2026

OPERATOR'S MANUAL

ARCTIC CAT®

ZR/Riot/M — 600/858

p/n: 653-00054
6/25

ORIGINAL INSTRUCTIONS

This vehicle can be hazardous to operate.

A snowmobile is a very high performance vehicle. Because it does accelerate rapidly and is capable of very high speeds, it should not be operated by a novice or an inexperienced operator. Never accelerate rapidly or drive at high speed beyond the limits of visibility or without being totally familiar with the terrain and what lies in front of you. Obey speed limits and never operate at speeds that do not allow adequate maneuvering and stopping distances. Read and study the entire Operator's Manual and Snowmobile Safety Handbook.

Failure to follow this warning could result in personal injury to yourself or others. For your safety, understand and follow all the warnings contained in this Operator's Manual and on the labels on this vehicle.

Keep this Operator's Manual with this vehicle at all times. If you lose your manual, contact your authorized dealer for a free replacement. The labels should be considered permanent parts of the vehicle. If a label comes off or becomes hard to read, contact your authorized dealer for a free replacement. Contact Arctic Cat Service Department, 601 Brooks Ave, Thief River Falls, MN 56701 USA, for proper registration information.

FAILURE TO FOLLOW THE WARNINGS CONTAINED IN THIS MANUAL CAN RESULT IN SERIOUS INJURY OR DEATH.

The Operator's Manual, Snowmobile Safety Handbook, and decals on the snowmobile Decals display important information:

⚠	The Safety Alert Symbol means ATTENTION! BE ALERT! YOUR SAFETY IS INVOLVED.
⚠ WARNING	WARNING identifies personal safety-related information. Follow the directive because it deals with the possibility of serious personal injury or even death.
CAUTION	CAUTION, without the safety alert symbol, identifies unsafe practices which may result in snowmobile-related damage. Follow the directive because it deals with the possibility of damaging part or parts of the snowmobile.
■ NOTE:	A NOTE identifies supplementary information worthy of particular attention.

Personal Injury

- To avoid injury to yourself and others, NEVER operate the snowmobile without first reading and understanding this manual and the Snowmobile Safety Handbook; then follow the instructions and heed the warnings given.
- USE COMMON SENSE.
- DON'T DRINK and DRIVE.
- STAY IN CONTROL at ALL TIMES.
- TELL YOUR FRIENDS. If you see a friend operating a snowmobile recklessly, at excessive speeds, while intoxicated, or in other unsafe ways, don't wait until it is too late to warn of the consequences of snowmobile misuse. Such conduct endangers everyone. TAKE AN ACTIVE ROLE IN THE SAFETY OF YOURSELF AND OTHERS.

California Proposition 65

⚠ WARNING

The Engine Exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

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p/n: 653-00044

Foreword

Congratulations! You have chosen a quality Arctic Cat Snowmobile designed and assembled to give dependable service. Be sure, as the owner/operator of an Arctic Cat Snowmobile, to become thoroughly familiar with its basic operation, maintenance, and off-season storage procedures. Read this manual and the accompanying Snowmobile Safety Handbook before operating the snowmobile to learn safe and proper use of your new Arctic Cat Snowmobile. Always operate the snowmobile within your level of skill and current terrain conditions.

This manual covers operator-related maintenance, operating instructions, and off-season storage instructions. If major repair or service is ever required, contact an authorized Arctic Cat Snowmobile dealer for professional service.

At the time of publication, all information and illustrations were technically correct. Some illustrations used in this manual are used for clarity purposes only and are not designed to depict actual conditions. Because Arctic Cat Inc. constantly refines and improves its products, no retroactive obligation is incurred.

This Operator's Manual should be considered a permanent part of the snowmobile and must remain with the snowmobile at the time of resale. If the snowmobile changes ownership more than once, contact Arctic Cat Inc., Service Department, 601 Brooks Ave, Thief River Falls, MN 56701 USA, for proper registration information.

Every Arctic Cat Snowmobile meets or exceeds the standards of the Snowmobile Safety and Certification Committee and displays the SSCC decal. Arctic Cat Inc. endorses and encourages the safe use of all snowmobiles. Always wear a helmet and eye protection. Drive with caution, observe all state and local regulations, and respect the rights of others. International Snowmobile Manufacturers Association (ISMA) members like Arctic Cat do their part to improve trails, sponsor events, and generally support the sport of snowmobiling. As a member of the American Council of Snowmobile Associations (ACSA), Arctic Cat Inc. promotes snowmobiling through education, charity, and research programs.

Printed in U.S.A.

Declaration of Conformity

Application of Council Directives:
Issued by European Commission.
Type of Equipment: Snowmobile
Brand Name: Arctic Cat
Date of Issue: 01-01-22

EMC Directive: 2014/30/EC
Machinery Directive: 2006/42/EC
Emissions Regulation: 2016/1628

Model Number	Model	Vehicle Identification Number (VIN) *Calculated check digit
S2026COJEPEUF	2026 ZR 858 137 EXT EU PNL	4UF1S2JH*TT100101-
S2026CAJREEUG	2026 ZR 858 137 RXC ES EU GRN 1.75	4UF1S2JH*TT100101-
S2026COJRSEUB	2026 RIOT 858 146 SNO PRO ES EU BLK 1.75	4UF1S2JH*TT100101-
S2026COJRTEUB	2026 RIOT 858 146 ATAC ES EU BLK 1.75	4UF1S2JH*TT100101-
S2026CMJS4EUP	2026 M 858 154 SNO PRO ES EU BDP 2.6	4UF1S2JH*TT100101-
S2026CMJHXEUB	2026 M 858 146 HCX EU BLK 2.6	4UF1S2JH*TT100101-
S2026CMJHREUB	2026 M 858 154 HCR EU BLK 2.6	4UF1S2JH*TT100101-

Standards to which conformity is declared:
EMC: EN 55012, EN 61000-6-2

Machinery: EN 12100:2010

Manufacturer (if not issuing agent):
Arctic Cat Inc.
601 Brooks Ave. S.
Thief River Falls, MN 56701
USA

I, the undersigned, hereby declare that the equipment specified above conforms to the directive(s) and standard(s) as specified:

Brad Darling
President
Arctic Cat Inc.

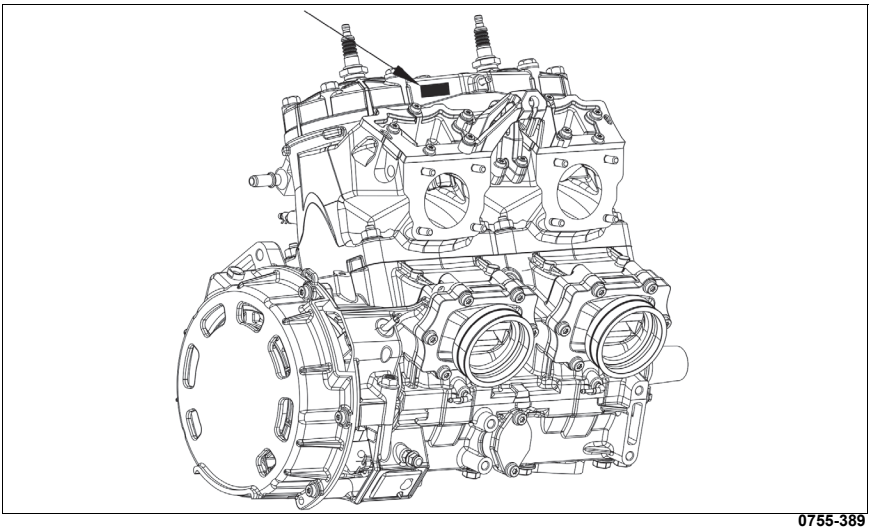
Authorized person (European Community) to compile the technical file:

Kenneth Hilton
Plankvägen 3
831 77 Östersund
Sweden

Emissions Regulation 2016/1628 (858 EU models)

Equipment complies with Emissions Regulation 2016/1628 as shown by a Non-Road Mobile Machinery (NRMM) identification decal on the engine cylinder head cover.

■ **NOTE: Tampering with the engine or emissions control components will void the European Union approval of this engine type.**



0755-389

Carbon Dioxide (CO_2)

628.250 g/kWh

■ **NOTE: The carbon dioxide value is determined from a fixed test cycle under laboratory conditions on a representative sample of the engine type and does not imply or express any guarantee of the performance of an individual engine.**

Vibration and Noise Values (for Europe — EU models)

Vibration

Handlebar: <8.12 m/s^2 (uncertainty of measurement: 3.4 m/s^2)

Seat: <0.24 m/s^2 (uncertainty of measurement: 0.05 m/s^2)

Noise

Sound Pressure: 75 dB(A) at 4000 RPM (uncertainty of measurement: 3 dB[A])

Sound Power: 95 dB(A) at 4000 RPM (uncertainty of measurement: 3 dB[A])

SNOWMOBILE SAFETY RULES

Arctic Cat® endorses and encourages the safe use of all snowmobiles.
Always follow these rules to ensure your continued enjoyment of the sport.
Receive proper training and operate within your capabilities. See operator's manual for complete safety instructions.

RÈGLEMENTS DE SÉCURITÉ EN MOTONEIGE

Arctic Cat® endosse et encourage l'utilisation sécuritaire de toutes motoneiges.
Respectez toujours ces règlements qui vous permettront de pratiquer ce sport avec plaisir.
Obtenez la formation nécessaire et conduisez selon vos capacités.
Veuillez vous référer au manuel de l'opérateur pour les instructions complètes de sécurité.

SÄKERHETSREGLER VID SNÖSKOTERKÖRNING

Arctic Cat® manar till försiktighet vid snöskoterkörning. Följ alltid dessa regler när du är ute och kör.

MOOTTORIKELKAN TURVASÄÄNNÖT

Arctic Cat® korostaa ja kannustaa moottorikelkkojen turvallista käyttöä.
Näitä sääntöjä tarkkaan noudattaen saat kelkkailusta irti parhaan mahdollisen huvin ja hyödyn.

SIKKERHETSREGLER FOR BRUK AV SNØSCOOTER

Arctic Cat® oppfordrer alle til å utvise forsiktighet ved bruk av snøscootere.
Følg alltid disse reglene når du er ute og kjører.

NORME DI SICUREZZA PER LE MOTOSLITTE

Arctic Cat® sostiene ed incoraggia la sicurezza delle motoslitte.
Per un divertimento continuo di questo sport seguite sempre le suddette norme.

スノーモービルの安全運転ルール

アークティックキャット社はスノーモービルの安全なご利用を奨励しています。いつまでもスノーモービルをお楽しみ頂けるよう、下記の安全運転ルールを守ってください。

1 Don't drink and ride.
Ne buvez pas lorsque vous conduisez.
Kör aldrig om du är alkoholpåverkad.
Jos otat, älä kelkkaile!
Kjør aldri under påvirkning av alkohol.
Non bevete durante la guida.

飲酒運転はしないこと。

2 Always wear a helmet.
Portez toujours un casque.
Hjälm ska alltid bäras.
Käytä aina suojakypärää.
Bruk alltid hjelm.
Indossate sempre il casco.

常時、ヘルメットを着用すること。

3 Watch out for thin ice/open water.
Évitez la glace mince et les trous d'eau.
Se upp för tunn is/öppet vatten.
Varo heikkoja jäitä ja avantoja.
Se opp for tynn is/åpent vann.
Attenti allo spessore/rottura del ghiaccio.

薄氷やまだ凍ってない場所は警戒すること。

4 Use caution when crossing road/train tracks.
Soyez prudent lorsque vous traversez des routes et des chemins de fer.
Var försiktig när du korsar väg/järnväg.
Ole varovainen kun ajat tien tai rautatien poikki.
Vær forsiktig når du krysser veier/jernbaneskinner.
Usate prudenza nell'attraversare strade/passaggi a livello.

道路や線切を横切るときは注意すること。

5 Don't ride after midnight.
Ne conduisez pas après minuit.
Kör inte efter midnatt.
Älä ajelo pikkutunneilla.
Unngå å kjøre etter midnatt.
Non guidate dopo la mezzanotte.

真夜中以後は乗らないこと。

6 Beware of trees and other hazards.
Soyez attentif aux dangers naturels.
Se upp för träd och andra faror.
Varo puita ja muita vaaroja.
Se opp for trær og andre farer.
Attenti agli alberi e ai diversi ostacoli.

木や障害物に用心すること。

7 Always use a solid hitch for towing.
Assurez-vous d'avoir une attache solide pour remorquer.
Använd alltid sted koppling vid bogsering.
Käytä aina vahvoja vetokaitteita.
Bruk alltid solid slepeutstyr for tauing.
Usate un gancio fisso per il traino.

牽引にはしっかりしたロープを使うこと。

8 Observe proper rider capacity.
A. Maximum one rider on 1-Up sleds.
B. Maximum two riders on 2-Up sleds.
Respectez le nombre recommandé de passagers.
A. Maximum un passager sur les modèles réguliers.
B. Maximum deux passagers sur les modèles à 2-Niveaux.
Begränsa antal åkande.
A. Enkeldyna: Endast förare.
B. Dubbeldyna: Förare och en passagerare.
Ota huomioon kuormitusrajat.
A. Vain yksi henkilö yhden istuttavaan kelkkaan.
B. Korkeintaan kaksi kahden hengen kelkkaan.
Vær oppmerksom på passasjerkapasiteten.
A. Maks. En person på en-seters scootere.
B. Maks. To personer på to-seters scootere.
Osservate la capienza del veicolo.
1-posto: Massimo 1 passeggero.
2-posti: Massimo 2 passeggeri.

乗車定員を守ること。
一人乗りには一人だけ。
二人乗りには一人まで。

9 Check controls and maintain your machines.
Vérifiez les commandes et entretenez votre véhicule.
Kontrollera reglage och underhåll din maskin.
Tarkista kaikki säädöt ja pidä koneesi kunnossa.
Sjekk instrumentene og hold scooteren vedlike.
Controllate i comandi ed eseguite la manutenzione.

操作装置のチェックと ① 運転をすること。

10 Be of legal age.
Soyez d'âge légal.
Respektera åldersgränsen.
Odota kunnes saavutat vaaditun ikärajan.
Farer må være over aldersgrensen.
Dovete essere maggiorenni.

運転 格のある年 に達していること。

11 Read and understand your Operator's Manual.
Lisez et comprenez votre Manuel de l'opérateur.
Läs och förstå Instruktionsboken.
Lue ja ymmärrä mitä Käyttöoppaassa sanotaan.
Les og forstå Brukerhåndboken.
Leggete attentamente il Manuale di Guida.

オーナーズマニュアルをよく読み、理 すること。

12 Obey all local laws and regulations and use common sense.
Obéissez aux lois et recommandations locales et usez de bon sens.
Följ terrängkörningslagen och lokala bestämmelser. Använd sunt förnuft.
Noudata kaikkia lakeja ja paikallismääräyksiä, ja käytä myös tervettä järkeä.
Overhold lokale lover og regelverk og bruk sunn fornuft.
Osservate tutte le norme di legge nazionali.

地域の条例や規則を守り、常識ある行動をすること。

Warning Labels & Information

This snowmobile comes with labels containing important safety information. Anyone who rides the snowmobile should read and understand this information before riding. The labels should be considered as permanent parts of the snowmobile. If a label comes off or becomes hard to read, contact your authorized dealer for a replacement.

A

⚠ WARNING

SEVERE INJURY OR EVEN DEATH MAY RESULT IF ANY OF THE FOLLOWING ARE IGNORED.

THIS SNOWMOBILE IS DESIGNED FOR ONE (1) OPERATOR AND AS MANY PASSENGERS AS THERE ARE SEATS WITH A HANDGRIP STRAP OR HANDGRIPS INSTALLED ON THE SNOWMOBILE.

Before operating this snowmobile, all operators must read, understand, and follow the information contained in the Operator's Manual and all Warning decals.

This vehicle is designed for adult use only. It is capable of high speeds and should not be operated by children or inexperienced riders.

Wear an approved helmet, eye protection and appropriate snowmobile clothing.

Before starting engine, check throttle, brake, and steering for proper operation.

