a given year will expire November 30th of the following year.

For emission-related components; please also refer to the *US EPA EMISSION-RELATED WARRANTY* contained herein.

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.

CONDITIONS REQUIRED FOR WARRANTY COVERAGE

This warranty coverage is available **only** if each of the following conditions has been fulfilled:

- The 2020 Ski-Doo snowmobile must be purchased as new and unused by its first owner from a BRP dealer authorized to distribute Ski-Doo snowmobiles in the country in which the sale occurred ("**BRP dealer**");
- The BRP specified pre-delivery inspection process must be completed and documented and signed by the purchaser;
- The 2020 Ski-Doo snowmobile must have undergone proper registration by an authorized BRP dealer;
- The 2020 Ski-Doo snowmobile must be purchased in the country in which the purchaser resides; and
- Routine maintenance outlined in the Operator's Guide must be timely performed in order to maintain warranty coverage. BRP reserves the right to make warranty coverage contingent upon proof of proper maintenance.

BRP will not honor this limited warranty to any private use owner or commercial use owner if one of the preceding conditions has not been met. Such limitations are necessary in order to allow BRP to preserve both the safety of its products, and also that of its consumers and the general public.

WHAT TO DO TO OBTAIN WARRANTY COVERAGE

The customer must cease using the snowmobile upon the appearance of an anomaly. The customer must notify a servicing BRP dealer within three (3) 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 authorized BRP dealer, proof of purchase of the product and must sign the repair/work order prior to starting the repair in order to validate the warranty repair. All parts replaced under this limited warranty become the property of BRP.

WHAT BRP WILL DO

BRP'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 Ski-Doo parts without charge for parts and labor, at any authorized BRP dealer during the warranty coverage period under the conditions described herein. No claim of breach of warranty shall be cause for cancellation or rescission of the sale of the snowmobile to the owner.

In the event that service is required outside of the country of original sale, the owner will bear responsibility for any additional charges due to local practices and conditions, such as, but not limited to, freight, insurance, taxes, license fees, import duties, and any and all other financial charges, including those levied by governments, states, territories and their respective agencies.

BRP reserves the right to improve or modify products from time to time without assuming any obligation to modify products previously manufactured.

TRANSFER

If the ownership of a product is transferred during the warranty coverage period, this limited warranty, subject to its terms and conditions, shall also be transferred and be valid for the remaining coverage period provided BRP or an authorized Ski-Doo Distributor/Dealer receives a proof that the former

owner agreed to the transfer of ownership, in addition to the co-ordinates of the new owner.

CONSUMER ASSISTANCE

In the event of a controversy or a dispute in connection with this limited warranty, BRP 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.

If the matter still remains unresolved, contact BRP by filling out the customer contact form at www.brp.com or contact BRP by mail at one of the addresses listed under the *CONTACT US* section of this guide.

* In the USA, products are distributed and serviced by BRP US Inc.

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US EPA EMISSION-RELATED WARRANTY

Bombardier Recreational Products Inc. (“BRP”)* warrants to the ultimate purchaser and each subsequent purchaser that this new engine, including all parts of its exhaust emission-control system and its evaporative emission-control system, meets two conditions:

1. It is designed, built, and equipped so it conforms at the time of sale to the ultimate purchaser with the requirements of 40 CFR 1051 and 40 CFR 1060.
2. It is free from defects in materials and workmanship that may keep it from meeting the requirements of 40 CFR 1051 and 40 CFR 1060.

Where a warrantable condition exists, BRP will repair or replace, as it elects, any part or component with a defect in materials or workmanship that would increase the engine’s emissions of any regulated pollutant within the stated warranty period at no cost to the owner, including expenses related to diagnosing and repairing or replacing emission-related parts. All defective parts replaced under this warranty become the property of BRP.

For all emission-related warranty claims, BRP is limiting the diagnosis and repair of emission-related parts to the authorized Ski-Doo dealers, unless for emergency repairs as required by item 2 of the following list.

As a certifying manufacturer, BRP will not deny emission-related warranty claims based on any of the following:

1. Maintenance or other service BRP or BRP’s authorized facilities performed.
2. Engine/equipment repair work that an operator performed to correct an unsafe, emergency condition attributable to BRP as long as the operator tries to restore the engine/equipment to its proper configuration as soon as possible.
3. Any action or inaction by the operator unrelated to the warranty claim.
4. Maintenance that was performed more frequently than BRP specify.
5. Anything that is BRP fault or responsibility.

