



# *ski-doo*®

**2002**

## Operator's Guide



### **WARNING**

Read this guide thoroughly.  
It contains important safety information.

**Skandic  
Tundra R**

484 100 041

## SAFETY WARNING

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

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

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RECREATIONAL PRODUCTS



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## 2002 SKI-DOO OPERATOR'S GUIDE

This guide is applicable to:

***Tundra\* R***

and to the following ***Skandic\* series*** models:

***Skandic LT/WT/SWT/WT LC***

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## FOREWORD

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

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

### **WARNING**

Identifies an instruction which if not followed, may cause injuries including the possibility of death.

**CAUTION:** Denotes an instruction which if not followed, may damage the vehicle and/or components.

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

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

At delivery, you were also informed of the warranty coverage and completed the Warranty Registration Form which is to be sent to us for processing.

The information and components/system descriptions contained in this guide are correct at time of publication.

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

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



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

Most components of this snowmobile are built with parts dimensioned in the metric system. Most fasteners are metric and must not be replaced by customary fasteners or vice versa.

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

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

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## **⚠ SAFETY MEASURES**

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

- ⚠ For vehicles with a parking brake always engage brake when vehicle is not in use.
- ⚠ Throttle mechanism should be checked for free movement before starting engine.
- ⚠ The snowmobile engine can be stopped by activating the engine cut-out button, pulling the tether cord or turning off the key.
- ⚠ Engine should be running only when belt guard is secured in place. Never run the engine without drive belt installed. Running an unloaded engine can prove to be dangerous.
- ⚠ Never run the engine when the track is raised off the ground or with the hood opened or removed.
- ⚠ Maintain your snowmobile in top mechanical condition at all times.
- ⚠ Your snowmobile is not designed to be operated on public streets, roads or highways. In most States and Provinces, it is considered an illegal operation.
- ⚠ Electric start models only: Never charge or boost a battery while installed on snowmobile.
- ⚠ Do not lubricate throttle and/or brake cables and housings.
- ⚠ Only perform procedures as detailed in this guide. Unless otherwise specified, engine should be turned OFF and cold for all lubrication and maintenance procedures.
- ⚠ Some snowmobiles are designed for the driver only and no provisions have been made for a passenger.
- ⚠ The performance of some snowmobiles may significantly exceed that of other snowmobiles you have operated. Therefore, use by novice or inexperienced operators is not recommended.
- ⚠ The engine and components used in a particular model should not be used on other models. Use of Rotax® snowmobile engines in other than SKI-DOO snowmobiles is not recommended or authorized by Bombardier.

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# **BOMBARDIER LIMITED WARRANTY NORTH AMERICA: 2002 SKI-DOO® SNOWMOBILES**

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

BOMBARDIER INC. (hereinafter "BOMBARDIER") warrants its 2002 SKI-DOO snowmobiles from defects in material or workmanship for the period described below.

All genuine BOMBARDIER parts and accessories, installed by an authorized BOMBARDIER dealer (as hereinafter defined) at the time of delivery of the 2002 SKI-DOO snowmobile, carry the same warranty as that of the snowmobile.

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

## **2. WARRANTY COVERAGE PERIOD**

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

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

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

## **3. CONDITIONS TO HAVE WARRANTY COVERAGE**

This warranty coverage is available only on 2002 SKI-DOO snowmobile purchased as new and unused by its first owner from a BOMBARDIER dealer authorized to distribute SKI-DOO products in the country in which the sale occurred (hereinafter "BOMBARDIER dealer"), and then only after the BOMBARDIER specified pre-delivery inspection process is completed and documented. Warranty coverage only becomes available upon proper registration of the product by a BOMBARDIER dealer. Such limitations are necessary in order to allow BOMBARDIER to preserve both the safety of its products, and also that of its consumers and the public.

Routine maintenance outlined in the *Operator's Guide* must be timely performed in order to maintain warranty coverage. BOMBARDIER reserves the right to make warranty coverage contingent upon proof of proper maintenance.

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

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

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

BOMBARDIER's obligations under this warranty are limited to, at its sole discretion, repairing parts found defective under normal use, maintenance and service, or replacing such parts with new genuine BOMBARDIER parts without charge for parts and labor, at any authorized BOMBARDIER dealer.

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

## 6. EXCLUSIONS - ARE NOT WARRANTED

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

## 7. LIMITATIONS OF LIABILITY

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

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

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

## 8. TRANSFER

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

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

## 9. CONSUMER ASSISTANCE

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

In Canada:

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

In USA:

**BOMBARDIER MOTOR**  
**CORPORATION OF AMERICA**  
**RECREATIONAL PRODUCTS**  
SKI-DOO®  
CUSTOMER ASSISTANCE CENTER  
P.O. BOX 8035  
7575 BOMBARDIER COURT  
WAUSAU WI 54402-8035  
Tel: (715) 848-4957



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# **BOMBARDIER LIMITED WARRANTY INTERNATIONAL: 2002 SKI-DOO® SNOWMOBILES**

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

BOMBARDIER INC. (hereinafter "BOMBARDIER") warrants its 2002 SKI-DOO snowmobiles from defects in material or workmanship for the period described below.

All genuine BOMBARDIER parts and accessories, installed by an authorized BOMBARDIER distributor/dealer (as hereinafter defined) at the time of delivery of the 2002 SKI-DOO snowmobile, carry the same warranty as that of the snowmobile.

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

## **2. WARRANTY COVERAGE PERIOD**

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

- a. TWELVE (12) CONSECUTIVE MONTHS, for private use owners. The warranty coverage period on a snowmobile delivered between June 1<sup>st</sup> and December 1<sup>st</sup> of a given year will expire December 1<sup>st</sup> of the following year; or
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The repair or replacement of parts or the performance of service under this warranty does not extend the life of this warranty beyond its original expiration date.

## **3. CONDITIONS TO HAVE WARRANTY COVERAGE**

This warranty coverage is available only on 2002 SKI-DOO snowmobile purchased as new and unused by its first owner from a BOMBARDIER distributor/dealer authorized to distribute SKI-DOO products in the country in which the sale occurred (hereinafter "BOMBARDIER distributor/dealer"), and then only after the BOMBARDIER specified pre-delivery inspection process is completed and documented. Warranty coverage only becomes available upon proper registration of the product by a BOMBARDIER dealer. Such limitations are necessary in order to allow BOMBARDIER to preserve both the safety of its products, and also that of its consumers and the public.

Routine maintenance outlined in the *Operator's Guide* must be timely performed in order to maintain warranty coverage. BOMBARDIER reserves the right to make warranty coverage contingent upon proof of proper maintenance.

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

The customer must notify a servicing BOMBARDIER 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 BOMBARDIER dealer, proof of purchase of the product and must sign the repair/work order prior to the start of the repair in order to validate the warranty repair. All parts replaced under this limited warranty become the property of BOMBARDIER.

## 5. WHAT BOMBARDIER WILL DO

BOMBARDIER's obligations under this warranty are limited to, at its sole discretion, repairing parts found defective under normal use, maintenance and service, or replacing such parts with new genuine BOMBARDIER parts without charge for parts and labor, at any authorized BOMBARDIER distributor/dealer.

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

## 6. EXCLUSIONS - ARE NOT WARRANTED

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

## 7. LIMITATIONS OF LIABILITY

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

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

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

## **8. TRANSFER**

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

- a. The former owner contacts BOMBARDIER or an authorized BOMBARDIER distributor/dealer and gives the coordinates of the new owner; or
- b. BOMBARDIER or an authorized BOMBARDIER distributor/dealer receives a proof that the former owner agreed to the transfer of ownership, in addition to the coordinates of the new owner.

## **9. CONSUMER ASSISTANCE**

- a. In the event of a controversy or a dispute in connection with this BOMBARDIER LIMITED WARRANTY, BOMBARDIER suggests that you try to resolve the issue at the distributorship/dealership level. We recommend discussing the issue with the authorized dealer's service manager or owner.
- b. If further assistance is required, the distributor's service department should be contacted in order to resolve the matter.



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## FREQUENTLY ASKED QUESTIONS

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

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

a) *have warranty work performed at any authorized SKI-DOO dealer in North America. Your registration form will provide the SKI-DOO dealer with all the necessary data to complete warranty claim forms.*

b) *be advised by Bombardier should there be a safety recall or particular warranty campaign.*

c) *be contacted much faster by the police, the minute they find your stolen snowmobile (if such a case occurs).*

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

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

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

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

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

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

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

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

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

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

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

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

Q: If I sell my snowmobile within the warranty period, will the new owner qualify for the balance of the warranty?

A: *Yes, provided the re-sale has been registered with the manufacturer.*

Q: How can I receive the best owner assistance?

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

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

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## AUTHORIZED SKI-DOO DEALERS

For Canada and USA Only

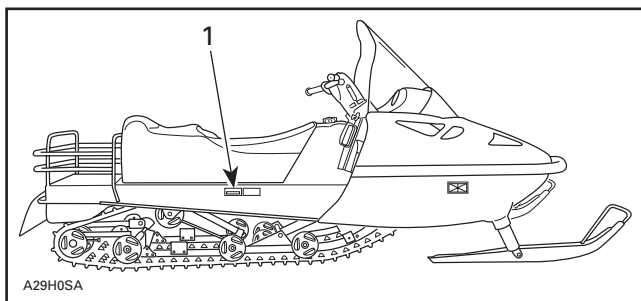
To find the nearest authorized SKI-DOO dealer, dial: 1-800-375-4366.

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## HOW TO IDENTIFY YOUR SNOWMOBILE

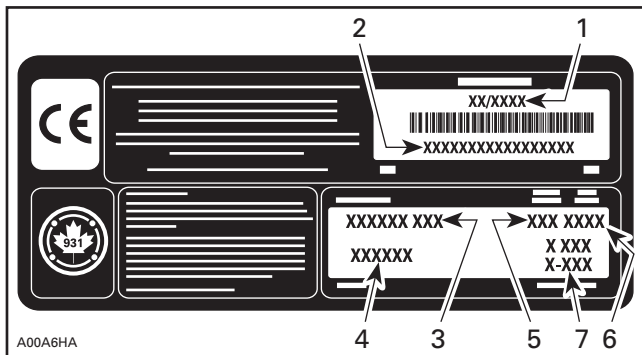
### Vehicle Description Decal

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



*TYPICAL — SKANDIC LT/WT/SWT/WT LC*

*1. Vehicle description decal*



#### VEHICLE DESCRIPTION DECAL

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

## Serial Numbers

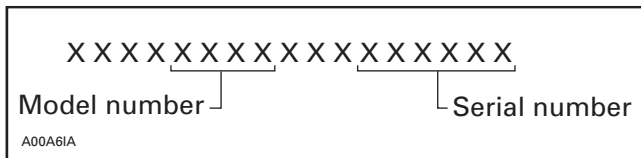
The main components of your snowmobile (engine and frame) are identified by different serial numbers. It may sometimes become necessary to locate these numbers for warranty purposes or to trace your snowmobile in the event of loss. These numbers are required by the SKI-DOO dealer to complete warranty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

### Vehicle Identification Number (VIN) Location

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

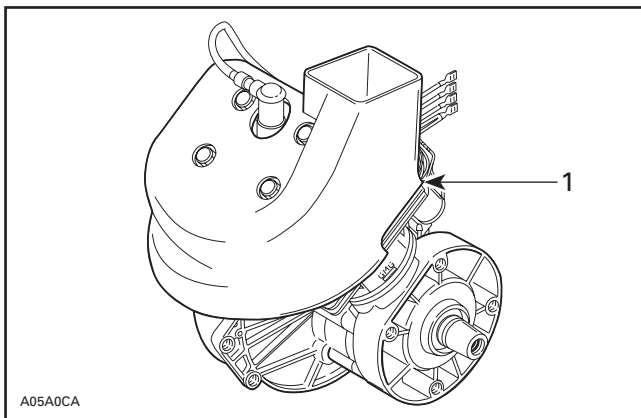
## Model Number Location

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



*VIN DESCRIPTION*

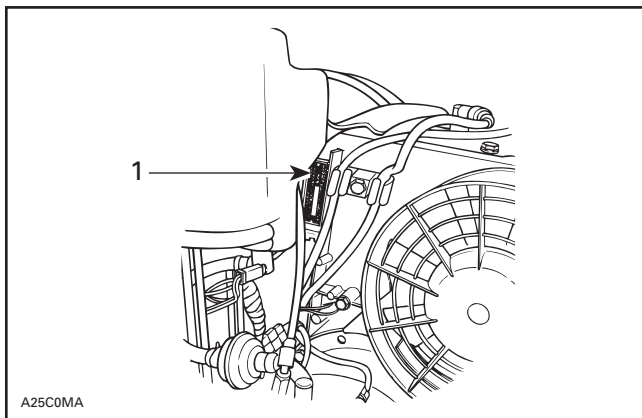
## Engine Serial Number Location



*TUNDRA R*

1. Engine serial number

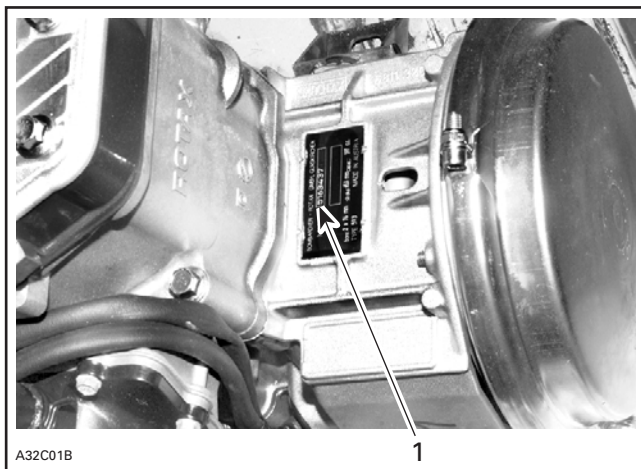




A25C0MA

**SKANDIC LT/WT/SWT**

1. Engine serial number



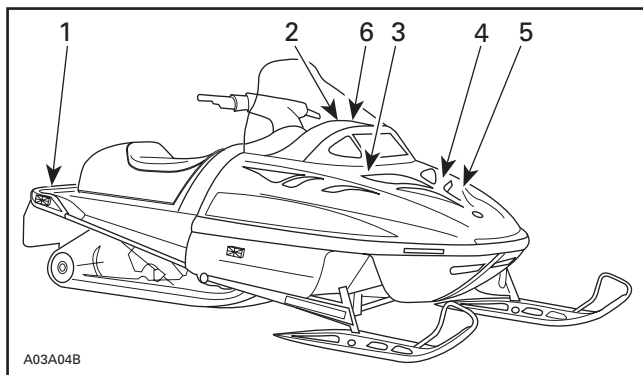
A32C01B

**SKANDIC WT LC**

1. Engine serial number

## ON-VEHICLE IMPORTANT INSTRUCTIONS

Please read the following instructions carefully before operating snowmobile.



TYPICAL — LOCATION OF IMPORTANT INSTRUCTIONS

### Instruction 1

#### **⚠ WARNING**

- Check that the tow bar is securely fastened to the trailer coupling.
  - Use a rigid tow bar.
- Reduce speed when towing.

#### **⚠ AVERTISSEMENT**

- Vérifier que la barre d'accouplement soit bien verrouillée à l'attache-remorque.
- Utiliser une barre d'accouplement rigide.
- Remorquer à vitesse réduite.

516 001 243

A05H1CA

TUNDRA R AND SKANDIC SERIES

## Instruction 2

### **WARNING**

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

**Before starting engine, check:**

- If throttle lever returns to its initial position when released.
- All guards are in place.
- The hood is closed and the clutch access door is installed.
- Parking brake is applied.

**After starting, check proper operation of:**

- Engine emergency cut-off switch and all controls.

**Before operating the vehicle:**

- Make sure parking brake is fully disengaged.
- Drive carefully.
- This vehicle is designed for operator only. "NO PASSENGER".

### **AVERTISSEMENT**

- Lisez et respectez tous les avertissements contenus dans le guide du conducteur/guide de sécurité, avant toute mise en marche.
- Le fait de passer outre aux avertissements ou d'utiliser la motoneige de façon inadéquate peut entraîner de graves blessures ou la mort.

**Avant de démarrer le moteur, s'assurer que:**

- La manette d'accélérateur revient à sa position initial lorsque relâchée.
- Les gardes soient en place.
- Le capot soit fermé et le panneau d'accès de la poulie soit installé.
- Le frein de stationnement soit appliqué.