To stop engine in an emergency, push the emergency stop switch down.

Stay clear of the rotating track. Entanglement may result.

Do not operate this vehicle on public roads.

Avoid contact with hot or moving parts. Turn engine off before opening hood. Leave all shields in place.

After refueling, secure fuel tank cap before sitting on or operating this vehicle. Do not store this vehicle in an enclosed area with a full tank of gas.

Check brake fluid level and pad wear before each use or brake loss can result. Loss of brakes can result in severe injury or even death.

Excessive repetitive use of the hydraulic brake for high speed stops will cause overheating of the brake fluid and premature brake pad wear which will result in a unexpected loss of brakes.

Use only DOT4 brake fluid from a sealed container. Clean filler cap before removing.

The brake lever lock is not a parking brake and should not be applied for periods exceeding 5 minutes. Longer time periods can cause loss of brake lock.

Refer to Operator's Manual for more information and instructions. A free Operator's Manual for this model is available upon written request.

⚠ CAUTION

The engine must be properly warmed up before high speed operation or severe engine damage may occur. Do not operate the engine at more than half throttle until the engine has reached normal operating temperature. If this vehicle is equipped with a battery, it should be removed before turning vehicle onto its side to prevent battery acid spillage.

BNT-K7761-70 9621-216

B

⚠ WARNING

Use a solid tongue hitch when towing objects to avoid injury due to sudden stops.

Do not stand near or behind rotating track. Personal injury could result.

5611-853

C

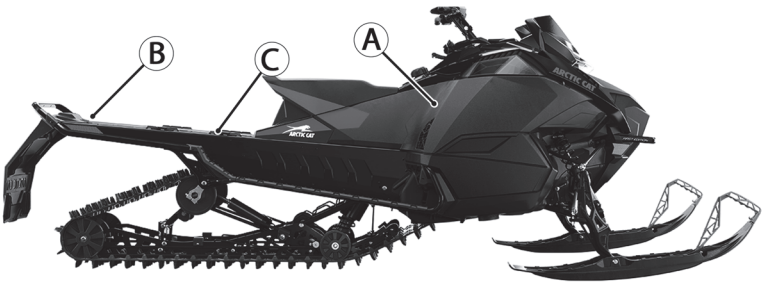
MAXIMUM LOAD CAPACITY IS 30 lbs (13.5 kg)

CAPACITÉ DE CHARGE MAXIMALE EST 13.5 kg (30 lbs) 9621-534

D

⚠ WARNING

Do not run engine without this shield in place or with drive belt removed. Do not attempt any adjustment with engine running. 9611-690



SNO-WL13

General Information

Snowmobile Identification

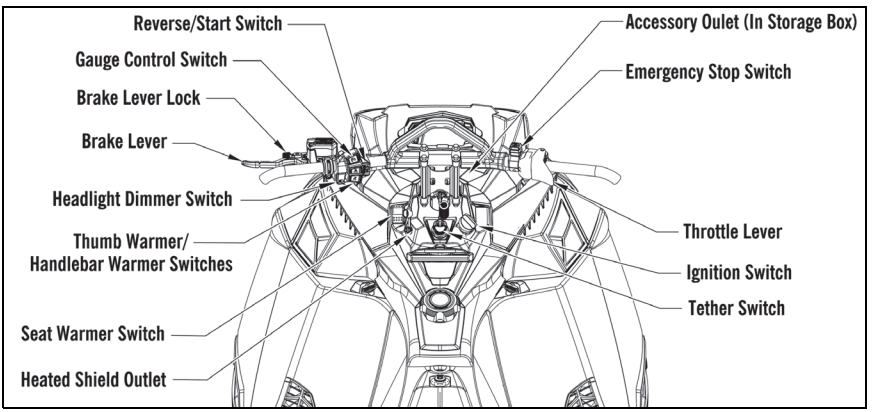
The Arctic Cat Snowmobile has two important identification numbers. The Vehicle Identification Number (VIN) is stamped into the tunnel. The decal (on top of the tunnel) also displays pertinent production information. The Engine Serial Number (ESN) is stamped into the crankcase of the engine.

These numbers are required by the dealer to complete warranty claims properly. No warranty will be allowed by Arctic Cat Inc. if the engine serial number or VIN is removed or mutilated in any way.

Always provide the snowmobile name, VIN, and ESN when contacting an authorized Arctic Cat Snowmobile dealer for parts, service, accessories, or warranty. If the complete engine must be replaced, ask the dealer to notify Arctic Cat for correct registration information.

Control Locations

Shown below are the typical control locations for Arctic Cat snowmobiles. Location of a specific control will vary according to model.



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Gasoline — Oil

Recommended Gasoline

CAUTION

Do not use white gas or gasoline containing methanol. Only Arctic Cat approved gasoline additives should be used.

The recommended gasoline to use in this snowmobile is minimum 91 octane (R+M)/2 Non-Oxygenated (Non Ethanol) gasoline for optimum performance.

Gasoline rated at 91 octane with a maximum 10% ethanol level is acceptable but reduced engine performance may be experienced.

CAUTION

If a situation arises wherein 91 octane gasoline is not available, 87 octane gasoline can be substituted in an emergency; however, the prolonged usage of 87 octane gasoline can cause severe engine damage.

Gasoline containing more than 10% ethanol is not acceptable for use in this snowmobile. Do not use gasoline containing methanol.

Recommended Injection Oil

The recommended oil to use in the oil-injection system is Arctic Cat C-TEC2 Synthetic 2-Cycle Oil. This oil is specially formulated and meets all of the lubrication requirements of the Arctic Cat C-TEC2 snowmobile engine.

CAUTION

Any oil used in place of the recommended oil could cause serious engine damage.

Filling Gas Tank

Since gasoline expands as its temperature increases, the gas tank must be filled to its rated capacity only. Expansion room must be maintained in the tank particularly if the tank is filled with cold gasoline and then moved to a warm area.

Also, if the snowmobile is to remain on a trailer after filling the gas tank, the bed of the trailer must be maintained level to prevent gasoline from draining out through the gas tank vent hose.

⚠ WARNING

Always fill the gas tank in a well-ventilated area. Never add gasoline to the snowmobile gas tank near any open flames or with the engine running. DO NOT SMOKE while filling the gas tank. Do not sit on the snowmobile without first installing the gas tank cap.

Engine Break-In

The Arctic Cat engine (when new) requires a short break-in period before the engine is subjected to heavy load conditions.

The break-in period occurs in two stages. Stage One occurs during the first 18 minutes of a new engine's run time where the ECM will provide additional oil to the engine.

Stage Two occurs after the completion of Stage One. However, Stage Two still provides additional oil to the engine for the remainder of 3 hours. This additional oil is less than the amount added during Stage One.

Premixing fuel and oil during the break in period is not required. Due to the oil delivery control strategy of the electronic oil pump, the oil pump will automatically compensate and deliver a richer fuel-oil ratio during the engine break-in period.

Drive Belt Break-In

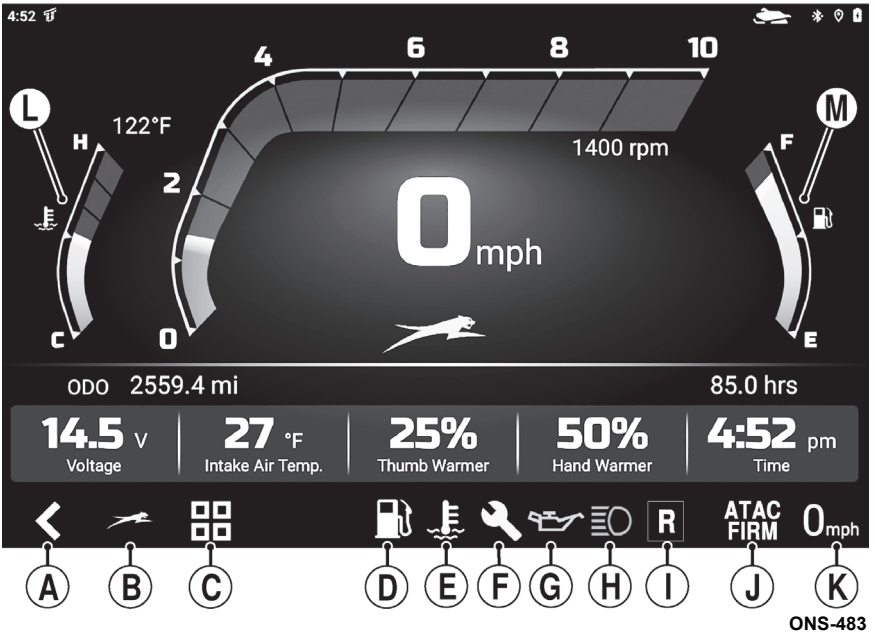
Drive belts require a break-in period of 25 miles (40 km). Drive the snowmobile for 25 miles (40 km) at 3/4 throttle or less. By revving the engine up and down (but not exceeding 60 mph [96 km/h]), the exposed cord on the side of a new belt will be worn down. This will allow the drive belt to gain its optimum flexibility and will extend drive belt life.

■ **NOTE: Before starting the snowmobile in extremely cold temperatures (-10° F/-23° C or colder), the drive belt should be removed and warmed up to room temperature. Once the drive belt is at room temperature, install the drive belt.**

CAUTION

Never run the engine with the drive belt removed. Excessive revving of the engine could result in serious engine damage and drive clutch failure.

G8 Gauge



ONS-483

A. Back Button

This button will show the previous viewed display screen.

B. Vehicle Information Button

This button will display the main vehicle information screen.

C. Main Screen Button

This button will display the main screen. Press and hold any app icon or widget to move it. Press and hold in a black area to add a new widget and/or change the background.

D. Low Fuel Indicator

The indicator illuminates whenever the gas level in the gas tank is low.

E. Coolant Temperature Indicator

The indicator and coolant temperature graph will illuminate blue when cold-starting the engine. The indicator will cease to illuminate, and the graph will change to green when the engine reaches proper operating temperature.

If the coolant temperature rises above the operating temperature, the indicator will illuminate orange at 176° F (80° C). Once the coolant temperature reaches the specified temperature of 185° F (85° C), the temperature sensor will signal the ECM to go into rich mode to protect the engine while overheating. At this time, the indicator will illuminate red.

CAUTION

If the indicator is illuminated red, stop the engine immediately and allow it to cool down. If unable to either determine or remedy the problem, take the snowmobile to an authorized Arctic Cat Snowmobile dealer for service. If not under warranty, this service is at the discretion and expense of the snowmobile owner.

F. Service Indicator

The indicator illuminates whenever a problem exists with any of the vehicle sensors.

G. Low Oil Indicator

The indicator is designed to alert the snowmobile operator when the oil in the oil injection tank gets below a prescribed level. Once the indicator illuminates during operation of the snowmobile, the operator must periodically monitor the level of oil in the reservoir and must fill the reservoir the next time gasoline is added.

H. High Beam Indicator

The indicator is on whenever the high beam mode is selected by the headlight switch.

I. Reverse Indicator

The indicator is on whenever the vehicle is shifting into reverse and a reverse alarm will sound.

J. ATAC Suspension Indicator

The indicator will display the selected ATAC suspension setting (soft, medium, firm, driver 1, driver 2).

K. Vehicle Speed Indicator

This will display the vehicle speed.

L. Coolant Temperature Graph

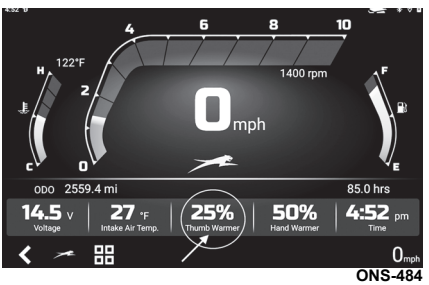
This graph display shows the coolant temperature.

M. Fuel Level Graph

This graph display shows the approximate amount of fuel in the gas tank.

G8 User Custom Data Fields

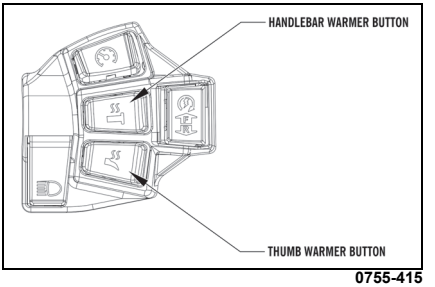
The five customizable data fields can display a variety of data. These data fields can be simply changed by pressing on the data field and selecting a new one.



ONS-484

Thumb Warmer

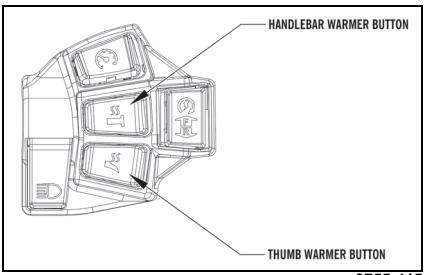
The right toggle of the button will increase the warmth setting and the left toggle will decrease the warmth setting.



0755-415

Handlebar Warmer

The right toggle of the button will increase the warmth setting and the left toggle will decrease the warmth setting.



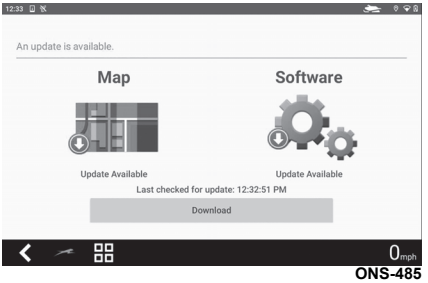
0755-415

G8 Software Update

When performing updates via Wi-Fi, it is recommended to connect the vehicle to a battery charger or battery tender, increase the screen timeout, and ensure the display battery voltage is 50% of charge or greater.

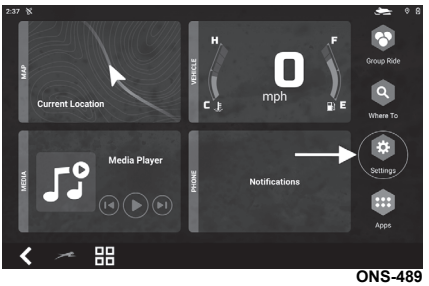
If the display battery voltage is below 50%, start and idle the vehicle until the display turns on. Using the provided USB cable, connect a PC or wall charger to the USB connection located near the hood connector.

The display will automatically prompt the user when an update is available.

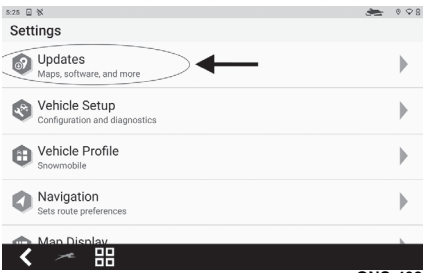


ONS-485

To manually check for updates, select settings and then updates.



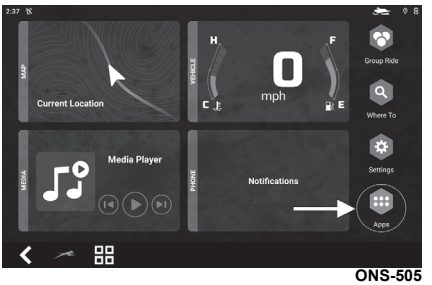
ONS-489



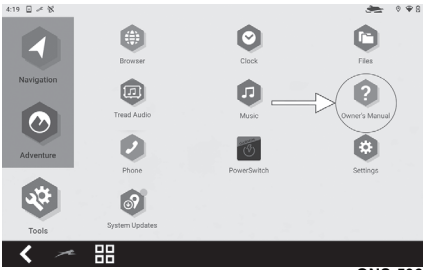
ONS-498

G8 Owner's Manual

The owner's manual for the G8 gauge can be found on the device screen in many languages. To find the owner's manual, select apps and then owner's manual.