- The use of any fuel that is commonly available where the equipment operates unless BRP written maintenance instructions state that this fuel would harm the equipment's emission control system and operators can readily find the proper fuel. See maintenance information section and fuel requirements of fueling section.

Emission-Related Warranty Period

The emission-related warranty is valid for the following period whichever comes first:

	hours	months	Kilometers
Exhaust emission-related components	200	30	4000
Evaporative emission-related components	N/A	24	N/A

Components Covered

The emission-related warranty covers all components whose failure would increase an engine's emissions of any regulated pollutant, including the following listed components:

- For exhaust emissions, emission-related components include any engine parts related to the following systems:
 - Air-induction system
 - Fuel system
 - Ignition system
 - Exhaust gas recirculation systems
- The following parts are also considered emission-related components for exhaust emissions:
 - Aftertreatment devices
 - Crankcase ventilation valves
 - Sensors
 - Electronic control units
- The following parts are considered emission-related components for evaporative emissions:
 - Fuel tank

- Fuel cap
- Fuel line
- Fuel line fittings
- Clamps*
- Pressure relief valves*
- Control valves*
- Control solenoids*
- Electronic controls*
- Vacuum control diaphragms*
- Control cables*
- Control linkages*
- Purge valves
- Vapor hoses
- Liquid/vapor separator
- Carbon canister
- Canister mounting brackets
- Carburetor purge port connector

*As related to the evaporative emission control system

4. Emission-related components also include any other part whose only purpose is to reduce emissions or whose failure will increase emissions without significantly degrading engine/equipment performance.

Limited Applicability

As a certifying manufacturer, BRP may deny emission-related warranty claims for failures that have been caused by the owner's or operator's improper maintenance or use, by accidents for which the manufacturer has no responsibility, or by acts of God. For example, an emission-related warranty claim need not be honored for failures that have been directly caused by the operator's abuse of the engine/equipment or the operator's use of the engine/equipment in a manner for which it was not designed and are not attributable to the manufacturer in any way.

If you have any question regarding your warranty rights and responsibility, you should contact Bombardier Recreational Products at 1-888-272-9222.

* In the USA, products are distributed and serviced by BRP US Inc.

BRP INTERNATIONAL LIMITED WARRANTY: 2020 SKI-DOO® SNOWMOBILES

SCOPE OF THE LIMITED WARRANTY

Bombardier Recreational Products Inc. ("BRP")* warrants its 2020 Ski-Doo snowmobiles sold by distributors or dealers authorized by BRP to distribute SKI-Doo snowmobiles ("**Ski-Doo Distributor/Dealer**") outside of the fifty United States, Canada, members of the European Economic Area (which is comprised of the member states of the European Union plus Norway, Iceland and Liechtenstein) ("**EEA**"), members states of the Commonwealth of the Independent States (including Ukraine and Turkmenistan) ("**CIS**") and Turkey, from defects in material or workmanship for the period and under the conditions described below.

Non-factory installed parts and accessories are not covered under this limited warranty. Please refer to the applicable parts and accessories limited warranty text.

This limited warranty will become null and void if: (1) the snowmobile was used for racing or any other competitive activity, at any point, even by a previous owner; or (2) the snowmobile has been altered or modified in such a way so as to adversely affect its operation, performance or durability, or has been altered or modified to change its intended use.

LIMITATIONS OF LIABILITY

TO THE EXTENT PERMITTED BY LAW, 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 JURISDICTIONS 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 COUNTRY TO COUNTRY. (FOR PRODUCTS PURCHASED IN AUSTRALIA SEE CLAUSE 4 BELOW).

Neither the Ski-Doo Distributor/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 BRP.

BRP 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.

EXCLUSIONS – ARE NOT WARRANTED

The following are not warranted under this limited warranty under any circumstances:

- Normal wear and tear;
- Routine maintenance items, tune ups, adjustments;
- Damage caused by negligence or 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 or accessories not manufactured or approved by BRP which in its reasonable judgement are either incompatible with the product or adversely affect its operation, performance and durability, or resulting from repairs done by a person that is not an authorized servicing Ski-Doo Distributor/Dealer;
- Damage caused by abuse, abnormal use, neglect, racing or operation 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, snow or water ingestion, 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);
- Damage resulting from rust, corrosion or exposure to the elements;

- Incidental or consequential damages, or damages of any kind including without limitation towing, storage, transportation expenses, telephone, rental, taxi, inconvenience, insurance coverage, loan payments, loss of time, loss of income; or time missed for downtime experience due to service work.
- And damage resulting from studs installed on tracks if the installation does not conform to BRP's instructions.