**Après démarrage, s'assurer que:**

- L'interrupteur d'arrêt d'urgence du moteur et tous les contrôles fonctionnent normalement.

**Avant d'utiliser le véhicule:**

- S'assurer que le frein de stationnement soit complètement relâché.
- Conduisez prudemment.
- Ce véhicule est conçu pour un conducteur seulement. **AUCUN PASSAGER.**

516 001 208

A01A2CA

*SINGLE SEAT MODELS*

## ⚠️ WARNING

- Read and follow all warning labels & operator's guide/safety handbook before operation.
- Severe injury or death can result from ignoring warnings or through improper use of snowmobile.
- Before starting engine, check:
  - If throttle lever returns to its initial position when released.
  - All guards are in place.
- The hood is closed and the clutch access door is installed.
- Parking brake is applied.
- After starting, check proper operation of:
  - Engine emergency cut-off switch and all controls.
- Before operating the vehicle:
  - Make sure parking is fully disengaged.
  - Drive carefully.

- Lisez et respectez tous les avertissements contenus dans le guide du conducteur/guide de sécurité, avant toute mise en marche.
- Le fait de passer outre aux avertissements ou d'utiliser la motoneige de façon inadéquate peut entraîner de graves blessures ou la mort.
- Avant de démarrer le moteur, s'assurer que:
  - La manette d'accélérateur revient à sa position initiale lorsque relâchée.
  - Les gardes soient en place.
  - Le capot soit fermé et le panneau d'accès de la poulie soit installé.
  - Le frein de stationnement soit appliqué.
- Après démarrage, s'assurer que:
  - L'interrupteur d'arrêt d'urgence du moteur et tous les contrôles fonctionnent normalement.
- Avant d'utiliser le véhicule:
  - S'assurer que le frein de stationnement soit complètement relâché.
  - Conduisez prudemment.

## ⚠️ AVERTISSEMENT

- Lisez et respectez tous les avertissements contenus dans le guide du conducteur/guide de sécurité, avant toute mise en marche.
- Le fait de passer outre aux avertissements ou d'utiliser la motoneige de façon inadéquate peut entraîner de graves blessures ou la mort.
- Avant de démarrer le moteur, s'assurer que:
  - La manette d'accélérateur revient à sa position initiale lorsque relâchée.
  - Les gardes soient en place.
  - Le capot soit fermé et le panneau d'accès de la poulie soit installé.
  - Le frein de stationnement soit appliqué.
- Après démarrage, s'assurer que:
  - L'interrupteur d'arrêt d'urgence du moteur et tous les contrôles fonctionnent normalement.
- Avant d'utiliser le véhicule:
  - S'assurer que le frein de stationnement soit complètement relâché.
  - Conduisez prudemment.

516 001 229

A01A2DA

### Instruction 3

## **CAUTION**

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

## **ATTENTION**

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

516 001 191

A01A2EA

ALL MODELS

### Instruction 4

## **WARNING**

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

## **AVERTISSEMENT**

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

516 001 190

A01A2FA

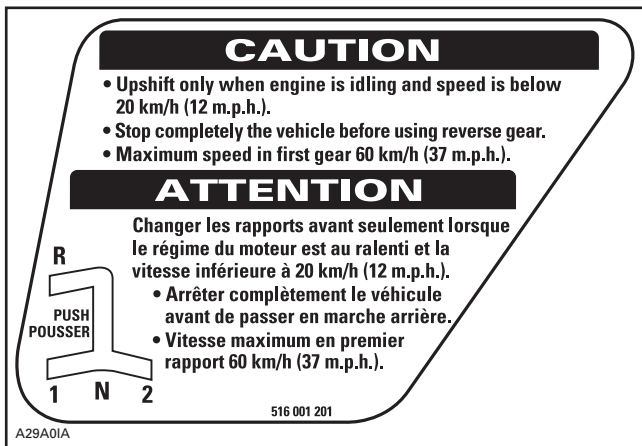
ALL MODELS

## Instruction 5



TYPICAL — ALL MODELS

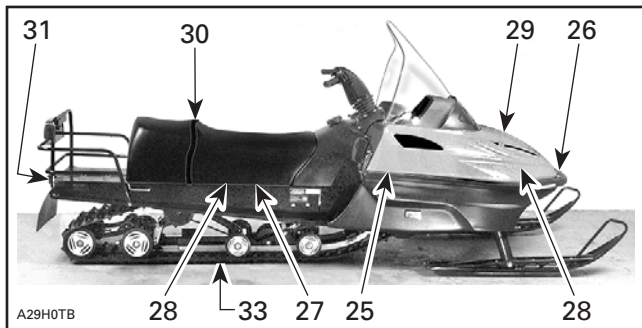
## Instruction 6



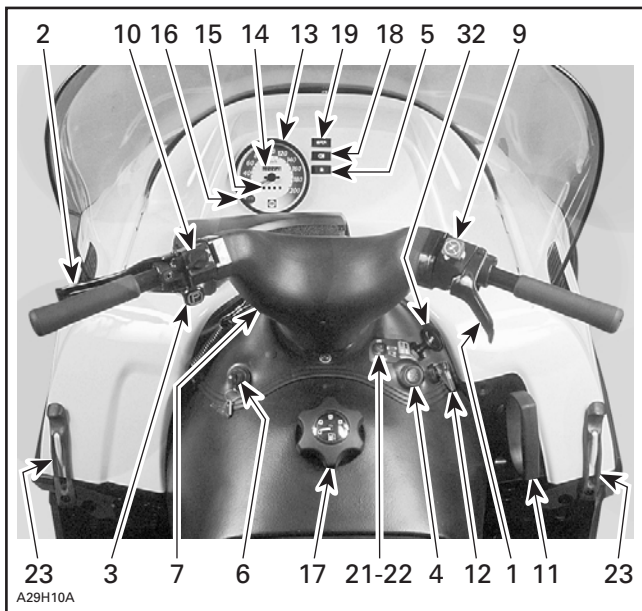
SKANDIC WT/SWT/WT LC

## CONTROLS/INSTRUMENTS/EQUIPMENT

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

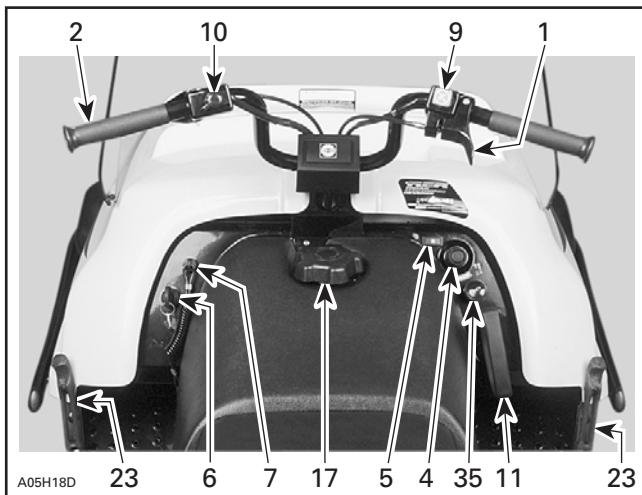


*TYPICAL*

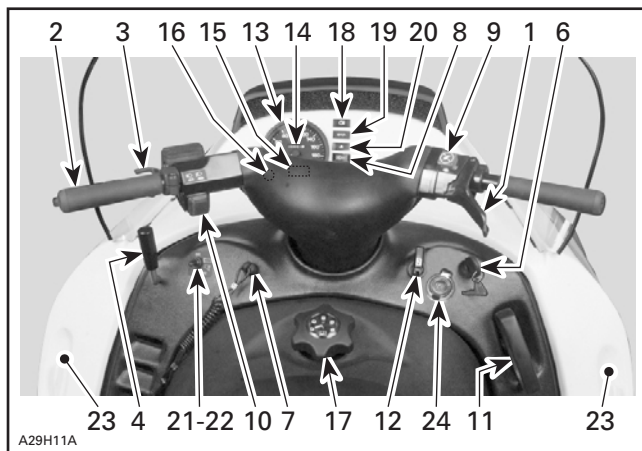


SKANDIC LT





TUNDRA R



TYPICAL — SKANDIC WT/SWT/WT LC

## 1) Throttle Lever

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

## 2) Brake Lever

Located on the left side of handlebar. When compressed, the brake is applied. When released, it automatically returns to its original position. Braking effect is proportional to the pressure applied on the lever and to the type of terrain and its snow coverage.

**CAUTION:** Excessive or repetitive use of brakes for high speed stops will cause an overheated brake system. This overheated condition could cause sudden loss of brakes and/or fire.

## 3) Parking Brake Button or Lever

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

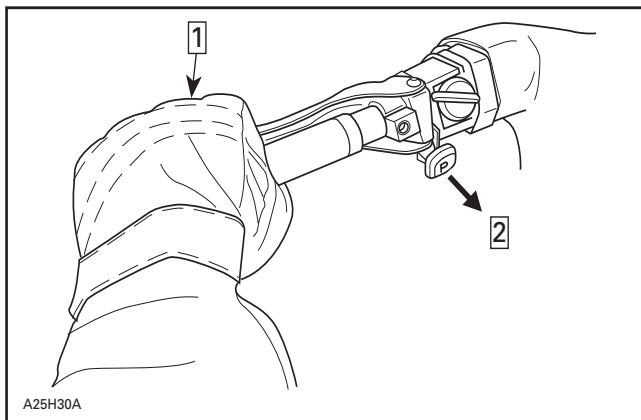
Whenever parking brake is applied and engine is running, injection oil level/parking brake pilot lamp lights up to remind you that it is engaged.

**CAUTION:** Make sure parking brake is fully disengaged before operating the snowmobile. Otherwise, brake system may overheat leading to sudden loss of brakes and/or fire.

### MECHANICAL BRAKE

**To engage** mechanism, squeeze brake lever and maintain while pulling button with the other hand. There are 2 retaining notches on button lever; pull button until it locks on a notch then release brake lever.

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



*TYPICAL*

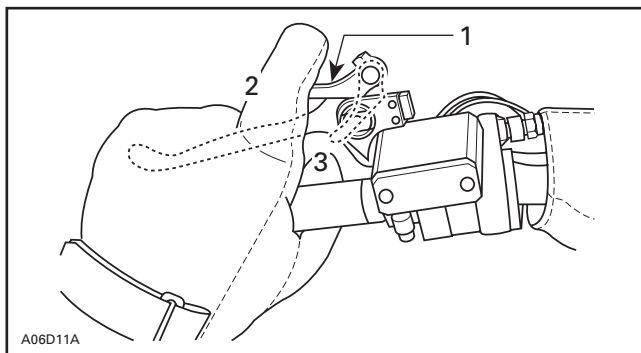
Step **1**: *Squeeze and hold*

Step **2**: *Fully pull*

## HYDRAULIC BRAKE

To **engage** mechanism, squeeze brake lever and maintain while pulling locking lever with a finger.

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



1. Locking lever
2. OFF
3. ON

## 4) Gear Shift Lever or Reverse Button

### **WARNING**

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

## MECHANICAL REVERSE

### **Skandic WT/SWT/WT LC**

These models are equipped with a mechanical reverse controlled by a 4-position gear shift lever.



TYPICAL

### Shifting Procedure

**CAUTION:** Upshift only when engine is idling and speed is below 20 km/h (12 MPH).

Stop completely the vehicle before using reverse gear.

Maximum speed in first gear is 60 km/h (37 MPH).

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

## ELECTRONIC REVERSE

### **Tundra R and Skandic LT**

These models are equipped with a Rotax Electronic Reverse (RER™) controlled by a reverse button.

Driving in reverse is achieved by changing the direction of engine rotation.

Shifting in reverse is an electronic operation consisting of a control module that modifies the ignition timing of the engine.

When depressing the reverse button, a signal will slow down the engine RPM enough to modify the ignition timing advance. This reverses crankshaft rotation.

No mechanical action and gear change is involved.

No adjustment is needed except for high altitude. See **RER Modification at High Altitude** below.

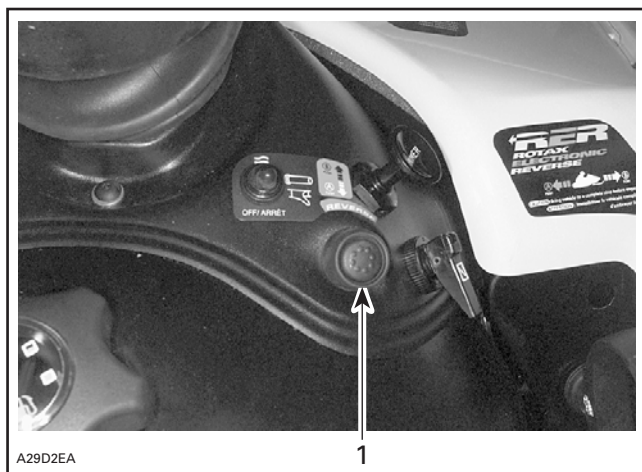
### Shifting Procedure

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

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

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

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



### SKANDIC LT

#### 1. Reverse button

The engine RPM will decrease for a few seconds then the engine will start rotating in the opposite direction and will return to its normal idle speed.

**NOTE:** A reverse indicator lamp **no. 5** will illuminate and a warning buzzer will sound when the snowmobile is engaged in reverse.



#### **TUNDRA R**

1. Reverse indicator lamp
2. Reverse button

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

To shift in forward depress button again. Indicator lamp and warning buzzer will stop.

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

#### **RER Modification at High Altitude**

##### ***Skandic LT Only***

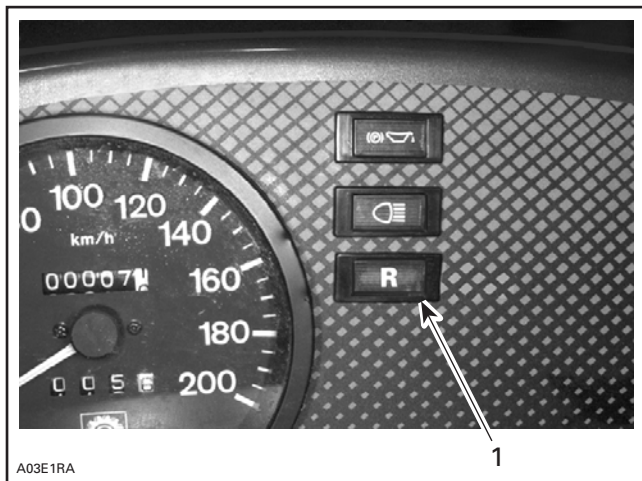
**NOTE:** Tundra R needs no modification on RER at high altitude.

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

Before using vehicle at high altitude see an authorized SKI-DOO dealer for installation of a high altitude cap.

## 5) Reverse Indicator Lamp

This indicator will light up when reverse is selected.

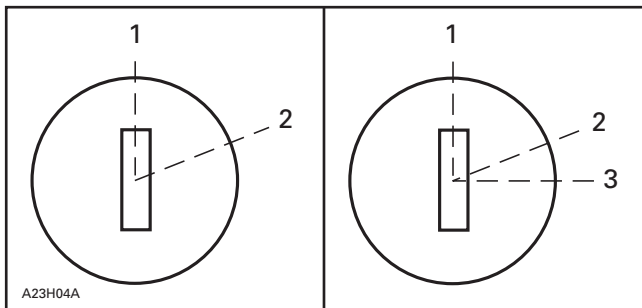


*TYPICAL*

1. Reverse indicator lamp

## 6) Ignition Switch

The lights are automatically ON whenever the engine is running.



*MANUAL START*

1. OFF
2. ON

*ELECTRIC START MODELS*

1. OFF
2. ON
3. START



## **Manual Starting**

Key operated, 2-position switch. To start the engine, first turn the key to ON position then, pull rewind starter grip. To stop the engine, turn the key to OFF position.

## **Electric Starting**

Key operated, 3-position switch. To start engine, turn key to START position and hold until engine has started. See illustration above.

**CAUTION:** Do not hold key at START position more than 15 seconds. A rest period should be observed between the cranking cycles to let starter cool down. Holding key in START position when engine has started could damage starter mechanism.

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

If engine does not start on first try, turn key back to OFF position before restarting. To stop engine, turn key to OFF position.

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

If starter does not operate, check starting system fuse condition. Refer to **Starting System Fuse** below.