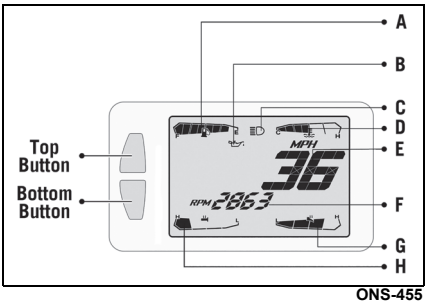


ONS-505



ONS-506

Sport Gauge



ONS-455

A. Fuel Level Display

This bar display shows the approximate amount of gas remaining in the gas tank.

B. Low Oil Indicator

The indicator is designed to alert the snowmobile operator when the oil in the oil injection tank gets below a prescribed level. Once the indicator illuminates during operation of the snowmobile, the operator must periodically monitor the level of oil in the reservoir and must fill the reservoir the next time gasoline is added to the gas tank.

C. High Beam Indicator

The indicator is on whenever the high beam mode is selected by the headlight switch.

D. Coolant Temperature Display

This bar display shows coolant temperature.

If the coolant temperature rises above proper operating temperature, the indicator will flash at 176° F (80° C) and the screen will flash the word HOT.

Once the coolant temperature reaches the specified temperature of 185° F (85° C), the temperature sensor will signal the ECM to go into rich mode to protect the engine while overheating. The word HOT will also become constant.

CAUTION

If the indicator is flashing and the word HOT is continuously illuminated, stop the engine immediately and allow it to cool down. If unable to either determine or remedy the problem, take the snowmobile to an authorized Arctic Cat Snowmobile dealer for service. If not under warranty, this service is at the discretion and expense of the snowmobile owner.

E. Speed/RPM Display

This displays speed or RPM. Press the top button to cycle between speed and RPM.

When the speed is displayed, press and hold the top button for two seconds to switch MPH to km/h.

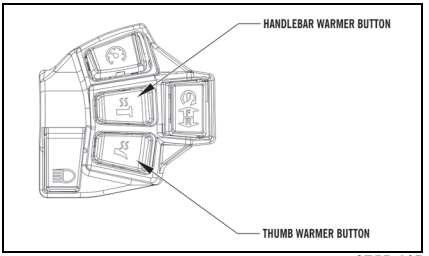
F. Speed/RPM/Trip Meter/ Odometer/Brightness Level Display

This display shows odometer, trip meter, speed, or RPM. Press the bottom button to change which parameter is being displayed. The odometer cannot be reset. To reset the trip meter, select the trip meter; then press and hold the bottom button until the trip meter display reads 0.

To change the LED screen brightness level, press the bottom button until the brightness level (BL) is displayed. Press and hold the bottom button for two seconds; then press the bottom button to cycle through the brightness values 0-100. Press the top button to confirm/exit.

G. Thumb Warmer Display

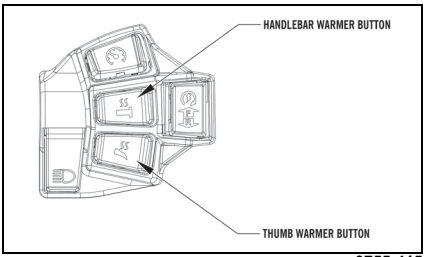
This bar display shows the thumb warmer setting. The right toggle of the button will increase the warmth setting and the left toggle will decrease the warmth setting.



0755-415

H. Hand Warmer Display

This bar display shows the hand warmer setting. The right toggle of the button will increase the warmth setting and the left toggle will decrease the warmth setting.



0755-415

Diagnostic Codes

Diagnostic codes are activated by the ECM and may be displayed on the digital gauge for a number of reasons.

If a code is displayed while the engine is running, the ECM is receiving input that is outside of its established parameters. If a code has been activated, take the snowmobile to an authorized Arctic Cat Snowmobile dealer for service. If not under warranty, this service is at the discretion and expense of the snowmobile owner.

Code	Trouble
C1500	Right Ski Shock Stepper Motor Stall Detection
C1505	Left Side Shock Stepper Motor Stall Detection
C1510	Front Skid Shock Stepper Motor Stall Detection
C1515	Rear Skid Shock Stepper Motor Stall Detection
C1520	Suspension Module Supply Voltage Low
C1521	Suspension Module Supply Voltage High
C1522	Suspension Module Checksum Error
C1523	Right Ski Shock Stepper Motor Coil (A) Circuit Malfunction
C1524	Right Ski Shock Stepper Motor Coil (B) Circuit Malfunction
C1525	Left Ski Shock Stepper Motor Coil (A) Circuit Malfunction
C1526	Left Ski Shock Stepper Motor Coil (B) Circuit Malfunction
C1527	Front Skid Shock Stepper Motor Coil (A) Circuit Malfunction
C1528	Front Skid Shock Stepper Motor Coil (B) Circuit Malfunction
C1529	Rear Skid Shock Stepper Motor Coil (A) Circuit Malfunction
C1530	Rear Skid Shock Stepper Motor Coil (B) Circuit Malfunction
C1600	Thumb Warmer Open Circuit
C1601	Thumb Warmer Circuit Short to System Ground
C1602	Thumb Warmer Circuit Short to System Power
C1603	Hand Warmer Open Circuit
C1604	Hand Warmer Circuit Short to System Ground
C1605	Hand Warmer Circuit Short to System Power
P0112	Intake Air Temp Sensor 1 Circuit Low
P0113	Intake Air Temp Sensor 1 Circuit High
P0117	Coolant Temp Sensor 1 Circuit Low
P0118	Coolant Temp Sensor 1 Circuit High
P0122	Throttle Position Sensor Circuit Low
P0123	Throttle Position Sensor Circuit High
P0217	Engine Coolant Over Temp Condition
P0261	Cylinder 1 Injector Circuit Low
P0264	Cylinder 2 Injector Circuit Low
P0324	Knock Control System Error
P0327	Knock Control 1 Circuit Low
P0328	Knock Control 1 Circuit High
P0351	Ignition Coil (A) Primary/Secondary
P0352	Ignition Coil (B) Primary/Secondary
P0545	Exhaust Temp Sensor Circuit Low
P0546	Exhaust Temp Sensor Circuit High
P1000	Oil Pump Flow Not Programmed
P1001	Injector 1 Offset Not Programmed
P1002	Injector 2 Offset Not Programmed
P1003	Oil Pump Outlier
P1004	ISC Outlier
P1005	Regulator Voltage Circuit Low
P1006	Regulator Voltage Circuit High
P1007	Fuel Pump Circuit Low
P1008	Fuel Pump Circuit High
P1009	Speed Sensor Malfunction
P1261	Injector Circuit/Open - Cylinder 1b

Code	Trouble
P1264	Injector Circuit/Open - Cylinder 2b
P1324	Knock Control System Activated
P1329	Knock Sensor Loose Detection
P1636	Crank Angle Sensor Circuit
P1639	Exhaust Valve Position Sensor Circuit Low
P1640	Exhaust Valve Position Sensor Circuit High
P1645	Exhaust Valve System Malfunction
P1646	Exhaust Valve Actuator Self-Cleaning Open Error
P1647	Exhaust Valve Actuator Short Error
P1755	Engine RPM Sensor Circuit Malfunction
P2228	Barometric Pressure Sensor (A) Circuit Low
P2229	Barometric Pressure Sensor (A) Circuit High
P3001	Control Module Improper Shutdown
U0132	Lost Communication with Suspension Control Module
U0155	LCD Gauge Communication Lost
U0162	Navigation Display Communication Lost
U1000	Vehicle Not Registered or Invalid PIN Entered
U1001	Vehicle Not Registered and Vehicle Limits Enabled
U1212	Lost Communication with Left Handlebar Control

Power Steering

Certain models were produced with an Electronic Power Steering (EPS) system to reduce steering effort and driver fatigue over a broad range of operating conditions.

The EPS system engages the engine is started and disengages once the engine has been turned off.

This system is entirely maintenance-free: no adjustment or servicing is required. There are no fluids to check or change, and the EPS system is entirely self-contained and sealed to protect it from the elements.

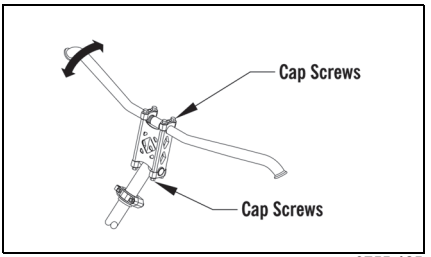
The EPS system is battery system powered; therefore, the battery must be in good condition and fully charged. Power delivery and overload protection is provided by an EPS relay and 30-amp fuse located in the Power Distribution Module (PDM).

The system is self-monitored and will display a malfunction code on the LCD gauge/speedometer should an EPS system control circuit problem occur. Do not operate the vehicle with an EPS malfunction code displayed.

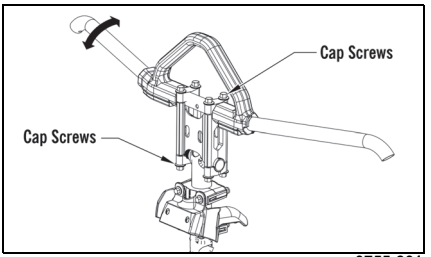
Code	Trouble
C1301	Over Current
C1302	Excessive Current Error
C1303	Torque Sensor Range Fault
C1304	Torque Sensor Linearity Fault
C1305	Rotor Position Encoder
C1306	System Voltage Low
C1307	System Voltage High
C1308	Temperature Above 110° C
C1309	Temperature Above 120° C
C1310	Vehicle Speed High
C1311	Vehicle Speed Low
C1312	Vehicle Speed Faulty
C1313	Engine RPM High
C1314	Engine RPM Low
C1315	Engine RPM Faulty
C1316	EEPROM Error
C1317	CAN Bus Error
C1318	Internal CRC Error
C1319	Boot Counter Exceeded
C1320	Incorrect Vehicle Speed-to-RPM Ratio
C1321	Vehicle Speed Erratic
C1322	Engine RPM Lost
C1323	“EPS OFF” Gauge Display
C1324	Loss of CAN communication with EPS unit
C1325	Dual Loss
C1326	Rotor Position Encoder
C1327	Voltage Converter Error (Low)
C1328	Voltage Converter Error (High)
C1329	Internal Data Error
C1331	Configuration CRC

Handlebar Tilt

1. Remove the handlebar cover; then loosen the eight cap screws securing the handlebar caps to the riser and the riser to the steering post.



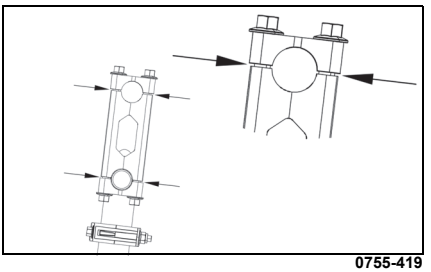
0755-185



0755-301

2. Adjust the handlebar to operator's desired position, tighten the cap screws evenly to 20 ft-lb (27 N-m), and check steering for maximum right/left turning capabilities.

■ NOTE: The riser block caps must be evenly spaced from the riser block when tightened to specification.



0755-419

■ NOTE: Do not rotate the handlebar to a position that allows air to enter the brake system.

⚠ WARNING

Tighten cap screws according to specifications to prevent unexpected "movement" of the handlebar during operation over rough terrain. DO NOT position the handlebar so steering (maximum right/left turning capabilities) or throttle and brake controls are affected.

Exhaust System

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

Air-Intake Silencer

Used in conjunction with the fuel intake system is a specially designed air-intake silencer. The purpose of the silencer is to quiet the intake of fresh air. Since the fuel intake system is calibrated with the air-intake silencer in place, the engine must never be run with the silencer removed. Performance will not be improved if the air-intake silencer is removed. In contrast, severe engine damage will occur.

Cooling System

These snowmobiles are equipped with a closed liquid cooling system for engine cooling. The cooling system should be inspected daily for leakage and damage. Also, the coolant level should be checked daily. If leakage or damage is detected, take the snowmobile to an authorized Arctic Cat Snowmobile dealer for service. If not under warranty, this service is at the discretion and expense of the snowmobile owner.

When filling the cooling system, use an ethylene glycol-based coolant/water mixture which will satisfy the coldest anticipated weather conditions of your area in accordance with the coolant manufacturer's recommendations.

■ NOTE: If operating on low snow, ice, or hard-packed snow conditions, it is recommended that Ice Scratchers (p/n 5639-897) be installed and engaged to reduce wear strip wear and engine overheating.

For checking/filling cooling system, refer to the Coolant Level sub-section in the Maintenance section.

Battery (Electric Start)

It is extremely important that the battery be maintained at full charge at all times and that the battery connections be clean and tight. If charging the battery becomes necessary, refer to Battery sub-section in the Maintenance section.

⚠ WARNING

If at any time the battery is removed/disconnected and a jumper pack will be used to start the snowmobile, always use the key or emergency stop switch to turn the engine off. Never disconnect the jumper pack with the engine running. Failure to do this will cause damage to the voltage regulator/rectifier.

Jump-Starting

■ NOTE: Arctic Cat does not recommend jump-starting a snowmobile with a dead battery, but rather to remove the battery, service it, and correctly charge it; however, in an emergency, it may be necessary to jump-start a snowmobile. If so, use the following procedure to carefully and safely complete this procedure.

⚠ WARNING

Improper handling or connecting of a battery may result in severe injury including acid burns, electrical burns, or blindness as a result of an explosion. Always remove rings and watches. Any time service is performed on a battery, the following must be observed: keep sparks, open flame, cigarettes, or any other flame away. Always wear safety glasses. Protect skin and clothing when handling a battery. When servicing a battery in an enclosed space, keep the area well-ventilated.

■ NOTE: To access the battery, the seat must be removed.

1. On the snowmobile to be jump-started, slide any terminal boots away.
2. Inspect the battery for any signs of electrolyte leaks, loose terminals, or bulging sides. Leaking or bulging battery cases may indicate a frozen or shorted battery.

⚠ WARNING

If any of these conditions exist, DO NOT attempt to jump-start, boost, or charge the battery. An explosion could occur causing serious injury.

3. Inspect the vehicle to be used for jump-starting to determine if voltage and ground polarity are compatible. The vehicle must have a 12-volt DC, negative ground electrical system.

CAUTION

Always make sure the electrical systems are of the same voltage and ground polarity prior to connecting jumper cables. If not, severe electrical damage may occur.

4. Move the vehicle to be used for the jump-start close enough to ensure the jumper cables easily reach; then set and lock the brakes, shut off all electrical accessories, and turn the ignition switch OFF.

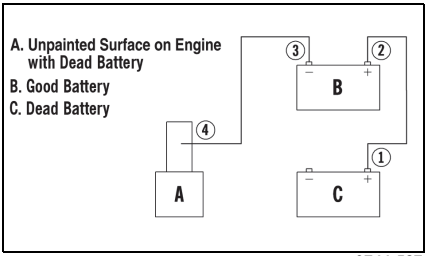
■ NOTE: Make sure all switches on the snowmobile to be jump-started are turned OFF.

5. Disconnect all external accessories such as cell phones, GPS units, and radios on both vehicles.

CAUTION

Failure to disconnect electronic accessories during jump-starting may cause system damage due to power spikes.

6. Attach one clamp of the positive (red) cable to the positive (+) terminal (1) of the dead battery (C) being careful not to touch any metal with the other clamp; then attach the other clamp of the positive (red) cable to the positive (+) terminal (2) of the good battery (B).



0744-527

■ **NOTE: Some jumper cables may be the same color but the clamps or ends will be color-coded red and black.**

7. Attach one clamp of the negative jumper cable (black) to the negative (-) terminal (3) of the good battery (B); then attach the other clamp of the negative (black) jumper cable (4) to an unpainted metal surface (A) on the engine or frame well away from the dead battery and fuel system components.

⚠ WARNING

Never make the final connection to a battery as a spark could ignite hydrogen gases causing an explosion of the battery resulting in acid burns or blindness.

8. Stand well away from the dead battery and start the vehicle with the good battery. Allow the vehicle to run for several minutes applying some charge to the dead battery.
9. Start the snowmobile with the dead battery and allow it to run for several minutes before disconnecting the jumper cables.
10. Remove the jumper cables in opposite order of hook-up (4, 3, 2, 1). Be careful not to short cables against bare metal.