WARRANTY COVERAGE PERIOD

This warranty will be in effect from (1) the date of delivery to the first retail consumer or (2) 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. However, the warranty coverage period on a snowmobile delivered between June 1st and December 1st of a given year will expire November 30th of the following year.

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.

Note that the duration and any other modalities of the warranty coverage are subject to the applicable national or local legislation in the customer's country.

FOR PRODUCTS SOLD IN AUSTRALIA ONLY

Nothing in these Warranty terms and conditions should be taken to exclude, restrict or modify the application of any condition, warranty, guarantee, right or remedy conferred or implied under the Competition and Consumer Act 2010 (Cth), including the Australian Consumer Law or any other law, where to do so would contravene that law, or cause any part of these terms and conditions to be void. The benefits given to you under this limited warranty are in addition to other rights and remedies that you have under Australian law.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You

are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

CONDITIONS TO HAVE WARRANTY COVERAGE

This warranty coverage is available **only** if each of the following conditions has been fulfilled:

- The 2020 Ski-Doo snowmobile must be purchased as new and unused by its first owner from a Ski-Doo Distributor/Dealer authorized to distribute Ski-Doo snowmobiles in the country in which the sale occurred;
- The BRP specified pre-delivery inspection process must be completed and documented;
- The product must have undergone proper registration by an authorized Ski-Doo Distributor/Dealer;
- The 2020 Ski-Doo snowmobile must be purchased in the country or union of countries in which the purchaser resides.
- Routine maintenance outlined in the Operator's Guide must be timely performed in order to maintain warranty coverage. BRP reserves the right to make warranty coverage contingent upon proof of proper maintenance.

BRP will not honour this limited warranty to any private use owner or commercial use owner if one of the preceding conditions has not been met. Such limitations are necessary in order to allow BRP to preserve both the safety of its products, and also that of its consumers and the general public.

WHAT TO DO TO OBTAIN WARRANTY COVERAGE

The customer must cease using the snowmobile upon the appearance of an anomaly. The customer must notify a servicing Ski-Doo Distributor/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 authorized Ski-Doo Distributor/Dealer, proof of purchase of the product and must sign the repair/work order prior to starting the repair in order

to validate the warranty repair. All parts replaced under this limited warranty become the property of BRP.

Note that the notification period is subject to the applicable national or local legislation in customer's country.

WHAT BRP WILL DO

To the extent permitted by law, BRP'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 Ski-Doo parts without charge for parts and labour, at any authorized Ski-Doo Distributor/Dealer during the warranty coverage period under the conditions described herein. BRP's responsibility is limited to making the required repairs or replacements of parts. No claim of breach of warranty shall be cause for cancellation or rescission of the sale of the snowmobile to the owner. You may have other legal rights which may vary from country to country.

In the event that service is required outside of the country of original sale, the owner will bear responsibility for any additional charges due to local practices and conditions, such as, but not limited to, freight, insurance, taxes, license fees, import duties, and any and all other financial charges, including those levied by governments, states, territories and their respective agencies.

BRP reserves the right to improve or modify products from time to time without assuming any obligation to modify products previously manufactured.

TRANSFER

If the ownership of a product is transferred during the warranty coverage period, this limited warranty, subject to its terms and conditions, shall also be transferred and be valid for the remaining coverage period provided BRP or an authorized Ski-Doo Distributor/Dealer receives a proof that the former owner agreed to the transfer of ownership, in addition to the co-ordinates of the new owner.

CONSUMER ASSISTANCE

In the event of a controversy or a dispute in connection with this limited warranty, BRP suggests that you try to resolve the issue at the Ski-Doo Distributor/Dealer level. We recommend discussing the issue with the authorized Ski-Doo Distributor/Dealer's service manager or owner.

If the matter still remains unresolved, contact BRP by filling out the customer contact form at www.brp.com or contact BRP by mail at one of the addresses listed under the *CONTACT US* section of this guide.