## **7) Tether Cut-Out Switch**

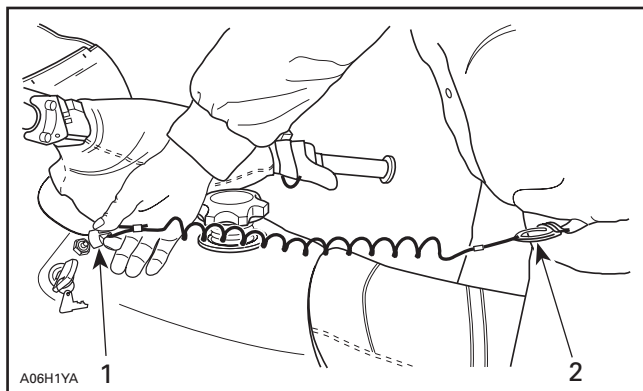
### ***All Models***

#### **General**

The tether cut-out system shuts-off engine if the driver accidentally falls off the vehicle.

## Operation

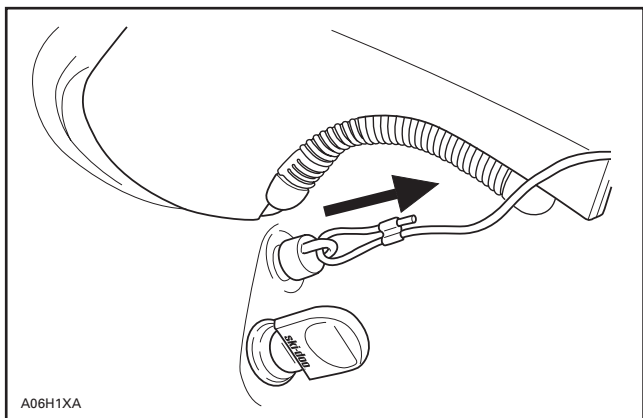
Attach tether cord to wrist or clothing then snap tether cut-out cap over receptacle before starting engine.



### TYPICAL

1. Snap over receptacle
2. Attach to eyelet

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



### TYPICAL

## **Skandic WT LC Only**

On this model tether cut-out system also includes the DESS™ (**D**ig**i**tally **E**ncoded **S**ecurity **S**ystem) which performs the same function as a key.

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

This system is a deterrent against theft. The tether cord cap provided with your snowmobile is dealer programmed and is the only one that allows engine to turn more than 3000 RPM. If an incorrectly programmed tether cord cap is installed the engine can not reach engagement speed to move vehicle.

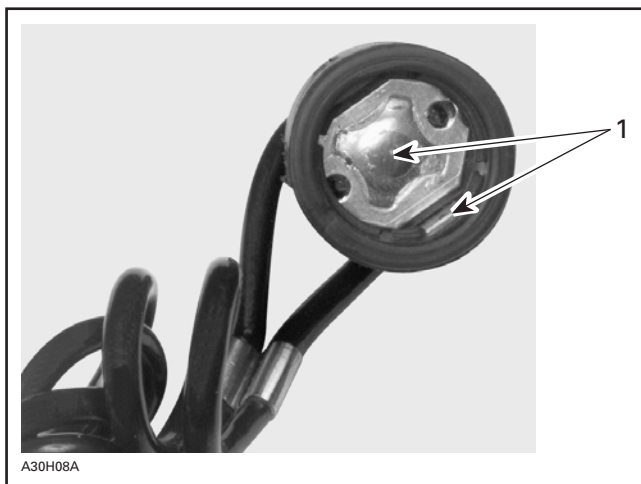
### **Additional Tether Cord Caps**

We recommend the purchase of additional tether cord caps from your SKI-DOO authorized dealer.

### **DESS Pilot Lamp Codes**

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

To check for bad connection, remove tether cord. Make sure it is free of dirt or snow. Reinstall tether cord and restart engine. If a blink per 3 seconds still occurs contact an authorized dealer.



1. Free of dirt or snow

A rapid DESS pilot lamp blinking means that an incorrectly programmed tether cord is being used. Vehicle can not be driven.

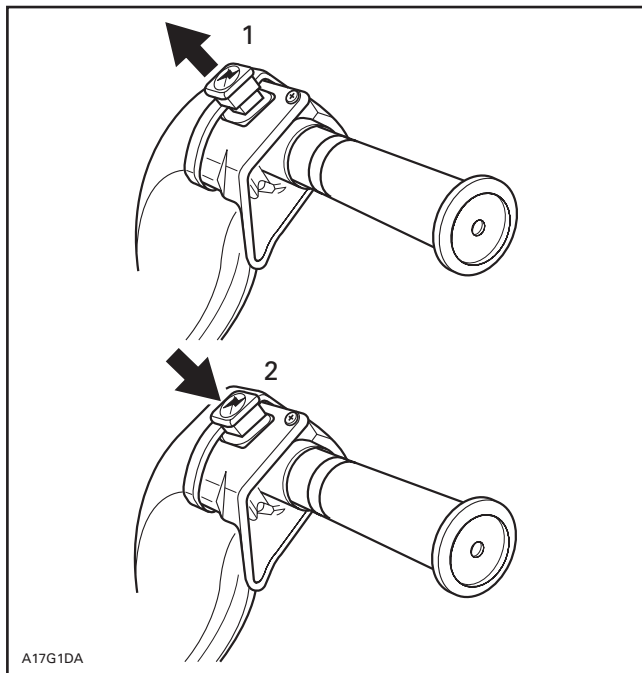
## 8) DESS Pilot Lamp

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

## 9) Engine Cut-Out Switch

### *All Models*

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



*TYPICAL*

1. ON
2. OFF

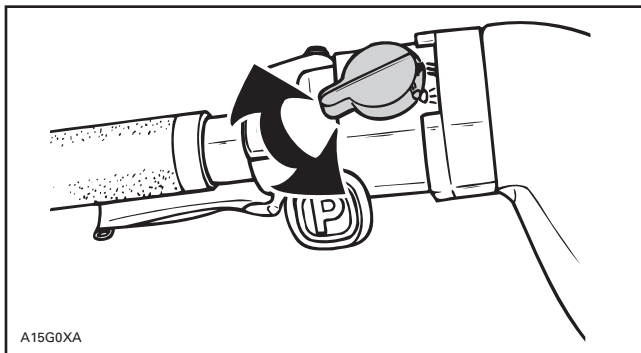
All drivers of the snowmobile should familiarize themselves with the function of this device by using it several times on first outing and to stop the engine there after. Thereby being mentally prepared for emergency situations requiring its use.

## **WARNING**

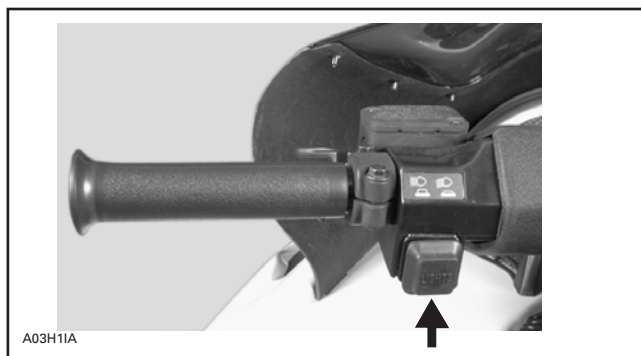
If the switch has been used in a mechanical malfunction, the source of malfunction should be determined and corrected before restarting engine.

### **10) Headlamp Dimmer Switch**

Located on left side of handlebar, allows selection of headlamp beam.



*TYPICAL — SOME MODELS*



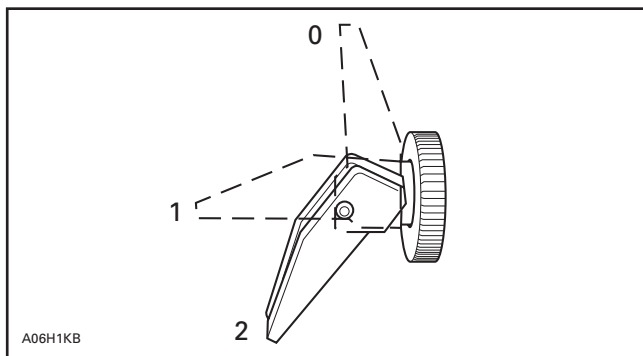
*TYPICAL — SOME MODELS*

## 11) Rewind Starter Handle

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

## 12) Choke Lever

This device features a 3-position lever to facilitate cold start.



- 0. OFF
- 1. Position 1
- 2. Position 2

### Initial Cold Starting

**NOTE:** Do not operate the throttle lever with the choke lever on.

Move the choke lever to position 2 and start the engine. As soon as the engine starts move the lever to position 1. After a few seconds (10 seconds maximum) move the choke lever to OFF.

**NOTE:** In severe cold weather, colder than  $-20^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$ ) you may need to flip choke lever from OFF to position 1 a couple of times once engine is started.

### Warm Engine Starting

Start the engine without any choke. If the engine will not start after two pulls of the rope or two 5 second attempts with the electric starter move choke lever to position 1. Start the engine without activating the throttle lever. As soon as the engine starts move the choke lever to OFF.

## 13) Speedometer

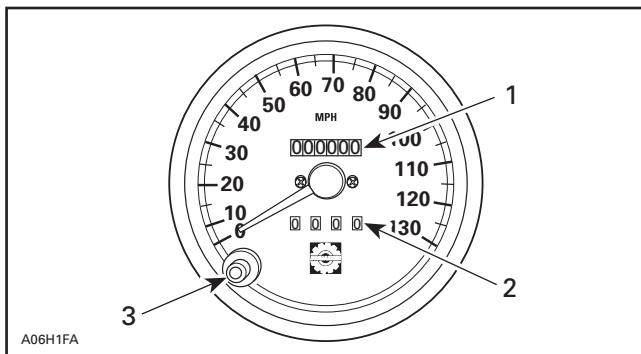
Direct-reading dial indicates the speed of the snowmobile in kilometers per hour (miles per hour for the USA).

## 14) Odometer

Odometer records the total distance travelled in kilometers or (miles for the USA).

## 15) Trip Meter

Records distance travelled in kilometers (miles for the USA) until it is reset. It can be used to record a fuel tank range or distance between 2 relays for instance.



1. Odometer
2. Trip meter
3. Reset button

## 16) Trip Meter Reset Button

To reset, push on button until all numbers read zero.

## 17) Fuel Tank Cap/Gauge

Unscrew to fill up tank then fully tighten.

Fuel tank cap features a dipstick or a mechanical gauge.

### **WARNING**

Fuel may be pressurized, open cap slowly. Fuel is flammable and explosive. Never use an open flame to check fuel level. Never smoke or allow flame or spark in vicinity. Never top up the fuel tank before placing the vehicle in a warm area. As temperature increases, fuel expands and may overflow. Always wipe off any fuel spillage from the vehicle.

## 18) High Beam Pilot Lamp (Blue)

Lights when headlamp is on HIGH beam.

## 19) Injection Oil Level/Parking Brake Pilot Lamp (Red)

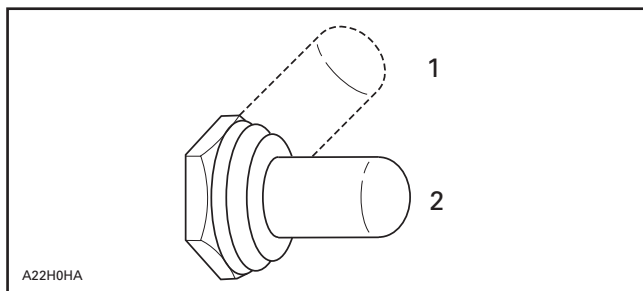
Lights when injection oil level is low. Check oil level and replenish as soon as possible. Also lights when brake or parking brake is applied (with engine running).

## 20) Engine Overheat Warning Lamp (Red)

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

## 21) and 22) Heated Grip and Throttle Lever

Two-position toggle switch. Select the desired position to keep your hands and right thumb at a comfortable temperature.



*TYPICAL*

1. *HOT*
2. *OFF*

## 23) Hood Latches

Stretch and unhook the latches to unlock the hood from its anchors.

Always lift hood gently until stopped by retaining device.

Close hood slowly then hook up latches.



## 24) Electric Power Outlet

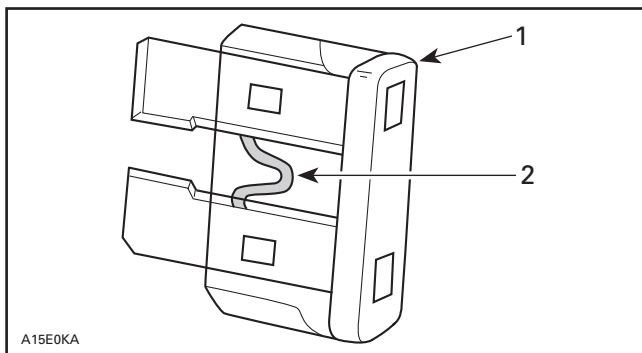
### *Skandic WT/SWT/WT LC*

A 12-volt electric appliance may be connected to that jack connector. Electric current is supplied when ever engine is running. Maximum output current is 20 amperes. See **Fuses** below for electric power outlet fuse location.



## 25) Fuses

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



1. Fuse
2. Check if melted

## Starting System Fuse

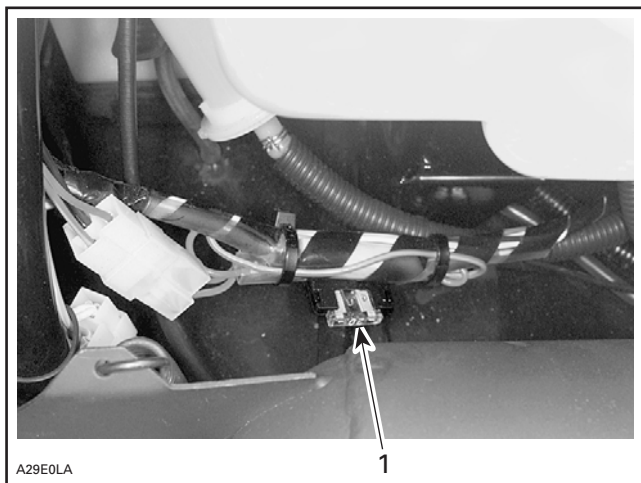
Starting system is protected with a 20 amperes rated fuse on Skandic WT/SWT/WT LC. See following illustrations for fuse holder location. If starter does not operate, check fuse condition and replace if necessary.

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

### **WARNING**

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

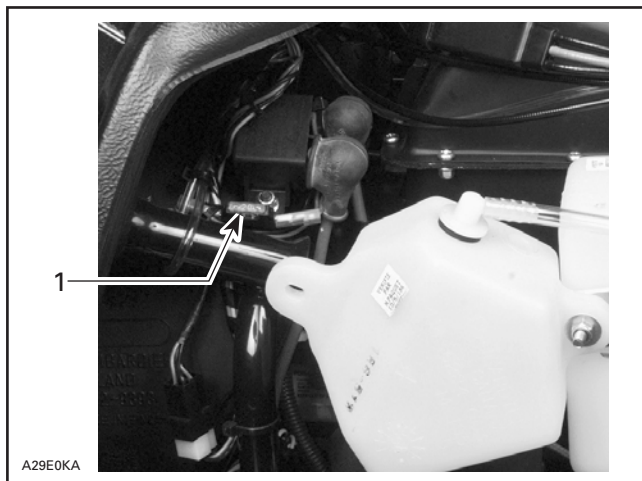
## Skandic WT/SWT



### FUSE FOR ELECTRIC STARTING SYSTEM — SKANDIC WT/SWT

1. Fuse holder

## Skandic WT LC



### FUSE FOR ELECTRIC STARTING SYSTEM — SKANDIC WT LC

1. Fuse holder

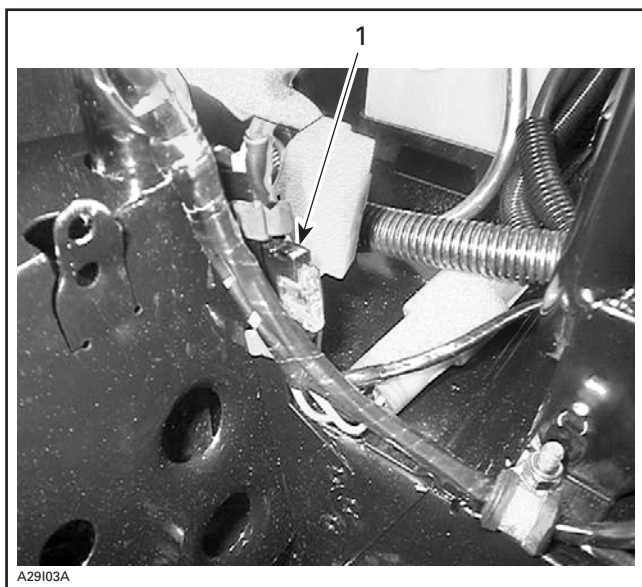
### Electric Power Outlet Fuse

Electric power outlet is protected with a 20 amperes rated fuse. See following illustration for fuse holder location. If there is no electricity at outlet, check fuse condition and replace if necessary.