■ **NOTE: Have the battery and electrical system checked prior to operating the snowmobile again.**

Drive Clutch and Driven Clutch

The drive clutch and driven clutch do not require lubrication; therefore, no special maintenance is required by the snowmobile owner except for periodic cleaning.

When operating the snowmobile at high altitudes, it may be necessary to change certain component parts of the drive clutch and/or the driven clutch. See an authorized Arctic Cat Snowmobile dealer for further information.

⚠ WARNING

If you become aware of higher than normal clutch engagement or unusual shift patterns, see your authorized Arctic Cat Snowmobile dealer immediately. Do not operate the snowmobile until the clutches have been serviced and/or repaired.

CAUTION

DO NOT attempt to service the drive clutch and driven clutch. The drive clutch and driven clutch must be serviced by an authorized Arctic Cat Snowmobile dealer only.

Drive Clutch/Driven Clutch Alignment

The alignment between the drive clutch and driven clutch is set at the factory. Normally, no adjustment is necessary as long as neither the drive clutch nor the driven clutch is removed or disassembled. However, if premature drive belt wear is experienced or if the drive belt turns over, the drive clutch/driven clutch alignment must be checked. Take the snowmobile to an authorized Arctic Cat Snowmobile dealer for this service. If not under warranty, this service is at the discretion and expense of the snowmobile owner.

Fuel Pump

The fuel pump is designed to provide adequate amount of gas to the injectors at all throttle settings. If a fuel delivery problem is suspected, take the snowmobile to an authorized Arctic Cat Snowmobile dealer. If not under warranty, this service is at the discretion and expense of the snowmobile owner.

Shock Absorbers (Rebuildable Gas)

Each shock absorber should be visibly checked weekly for fluid leakage, cracks or breaks in the body/reservoir, or a bent shaft. If any one of these conditions is detected, replacement or service is necessary. Take the snowmobile to an authorized Arctic Cat Snowmobile dealer for this service. If not under warranty, this service is at the discretion and expense of the snowmobile owner.

■ **NOTE: When the snowmobile is operated in extremely cold weather (-10° F/-23° C or colder), a small amount of leakage may be present. Unless the leakage is excessive, replacement is not necessary.**

■ **NOTE: The frequency of servicing rebuildable shock absorbers will vary according to the types of conditions and terrain the snowmobile has been subjected to. If riding quality deteriorates (or seems to be deteriorating), take the snowmobile to an authorized Arctic Cat Snowmobile dealer for shock absorber evaluation and/or servicing. This service is at the discretion and expense of the snowmobile owner.**

Standard Track (ZR/RIOT)

Accelerated wear strip and track clip wear caused by operating on ice or hard-packed snow conditions is NOT covered under Arctic Cat Inc. warranty policy.

■ **NOTE: If regularly operating on ice or hard-packed snow conditions, Performance Wear Strips (p/n 8639-422) may be installed at the expense of the snowmobile owner.**

■ **NOTE: If operating on ice or hard-packed snow conditions, it is recommended that Ice Scratchers (p/n 5639-897) be installed to reduce wear strip wear and engine overheating.**

Deep Lug Track (M)

A deep lug track on certain models is specifically designed for use in powder/deep snow riding conditions. To prevent track damage and decrease the amount of wear strip wear, slower speeds must be maintained and ice scratchers utilized when operating on trails. Track and wear strip damage are NOT covered under Arctic Cat Inc. warranty policy.

Operating these models with a deep lug track on ice, hard-packed snow, or at high speeds will cause damage to the track, wear strips, or rail which is NOT covered under Arctic Cat Inc. warranty policy. Never exceed the maximum sustained speeds for the specific deep lug tracks:

Track Lug	Maximum Sustained Speed
2.6 in (66 mm)	65 mph (100 km/h)
3.0 in (76 mm)	60 mph (95 km/h)

■ **NOTE: When operating in conditions other than deep snow, ice scratchers must be used to prevent track damage, reduce wear strip wear and prevent engine overheating. Engine temperature gauge and indicator light are not an indication of when to use the ice scratchers. Track and wear strip damage can occur before the engine temperature light illuminates.**

Track Studs

■ **NOTE: Stud or hooker plate installation will void track and tunnel warranty.**

■ **NOTE: Arctic Cat does not recommend studding a track with a lug greater than 1.6 in (40.6 mm).**

■ **NOTE: Stud installation can be performed by the snowmobile owner if qualified to do so. If the owner does not feel qualified, take the snowmobile to an authorized Arctic Cat Snowmobile dealer for this service. This service is at the discretion and expense of the snowmobile owner.**

⚠ WARNING

When installing studs on a single-ply track, it is important to use Arctic Cat-approved studs (proper head diameter). If approved studs (proper head diameter) are not used, studs could tear free of the track causing possible injury or even death. Consult an authorized Arctic Cat Snowmobile dealer for information.

CAUTION

To prevent tunnel damage from the studs, install Tunnel Protector Kit (p/n 8639-453).

For proper installation, use the following procedure:

1. Using the appropriate stud template (see chart), mark the desired stud pattern to be used.

Track Length	p/n
129/137/146 in	8639-227

2. Using the proper-sized stud hole drill bit, drill out the stud holes.
3. Push the stud through the hole from inside the track; then place the domed support plate and lock nut on the exposed stud.
4. Using a wrench to secure the stud, tighten the lock nut on the exposed stud.

It is also recommended that whenever studs are installed on a track, carbide wear bars should be installed on the skis. Carbide wear bars complement the track studs to balance steering control under these conditions. The length of the carbide on the wear bars should be proportionate to the number of track studs (i.e., small number of track studs = short length of carbide and many track studs = long length of carbide). The proper proportion between the number of studs and carbide length on the wear bar will maintain steering balance.

⚠ WARNING

Never rotate a damaged track under power and never perform track measurements, adjustments, and/or maintenance with the engine running.

⚠ WARNING

Always balance the snowmobile with the proper proportion between the number of studs and carbide length on the wear bars. Do not "over drive" conditions; use common sense in all operating conditions.

CAUTION

Do not use studs that are more than 0.375 in (9.525 mm) longer than the track lug height.

⚠ WARNING

Do not operate a snowmobile with loose studs as they may be thrown from the track. Always use a shielded safety stand whenever performing any maintenance or adjustments.

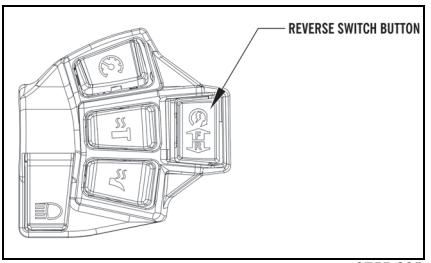
⚠ WARNING

DO NOT stand behind the snowmobile or near the rotating track. NEVER run the track at high speed when the track is suspended.

Reverse Operation

The engine reverse function offers the operator the convenience of being able to back up the snowmobile rather than having to turn the snowmobile around by hand. This feature, under most situations, should not be used to free a stuck snowmobile as it will tend to dig the skis deeper into the snow. Always use minimal speed when operating in reverse.

Shifting Into Reverse



0755-395

1. Always warm up the engine for 2-3 minutes prior to shifting into reverse. The reverse function is canceled when engine temperature is below or above normal operating range.
2. Shift only with the engine at idle RPM and the snowmobile completely stopped.
3. If attempting to shift into reverse at too high engine RPM (above 3000 RPM), the reverse function will be canceled. This indicates the reverse switch button was pressed at too high RPM. The operator must reduce engine RPM below 3000 and press the button a second time.
4. Upon pressing the reverse switch button, the reverse function will make up to three attempts to engage into reverse. If the function is not completed after the third attempt, the engine will shut down.

CAUTION

Never shift into reverse while the snowmobile is moving forward as it is hard on the driven clutch torque bracket and the cam rollers.

Operating in Reverse

1. When reverse is engaged, a reverse icon will illuminate in the speedometer/tachometer and a reverse alarm will sound.
2. If the throttle lever is compressed before complete reverse engagement, the engine may shut down. Always wait for the reverse icon to illuminate and the reverse alarm to sound before backing up.
3. The system will not shift until the button is released. Also, the reverse function will cancel if operated in reverse longer than 5 minutes.

⚠ WARNING

Do not use high speed when backing up. Control could be lost and injury could occur.

CAUTION

Do not use high speed when backing up. Damage to the drive belt and driven clutch components may occur.

4. To shift into forward, stop the snowmobile and allow the engine to idle; then press the reverse button and release. The forward selection will be complete.
5. After shifting from reverse to forward (or from forward to reverse), apply the throttle slowly and evenly to allow the driven clutch to engage properly.
6. The reverse function is canceled whenever the engine is shut off.

CAUTION

After reversing in deep powder snow conditions, make sure the snowflap does not become “caught up” in the track. Track and/or snowflap damage may occur.

CAUTION

If the snowmobile is equipped with ice scratchers, the scratchers must be disengaged or component damage will occur.

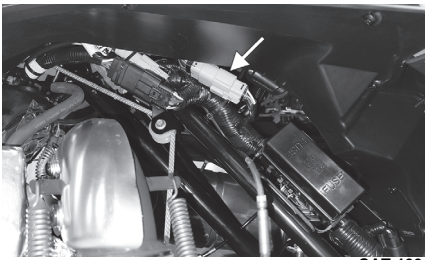
Access Panel/Hood

Removing

1. Rotate the three quarter-turn fasteners aligning with the holes in the side panel; then pull the top of the side panel away and slide the panel forward to remove it from the skid plate.

CAT-192

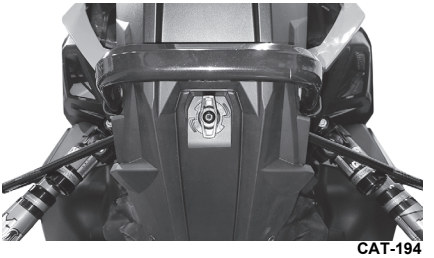
2. Disconnect the hood harness from the main harness.


CAT-193

3. Rotate the two quarter-turn fasteners securing the sides of the hood to the front fascia panels.

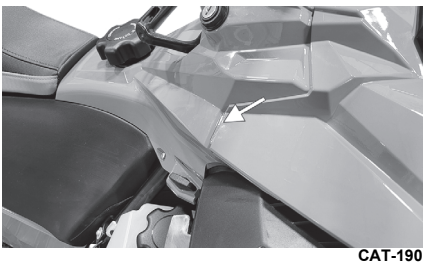
CAT-191

4. Rotate the front quarter-turn and lift up on the front of the hood. Carefully remove the hood.


CAT-194

Installing

1. Position the rear hood tabs within the holes in the console; then align the front hood latch. Press down on the front of the hood to secure.


CAT-190

2. Secure the sides of the hood to the front fascia panels using the two quarter turns.
3. Connect the hood harness to the main harness.
4. Install the access panels and secure using the quarter-turns.

Removable Seat

Removing

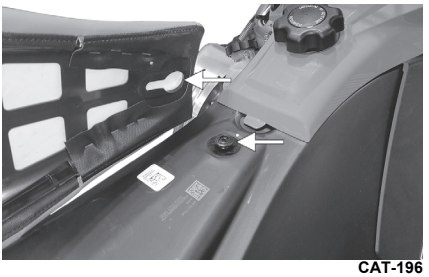
1. Rotate the quarter-turn counterclockwise securing the rear of the seat to the seat base.

CAT-195

2. Lift up slightly on the rear of the seat; then slide the seat rearward and remove the seat.

Installing

1. Install the opening in the seat onto the tab on the gas tank and slide forward.



CAT-196

2. Secure the rear of the seat to the seat base using the quarter turn.

CAT-195

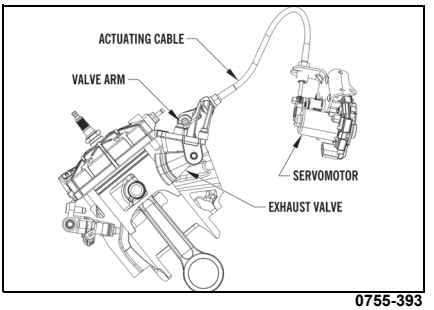
Towing

If the snowmobile is to be towed by another snowmobile, do not tow using the loops in the skis. The tow rope should be attached to the lower A-arms.

Arctic Power Valve (APV) System

This RPM-controlled servomotor (servo) actuated system adjusts the size of the exhaust ports to provide peak performance throughout the RPM range.

The system consists of an exhaust valve assembly mounted to the exhaust side of each cylinder and connected by adjustable valve arms, valve cable to an electronic servomotor mounted beneath the hood.



0755-393

At low RPM, the exhaust valves are held in the DOWN position. This gives the engine a “low port” exhaust design calibrated to provide maximum low RPM power and improve fuel economy at trail speeds.

At high RPM, the exhaust valves are raised. This creates a “high port” exhaust design calibrated to provide maximum performance at high RPM.

■ **NOTE: If the servomotor cycles three times and then shuts down, the exhaust valves are not adjusted correctly. The exhaust valves may also be sticking.**

■ **NOTE: Take the snowmobile to an authorized Arctic Cat Snowmobile dealer for this service. This service is at the discretion and expense of the snowmobile owner.**

Exhaust-Controlled Timing (ECT) System

This system automatically adjusts the ignition timing to provide maximum performance through a variety of operating conditions. The ECM receives input on engine RPM (demand) and exhaust pipe temperature (engine condition) and adjusts the ignition timing accordingly. This system is not adjustable and is maintenance free.

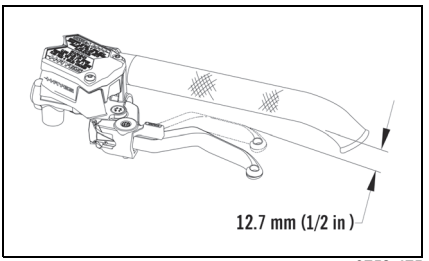
If a system fault is suspected, use an ohmmeter to check continuity of the exhaust pipe temperature sensor located in the expansion chamber. A reading of either 0 ohm or infinity indicates a failed sensor.

■ **NOTE: A disabled ECT system WILL NOT cause engine damage; however, a failed ECT system will have slower throttle response and may produce slightly less top-end performance.**

Starting and Stopping Engine

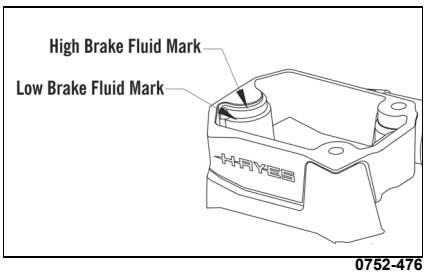
It is imperative that the brake system be checked for wear and proper operation and that all safety checks found in the accompanying Snowmobile Safety Handbook be performed before attempting to start the engine. After the engine has been started, check the headlights (high and low beam), taillight, and brake light to be sure they are working properly and adjusted correctly. Make sure all lights are clean to provide maximum illumination. The headlight and taillight must be clean and must be illuminated whenever the engine is running.

1. Test the operation of the brake system by compressing the brake lever. The brake lever must feel firm when compressed; then while holding the brake lever in the compressed position, measure the distance between the brake lever and the handlebar. The distance must be greater than 1/2 in (12.7 mm).



0752-475

2. With the brake fluid reservoir in a level position and the cover removed, check the fluid level. The brake fluid level must be at the high brake fluid mark in the reservoir.



0752-476

3. If the brake fluid is below the high brake fluid mark, add Arctic Cat-approved DOT 4 brake fluid until the fluid is at the recommended level. Install and secure the reservoir cover. Do not allow moisture to contaminate the brake system.

CAUTION

Brake fluid is highly corrosive. Do not spill brake fluid on any surface of the snowmobile.

⚠ WARNING

Do not overfill the brake fluid reservoir. Overfilling the reservoir may cause the brake system to hydraulically lock. Use only Arctic Cat-approved brake fluid.

⚠ WARNING

Do not start the engine if the brake system is not functioning properly. Service the brake system or have it properly repaired prior to operating the snowmobile. Serious personal injury or even death may occur if the brake system is not operating properly.