* For the territory covered by this limited warranty, products are distributed and serviced by Bombardier Recreational Products Inc. or its affiliates.

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BRP LIMITED WARRANTY FOR THE EUROPEAN AND THE COMMONWEALTH OF THE INDEPENDENT STATES (CIS) AREAS AND TURKEY: 2020 SKI-DOO® SNOWMOBILES

SCOPE OF THE LIMITED WARRANTY

Bombardier Recreational Products Inc. ("BRP")* warrants its 2020 Ski-Doo snowmobiles sold by distributors or dealers authorized by BRP to distribute Ski-Doo snowmobiles ("Ski-Doo Distributor/Dealer") in member states of the European Economic Area (which is comprised of the member states of the European Union plus Norway, Iceland and Liechtenstein) ("EEA"), in member states of the Commonwealth of the Independent States (including Ukraine and Turkmenistan) ("CIS") and Turkey from defects in material or workmanship for the period and under the conditions described below.

Non-factory installed parts and accessories are not covered under this limited warranty. Please refer to the applicable parts and accessories limited warranty text.

This limited warranty will become null and void if: (1) the snowmobile was used for racing or any other competitive activity, at any point, even by a previous owner; or (2) the snowmobile has been altered or modified in such a way so as to adversely affect its operation, performance or durability, or has been altered or modified to change its intended use.

LIMITATIONS OF LIABILITY

TO THE EXTENT PERMITTED BY LAW, 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 WARRANTIES. INCIDENTAL AND CONSEQUENTIAL DAMAGES ARE EXCLUDED FROM COVERAGE UNDER THIS WARRANTY. SOME JURISDICTIONS 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 COUNTRY TO COUNTRY.

Neither the Ski-Doo Distributor/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 BRP.

BRP 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.

EXCLUSIONS – ARE NOT WARRANTED

The following are not warranted under this limited warranty under any circumstances:

- Normal wear and tear;
- Routine maintenance items, tune ups, adjustments;
- Damage caused by negligence or 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 or accessories not manufactured or approved by BRP which in its reasonable judgement are either incompatible with the product or adversely affect its operation, performance and durability, or resulting from repairs done by a person that is not an authorized servicing Ski-Doo Distributor/Dealer;
- Damage caused by abuse, abnormal use, neglect, racing or operation 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, snow or water ingestion, 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);

- Damage resulting from rust, corrosion or exposure to the elements;
- Incidental or consequential damages, or damages of any kind including without limitation towing, transportation expenses, storage, telephone, rental, taxi, inconvenience, insurance coverage, loan payments, loss of time, loss of income or time missed for downtime experience due to service work;
- and damage resulting from studs installed on tracks if the installation does not conform to BRP's instructions.

WARRANTY COVERAGE PERIOD

This warranty will be in effect from (1) the date of delivery to the first retail consumer or (2) the date the product is first put into use, whichever occurs first and for a period of:

TWENTY-FOUR (24) CONSECUTIVE MONTHS, for private use owners and TWELVE (12) CONSECUTIVE MONTHS for commercial use owners. However, the warranty coverage period on a snowmobile delivered between June 1st and December 1st of a given year will expire November 30th of the applicable year. A snowmobile is used commercially when it is used in connection with generating income or any work or employment during any part of the warranty period. A snowmobile is also used commercially when, at any point during the warranty period, it has commercial tags or is licensed for commercial use.

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.

Note that the duration and any other modalities of the warranty coverage are subject to the applicable national or local legislation in the customer's country.

CONDITIONS TO HAVE WARRANTY COVERAGE

This warranty coverage is available **only** if each of the following conditions has been fulfilled:

- The 2020 Ski-Doo snowmobile must be purchased as new and unused by its first owner from a Ski-Doo Distributor/Dealer authorized to distribute Ski-Doo products in the country in which the sale occurred;
- The BRP specified pre-delivery inspection process must be completed and documented;
- The product must have undergone proper registration by an authorized Ski-Doo Distributor/Dealer;
- The 2020 Ski-Doo snowmobile must be purchased within the EEA by an EEA resident, in the CIS for residents of the countries comprised in such area and in Turkey for residents of Turkey; and
- Routine maintenance outlined in the Operator's Guide must be timely performed in order to maintain warranty coverage. BRP reserves the right to make warranty coverage contingent upon proof of proper maintenance.