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

## **WARNING**

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

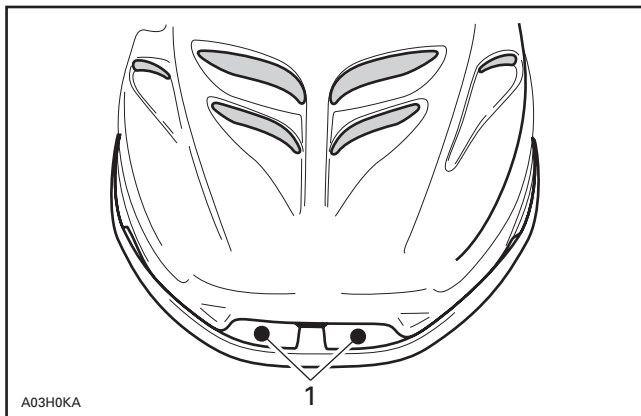


**FUSE FOR ELECTRIC POWER OUTLET**

1. Fuse holder

## 26) Front Grab Handles/Front Bumper

To be used whenever front of snowmobile requires manual lifting.



*TYPICAL*

1. *Front grab handles*

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

## 27) Storage Compartment

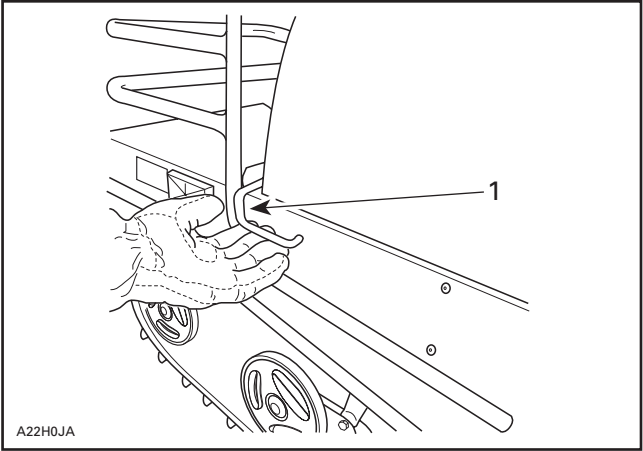
### **WARNING**

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

Depending on model, a storage compartment is provided in engine compartment, under seat or inside seat.

**Skandic LT/WT/SWT/WT LC Only**

A storage compartment is provided under seat. To open storage compartment, lift seat latch then tip seat over.



**SKANDIC LT/WT/WT LC**

1. Lift seat latch



**TYPICAL — SKANDIC SWT**

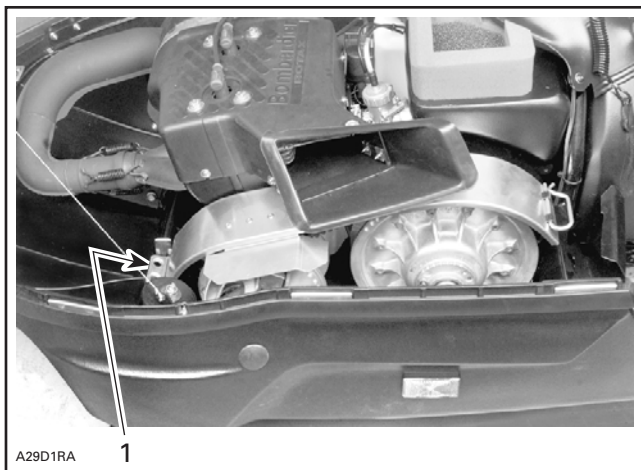
## 28) Tool Kit

A tool kit containing tools for basic maintenance is supplied with the vehicle. On Tundra R tool kit is located in storage compartment (in front of engine). On Skandic series models look under seat to find tool kit.

## 29) Spark Plug Holder

### *Skandic LT Only*

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



### *SKANDIC LT*

#### *1. Spare spark plug holder*

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

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

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

## 30) Seat Strap

Seat strap provides a grip for the passenger.

## 31) Hitch

The hitch can be used to pull most equipment.

## 32) Primer Button

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

To prime, activate button until a pumping resistance is felt. From this point, pump 2 or 3 times to inject fuel in intake manifold. After priming, ensure that primer button is pushed back.

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

## 33) Adjustable Suspensions

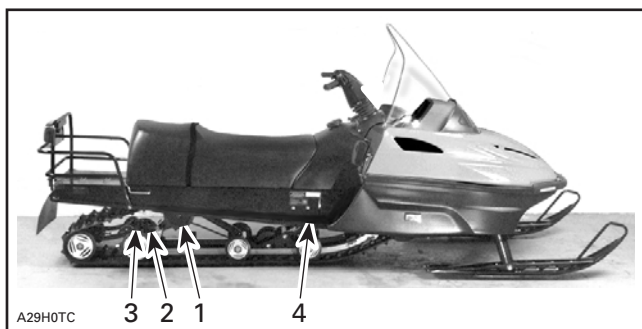
### General

#### **All Models**

Snowmobile handling and comfort depend upon suspension adjustments.

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

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



#### **TYPICAL**

1. *Rear springs for comfort*
2. *Suspended extension for load and snow conditions*
3. *Shackle movement for load and snow conditions*
4. *Stopper strap for snowmobile weight transfer*



## Guidelines to Adjust Suspension

The best way to set up suspension, is to start from factory settings then customize each adjustment one at a time in the right order (steps 1 to 4). Then, test run the snowmobile always with the same conditions; trail, speed, snow, driver riding position etc. Change adjustment and retest. Proceed methodically until you get satisfied.

### **WARNING**

Always completely stop vehicle and engine before attempting any suspension adjustments.

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

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

### 1. Rear Springs — Comfort

When driver and passenger (if so applicable) take place rear of snowmobile should collapse by 50 to 70 mm (2 to 3 in).



**PROPER ADJUSTMENT**

A. 50 to 75 mm (2 to 3 in)

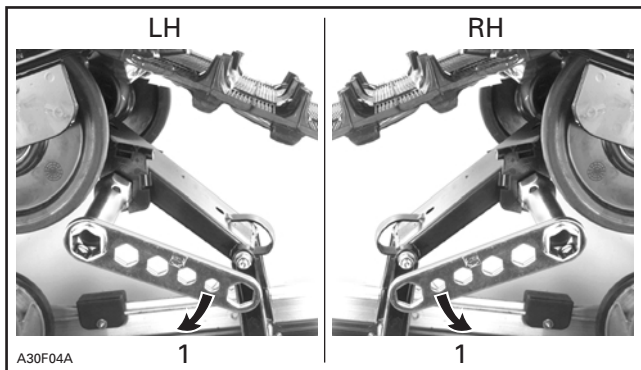


A03F2MA

*TOO SOFT OF ADJUSTMENT*



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



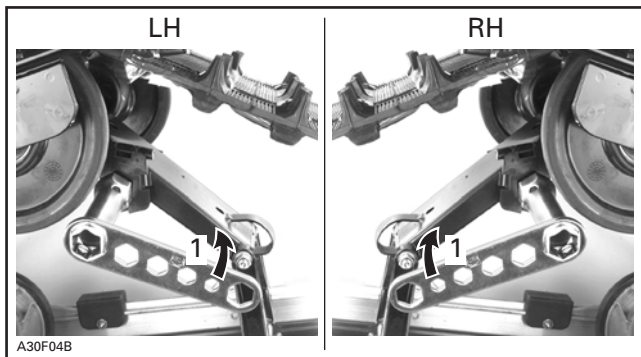
1. *Increase spring preload*



*TOO HARD OF ADJUSTMENT*



**CAUTION:** Always turn the left side adjustment cam in a counter-clockwise direction, the right side cam in a clockwise direction. Left and right adjustment cams may be at different settings.



1. *Decrease spring preload*

## 2. Suspended Extension Adjustment

Suspended extension can be adjusted according to the load and snow conditions.

For better deep snow performance, first loosen lock nut then tighten nut 3/4 turn after contacting washers. Retighten lock nut. Adjust the same on both sides.

For trail riding with or without a load and for pulling a load, first loosen lock nut. Turn to a maximum preload of 3 turns after nut touching washers. Retighten lock nut. Adjust the same on both sides.

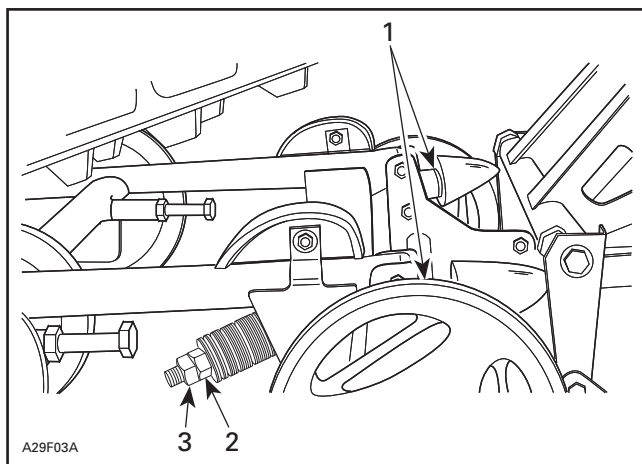
## 3. Shackle Movement Limiter

For deep snow riding, do not install horse shoe washers.

For trail riding with passenger and/or weight, install 1 horse shoe washer under each rubber stoppers.

For trail riding with heavy load and/or pulling a load, use 2 horse shoe washers under each rubber stoppers.

**CAUTION:** Always install same amount of washers on both sides.



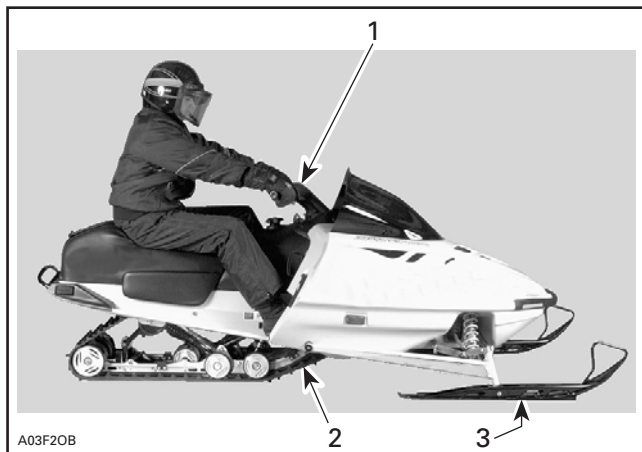
1. Horse shoe washer(s)
2. Nut
3. Lock nut

#### 4. Stopper Strap — Weight Transfer

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

At rest, stopper strap should have a free play of 12 mm (1/2 in).

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



**TYPICAL — GOOD ADJUSTMENT AT FULL ACCELERATION**

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



**TYPICAL — TOO LONG STRAP**

1. Skis lift off the ground

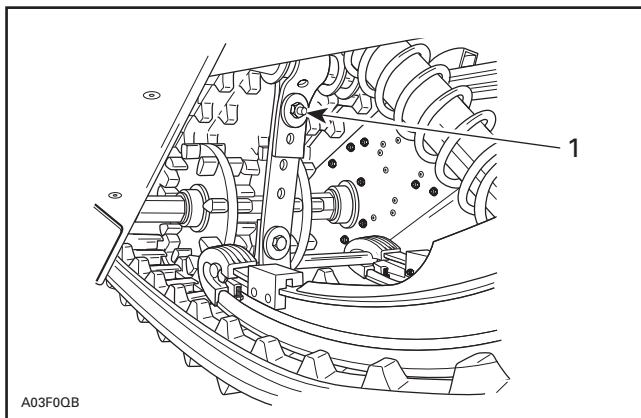
OR



**TYPICAL — TOO SHORT STRAP**

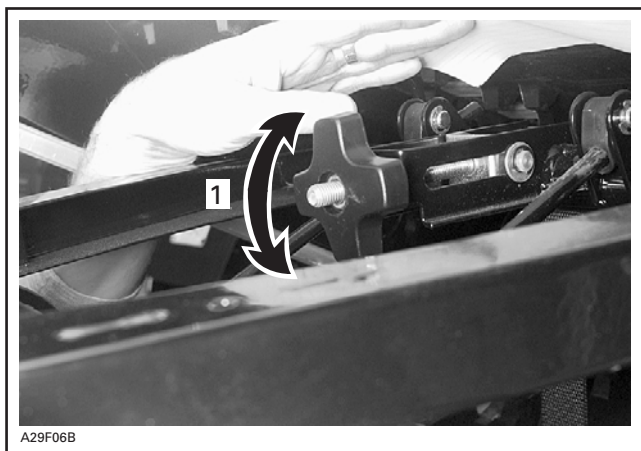
1. Heavy steering

## **Tundra R**



1. Vary strap length by bolting to a different hole

## **Skandic WT/SWT/WT LC**



1. Screw or unscrew knob to vary strap length

# SUSPENSION TROUBLESHOOTING CHART

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

## In Deep Snow

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



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## FUEL AND OIL

### Recommended Fuel

Use regular unleaded gasoline, available from most service stations or oxygenated fuel containing less than 10% of ethanol or 5% of methanol. The gasoline used must have an octane number (R + M)/2 of 87 or higher.

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

**CAUTION:** Never experiment with other fuels or fuel ratios. The use of unrecommended fuel can result in snowmobile performance deterioration and damage to critical parts in the fuel system and engine components. Do not mismatch oil reservoir cap with fuel tank cap. Oil reservoir cap is identified OIL.

### **WARNING**

Fuel may be pressurized, open cap slowly. Fuel is flammable and explosive. Never use an open flame to check fuel level. Never smoke or allow flame or spark in vicinity. Never top up the fuel tank before placing the vehicle in a warm area. As temperature increases, fuel expands and may overflow. Always wipe off any fuel spillage from the vehicle.

### Fuel System Antifreeze

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

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

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

**NOTE:** Use only **methyl hydrate free** gas line antifreeze, Kleen-Flo\* or equivalent.

## Recommended Oil

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

Oil is contained in the oil injection reservoir.

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

| MODEL | OIL TYPE  |
|-------|---|
| All   | BOMBARDIER FORMULA XP-S<br>synthetic injection oil (or equivalent)<br>OR<br>BOMBARDIER injection oil (or equivalent) ①② |

① If BOMBARDIER injection oil is not available, API TC high-quality ashless two-stroke injection oil may be used.

② BOMBARDIER FORMULA XP-S synthetic injection oil and BOMBARDIER injection oil are compatible, they can be mixed together.

BOMBARDIER injection oil is a special blend of basic oil and additives especially selected to ensure unequalled lubrication, engine cleanliness and minimum spark plug fouling.

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

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

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

**CAUTION:** Check level and refill every time you refuel.

### **WARNING**

Wipe off any oil spills. Oil is highly flammable.

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## COLD WEATHER CARBURETION MODIFICATIONS

All vehicles have been calibrated for - 20°C (- 4°F). They can be operated at warmer winter temperatures without problems.

**CAUTION:** For colder temperatures than - 20°C (- 4°F), carburetor(s) must be recalibrated to avoid engine damage. Refer to an authorized SKI-DOO dealer.

Refer also to RIDING AT HIGH ALTITUDES in following pages.

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## BREAK-IN PERIOD

### Engine

**CAUTION:** A break-in period of 10 to 15 operating hours — 500 km (300 miles) — is required before running the snowmobile at full throttle.

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

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

### Belt

A new drive belt requires a break-in period of 50 km (30 miles). Avoid strong acceleration/deceleration, pulling a load or high speed cruising.

### 10-Hour Inspection

As with any precision piece of mechanical equipment, we suggest that after the first 10 hours of operation — 500 km (300 miles) — or 30 days after the purchase, whichever comes first, your snowmobile be checked by an authorized SKI-DOO dealer. This inspection will also give you the opportunity to discuss the unanswered questions you may have encountered during the first hours of operation.