4. Test the throttle control lever by completely compressing and releasing it several times. The lever MUST return to the idle position quickly and completely.

CAUTION

Always check the coolant level before starting the engine.

5. Move the emergency stop switch to the UP or RUN position.
6. Insert key into ignition switch; then rotate key to the RUN position.

■ **NOTE: When a cold engine is being started, DO NOT COMPRESS THE THROTTLE CONTROL LEVER. If the throttle control lever is compressed, the engine will not start because the fuel/air mixture will be too lean.**

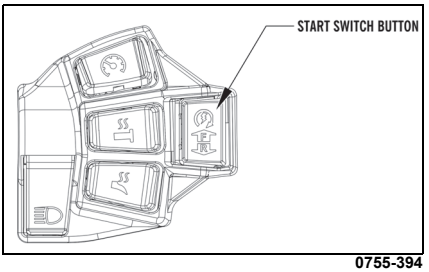
7. If using manual start, pull the recoil handle slowly until resistance is felt; then give a short quick pull. Repeat until the engine starts.

■ **NOTE: In extremely cold weather (-10° F/-23° C or colder), pull the recoil handle slowly two to three times to begin the starting procedure.**

CAUTION

To avoid damaging the recoil starter, DO NOT pull the recoil rope to its limit or release the recoil handle from an extended position. Allow the rope to rewind slowly.

8. If using electric start, press the start switch button located on the left-side handlebar control; then when the engine starts, release the button.



0755-394

CAUTION

Do not continuously run the starter for more than 5 seconds at a time.

■ **NOTE: When the engine starts, allow it to warm up properly. Idle the engine several minutes until the engine has reached normal operating temperature. Do not idle the engine for excessively long periods of time.**

9. There is a "cold drive-away" function incorporated within the engine. This function is active until the engine reaches operating temperature.

CAUTION

It is extremely important that the engine be properly warmed up before subjecting the engine to high speed operation or heavy loads. The engine should be allowed to idle at least 3-4 minutes before being operated at more than 1/2 throttle. In extremely cold conditions, the warm-up time will be longer. Cold seizure and piston scuffing caused by insufficient warm-up will not be covered by warranty. Also, do not idle the engine for excessively long periods of time.

10. Flooding — If the engine does not start but seems ready to start, engage the brake lever lock; then compress the throttle control lever fully and try to start the engine. When the engine starts, release the throttle control lever immediately. After the warm-up, release the brake lever lock.

■ **NOTE: If the engine fails to start during the attempt with the throttle control lever compressed, remove the spark plugs and clean and dry them thoroughly or install a new set of properly gapped, recommended spark plugs.**

11. To shut off the engine, turn the ignition key to the OFF position or push the emergency stop switch to the DOWN position.

Braking

The following items are items that the operator must be familiar with when operating this snowmobile and its hydraulic brake system. Important additional information on the proper maintenance of the brake system is found in the Maintenance section.

1. Use the brakes wisely. Each time the brakes are applied in all hydraulic brake systems (including automotive applications), heat is transferred to the brake fluid. The amount of heat transferred during high speed stops and/or repetitive use may be high enough to boil the brake fluid and cause the brakes to either fade or may cause an unexpected loss of brakes.

If this occurs, the brake fluid requires a cool-down period before the brakes will again function properly. This cool-down period will vary depending upon the ambient air temperature and the temperature of the brake fluid. If loss of brakes has occurred because of high fluid temperatures, do not operate the snowmobile until the cool-down period has expired and brake lever firmness has returned.

⚠ WARNING

Excessive, repetitive use of the hydraulic brake for high speed stops will cause overheating of the brake fluid and premature brake pad wear which will result in an unexpected loss of brakes.

2. Be sure to maintain the brake fluid at the proper level and take care not to get any moisture in the system as moisture in the brake fluid lowers the boiling point. If the brake fluid is ever boiled (by high speed stops or repetitive use) or if moisture is allowed to enter the system, it must be changed. Never substitute or mix different types or grades of brake fluid.

⚠ WARNING

Use only Arctic Cat-approved DOT 4 brake fluid. Never substitute or mix different types or grades of brake fluid. Brake loss can result. Check brake fluid level and pad wear before each use. Brake loss can result in severe injury or even death.

3. Never ride the brake. Even maintaining minimal pressure on the brake lever will cause the brake pads to drag on the disc and may overheat the brake fluid.
4. The brake lever lock is not a parking brake and should not be applied for periods exceeding 5 minutes. NEVER OPERATE THE SNOWMOBILE WITH THE BRAKE LEVER LOCK ENGAGED.

⚠ WARNING

The brake lever lock is not a parking brake and should not be applied for periods exceeding 5 minutes. The brake lever lock maintains the brake lever in the compressed position and maintains pressure against the brake disc; however, after a period of time, the pressure applied to the brake disc may relax below the amount required to hold the snowmobile stationary.

5. Pumping the brake lever is permissible; however, if pumping the brake lever more than twice is necessary to obtain the necessary stopping power, immediately take the snowmobile to an authorized Arctic Cat Snowmobile dealer for service. If not under warranty, this service is at the discretion and expense of the snowmobile owner.
6. When new brake pads are installed, a "burnishing" process is required.

Emergency Stopping

There are several methods of stopping or slowing the snowmobile under a variety of situations. Identified in the following chart are the ways a snowmobile may be brought to a stop and the effectiveness under normal conditions.

Item	Function
Emergency Stop Switch	interrupts ignition circuit
Throttle/Ignition Monitor Switch	interrupts ignition circuit
Ignition Switch	interrupts ignition circuit
Brake	slows the drive system
Tether Switch	interrupts ignition circuit

Throttle/Ignition Monitor Switch

The throttle control is equipped with a monitor switch for safety purposes which will stop the engine when a loss of return spring force occurs. If ice forms in the throttle system or if there is some other malfunction of the throttle system resulting in a loss of return spring force, the monitor switch will stop the engine when the throttle control lever is released.

⚠ WARNING

If any malfunction of the throttle system occurs (such as freezing in fluffy snow) and the monitor switch does not shut off the engine, press down on the emergency stop switch IMMEDIATELY to stop the engine. DO NOT start the engine until the malfunction in the throttle system has been located and corrected.

If the snowmobile engine stops abruptly when the throttle control lever is released and the activation of the monitor switch is suspected, use the following procedure:

1. Rotate the ignition key to the OFF position.
2. Remove ice and snow from the throttle system and wait 5-10 minutes for the engine heat to thaw ice from the throttle system.
3. Test the throttle control lever by compressing and releasing it several times. The lever MUST return to the idle position quickly and completely.

■ NOTE: If the throttle control lever operates properly and the engine does not start, compress the throttle lever slightly (approximately 1/8 throttle) and try starting the engine. If the engine now starts and stops when the throttle lever is released, take the snowmobile to an authorized Arctic Cat Snowmobile dealer for service. If not under warranty, this service is at the discretion and expense of the snowmobile owner.

⚠ WARNING

If the throttle control lever does not work properly, DO NOT ATTEMPT TO START THE ENGINE.

4. If the throttle control lever operates properly, rotate the ignition key to the RUN position and go through normal starting procedures.

■ NOTE: If the throttle control lever operates properly and the engine does not start, a malfunctioning monitor switch may be the problem. Take the snowmobile to an authorized Arctic Cat Snowmobile dealer for service. If not under warranty, this service is at the discretion and expense of the snowmobile owner. However, if a dire emergency exists wherein the engine must be started, disconnect the throttle monitor switch located in the right-side handlebar control.

■ NOTE: If disconnection of the throttle monitor switch is needed to start the engine, take the snowmobile to an authorized Arctic Cat Snowmobile dealer for service as soon as possible. If not under warranty, this service is at the discretion and expense of the snowmobile owner.

⚠ WARNING

Under no circumstances should disconnection of the throttle control wiring harness be used as a substitute for the monitor switch during normal operation of the snowmobile. Personal injury and damage could occur if the throttle system malfunctions or if the operator is unable to stop the engine in an emergency. If the snowmobile must be operated with a disconnected throttle control wiring harness, EXTREME CAUTION MUST BE TAKEN. NEVER EXCEED 10 MPH (16 KM/H) WITH THE THROTTLE CONTROL WIRING HARNESS DISCONNECTED.

■ NOTE: The monitor switch is now bypassed. All other ignition/electrical features (ignition switch, emergency stop switch, headlight, taillight, and brake light) will operate properly.

Varying Altitude Operation

Operating a snowmobile at varying altitudes requires changes in performance components. These changes affect drivetrain components.

For altitude information, see the appropriate specifications sheet.

■ NOTE: Just as important as calibrating the snowmobile for higher altitudes is recalibrating the snowmobile when going to lower altitudes.

ZR/RIOT models are initially set up at the factory for operation at an elevation of 0-5000 ft. (0-1525 m).

M models are initially set up at the factory for operation at an elevation of 6000-8000 ft. (1830-2440 m).

■ NOTE: Drivetrain changes can be made by the snowmobile owner if qualified to do so. If the owner does not feel qualified, take the snowmobile to an authorized Arctic Cat Snowmobile dealer for this service. This service is at the discretion and expense of the snowmobile owner.

Rear Suspension

This procedure should be done every 40 operating hours.

■ NOTE: Arctic Cat recommends that Arctic Cat Low-Temp Grease (p/n 7639-517) be used for this procedure.

Lubricate all grease fittings with low-temperature grease.

Maintenance

Periodic Maintenance Checklist			
Item	**Interval**	**Page**	**Remarks**
Battery	Daily	16, 34	Check for proper charge and tight connections
Brake System	Daily	37	Check for binding, leakage, and proper operation; lever firmness, travel, caliper, disc, and pads
Cooling System	Daily	15, 30	Check for leakage, damage, obstructions, coolant level
Drive Belt	Daily Monthly	40	Check for wear, cracks, and fraying Check length and width dimensions
Final Drive Belt	Seasonal	41	Check for wear, cracks, and fraying Check length and width dimensions
Headlight & Taillight/Brake Light	Daily	53	Check for proper operation and cleanliness
Hoses	Daily	—	Check for damage, leakage, and wear
Oil-Injection System	Daily	—	Check for leakage, damage, and injection/engine oil level
Ski Wear Bars	Daily	54	Check for wear and damage
Steering System	Daily	—	Check for proper operation, tightness of bolts, and binding
Stop Switch	Daily	—	Check for proper operation
Throttle Control System	Daily	27	Check for binding, sticking, proper operation, throttle cable tension, and wear
Track Tension/Alignment	Daily	44, 46	Check/adjust
Electrical Wiring	Weekly	—	Check for wear, damage, and tight connections
Exhaust System	Weekly	15	Check for damage, leakage, and obstructions
Fuel System — Tank, Pump & Vent Hose	Weekly	—	Check for damage, wear, obstructions, and leakage
Nuts, Bolts, Fasteners	Weekly	—	Check tightness
Recoil Starter	Weekly	—	Check rope for wear, fraying, and proper operation
Shock Absorbers	Weekly	18, 47	Check for fluid leakage and damage
Suspension	Weekly	47	Check for damage, loose components, and proper adjustment
Wear Strips	Weekly	55	Check for wear and damage
Wires & Cables	Weekly	—	Check for wear, damage, and fraying
APV System	2000 mi	22, 31	Check/clean/adjust as necessary
Drive Clutch/Driven Clutch	Monthly	17	Check for damage, binding, and wear/remove drive belt, clean drive clutch/driven clutch
Heat Exchangers	Monthly	—	Check for wear, leakage, and damage
Rear Suspension	Monthly	28	Grease
Air Silencer	Seasonal	—	Inspect/clean
Shock Absorber Fluid	3000 mi	18, 47	Replace
Spark Plugs	2000 mi	31	Inspect/clean; Replace as necessary

California Proposition 65

⚠ WARNING

The Engine Exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

The longevity and safety of the snowmobile can be increased by making periodic checks of the items in the preceding checklist.

If, at any time, abnormal noises, vibrations, or improper working conditions of any component of this snowmobile are detected, DO NOT OPERATE THE SNOWMOBILE. Take the snowmobile to an authorized Arctic Cat Snowmobile dealer for inspection and adjustment or repair. If not under warranty, this service is at the discretion and expense of the snowmobile owner.

The snowmobile should be taken to an authorized Arctic Cat Snowmobile dealer at the end of each snowmobiling season for general inspection and for off-season storage servicing. This inspection and servicing is at the expense of the snowmobile owner.

Fuel System

⚠ WARNING

Whenever any maintenance or inspection is made on the fuel system in which there may be fuel leakage, there should be no welding, smoking, open flames, etc., in the area.

Gasoline Additives

Fuel de-icer can be used for all models. Periodic use of the injector cleaner is recommended especially in the last tank of gasoline before storage. Arctic Cat Fuel Treatment (p/n 2436-868) should also be added to the last tank of gasoline before storage.

Fuel Pickup Valves

If ever there is a restricted fuel flow and a pickup valve is suspected, take the snowmobile to an authorized Arctic Cat Snowmobile dealer for this service. If not under warranty, this service is at the discretion and expense of the snowmobile owner.

Checking/Adding Engine Oil

The oil level may be visually checked by looking down into the tank, or oil may be added when the low oil indicator light illuminates on the gauge.

The oil tank (when filled to the bottom of the filler neck) has a capacity of 3 quarts (2.84 L).

1. Park the snowmobile on a level surface; then remove the right-side access panel.
2. Remove the oil tank cap and add the appropriate oil through the filler neck making sure to fill only to the bottom of the filler neck.

CAUTION

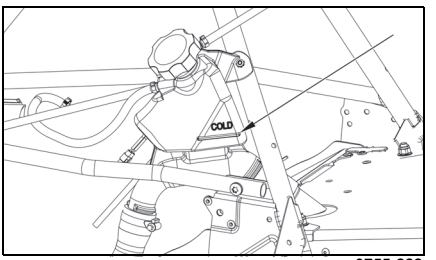
Care must be taken not to over-fill the oil tank.

Coolant Level

■ NOTE: Use Arctic Cat Antifreeze – 60/40 Extended Life (p/n 2436-871).

■ NOTE: Always check the coolant level with the engine cold.

Locate the coolant tank behind the expansion chamber. If the coolant needs to be added, fill the coolant tank up to the cold fill line located on the tank.



0755-282

CAUTION

After operating the snowmobile for the initial 5-10 minutes, stop the engine, allow the engine to cool down, and check the coolant level. Add coolant as necessary.

Spark Plugs

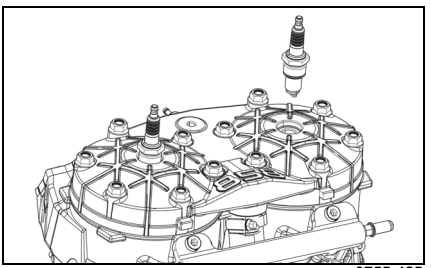
■ NOTE: Always use the recommended spark plugs in the engine. See the appropriate specifications sheet for correct spark plug gap.

Varying terrain conditions and operating usage may require spark plugs of a different heat range. For example, sustained cross-country riding will usually require colder heat-range spark plugs while trail riding or other continual slow speed operation will usually require hotter heat-range spark plugs.

CAUTION

If adjusting spark plug gap is necessary, do not use the center electrode as a leverage point. Damage to the plug may occur.

1. Remove the springs securing the expansion chamber to the exhaust manifold and resonator.
2. Move the expansion chamber out of the way to access the spark plugs.
3. Remove the spark plug caps from the plugs.
4. Using a spark plug wrench, remove the plugs.



0755-425

5. Install the plugs and finger-tighten.
6. Tighten the spark plugs to 18 ft-lb (25 N-m); then install the spark plug caps.
7. Place the expansion chamber into position and secure to the exhaust manifold and resonator with the springs.