BRP will not honour this limited warranty to any private use owner or commercial use owner if one of the preceding conditions has not been met. Such limitations are necessary in order to allow BRP to preserve both the safety of its products, and also that of its consumers and the general public.

WHAT TO DO TO OBTAIN WARRANTY COVERAGE

The customer must cease using the snowmobile upon the appearance of an anomaly. The customer must notify a servicing Ski-Doo Distributor/Dealer within two (2) months 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 authorized Ski-Doo Distributor/Dealer, proof of purchase of the product and must sign the repair/work order prior to starting the repair in order to validate the warranty repair. All parts replaced under this limited warranty become the property of BRP.

Note that the notification period is subject to the applicable national or local legislation in customer's country.

WHAT BRP WILL DO

To the extent permitted by law, BRP'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 Ski-Doo parts without charge for parts and labour, at any authorized Ski-Doo Distributor/Dealer during the warranty coverage period under the conditions described herein. BRP's responsibility is limited to making the required repairs or replacements of parts. No claim of breach of warranty shall be cause for cancellation or rescission of the sale of the snowmobile to the owner. You may have other legal rights which may vary from country to country.

In the event that service is required outside of the EEA, CIS or Turkey, the owner will bear responsibility for any additional charges due to local practices and conditions, such as, but not limited to, freight, insurance, taxes, license fees, import duties, and any and all other financial charges, including those levied by governments, states, territories and their respective agencies.

BRP reserves the right to improve or modify products from time to time without assuming any obligation to modify products previously manufactured.

TRANSFER

If the ownership of a product is transferred during the warranty coverage period, this limited warranty, subject to its terms and conditions, shall also be transferred and be valid for the remaining coverage period provided BRP or an authorized Ski-Doo Distributor/Dealer receives a proof that the former owner agreed to the transfer of ownership, in addition to the co-ordinates of the new owner.

CONSUMER ASSISTANCE

In the event of a controversy or a dispute in connection with this limited warranty, BRP suggests that you try to resolve the issue at the Ski-Doo Distributor/Dealer level. We recommend discussing the issue with the authorized Ski-Doo Distributor/Dealer's service manager or owner.

If the matter still remains unresolved, contact BRP by filling out the customer contact form at www.brp.com or contact BRP by mail at one of the addresses listed under the *CONTACT US* section of this guide.

* In the EEA, products are distributed and serviced by BRP European Distribution S.A. and other affiliates or subsidiaries of BRP.

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ADDITIONAL TERMS AND CONDITIONS FOR FRANCE ONLY

The following terms and conditions are applicable to products sold in France only:

The seller shall deliver goods that are complying with the contract and shall be responsible for defects existing upon delivery. The seller shall also be responsible for defects resulting from packaging, assembling instructions or the installation when it is its responsibility per the contract or if accomplished under its responsibility. To be compliant with the contract, the good shall:

Be fit for normal use for goods similar thereto and, if applicable:

- Correspond to the description provided by the seller and have the qualities presented to the buyer through sample or model;

- _ Have the qualities that a buyer may legitimately expect considering the public declarations of the seller, the manufacturer of its representative, including in advertising or labeling; or
- 2. Have the characteristics mutually agreed upon as between the parties or be fit for the specific use intended by the buyer and brought to the attention of the seller and which accepted

The action for failure to comply is prescribed after two years after delivery of the goods. The seller is responsible for the warranty for hidden defects of the good sold if such hidden defects are rendering the good unfit for the intended use, or if they diminish its use in such a way that the buyer would not have acquired the good or would have given a lesser price, had he known. The action for such hidden defects shall be taken by the buyer within 2 years of the discovery of the defect.

CUSTOMER INFORMATION

PRIVACY INFORMATION

BRP wishes to inform you that your coordinates will be used for safety and warranty related purposes. Furthermore, BRP and its affiliates may use its customer list to distribute marketing and promotional information about BRP and related products.

To exercise your right to consult or correct your data, or to be removed from the addressee-list for direct marketing, please contact BRP.