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

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## PRE-OPERATION CHECK

### **WARNING**

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

- Verify track and idler wheels are unfrozen and free to turn.

### **WARNING**

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

- Activate the brake control lever and make sure the brake fully applies before the brake control lever touches the handlebar grip. It must fully return when released.
- Check the parking device. Apply parking brake and check if it operates properly.
- Activate the throttle control lever several times to check that it operates easily and smoothly.

### **WARNING**

Throttle lever must operate easily and smoothly. It must return to idle position when released.

- Check operation of ignition switch, headlight switch (HI-LO), taillight, brake light, indicator lights and tether and engine cut-out switches.
- Check gear shift lever position (models with mechanical reverse only).
- Verify that skis and steering operate freely. Check corresponding action skis versus handlebar.
- Check fuel and injection oil for levels and leaks. Replenish as necessary and see an authorized SKI-DOO dealer in case of any leaks.
- Verify that air filter(s) is free of snow, if so equipped.

### **WARNING**

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

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

## PRE-OPERATION CHECK LIST

| ITEM                   | OPERATION   | ✓ |
|------------------------|---|---|
| Track and idler wheels | Check for free movement.  |   |
| Brake lever            | Check proper action.  |   |
| Parking device         | Check proper action.  |   |
| Throttle lever         | Check proper action.  |   |
| Switches and lights    | Check proper action.  |   |
| Gear shifter           | Check position.   |   |
| Skis and steering      | Check proper action.  |   |
| Fuel and oil           | Check for proper level and leaks.                                     |   |
| Air filter             | Check for free of snow.   |   |
| Adjustable features    | Check for optimal adjustment and securely tightened adjustment locks. |   |
| Storage compartment    | Check for proper latching and no heavy or breakable objects.          |   |

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## OPERATING INSTRUCTIONS

### **WARNING**

Proceed with pre-operation check list before riding.

## Principle of Operation

### Propulsion

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

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

The driven pulley senses the load on the track and limits the belt movement. The result is a continuous change in the ratio of the two pulleys which maximizes acceleration and forward movement of the vehicle.

### **WARNING**

Do not operate engine with hood open or belt guard removed.

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

### **WARNING**

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

### Turning

Handlebar controls the direction of travel of the vehicle. As the handlebar is rotated to right or left, the skis are turned in the direction of intended travel.

### **WARNING**

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

## Starting the Engine

### **WARNING**

Operator and passenger (if applicable) must be properly seated before starting engine.

#### **Before Starting**

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

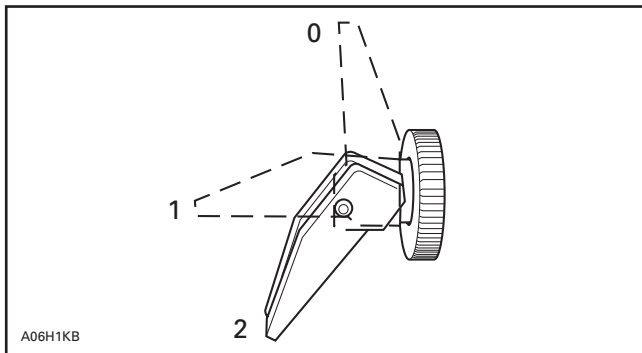
#### **Primer Equipped Vehicles**

- To prime, activate button until a pumping resistance is felt. From this point, pump 2 or 3 times to inject fuel in intake manifold. After priming, ensure that primer button is pushed back.

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

**NOTE:** Priming is not necessary when engine is warm.

#### **Choke Equipped Vehicles**



0. OFF
1. Position 1
2. Position 2

## Initial Cold Starting

**NOTE:** Do not operate the throttle lever with the choke lever on.

Move the choke lever to position 2 and start the engine. As soon as the engine starts move the lever to position 1. After a few seconds (10 seconds maximum) move the choke lever to OFF.

**NOTE:** In severe cold weather, colder than - 20°C (- 4°F) you may need to turn the choke on and off a couple of times to position 1 once engine is started.

## Warm Engine Starting

Start the engine without any choke. If the engine will not start after two pulls of the rope or two 5 second attempts with the electric starter move choke lever to position 1. Start the engine without activating the throttle lever. As soon as the engine starts move the choke lever to OFF.

## Manual Starting

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

Grasp manual starter handle firmly and pull to crank engine.



## WARNING

Do not apply throttle while starting.

## Electric Starting (some models only)

Insert key in ignition switch.

Turn key clockwise until starter engages.

Release key immediately when engine has started.

**CAUTION:** Do not hold key at START position more than 15 seconds. A rest period should be observed between the cranking cycles to let starter cool down. Holding key in START position when engine has started could damage starter mechanism.

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



## Emergency Starting

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

Remove belt guard.

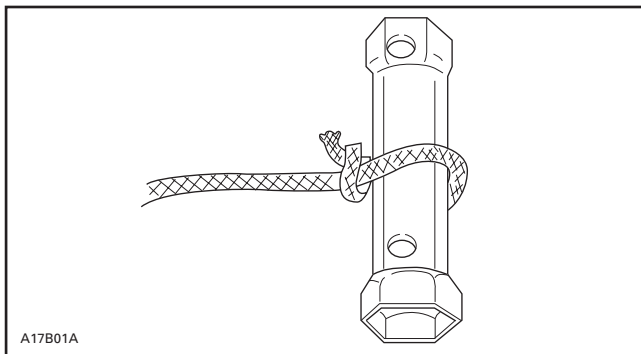
### **WARNING**

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



Attach one end of emergency rope to rewind handle.

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

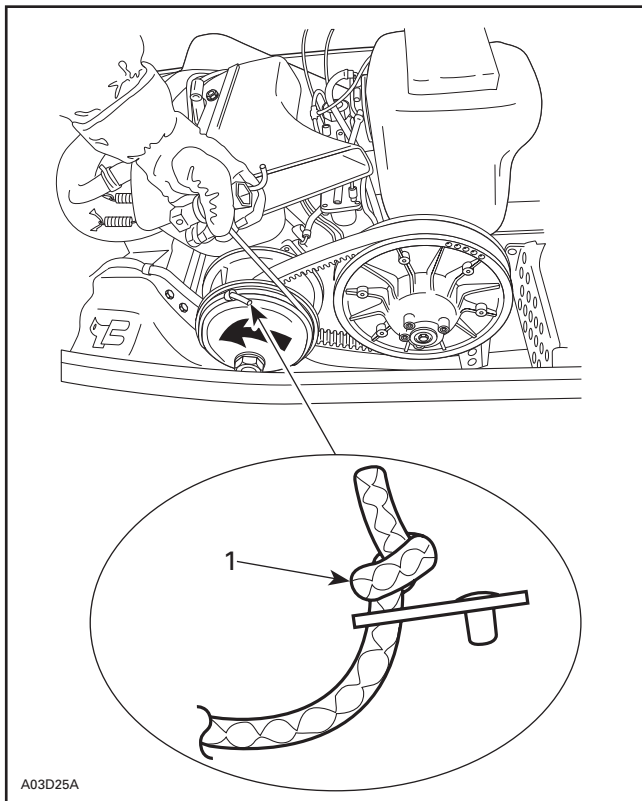


*TYPICAL*

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

Hook up clip on drive pulley.

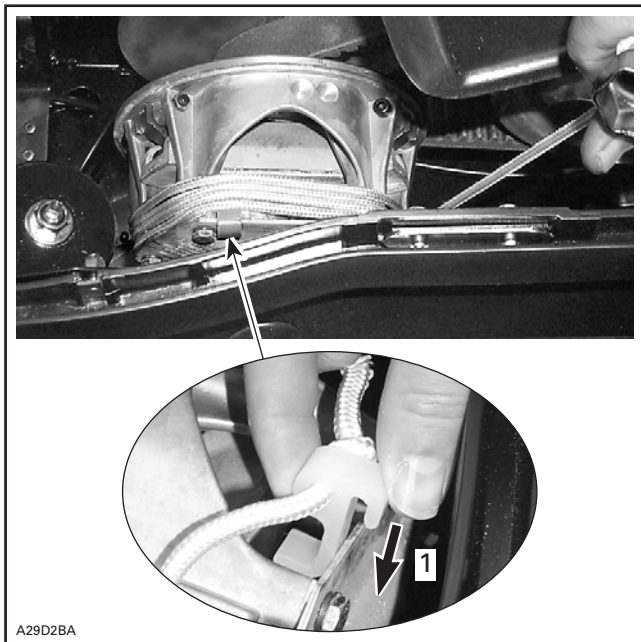
Wind the rope tightly around drive pulley. When pulled, pulley must rotate counterclockwise.



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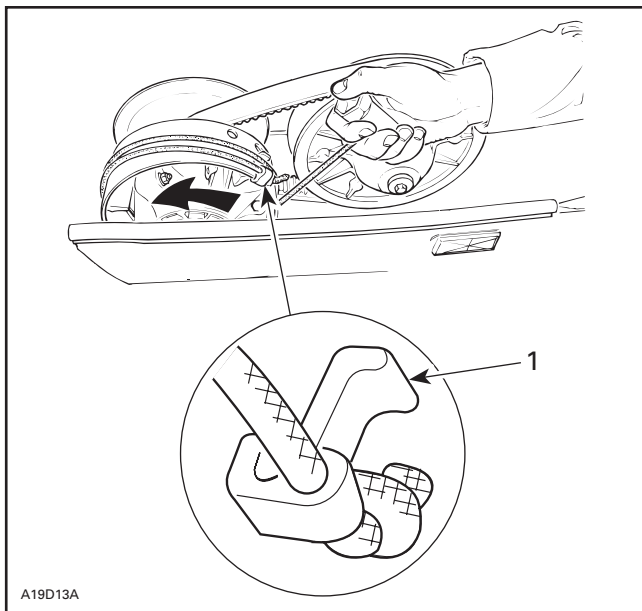
**TUNDRA R**

1. Knot on this side



**SKANDIC LT**

1. Hook up starter clip



A19D13A

*TYPICAL — SKANDIC WT/SWT/WT LC*

1. Clip

### **All Models**

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

Start engine as per usual manual starting.

## **⚠ WARNING**

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

## Shutting Off the Engine

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

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

### **WARNING**

Never leave key and tether cord on vehicle when not in operation.

---

## VEHICLE WARM-UP

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

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

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

**NOTE:** The Skandic WT/SWT/WT LC gearbox may be in neutral position.

Release parking brake.

### **WARNING**

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

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

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

Skis may be frozen on the ground. Grasp both skis by their loops and lift them.

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

---

## POST-OPERATION CARE

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

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

Protect vehicle with a snowmobile cover.

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## SPECIAL OPERATIONS

### Riding at High Altitudes

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

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

### Engine Overheating

#### *Fan Cooled Models*

Shut off the engine.

Check for clogged air duct passages. Remove any foreign materials. Check for proper fan belt condition and tension. See an authorized SKI-DOO dealer.

#### *Liquid Cooled Models*

Engine overheating indicator will light up if engine is too hot.

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

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

## Fuel Flooded Engine

*All Models*



### WARNING

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

Install new spark plugs and restart engine.

## Rear Suspension Slider Shoe Sticking

*All Models*

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

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

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

# PERIODIC MAINTENANCE CHART

## WARNING

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

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

- ① 10-HOUR OR 500 km (300 mi) INSPECTION (to be performed by SKI-DOO dealer)
- ② WEEKLY OR EVERY 240 km (150 mi)
- ③ MONTHLY OR EVERY 800 km (500 mi)
- ④ ONCE A YEAR OR EVERY 3200 km (2000 mi)
- ⑤ STORAGE (to be performed by SKI-DOO dealer)
- ⑥ PRE-SEASON PREPARATION (to be performed by SKI-DOO dealer)

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



| <b>PERIODIC MAINTENANCE CHART</b>   |   | ①           | ②           | ③ | ④ | ⑤ | ⑥ |
|---|---|-------------|-------------|---|---|---|---|
|    | Brake Fluid Level   | ✓           | ✓           |   |   |   | ✓ |
|   | Brake Fluid Change (once a year)  |             |             |   |   | ✓ |   |
|   | Brake Condition   | ✓           | ✓           |   |   | ✓ | ✓ |
|   | Brake Adjustment  |             |             | ✓ |   | ✓ |   |
|   | Lubrication of Ratchet Wheel  |             |             |   |   | ✓ |   |
|    | Drive Chain Tension   | ✓           |             | ✓ |   | ✓ |   |
|   | Countershaft Lubrication**  | ✓           |             | ✓ |   | ✓ |   |
|   | Chaincase/Gearbox Oil Level   | ✓           |             | ✓ |   |   | ✓ |
|   | Chaincase/Gearbox Oil Change  | ✓           |             |   |   | ✓ |   |
|   | Chaincase/Gearbox Oil Change (Skandic LT/WT/SWT/WT LC only)   | ✓           |             |   | ✓ | ✓ |   |
|   | Lubrication of Drive Axle End Bearing**   | ✓           |             | ✓ |   | ✓ |   |
|    | Handlebar Bolts, Retorque to 26 N•m (19 lbf•ft)   | ✓           |             |   |   | ✓ |   |
|   | Steering and Front Suspension Mechanism Lubrication**   | ✓           |             |   | ✓ | ✓ |   |
|   | Steering and Front Suspension Mechanism Condition   | ✓           |             | ✓ |   | ✓ |   |
|   | Wear and Condition of Skis and Runners  | ✓           | ✓           |   |   | ✓ |   |
|   | Steering and Ski Leg Camber Adjustment  | ✓           |             | ✓ |   | ✓ |   |
|    | Suspension Adjustments  | AS REQUIRED |             |   |   |   |   |
|   | Suspension Lubrication**  |             |             |   | ✓ | ✓ |   |
|   | Suspension Condition  | ✓           |             | ✓ |   | ✓ |   |
|   | Suspension Stopper Strap Condition  |             |             |   | ✓ | ✓ |   |
|   | Track Condition   | ✓           |             | ✓ |   | ✓ |   |
|   | Track Tension and Alignment   | ✓           | AS REQUIRED |   |   |   |   |
|  | Spark Plugs*  | ✓           |             | ✓ |   |   | ✓ |
|   | Engine Timing   | ✓           |             |   |   |   | ✓ |
|   | Battery Condition   | ✓           |             | ✓ |   | ✓ | ✓ |
|   | Headlight Beam Aiming   |             |             |   | ✓ |   | ✓ |
|   | Wiring Harnesses, Cables and Lines  | ✓           |             | ✓ |   | ✓ |   |
|   | Operation of Lighting System (HI/LO beam, brake light, etc.), Test Operation of Engine Cut-Out Switch and Tether Cut-Out Switch | ✓           | ✓           |   |   |   | ✓ |
|   |   |             |             |   |   |   |   |
|  | Rags in Air Intake and Exhaust System   |             |             |   |   | ✓ | ✓ |
|   | Engine Compartment  | ✓           |             | ✓ |   | ✓ |   |
|   | Vehicle Cleaning and Protection   | ✓           |             | ✓ |   | ✓ |   |

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

\*\*Lubricate whenever the vehicle is used in wet conditions (wet snow, rain, puddles).

## FLUID LEVELS

### **WARNING**

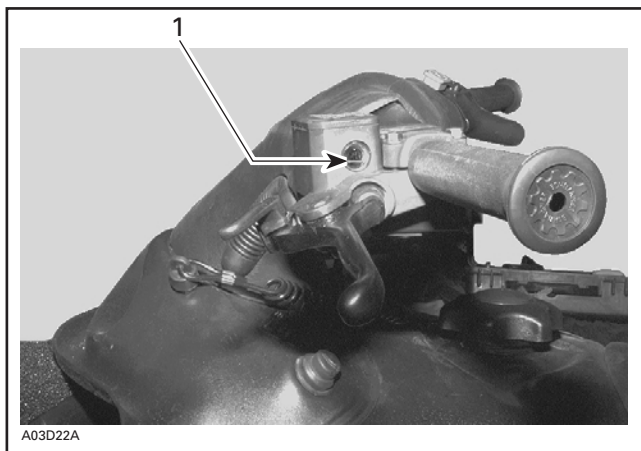
It is recommended that the assistance of an authorized SKI-DOO dealer be periodically obtained on other components/systems not covered in this guide. Unless otherwise specified, engine must be cold and not running. The tether cord cap must be removed for all maintenance procedures.