Checking/Adjusting APV Cable

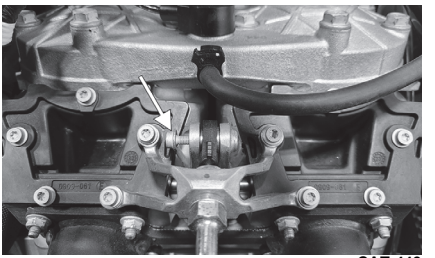
858

Proper cable adjustment is critical to the operation of the APV system. Although inspecting cable adjustment is recommended every 2000 miles (3200 km), the cable should not need frequent adjustment. To check the cable adjustment, use the following procedure:

■ NOTE: Exhaust Valve Tool Kit (p/n 836-00005) is required to check/adjust the APV system.

Checking

1. Remove the torx screw securing the actuator arms to the exhaust valve cable.



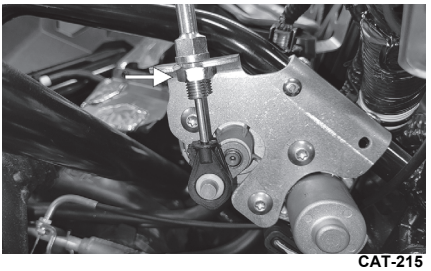
CAT-443

2. Move the actuator arms front to back. the arms and valves should move together freely. If the arms and valves are stuck or do not move freely, the valves and bushings will need to be inspected.
3. Move both actuator arms forward to the full open position. If the actuator arms do not align, the valves will need to be adjusted.
4. If the actuator arms and valves are operating and do not need to be adjusted, secure the actuator arms to the cable using a new torx screw. Tighten to 62 in.-lb (7 N-m).

Adjusting

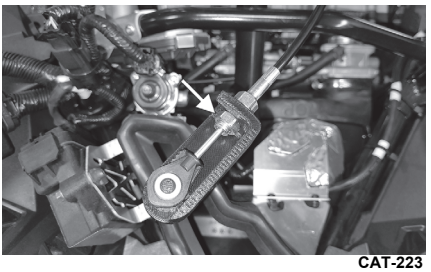
1. Remove the springs securing the expansion chamber to the manifold and the resonator. Remove the exhaust temperature sensor and secure out of the way.

2. Loosen the nut securing the APV cable to the servomotor bracket; then pull the end of the cable straight off of the servomotor arm.



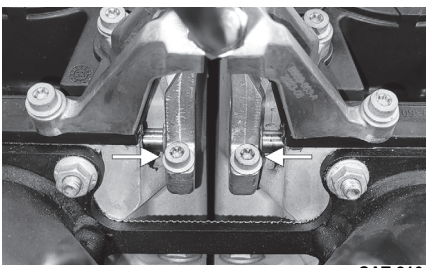
CAT-215

3. Remove the nuts securing the exhaust manifold to the cylinders. Remove the manifold and account for the two exhaust gaskets.
4. Install the exhaust valve cable adjustment tool onto the end of the cable. Tighten the nut against the tool to secure the tool.



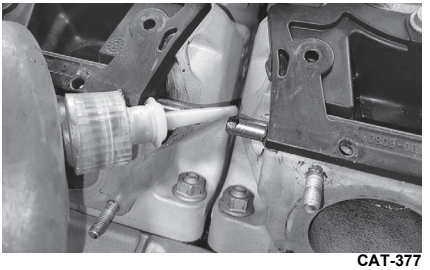
CAT-223

5. Remove the two torx screws securing the exhaust valve arms around the exhaust valves; then remove the torx screw securing the arms to the cable.



CAT-216

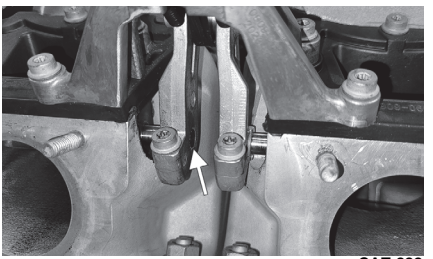
6. Remove the arms from the exhaust valves; then use alcohol to remove any residual Loctite from both exhaust valve ends.
7. Add a drop of green Loctite #620 to the ends of both exhaust valves.



CAT-377

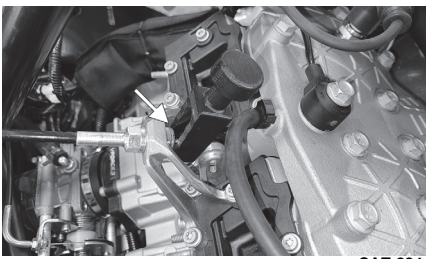
8. Install the arms onto the exhaust valves; then secure the cable between the arms using a new torx screw. Tighten to 62 in.-lb (7 N-m).

■ **NOTE: The inside of the exhaust valve arms will be flush with the ends of the valves when properly positioned.**



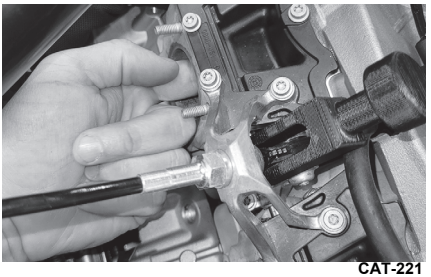
CAT-222

9. Insert the exhaust valve wedge tool between the exhaust valve arms and the cable nut to remove any slack in the cable. Make sure the ribbed side of the tool is installed against the valve cable nut.



CAT-224

10. While holding the valves in the full open position, tighten the torx screws securing the arms around the valves to 62 in.-lb (7 N-m).

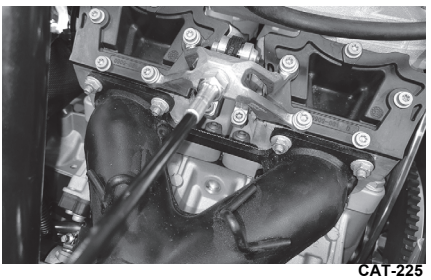


CAT-221

11. Once both screws are properly tightened, remove both tools.
12. Install the valve cable end onto the servomotor arm; then position the cable within the bracket. Tighten the nut securely against the bracket.

■ NOTE: With the cable installed onto the servomotor arm, the cable should move up and down freely without contacting the cable sheath.

13. Install exhaust gaskets onto the cylinders; then install the manifold. Secure using the existing nuts using a criss-cross pattern. Tighten to 96 in.-lb (11 N-m).

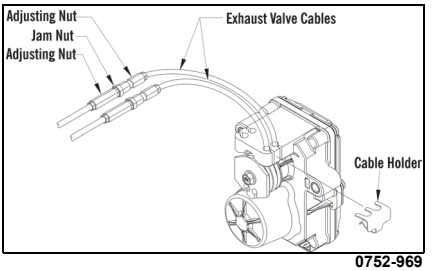


CAT-225

14. Install the expansion chamber and secure to the manifold and the resonator using the existing springs.
15. Install the exhaust temperature sensor into the expansion chamber. Tighten to 34 ft-lb (46 N-m).

600

1. Remove the servomotor cable holder.



0752-969

2. Rotate the servomotor actuator counterclockwise to loosen the cable; then pull the cable housings up and out of the servomotor.

CAUTION

Do not use the nut securing the clutch to the servomotor to rotate the actuator.

■ NOTE: For installing purposes, note the side that the servomotor cables are installed on.

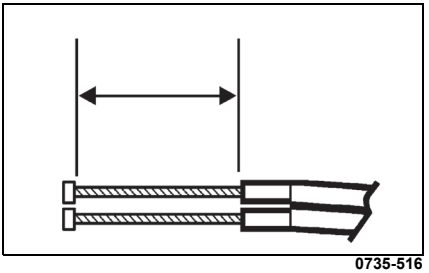
3. Slide each cable drum out of the slot of the servomotor actuator.
4. While holding the cable housing firmly, pull the cable as far out as it will go; then release. Repeat three to four times. The cable/exhaust valve should move freely without binding.

■ NOTE: If the cable/exhaust valve does not move freely, the exhaust valve assembly will need to be removed for further inspection. Take the snowmobile to an authorized Arctic Cat Snowmobile dealer for this service.

■ NOTE: When measuring the cables, they are to be routed as close to their installed position as possible.

5. While holding the cable housing, lightly pull on one cable end to remove any slack; then measure the amount of exposed cable from the cable housing to the end of the cable (cable drum).

APV Cable Length
36.5 mm ± 1 mm



0735-516

■ **NOTE: The two cable measurements must be equal in length or less than 0.5 mm (0.020 in) difference in length from each other.**

■ **NOTE: Repeat steps 4 and 5 for each cable; then compare the measurements to the APV Cable Length chart.**

■ **NOTE: The measurements must be within the specifications from the chart. If the measurements are within specifications, no adjustment is necessary (proceed to step 8). If they are not within specifications, proceed to step 6.**

6. Loosen the jam nut on the cable to be adjusted; then using the adjusting nuts, lengthen or shorten the housing as needed.
7. Once the proper length has been attained, hold the adjusting nut in place and tighten the jam nut securely.
8. Place the cable housings into position in the servomotor. Secure the cable housings with the cable holder.

CAUTION

Ensure the cables are rotated and secured properly to avoid contacting exhaust components.

Battery (Electric Start)

These sealed batteries after being in service require regular cleaning and recharging in order to deliver peak performance and maximum service life. The following procedures are recommended for cleaning and maintaining sealed batteries. Always read and follow instructions provided with battery chargers and battery products.

■ **NOTE: Battery maintenance may be done by the snowmobile owner if qualified to do so. If the owner does not feel qualified, take the snowmobile to an authorized Arctic Cat Snowmobile dealer for this service. This service is at the discretion and expense of the snowmobile owner.**

To remove and charge the battery, use the following procedure:

⚠ WARNING

Improper handling or connecting of a battery may result in severe injury including acid burns, electrical burns, or blindness as a result of an explosion. Always remove rings and watches. Any time service is performed on a battery, the following must be observed: keep sparks, open flame, cigarettes, or any other flame away. Always wear safety glasses. Protect skin and clothing when handling a battery. When servicing a battery in an enclosed space, keep the area well-ventilated.

⚠ WARNING

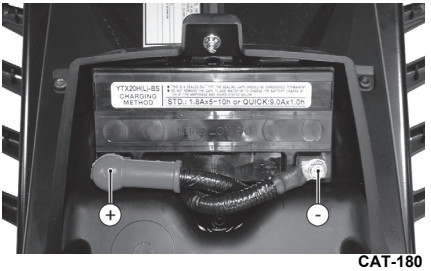
Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer and reproductive harm. Wash hands after handling.

1. Loosen the quarter-turn securing the seat to the seat base; then slide the seat rearward. Remove the seat.

CAT-195

2. Remove the negative battery cable and ground wire; then remove the positive cable. Remove the battery.

■ **NOTE: For installing purposes prior to removing the battery, note the routing and securing locations of the cables and harness wires.**



CAT-180

⚠ WARNING

Avoid spillage and contact with skin, eyes, and clothing.

CAUTION

Do not charge the battery while it is in the snowmobile with the battery terminals connected.

3. Thoroughly wash the battery with soap and water; then using a wire brush, clean the battery posts and cable ends removing all corrosive buildup. Replace damaged cables or cable ends.

■ NOTE: If battery posts or cable ends have a build-up of white/green powder residue, apply water and baking soda to neutralize acid; then flush off with warm soapy water.

CAUTION

Do not remove the seal strip on a sealed battery.

⚠ WARNING

Battery acid is harmful if it contacts eyes, skin, or clothing. Care must be taken whenever handling a battery.

4. Using a multimeter, test the battery voltage. The meter must read no less than 12.8 DC Volts for a fully charged battery.

■ NOTE: At this point if the meter reads as specified, the battery may be returned to service (see step 9).

5. If the meter reads less than specified voltage, charge the battery using the following guidelines:

   A. When using an automatic battery charger, always follow the charger manufacturer's instructions.

   B. When using a constant-current battery charger, use the following Battery Charging Chart.

CAUTION

Never exceed the standard charging rate.

⚠ WARNING

An overheated battery could explode causing severe injury or death. Always monitor charging times and charge rates carefully. Stop charging if the battery becomes very warm to the touch. Allow it to cool before resuming charging.

Battery Charging Chart (Constant-Current Charger)

Battery Voltage (DC)	Charge State	Charge Time Required (at 1.5-2.0 Amps)
12.8-13.0	100%	None
12.5-12.8	75%-100%	3-6 hours
12.0-12.5	50%-75%	5-11 hours
11.5-12.0	25%-50%	13 hours (minimum)
11.5 or less	0-25%	20 hours (minimum)

■ NOTE: If the battery voltage is 11.5 DC Volts or less, some chargers may "cut off" and fail to charge. If this occurs, connect a fully charged booster battery in parallel (positive to positive and negative to negative) for a short period of time with the charger connected. After 10-15 minutes, disconnect the booster battery leaving the charger connected and the charger should continue to charge. If the charger "cuts off," replace the battery.

6. After charging the battery for the specified time, remove the battery charger and allow the battery to sit for 1-2 hours.

7. Connect the multimeter and test the battery voltage. The meter should read no less than 12.8 DC Volts. If the voltage is as specified, the battery is ready for service.

■ NOTE: If voltage in step 7 is below specifications, charge the battery an additional 1-5 hours; then retest. The battery is ready for service.

8. Place the battery into position in the snowmobile; then coat the battery posts and cable ends with a light coat of multi-purpose grease.

CAUTION

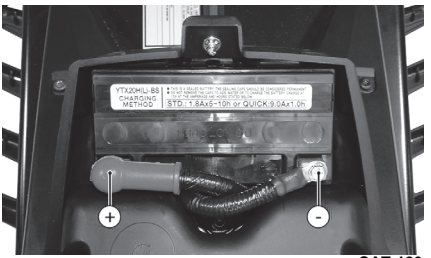
Before installing the battery, make sure the ignition switch is in the OFF position.

9. Secure the red positive cable to the positive terminal on the battery using a cap screw, lock washer, and a flat washer. Tighten securely.
10. Secure the main black negative cable and the small black negative cable to the battery using a cap screw, lock washer, and a flat washer. Tighten securely.

CAUTION

Connecting cables in reverse (positive to negative and negative to positive) can cause serious damage to the electrical system.

■ **NOTE: Ensure the harness wires and cables are routed properly as noted during removing battery procedure.**



CAT-180

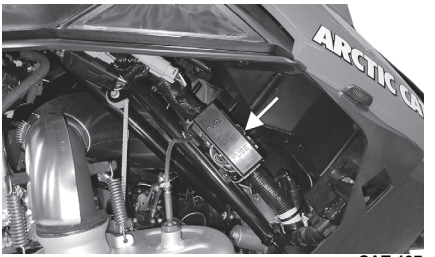
11. Install the seat heater harness (if equipped), then install the seat.

Fuses

Fuses protect the snowmobile electrical system from overloading. If electrical parts in the snowmobile are not working, the system may have been overloaded and caused a blown fuse. Before repairing or replacing any electrical part, check the appropriate fuses. If a fuse blows (opens a circuit), all the parts of the snowmobile that use that circuit will not work.

Once which fuse to check has been determined, perform the following steps:

1. Open the right-side access panel.
2. Locate the fuse block and remove the fuse block cover.



CAT-197

■ **NOTE: There are spare fuses beneath the fuse block cover.**

3. Remove the suspected fuse.

■ **NOTE: Fuse function descriptions are next to the fuse contacts in the fuse block.**

4. Look through the clear side of the fuse to see if the element inside is burned or separated. If it is, the fuse is blown and should be replaced with a fuse of the correct amperage rating.

⚠ WARNING

Always replace a fuse with one having the same specified amperage rating. Using a fuse with a higher rating can cause severe wire damage and could start a fire.

5. Install the fuse block cover and close the access panel.

Even after replacing a fuse, it may continue to blow if the cause of the overload is not determined. If the fuse continues to blow, take the snowmobile to an authorized Arctic Cat Snowmobile dealer for service. If not under warranty, this service is at the discretion and expense of the snowmobile owner.