By E-
mail: **privacyofficer@brp.com**

By
mail: BRP
Senior Legal Counsel-Privacy Officer
726 St-Joseph
Valcourt QC
Canada
J0E 2L0

CONTACT US

www.brp.com

Asia

Room 4609, Tower 2,
Grand Gateway 3 Hong Qiao
Road Shanghai,
China 200020
21F Shinagawa East One Tower
2-16-1 Konan, Minatoku-ku,
Tokyo 108-0075
Japan

Europe

Skaldenstraat 125
B-9042 Gent
Belgium
Itterpark 11
D-40724 Hilden
Germany
ARTEPARC Bâtiment B
Route de la côte d'Azur, Le Canet
13590 Meyreuil
France
Ingvald Ystgaardsvei 15
N-7484 Tronheim
Norway
Isoaavantie 7
PL 8040
96101 Rovaniemi
Spinnvägen 15
903361 Umeå

Sweden

Avenue d'Ouchy 4-6

1006 Lausanne

Switzerland

North America

565 de la Montagne Street

Valcourt (Québec) J0E 2L0

Canada

Sa De Cv, Av. Ferrocarril 202

Parque Ind. Querétaro, Lote2-B

76220

Santa Rosa Jáuregui, Qro., Mexico

Sturtevant, Wisconsin, U.S.A.

10101 Science Drive

Sturtevant, Wisconsin

53177

U.S.A.

Oceania

6 Lord Street

Lakes Business Park

Botany, NSW 2019

Australia

3B Echelon Place, East Tamaki,

Auckland 2013,

New Zealand

South America

Rua James Clerck Maxwell, 230

TechnoPark Campinas SP 13069-380

Brazil

CHANGE OF ADDRESS/OWNERSHIP

If your address has changed or if you are the new owner of the Snowmobile, be sure to notify BRP by either:

- Notifying an authorized Ski-Doo dealer.
- **North America Only:** calling at 1 888 272-9222.
- Mailing one of the change of address cards on the following pages at one of the BRP addresses indicated in the *CONTACT US* section of this guide.

In case of change of ownership, please join a proof that the former owner agreed to the transfer.

Notifying BRP, even after the expiration of the limited warranty, is very important as it enables BRP to reach the Snowmobile owner if necessary, like when safety recalls are initiated. It is the owner's responsibility to notify BRP.

STOLEN UNITS: If your personal Snowmobile is stolen, you should notify BRP or an authorized Ski-Doo dealer. We will ask you to provide your name, address, phone number, the vehicle identification number and the date it was stolen.

CHANGE OF ADDRESS CHANGE OF OWNERSHIP

VEHICLE IDENTIFICATION NUMBER

Model Number

Vehicle Identification Number (V.I.N.)

OLD ADDRESS
OR PREVIOUS OWNER:

NO. STREET APT

CITY STATE/PROVINCE ZIP/POSTAL CODE

COUNTRY TELEPHONE

NEW ADDRESS
OR NEW OWNER:

NO. STREET APT


CITY STATE/PROVINCE ZIP/POSTAL CODE

COUNTRY TELEPHONE

E-MAIL ADDRESS

EN-CHANGEADD-SKI

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 CHANGE OF ADDRESS CHANGE OF OWNERSHIP

VEHICLE IDENTIFICATION NUMBER

Model Number _____ Vehicle Identification Number (V.I.N.) _____

**OLD ADDRESS
OR PREVIOUS OWNER:**

_____ NAME
 _____ STREET APT
 _____ CITY STATE/PROVINCE ZIP/POSTAL CODE
 _____ COUNTRY TELEPHONE

**NEW ADDRESS
OR NEW OWNER:**

_____ NAME
 _____ STREET APT
 _____ CITY STATE/PROVINCE ZIP/POSTAL CODE
 _____ COUNTRY TELEPHONE
 _____ E-MAIL ADDRESS

EN-CHANGEADD-SKI

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Notes



WARNING

BEFORE YOU OPERATE THIS VEHICLE, READ THIS OPERATOR'S GUIDE, ALL ON-PRODUCT SAFETY LABELS AND WATCH THE SAFETY VIDEO.



ski-doo LYNX SEA-DOO EVINRUDE ROTAX can-am

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OPERATOR'S GUIDE REV-G4 Trail / Crossover E-TEC Series / ENGLISH
GUIDE DU CONDUCTEUR REV-G4 Trail / Crossover E-TEC Series / ANGLAIS

FAIT AU / MADE IN CANADA

U/M.P.C.