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

### **Brake System**

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

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



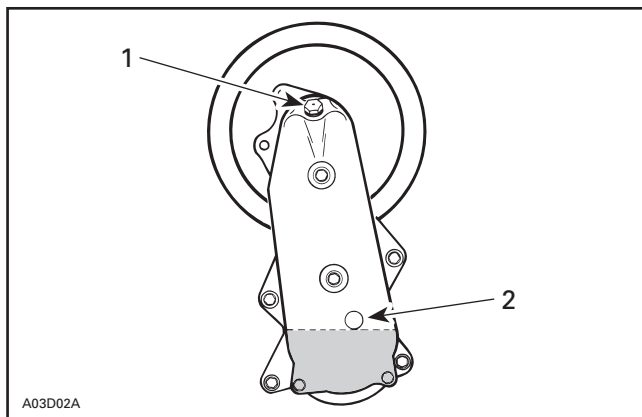
**TYPICAL — BRAKE FLUID RESERVOIR**

1. *Minimum*

## Chaincase/Gearbox Oil Level

### *Tundra R*

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



1. Filler plug
2. Oil level plug

The oil should be level with the bottom of the oil level hole. Refill as required using BOMBARDIER chaincase oil (P/N 413 801 900) until it flows through oil level hole.

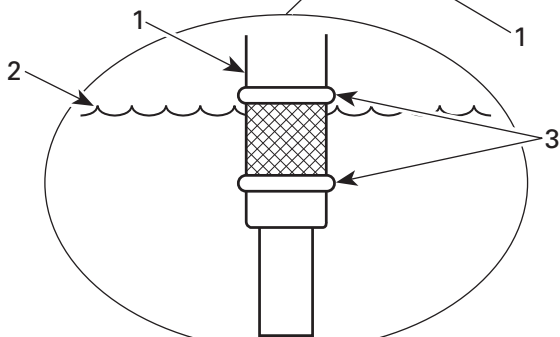
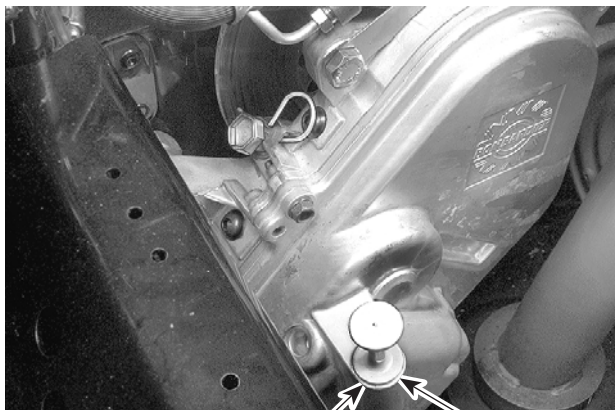
### **Skandic LT**

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

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

Refill up to upper mark using BOMBARDIER synthetic chaincase oil (P/N 413 803 300 — 12 x 355 mL) for Skandic LT.

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



A03D2MA

**TYPICAL**

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

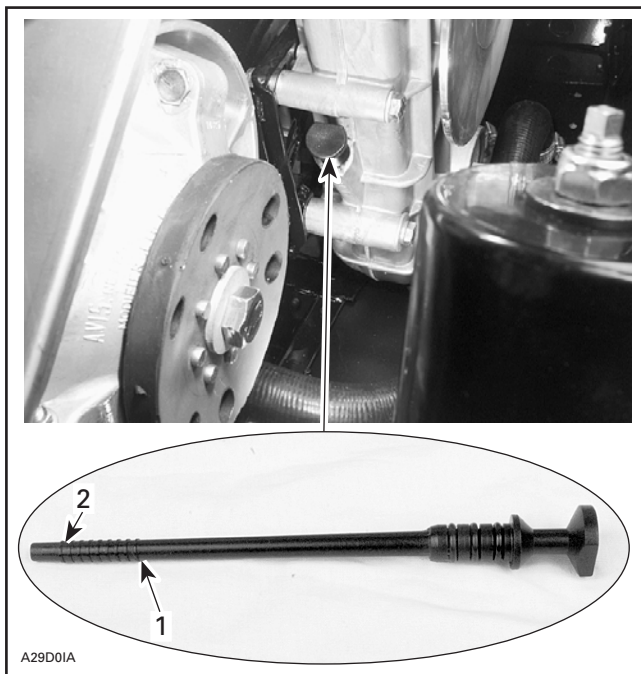
## **Skandic WT/SWT/WT LC**

To check, pull dipstick. Oil should reach level mark.

**NOTE:** Before initial start-up, the oil level may be higher than the full mark. After first outing, oil level will decrease as the upper oil cavity fills with oil.

To fill, remove filler plug from top of gearbox. Refill as required using BOMBARDIER synthetic chaincase oil (P/N 413 803 300 — 12 x 355 mL).

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



**TYPICAL — SKANDIC WT/SWT/WT LC**

1. Full level mark
2. Lower level mark

## Oil Injection System

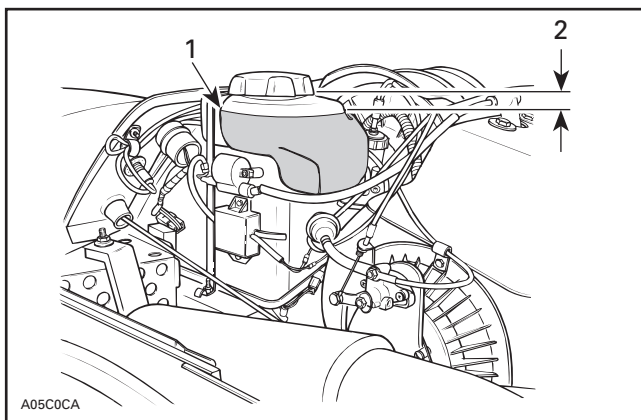
Always maintain a sufficient amount of BOMBARDIER injection oil in the injection oil reservoir.

**CAUTION:** Never allow oil reservoir to be almost empty.

### **WARNING**

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

### *Tundra R*

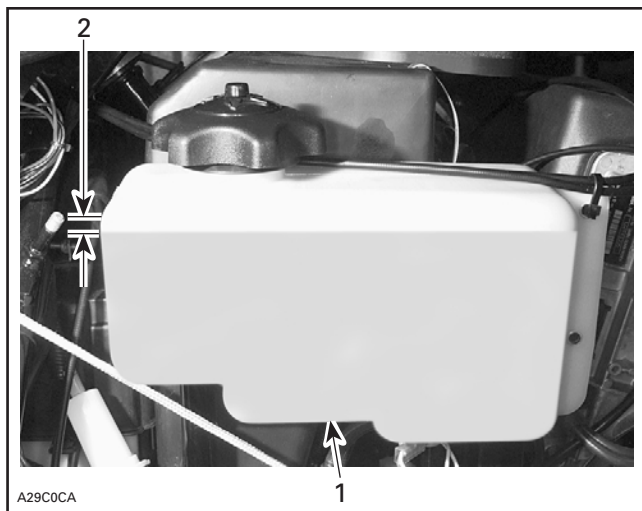


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### *TYPICAL*

- 1. Injection oil reservoir*
- 2. Maximum level: 13 mm (1/2 in) from top*

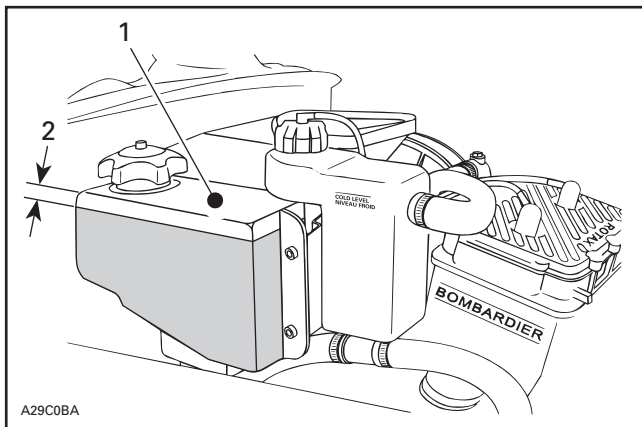
## Skandic LT/WT/SWT



### TYPICAL

1. Injection oil reservoir
2. Maximum level: 13 mm (1/2 in) from top

## Skandic WT LC



1. Injection oil reservoir
2. Maximum level: 13 mm (1/2 in) from top

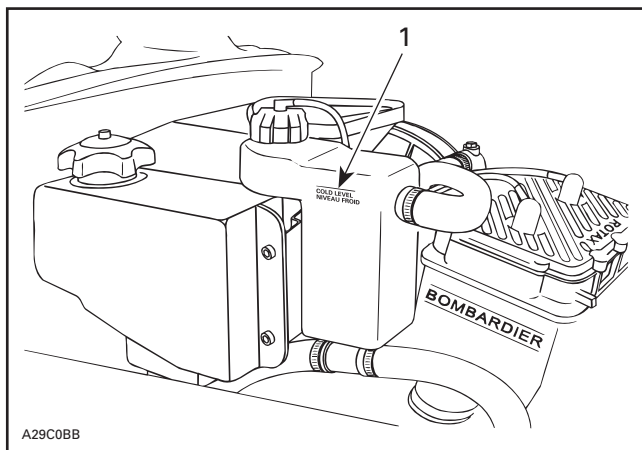
## Cooling System

### **Skandic WT LC Only**

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

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

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



SKANDIC WT LC

1. COLD LEVEL line

## Battery Electrolyte

### **Some Models**

See your SKI-DOO dealer.

## **WARNING**

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



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## MAINTENANCE

### **WARNING**

It is recommended that the assistance of an authorized SKI-DOO dealer be periodically obtained on other components/systems not covered in this guide. Unless otherwise specified, engine must not be running and cold. The tether cord cap must be removed for all maintenance procedures.

### **Vehicle Cleaning and Protection**

Remove any dirt or rust.

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

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

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

**CAUTION:** Do not use Bombardier Cleaner on decals or vinyl.

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

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

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

Clean sheaves of both pulleys using BOMBARDIER Parts Cleaner (P/N 413 711 809).

Inspect the hood and repair any damage.

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

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

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

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

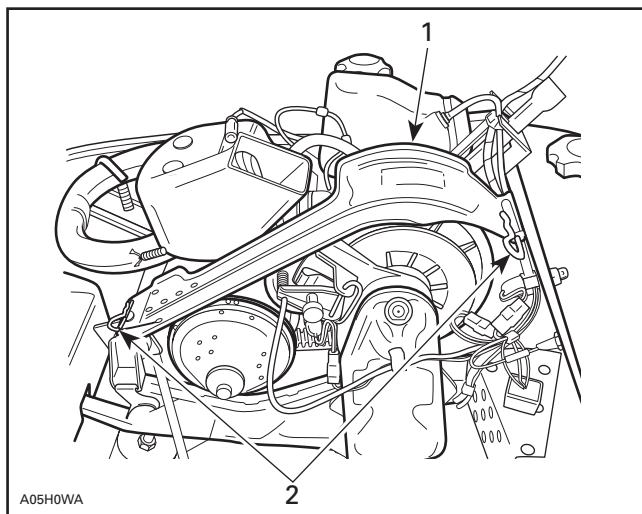
Lift rear of vehicle until track is clear of the ground. Install on a snowmobile mechanical stand.

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

## Belt Guard Removal and Installation

### *Tundra R*

1. Turn off engine cut-out switch.
2. Open hood. Remove guard retaining pins and lift off the guard.

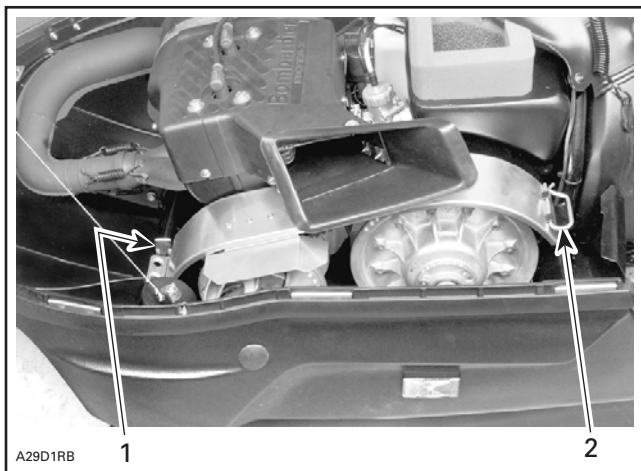


#### *TYPICAL*

1. Guard
2. Retaining pins

## **Skandic LT**

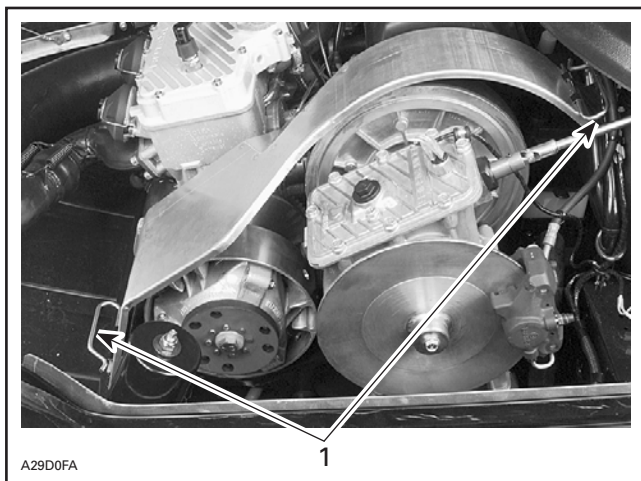
1. Turn off engine cut-out switch.
2. Open hood. Pull out clip then, open pin retainer. Remove belt guard.



1. *Clip*
2. *Pin retainer*

## **Skandic WT/SWT/WT LC**

1. Turn off engine cut-out switch.
2. Open hood. Remove both retaining pins then belt guard.



### **TYPICAL**

1. Retaining pins

### **All Models**

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

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

## **Drive Belt Removal/Installation**

### **Removal**

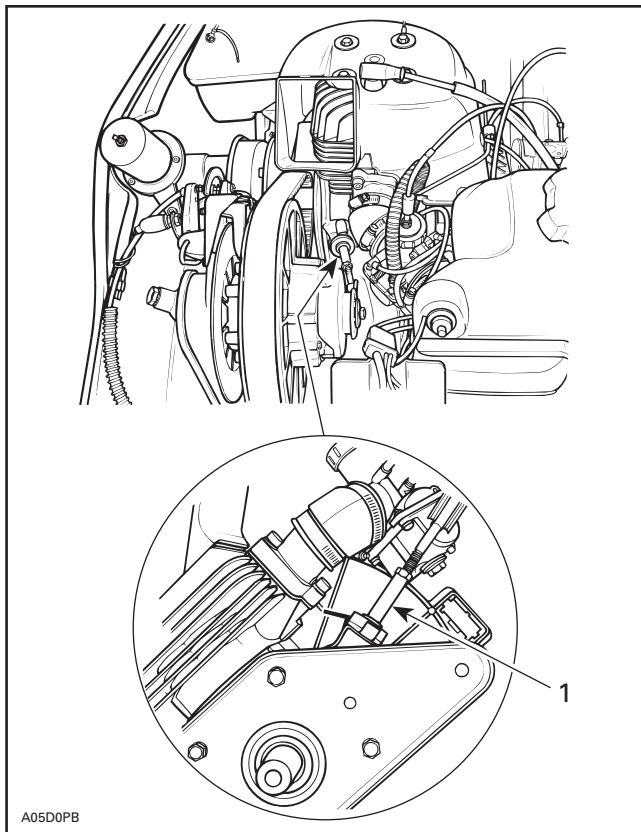
#### **All Models**

**NOTE:** Removal and installation of drive belt is easier when driven pulley is held with brake so that it can not rotate. Apply parking brake, for this purpose.

Turn off engine cut-out switch. Open hood and remove belt guard.

## **Tundra R**

Disconnect driven pulley support.