Brake System

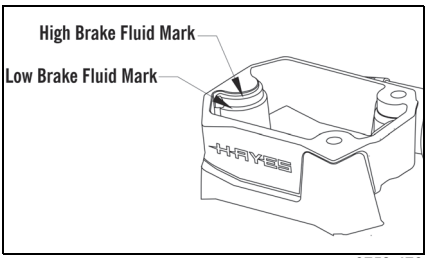
Arctic Cat recommends that the brake system (brake lever, fluid reservoir, hose, caliper, pads, and brake disc) be checked daily for fluid leakage, wear, or damage and for proper operation. Also, the brake fluid level must be checked every time before starting the engine.

⚠ WARNING

DO NOT operate the snowmobile when the brake lever lock is engaged or when any component in the brake system is damaged, worn, or adjusted improperly. If the snowmobile is operated and the brake system is not functioning properly, severe personal injury could result.

Checking/Adding Brake Fluid

1. With the brake fluid reservoir in a level position and the cover removed, check the fluid level. The brake fluid level must be at the high brake fluid mark in the reservoir.



0752-476

2. If the brake fluid is below the high brake fluid mark, add Arctic Cat-approved DOT 4 brake fluid until the fluid is at the recommended level. Install and secure the reservoir cover. Do not allow moisture to contaminate the brake system.

CAUTION

Brake fluid is highly corrosive. Do not spill brake fluid on any surface of the snowmobile.

⚠ WARNING

Do not overfill the brake fluid reservoir. Overfilling the reservoir may cause the brake system to hydraulically lock. Use only Arctic Cat-approved DOT 4 brake fluid. Never substitute or mix different types or grades of brake fluid. Brake loss can result. Brake loss can result in severe injury or even death.

Changing Brake Fluid

The brake fluid must be changed on a regular basis and whenever the brake fluid has been overheated or contaminated. The brake fluid should be changed every 1000 miles (1600 km) or at the end of the snowmobiling season, whichever occurs first. Take the snowmobile to an authorized Arctic Cat Snowmobile dealer for this service. This service is at the discretion and expense of the snowmobile owner.

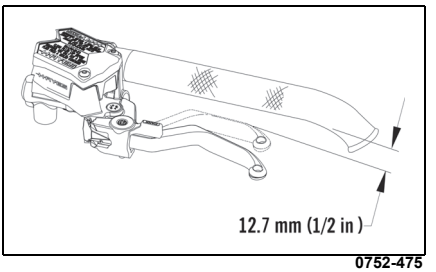
Checking Brake Lever Travel

Before each use, check the brake lever travel using the following procedure:

1. Compress the brake lever fully.

■ NOTE: Do not pump the brake lever as it will produce an inaccurate reading.

2. Measure the distance between the brake lever and the handlebar. The distance must be greater than 12.7 mm (1/2 in).



0752-475

3. If the resultant distance is less than specified, take the snowmobile to an authorized Arctic Cat Snowmobile dealer for service. If not under warranty, this service is at the discretion and expense of the snowmobile owner.

⚠ WARNING

Do not operate the snowmobile if the compressed distance between the brake lever and the handlebar is less than 12.7 mm (1/2 in). Brake loss may occur. Brake loss can result in severe personal injury.

Bleeding Brake System

If the brake lever feels spongy when applied, the brake system may need to be bled. To bleed the brake, use the following procedure:

■ NOTE: The brake system may be bled by the snowmobile owner if qualified to do so. If the owner does not feel qualified, take the snowmobile to an authorized Arctic Cat Snowmobile dealer for this service. This service is at the discretion and expense of the snowmobile owner.

1. Remove the reservoir cover and (if necessary) fill the reservoir to the high brake fluid mark with Arctic Cat-approved DOT 4 brake fluid.

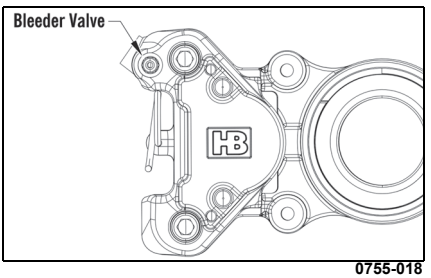
CAUTION

Brake fluid is highly corrosive. Do not spill brake fluid on any surface of the snowmobile.

⚠ WARNING

Use only Arctic Cat-approved DOT 4 brake fluid. Any substitute may result in a loss of brakes.

2. Slide a piece of flexible tubing over the ball of the bleeder valve and direct the other end into a container.



0755-018

3. Slowly compress the brake lever until maximum pressure is attained; then hold the lever in the compressed position to maintain pressure. Open the bleeder valve to release the fluid and air. When the fluid stops, close the bleeder valve; then release the brake lever.
4. Repeat step 3 until the brake fluid flows free of air bubbles.

■ NOTE: It may be necessary to refill the reservoir during the bleeding process. Never allow the brake fluid to go below the low brake fluid mark in the reservoir.

5. When the brake fluid is free of all air and the brake lever feels firm when compressed, fill the reservoir to the high brake fluid mark; then install and secure the cover. Remove the tube from the bleeder valve.

Checking/Changing Brake Pads

The condition of the brake pads must be checked daily and changed if worn or damaged. To check and change the brake pads, use the following procedure:

■ NOTE: The brake pads may be changed by the snowmobile owner if qualified to do so. If the owner does not feel qualified, take the snowmobile to an authorized Arctic Cat Snowmobile dealer for this service. This service is at the discretion and expense of the snowmobile owner.

■ NOTE: When installing new brake pads, always install them as a set. Never install just one pad or use brake pads which have been used in another snowmobile.

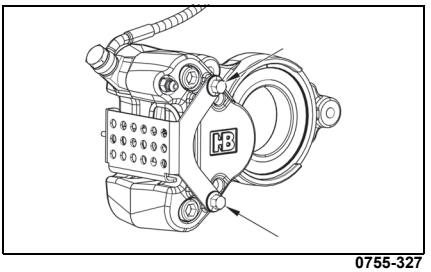
1. Remove the brake fluid reservoir cover; then remove most of the brake fluid from the reservoir. Install the cover.

CAUTION

Brake fluid is highly corrosive. Do not spill brake fluid on any surface of the snowmobile.

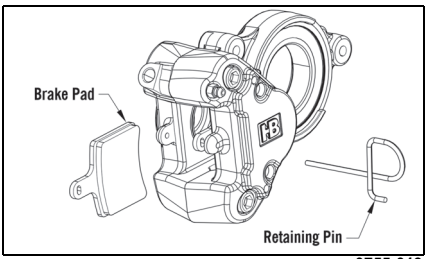
■ **NOTE: The above procedure will allow room for the fluid from the caliper when the pistons are pushed into the caliper for installing new brake pads. Replacing the cover will prevent fluid spillage.**

2. Open the left-side access panel.
3. Remove the cap screws securing the brake disc shield to the brake caliper.



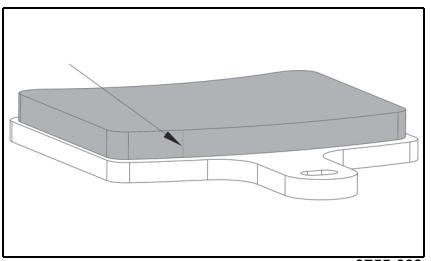
0755-327

4. Carefully move the shield out of the way; then remove the hairpin clip securing the brake pads to the caliper assembly.
5. Remove the brake pads from the caliper.



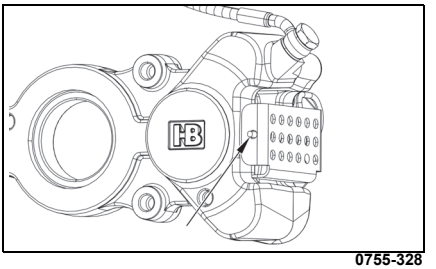
0755-019

6. Measure the thickness of the brake pad. The brake pad thickness must be greater than 1.0 mm (0.04 in). If the brake pad thickness is less than specified, replacement of both pads is necessary.



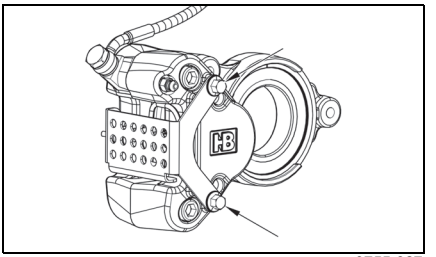
0755-099

7. Install both brake pads into the caliper; then install the hairpin clip through the caliper and brake pads and into the brake disc shield.



0755-328

8. Secure the brake disc shield to the caliper using the existing screws. Tighten to 96 in.-lb (11 N-m).



0755-327

9. Remove the reservoir cover and remove the remaining fluid; then fill the reservoir with fresh fluid and install the cover.
10. Pump the brake lever to ensure correct positioning of the brake pads and proper brake lever travel; then release.

■ **NOTE: If brake lever travel is not within specification, bleed the brake system.**

11. Remove the reservoir cover and fill the reservoir (if necessary) to the proper level with fresh brake fluid; then install the cover.
12. Close and secure the left-side access panel.

■ **NOTE: When new brake pads are installed, a "burnishing" process is required (see Burnishing Brake Pads sub-section).**

Burnishing Brake Pads

After changing brake pads, the new brake pads must be burnished to achieve full braking effectiveness. Braking distance will be extended until brake pads are properly burnished.

To properly burnish the brakes, use the following procedure:

1. Choose an area sufficiently large to safely accelerate to 30-40 mph (48-64 km/h) and to brake to a stop.

⚠ WARNING

If this procedure is done using a shielded jack stand, be sure the operator is wearing the tether in case the snowmobile falls from the stand.

2. Accelerate to 30-40 mph (48-64 km/h); then compress brake lever to decelerate to a stop.

■ NOTE: Lightly apply the brake lever to come to an easy stop; do not overapply brakes or "lock up" the track.

3. Repeat procedure 10-15 times allowing some cooling between stops.

■ NOTE: Do not repeat too soon or too aggressively as to get the brake disc "red hot".

⚠ WARNING

Do not attempt sudden stops or put yourself into a situation where a sudden stop will be required until the brake pads are properly burnished.

■ NOTE: This procedure stabilizes the pad material and extends the life of the pads.

Drive Belt

The drive belt transfers power from the drive clutch to the driven clutch. If the belt is worn, cracked, or stretched, maximum power will not be transmitted and the belt could also fail and therefore must be replaced. Periodic checks (at least once a month under normal usage) of two drive belt specifications are essential.

■ NOTE: Drive belts should be purchased from an authorized Arctic Cat Snowmobile dealer, as Arctic Cat drive belts are made to exact specifications and of quality material. Belts made by other manufacturers may not be of the same specifications or quality and, therefore, usage could result in poor performance and premature belt failure.

■ NOTE: Before starting the snowmobile in extremely cold temperatures (-10° F/-23° C or colder), the drive belt should be removed and warmed up to room temperature. Once the drive belt is at room temperature, install the drive belt.

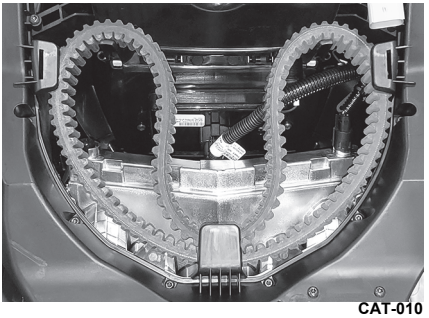
Also, new drive belts have a break-in period of 25 miles (40 km). After installing a new drive belt, drive the snowmobile for 25 miles (40 km) at 3/4 throttle or less. By revving the engine up and down (but not exceeding 60 mph [100 km/h]), the exposed cord on the side of a new belt will be worn down. This allows the drive belt to gain its optimum flexibility and will extend drive belt life.

CAUTION

Never run the engine with the drive belt removed. Excessive revving of the engine could result in serious engine damage and drive clutch failure.

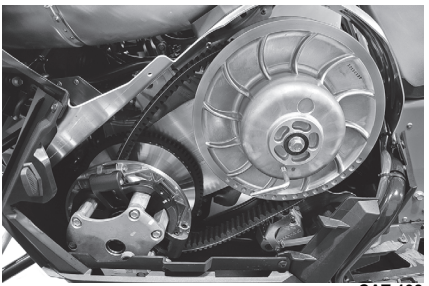
■ NOTE: Changing a drive belt can be done by the snowmobile owner if qualified to do so. If the owner does not feel qualified, take the snowmobile to an authorized Arctic Cat Snowmobile dealer for this service. This service is at the discretion and expense of the snowmobile owner.

■ NOTE: A spare belt can be stored under the hood assembly within the three tabs near the headlight.

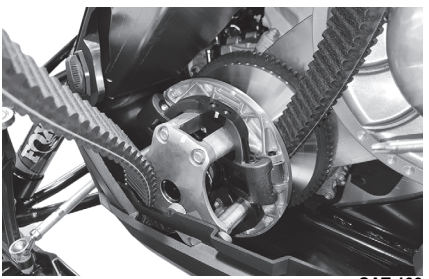

CAT-010

Removing

1. Set the brake lever lock; then remove the left-side access panel.
2. Thread Removal/Installation Tool (p/n 0744-118) clockwise into the driven clutch until the movable sheave opens far enough to remove the drive belt.


CAT-198

3. When the sheaves are fully apart, pull up on drive belt and roll belt over stationary sheave until it is free of the driven clutch.
4. Rotate the drive belt around the drive clutch while rotating the drive clutch until the belt is free from the clutch.


CAT-199

Installing

1. Place the belt (so the part number can be read) between the sheaves of the drive clutch.
2. With the sheaves fully apart, roll the belt over the stationary sheave.
3. With the drive belt properly positioned in the drive clutch and driven clutch, turn the belt tool counterclockwise and roll the belt back and forth to allow the driven clutch sheaves to fully close.
4. After the belt is installed properly, install the left-side access panel.
5. Release the brake lever lock.

Final Drive Belt

The final drive belt transfers power from the driven shaft to the drive shaft. If the belt is worn, cracked, or stretched, maximum power will not be transmitted and the belt could also fail and therefore must be replaced.

■ **NOTE: Final drive belts should be purchased from an authorized Arctic Cat Snowmobile dealer, as Arctic Cat belts are made to exact specifications and of quality material. Belts made by other manufacturers may not be of the same specifications or quality and, therefore, usage could result in poor performance and premature belt failure.**

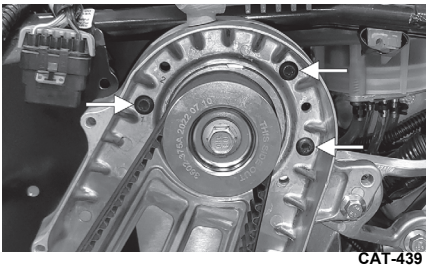
■ **NOTE: Changing a belt can be done by the snowmobile owner if qualified to do so. If the owner does not feel qualified, take the snowmobile to an authorized Arctic Cat Snowmobile dealer for this service. This service is at the discretion and expense of the snowmobile owner.**

Removing (ZR/RIOT)

1. Set the brake lever lock; then remove the right-side access panel.
2. Remove the screws securing the right-side footwell. Disconnect the speed sensor and remove the footwell.
3. Remove the screws securing the belt guard. Remove the guard.

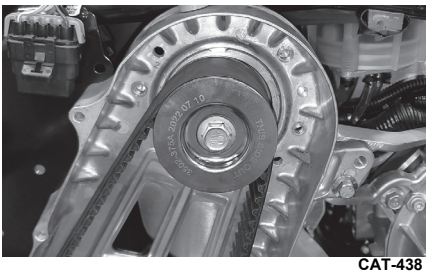
4. Remove the three torx screws securing the bearing hub adjuster to the belt drive case.

■ NOTE: Note the rear screw mounting location for assembly purposes.