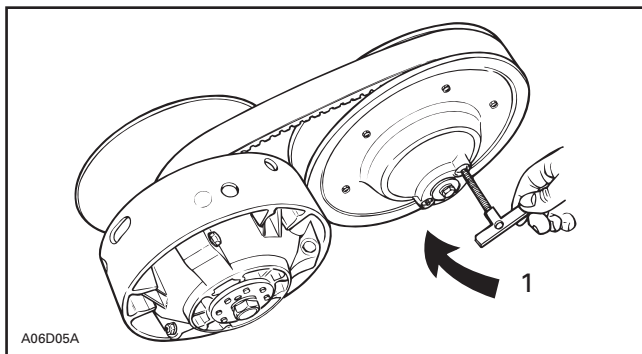
## **TUNDRA R**

1. Raise

## All Models

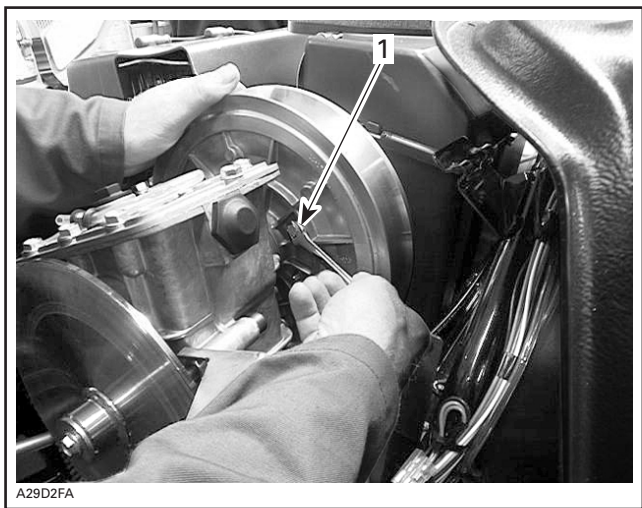
Open the driven pulley with the drive belt installer/remover provided in tool box.

Screw tool in the threaded hole and tighten to open the pulley. Remove belt.



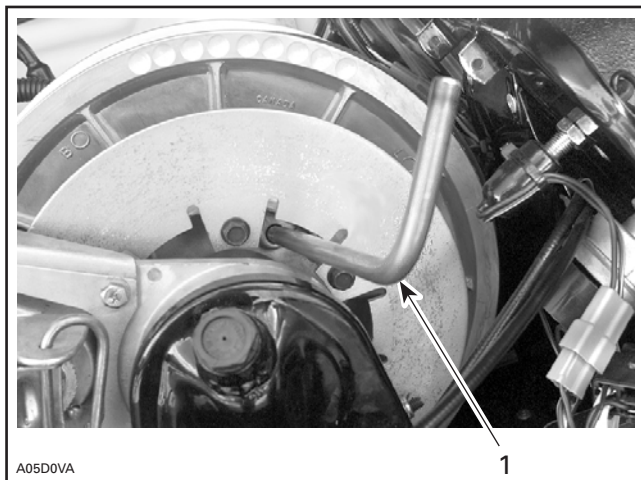
TYPICAL — SKANDIC LT

1. Tighten to open pulley



TYPICAL — SKANDIC WT/SWT/WT LC

1. Tighten to open pulley

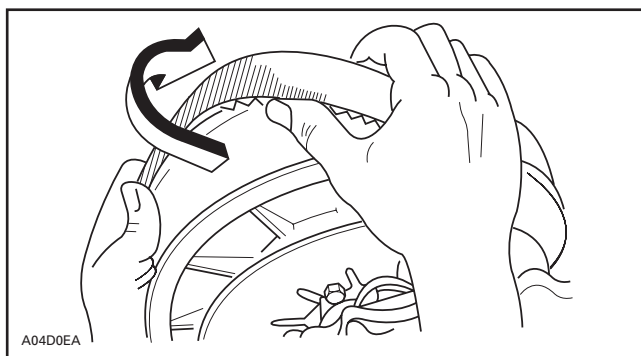


*TUNDRA R*

1. Tighten to open pulley

**All Models**

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



*TYPICAL*

## Installation

### *All Models*

The maximum drive belt life span is obtained when the belt has the proper rotation direction. Install it so the arrow printed on belt is pointing at front of vehicle.

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

Clean sheaves of both pulleys using BOMBARDIER Parts Cleaner (P/N 413 711 809).

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

Reposition and lock driven pulley support, on Tundra R.

Remove belt installer. Reinstall belt guard.

## Drive Chain Tension

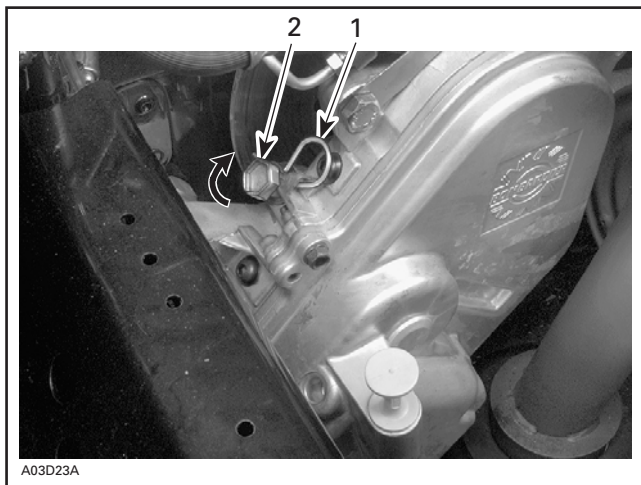
### *Skandic LT*

**NOTE:** Tundra R is equipped with an automatic tensioner. Skandic WT/SWT/WT LC are equipped with gearbox without chain.

Remove hair pin.

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





**TYPICAL**

1. Hair pin
2. Adjustment screw

## TRA Drive Pulley Adjustment

### **Some Models**

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

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

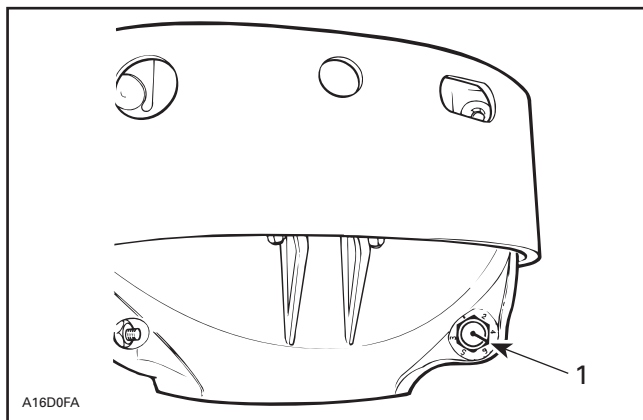
Calibration screws should be adjusted so that actual maximum engine RPM in vehicle matches with the maximum horsepower RPM.

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

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

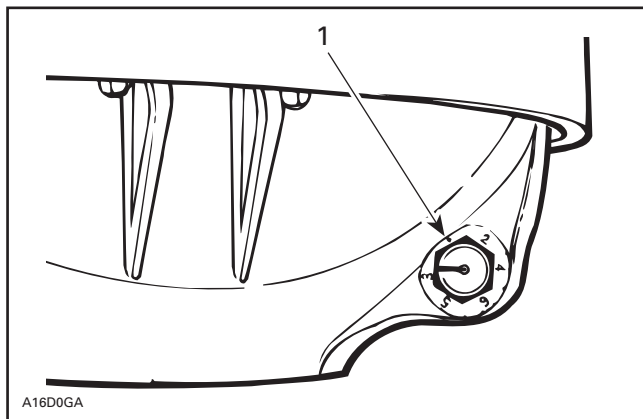
To adjust, turn calibration screws.

Calibration screw has a notch on top of its head.



1. Notch

Governor cup has 6 positions numbered 2 to 6. Note that in position 1 the number is substituted by a dot (due to its location on casting).



1. Position 1 (not numbered)

Each number modifies maximum engine RPM by about 200 RPM.

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

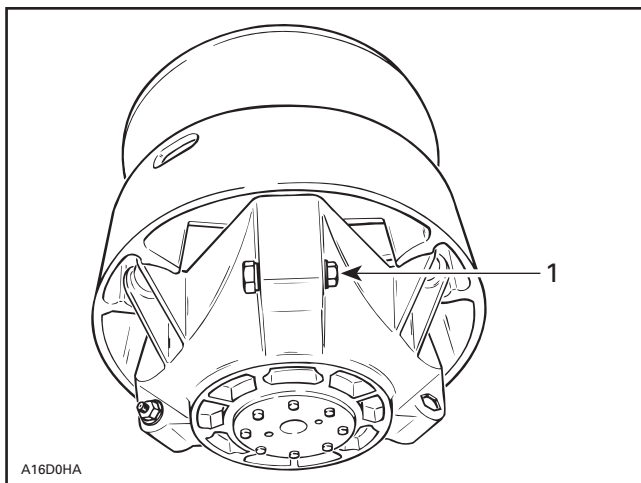
Example:

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

### To adjust:

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

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



1. Loosen just enough to permit rotating of calibrate screw

## **WARNING**

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

## Drive Belt Condition

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

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

## Brake Condition

### **WARNING**

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

## Brake Adjustment

### ***Mechanical Brake Only***

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

### ***Hydraulic Brake Only***

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

## Rear Suspension Condition

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

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

## Suspension Stopper Strap Condition

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

## Track Condition

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

**CAUTION:** Do not modify track, including by installing traction enhancing products. This may weaken the track and cause it to break without warning.

### **WARNING**

Do not operate or rotate a track if torn, damaged or excessively worn (fiber showing).

## Track Tension and Alignment

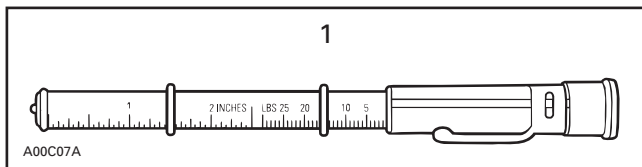
### Tension

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

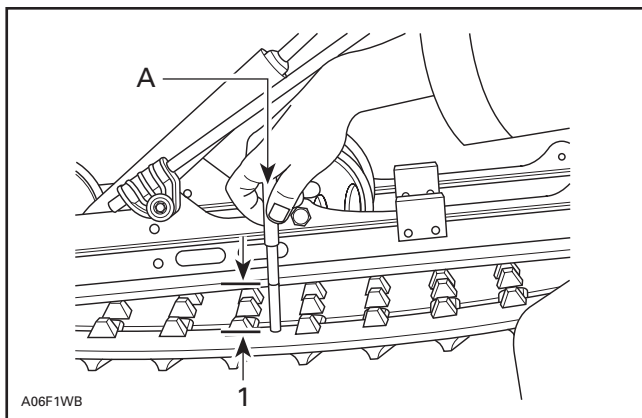
Lift rear of snowmobile and support it with a **snowmobile mechanical stand**.

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

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



1. Belt tension tester



**TYPICAL**

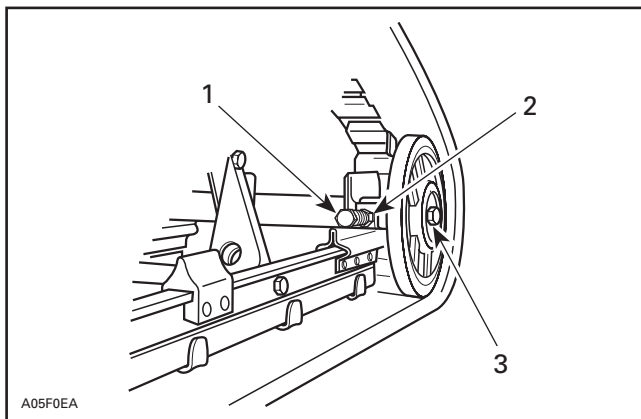
1. Deflection  
A. 7.3 kg (16 lb)

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

**To adjust tension:**

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

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



**TYPICAL**

1. Adjustment screw
2. Loosen lock nut (some models only)
3. Loosen screw

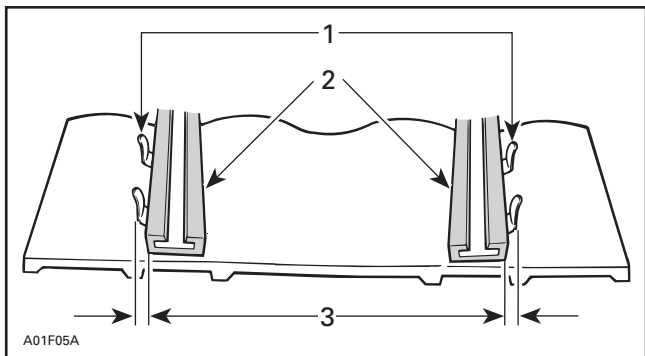
**Alignment**

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

**⚠ WARNING**

Before checking track alignment, ensure that the track is free of all particles which could be thrown out while track is rotating. Keep hands, tools, feet and clothing clear of track. Ensure no one is standing in close proximity to the snowmobile.

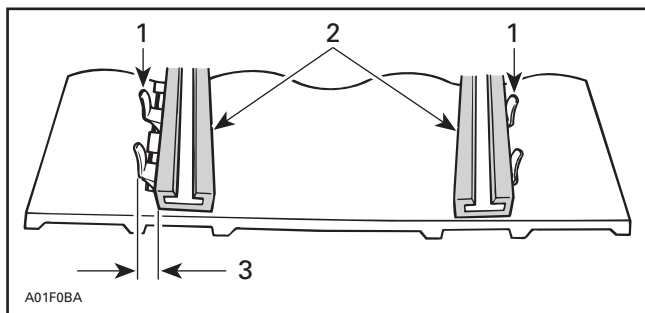
Start the engine and accelerate slightly so that track barely turns. This must be done in a short period of time (15 to 20 seconds). Check that the track is well centered; equal distance on both sides between edges of track guides and slider shoes.



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1. Guides
2. Slider shoes
3. Equal distance

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



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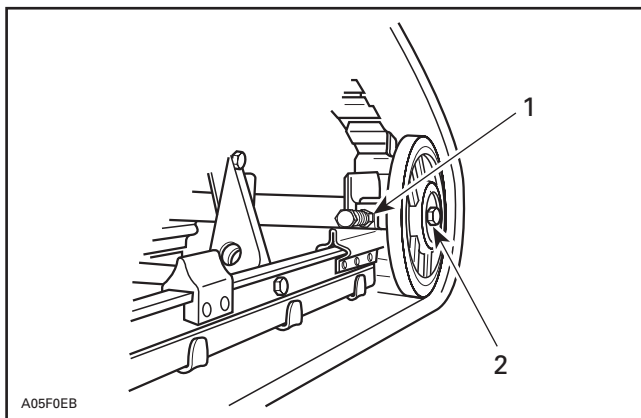
1. Guides
2. Slider shoes
3. Tighten on this side

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

## **WARNING**

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





### **TYPICAL**

1. *Retighten (some models only)*
2. *Retighten*

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

## **Steering and Front Suspension Mechanism**

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

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

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

### **⚠ WARNING**

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

## **Exhaust System**

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

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

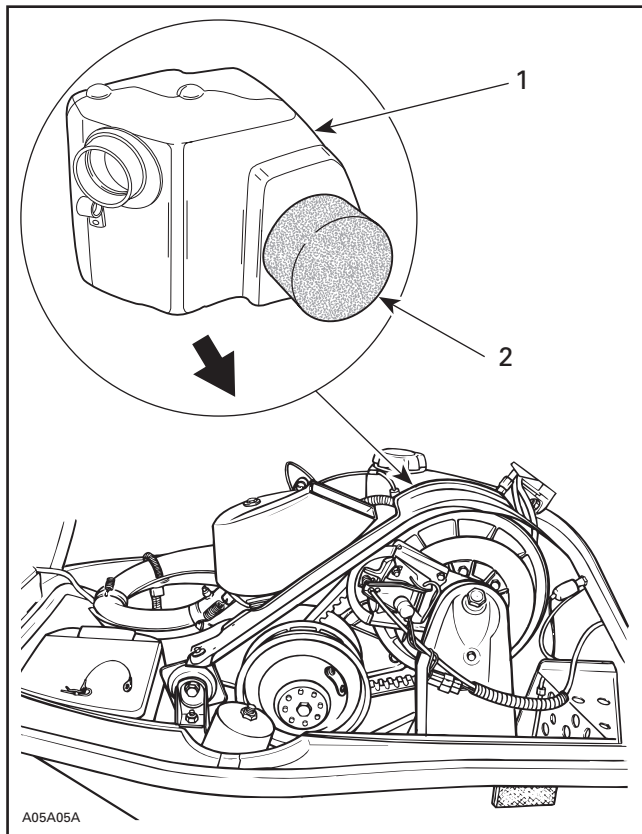
**CAUTION:** If any exhaust system component is removed, modified or damaged, severe engine damage may result.

## Air Filter Cleaning

### *Tundra R*

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

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



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1. Intake silencer
2. Air filter

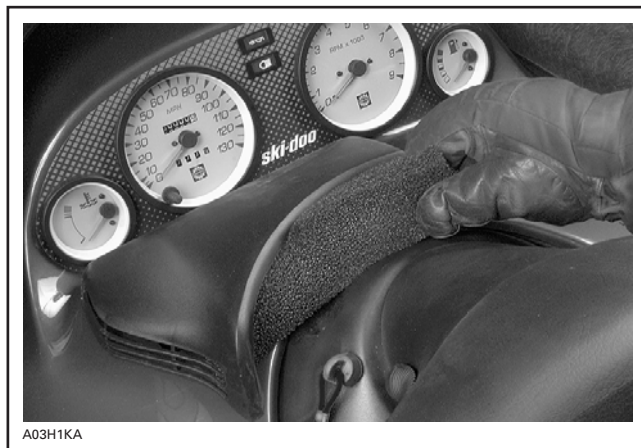
## **Skandic LT**

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

While riding in deep powder snow, periodically stop then shake the snow from the filter and reinstall filter.



**TYPICAL — FILTER INSTALLED**

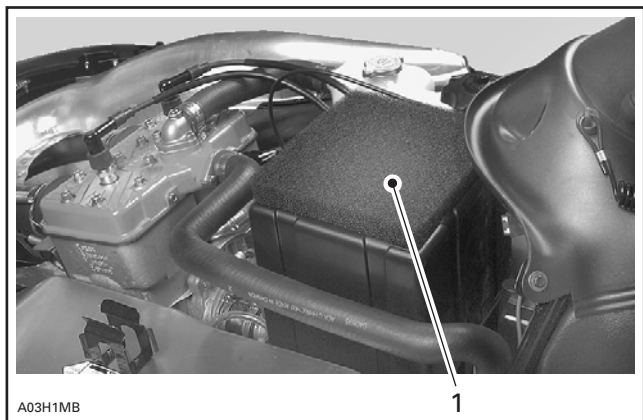


**TYPICAL — REMOVING FILTER**



*TYPICAL — SHAKING SNOW FROM FILTER*

Remove snow from filter on air intake silencer.

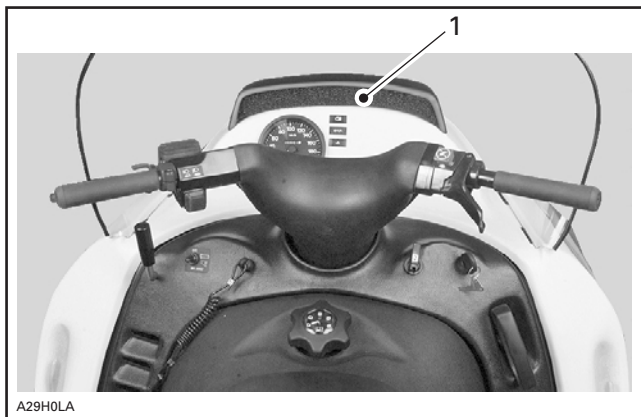


*TYPICAL*

1. Snow filter on air silencer

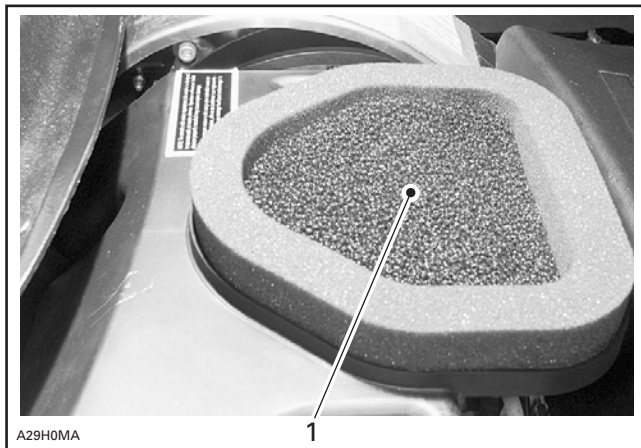
## **Skandic WT/SWT/WT LC**

Remove filter from air inlet duct. Shake the snow out of filter then, dry it out.



1. Air filter installed in air inlet duct

Open hood and check that filter on air silencer is free of snow.



1. Air filter installed on top of air silencer

## All Models

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

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

## Bulb Replacement

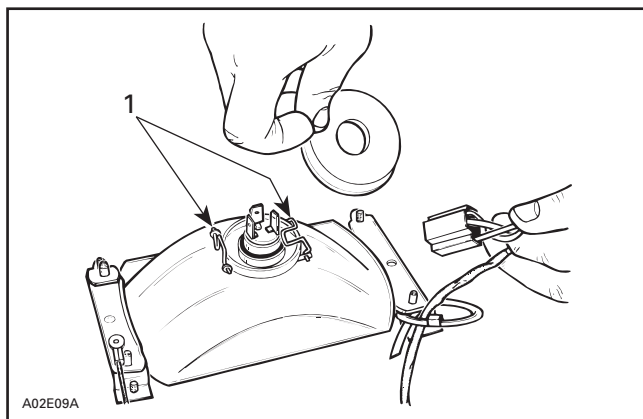
Always check light operation after bulb replacement.

### Headlight

**CAUTION:** On applicable models, 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.

### Tundra R

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

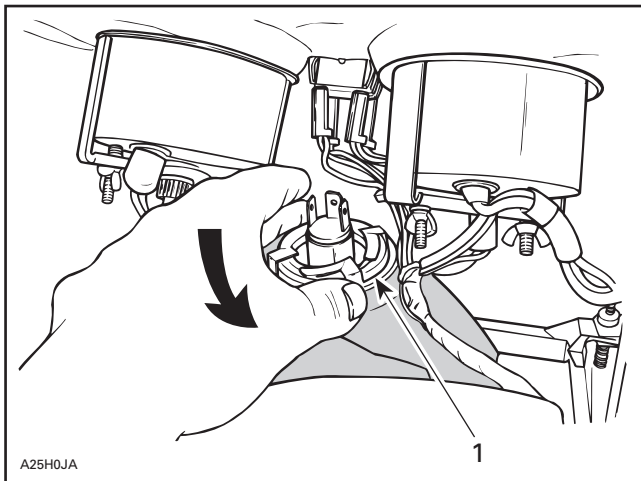


TYPICAL

1. Retainers clips

### **All Other Models**

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

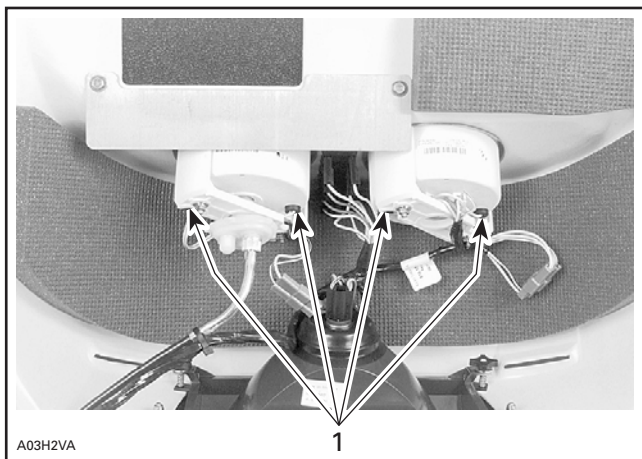


**TYPICAL**

1. Locking ring

## Instrument(s)

Bulb socket is always behind the instrument under a black rubber boot. Pull rubber boot and socket to expose bulb. Pull bulb out of socket.



*TYPICAL*

1. Instruments sockets

## Taillight

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

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## TOWING THE VEHICLE

First remove drive belt from vehicle to be towed.

Use a rigid bar and tow at very low speed.

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## TRANSPORTING THE VEHICLE

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

Tie vehicle to the transporting unit securely using suitable straps.



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## STORAGE AND PRE-SEASON PREPARATION

### **WARNING**

Have authorized SKI-DOO dealer inspect fuel and oil systems integrity as specified in Periodic Maintenance Chart.

### **Storage**

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

To prepare your snowmobile, follow the PERIODIC MAINTENANCE CHART section.

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

### **Pre-Season Preparation**

Refer to an authorized SKI-DOO dealer.

**CAUTION:** Have carburetor(s) cleaned-up before restarting engine.

## TROUBLESHOOTING

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

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

| POSSIBLE CAUSES                                | WHAT TO DO   |
|--|--|
| 1. Fouled or defective spark plug.             | Check item 5 of "Engine turns over but fails to start".  |
| 2. Lack of fuel to engine.                     | Check item 4 of "Engine turns over but fails to start".  |
| 3. Carburetor adjustments.                     | Contact an authorized SKI-DOO dealer.  |
| 4. Drive belt worn too thin.                   | If the drive belt has lost more than 3 mm (1/8 in) of its original width, it will affect vehicle performance.  |
| 5. Drive and driven pulleys require servicing. | Contact an authorized SKI-DOO dealer.  |
| 6. Engine is overheating.                      | On liquid cooled engines, check coolant level, pressure cap, thermostat and for air locks in cooling system. On fan cooled engines, check fan belt and its tension; clean cooling fins of engine; if overheating persists, contact an authorized SKI-DOO dealer. |

**SYMPTOM: Engine backfires.**

| POSSIBLE CAUSES   | WHAT TO DO  |
|---|---|
| 1. Faulty spark plug (carbon accumulation).                             | See item 5 of "Engine turns over but fails to start". |
| 2. Engine is running too hot.   | See item 6 of "Engine lacks acceleration or power".   |
| 3. Ignition timing is incorrect or there is an ignition system failure. | Contact an authorized SKI-DOO dealer.                 |

**SYMPTOM: *Engine misfires.***

| POSSIBLE CAUSES                       | WHAT TO DO   |
|---------------------------------------|--|
| 1. Fouled/defective/worn spark plugs. | Clean/verify spark plug gap and heat range. Replace as required.   |
| 2. Too much oil supplied to engine.   | Improper oil pump adjustment, refer to an authorized SKI-DOO dealer. On pre-mixed models only, improper fuel/oil mixture. Drain fuel tank and refill with appropriate mixture ratio. |
| 3. Water in fuel.                     | Drain fuel system and refill with fresh fuel.  |

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

| POSSIBLE CAUSES                | WHAT TO DO  |
|--------------------------------|---|
| 1. Drive belt.                 | Check item 4 of "Engine lacks acceleration or power".                                       |
| 2. Incorrect track adjustment. | See maintenance section and/or SKI-DOO dealer for proper alignment and tension adjustments. |
| 3. Pulleys misaligned.         | Contact an authorized SKI-DOO dealer.   |
| 4. Engine.                     | See items 1, 2, 6 and 7 of "Engine lacks acceleration or power".                            |

## SPECIFICATIONS

| MODEL                             | TUNDRA R     |                               |
|-----------------------------------|--------------|-------------------------------|
| <b>Engine</b>                     |              |                               |
| – Maximum power engine speed      | RPM          | 6900                          |
| <b>Drive Belt</b>                 |              |                               |
| – New belt width                  | mm (in)      | 36.5 (1-7/16)                 |
| – Wear limit width                | mm (in)      | 30.0 (1-3/16)                 |
| <b>Spark Plug</b>                 |              |                               |
| – Type                            |              | NGK BR 9 ES                   |
| – Gap                             | mm (in)      | 0.45 (.018)                   |
| <b>Track</b>                      |              |                               |
| – Tension                         | mm (in)      | 35 - 40<br>(1-3/8 - 1-9/16) ① |
| – Alignment                       |              | ②                             |
| <b>Fuel</b>                       |              |                               |
| – Type                            |              | ③                             |
| – Tank capacity                   | L (U.S. gal) | 26.0 (6.9)                    |
| <b>Oil (engine)</b>               |              |                               |
| – Type                            |              | ④                             |
| – Tank capacity                   | L (U.S. oz)  | 1.9 (64)                      |
| <b>Chaincase/Transmission Oil</b> |              |                               |
| – Type                            |              | ⑤                             |
| – Capacity                        | mL (U.S. oz) | 200 (7)                       |
| <b>Cooling System</b>             |              |                               |
| – Type                            |              | N.A.                          |
| – Capacity                        | L (U.S. oz)  | N.A.                          |
| <b>Brake System Fluid</b>         |              |                               |
| – Type                            |              | N.A.                          |

① to ⑦ and N.A.: See at end of specifications.

Because of our ongoing commitment to product quality and innovation, Bombardier reserves the right, at any time, to make changes in design and specifications and/or to make additions to, or improvements in its products without imposing any obligation upon itself to install them on its products previously manufactured.

| MODEL                             |              | SKANDIC<br>WT/SWT/WT LC            | SKANDIC LT                         |
|-----------------------------------|--------------|------------------------------------|------------------------------------|
| <b>Engine</b>                     |              |                                    |                                    |
| – Maximum power engine speed      | RPM          | SWT/WT: 6800<br>WT LC: 7200        | 6750                               |
| <b>Drive Belt</b>                 |              |                                    |                                    |
| – New belt width                  | mm (in)      | 34.6 (1-3/8)                       | 34.6 (1-3/8)                       |
| – Wear limit width                | mm (in)      | 32.0 (1-1/4)                       | 32.0 (1-1/4)                       |
| <b>Spark Plug</b>                 |              |                                    |                                    |
| – Type                            |              | NGK BR 9 ES                        | NGK BR 9 ES                        |
| – Gap                             | mm (in)      | 0.45 (.018)                        | 0.45 (.018)                        |
| <b>Track</b>                      |              |                                    |                                    |
| – Tension                         | mm (in)      | 40 - 50<br>(1-9/16 - 1-31/32)<br>① | 40 - 50<br>(1-9/16 - 1-31/32)<br>① |
| – Alignment                       |              | ②                                  | ②                                  |
| <b>Fuel</b>                       |              |                                    |                                    |
| – Type                            |              | ③                                  | ③                                  |
| – Tank capacity                   | L (U.S. gal) | 42 (11.1)                          | 37 (9.8)                           |
| <b>Oil (engine)</b>               |              |                                    |                                    |
| – Type                            |              | ④                                  | ④                                  |
| – Tank capacity                   | L (U.S. oz)  | 2.55 (86.2)                        | 2.55 (86.2)                        |
| <b>Chaincase/Transmission Oil</b> |              |                                    |                                    |
| – Type                            |              | ⑥                                  | ⑥                                  |
| – Capacity                        | mL (U.S. oz) | 400 (13.5)                         | 375 (12.7)                         |
| <b>Cooling System</b>             |              |                                    |                                    |
| – Type                            |              | WT LC: ⑦                           | N.A.                               |
| – Capacity                        | L (U.S. oz)  | WT LC: 4.5 (152)                   | N.A.                               |
| <b>Brake System Fluid</b>         |              |                                    |                                    |
| – Type                            |              | DOT 4                              | N.A.                               |

① to ⑦ and N.A.: See at end of specifications

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- ① Measure gap between slider shoe and bottom inside of track when exerting a downward pull of 7.3 kg (16 lb) to the track.
  - ② Equal distance between edges of track guides and slider shoes.
  - ③ Regular unleaded gasoline with a minimum octane number of 87 (R + M)/2.
  - ④ BOMBARDIER Formula XP-S synthetic injection oil (or equivalent) OR BOMBARDIER injection oil (or equivalent).
  - ⑤ Bombardier chaincase oil (P/N 413 801 900 — 12 x 250 mL).
  - ⑥ Bombardier synthetic chaincase oil (P/N 413 803 300 — 12 x 355 mL).
  - ⑦ Bombardier premixed coolant (P/N 413 711 802 — 16 x 1 L).
- N.A.: Not applicable

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## CHANGE OF ADDRESS OR OWNERSHIP

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

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

### NOTICE TO ALL NEW OWNERS:

Make sure to mail the *Change of Ownership Card* as you are entitled to the unexpired portion of the warranty.

### STOLEN UNITS

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

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

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





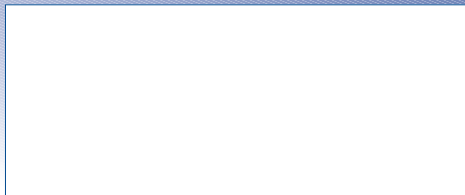
AFFIX  
PROPER  
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