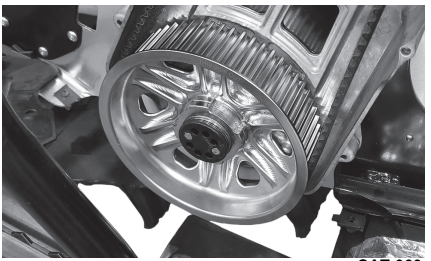
CAT-439

5. Remove the cap screw and pulley washer securing the upper drive pulley.



CAT-438

6. Remove the two nuts securing the lower drive pulley.

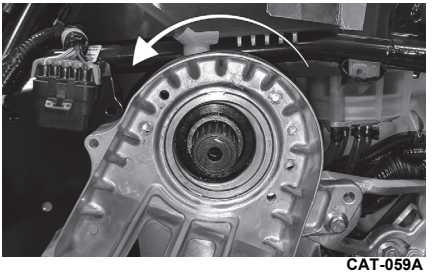


CAT-060

7. Rotate the bearing hub adjuster (located behind the belt drive case) counterclockwise to release the belt tension. Remove both pulleys and belt.

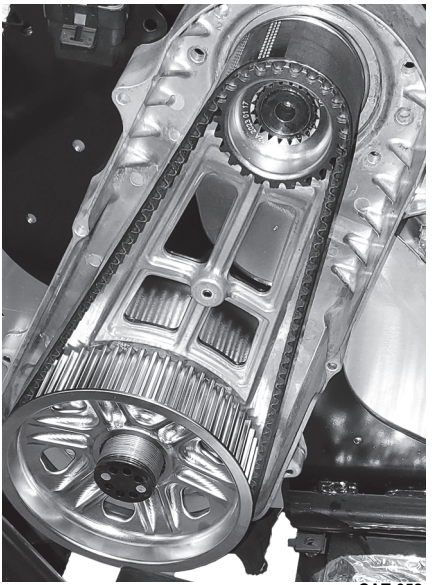
Installing (ZR/RIOT)

1. Fully rotate the bearing hub adjuster counterclockwise.



CAT-059A

2. Install the belt onto the upper and lower pulleys; then install as an assembly onto the drive and driven shafts.



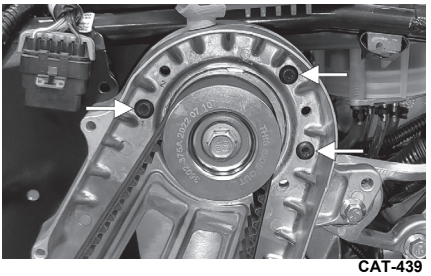
CAT-058

3. Thread the first nut onto the driveshaft; then using the nut tool, tighten the nut to 100 ft-lb (135 N-m). Thread the second nut onto the driveshaft and tighten against the first nut to 100 ft-lb (135 N-m).

4. Secure the upper drive pulley using the existing pulley washer and a new cap screw. Tighten to 55 ft-lb (74.5 N-m).

■ NOTE: Arctic Cat recommends replacing hardware with "Patch-Lock". If need be, the appropriate Loctite can be added to the threads of the existing hardware.

5. Rotate the bearing hub adjuster so the rear mounting hole is aligned with the correct hole in the drive belt case. Loosely secure using a new screw.
6. Align the other two mounting locations and loosely secure using two new screws.
7. Tighten all three screws to 96 in.-lb (11 N-m).

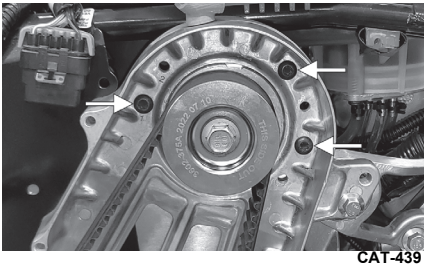

CAT-439

8. Install the belt guard and secure using the existing screws. Tighten securely.
9. Install the footwell and secure using the existing screws. Tighten securely.
10. Connect the speed sensor to the main harness; then install the right-side access panel.

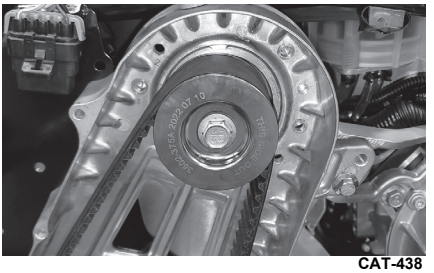
Removing (M)

1. Set the brake lever lock; then remove the right-side access panel.
2. Remove the screws securing the right-side footwell. Disconnect the speed sensor and remove the footwell.
3. Remove the screws securing the belt guard. Remove the guard.
4. Remove the three torx screws securing the bearing hub adjuster to the belt drive case.

■ NOTE: Note the rear screw mounting location for assembly purposes.


CAT-439

5. Remove the cap screw and pulley washer securing the upper drive pulley.


CAT-438

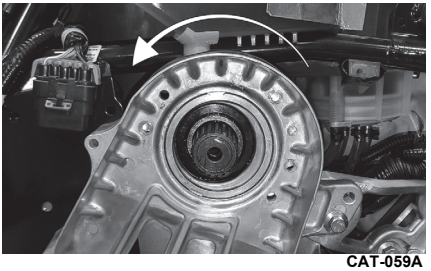
6. Remove the rubber plug from the retaining bolt; then remove the retaining bolt securing the lower pulley.


CAT-440

7. Rotate the bearing hub adjuster (located behind the belt drive case) counterclockwise to release the belt tension. Remove both pulleys and belt.

Installing (M)

1. Fully rotate the bearing hub adjuster counterclockwise.

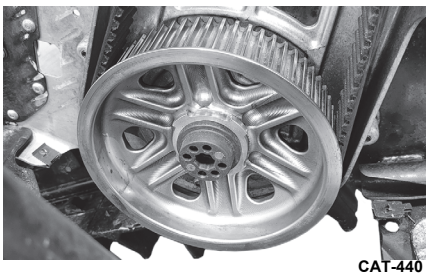


CAT-059A

2. Install the belt onto the upper and lower pulleys; then install as an assembly onto the drive and driven shafts.
3. Apply blue Loctite #243 to the threads of the retaining bolt; then hand thread the bolt into the drive shaft. Tighten to the bolt to 100 ft-lb (135.5 N-m).

CAT-441

4. Install the rubber plug into the driven shaft.

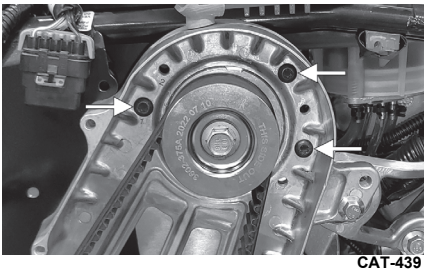


CAT-440

5. Secure the upper drive pulley using the existing pulley washer and a new cap screw. Tighten to 55 ft-lb (74.5 N-m).

■ **NOTE: Arctic Cat recommends replacing hardware with "Patch-Lock". If need be, the appropriate Loctite can be added to the threads of the existing hardware.**

6. Rotate the bearing hub adjuster so the rear mounting hole is aligned with the correct hole in the drive belt case. Loosely secure using a new screw.
7. Align the other two mounting locations and loosely secure using two new screws.
8. Tighten all three screws to 96 in.-lb (11 N-m).



CAT-439

9. Install the belt guard and secure using the existing screws. Tighten securely.
10. Install the footwell and secure using the existing screws. Tighten securely.
11. Connect the speed sensor to the main harness; then install the right-side access panel.

Track Tension

Track tension is directly related to the overall performance of the snowmobile. If the track is too loose, it may slap against the tunnel causing wear or it may "ratchet" on the track drive sprockets. If extremely loose, the idler wheels may climb over the track lugs forcing the track against the tunnel causing the track to "lock." Arctic Cat recommends that the track tension be checked daily during the first 300 miles (480 km) of operation and once a week thereafter and adjusted according to need. The track will stretch and take a "set" during break-in. Track deflection must be maintained within the recommended range.

⚠ WARNING

Track tension must be properly maintained. Personal injury could result if a track is allowed to become excessively loose.

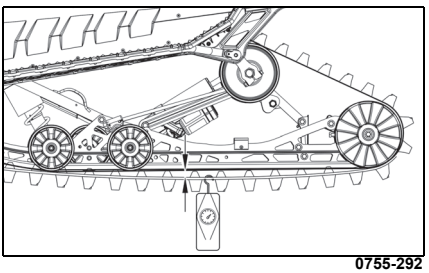
Checking Track Tension

ZR/RIOT/HCR/HCX

⚠ WARNING

DO NOT attempt to check or adjust track tension with engine running. Turn ignition key to the OFF position. Personal injury could result from contact with a rotating track.

1. Remove excess ice and snow buildup from the track, track drive sprockets, and the inside of the skid frame.
2. Elevate the snowmobile on a shielded safety stand high enough to use a spring scale.
3. At the midpoint of the track (shock pad), hook a spring scale around a track clip; then pull down on the scale to 20 lb (9 kg). Measure the deflection (distance) between the bottom of the wear strip and the inside surface of the track clip. Measurement should be 2 in (51 mm).



0755-292

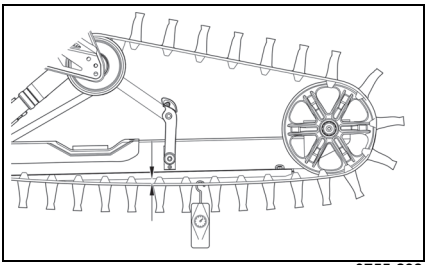
■ NOTE: Measurement is from the bottom of the wear strip at the point of the shock pad on the slide rail.

M Alpha

⚠ WARNING

DO NOT attempt to check or adjust track tension with engine running. Turn ignition key to the OFF position. Personal injury could result from contact with a rotating track.

1. Remove excess ice and snow buildup from the track and track drive sprockets.
2. Elevate the snowmobile on a shielded safety stand high enough to use a spring scale.
3. At the midpoint of the track (shock pad), hook a spring scale around a track clip; then pull down on the scale to 25 lb (11.3 kg). Measure the deflection (distance) between the bottom of the wear strip and the inside surface of the track clip. Measurement should be 2 in (51 mm).

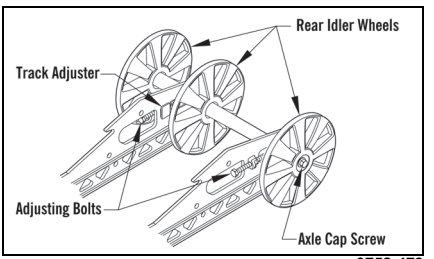


0755-298

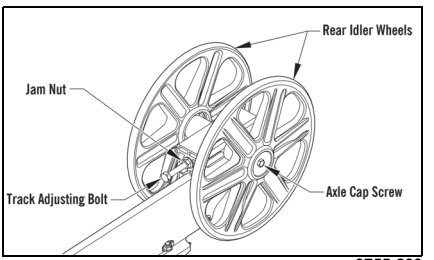
Adjusting Track Tension

■ NOTE: To ensure proper track tension adjustment, perform all adjustments on both sides of the snowmobile.

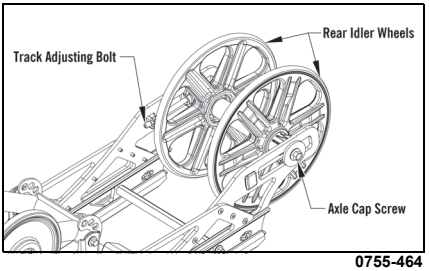
1. Loosen the idler wheel axle cap screws.



0752-479



0755-299



0755-464

2. If the deflection (distance between the bottom of the wear strip and the inside surface of the track clip) exceeds specifications, tighten the adjusting bolt(s) to take up excessive slack in the track.
3. If the distance between the bottom of the wear strip and the inside surface of the track clip is less than specified, loosen the adjusting bolts to increase the slack in the track.

CAUTION

Always maintain track tension within recommended specification.

4. Check track alignment.
5. On ZR/RIOT/HCR/HCX models, after proper track tension is obtained, tighten the idler wheel axle cap screws to 34 ft-lb (46 N-m); then tighten the adjusting bolts securely against the axle.
6. On M Alpha models, after proper track tension is obtained, tighten the idler wheel axle cap screws to 34 ft-lb (46 N-m); then tighten the adjusting bolt and jam nut securely.

■ **NOTE: Since track tension and track alignment are interrelated, always check both even if only one adjustment seems necessary.**

⚠ WARNING

Always make sure the adjusting bolts and jam nut are snug against the axle and the idler wheel cap screws are tightened to specifications. Failure to do so could cause 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." If a track "locks" during operation, severe personal injury could result.

Track Alignment

Proper track alignment is obtained when the rear idler wheels are equal distance from the inner track drive lugs. Excessive wear to the idler wheels, drive lugs, and track will occur if the track is improperly aligned. Arctic Cat recommends that the track alignment be checked once a week or whenever the track tension is adjusted.

Checking Track Alignment

⚠ WARNING

Make sure the ignition key is in the OFF position and the track is not rotating before checking or adjusting track alignment. Personal injury could result if contact is made with a rotating track.

1. Remove excess ice and snow buildup from the track, track drive sprockets, and the inside of the skid frame.
2. Position the tips of the skis against a wall; then using a shielded safety stand, raise the rear of the snowmobile off the floor making sure the track is free to rotate.

⚠ WARNING

The tips of the skis must be positioned against a wall or similar object.

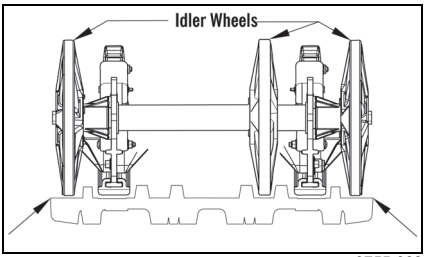
⚠ WARNING

DO NOT stand behind the snowmobile or near the rotating track. NEVER run the track at high speed when the track is suspended.

3. Start the engine and accelerate slightly. Use only enough throttle to turn the track several revolutions. SHUT ENGINE OFF.

■ NOTE: Allow the track to coast to a stop. DO NOT apply the brake because it could produce an inaccurate alignment condition.

4. When the track stops rotating, check the relationship of the idler wheels and the outside of the track. If the idler wheels are an equal distance from the outside of the track, no adjustment is necessary.



0755-003

5. If the idler wheels are not centered, an adjustment is necessary.

■ NOTE: There is no track alignment with the M Alpha skid frame assembly.

Adjusting Track Alignment

1. On the side of the track which has the inner track drive lugs closer to the rear idler wheel, loosen the idler wheel axle cap screw; then rotate the adjusting bolt clockwise 1 to 1-1/2 turns.
2. Check track alignment and continue adjustment until proper alignment is obtained.

■ NOTE: Make sure correct track tension is maintained after adjusting track alignment.

3. After proper track alignment is obtained, tighten the idler wheel axle cap screw to 34 ft-lb (46 N-m); then tighten the adjusting bolts securely against the axle.

⚠ WARNING

Always make sure the adjusting bolts are snug against the axle and the idler wheel cap screws are tightened to specifications. Failure to do so could cause 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". If a track "locks" during operation, severe personal injury could result.

4. Field test the track under actual conditions.
5. After the field test, check the alignment of the track. If additional adjustment is necessary, repeat Adjusting Track Alignment procedure.

Suspension

The suspension should be adjusted for the operational needs and riding preference of the operator.

The front shock springs determine the amount of ski pressure and the reaction of the front suspension to rough terrain. The amount of ski pressure can also be changed by adjusting the length of the skid frame front arm limiter straps.

On models with rear suspension springs, the springs influence the load carrying capability of the snowmobile and should be adjusted for the weight and riding preference of the operator.

■ NOTE: On models with a rear arm float shock, this adjustment is achieved by increasingly or decreasing the air pressure in the rear arm air shock absorber.

FOX Shocks

If service work is needed on any FOX shocks, the shock will have to be removed and sent to FOX or any FOX distributor for any service work. For FOX shock information, visit www.ridefox.com.

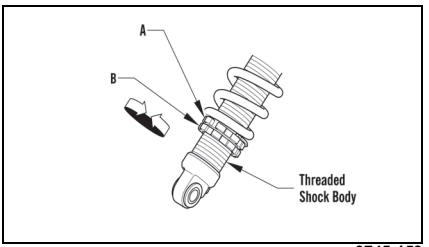
Each shock absorber should be visibly checked weekly for fluid leakage, cracks or breaks in the body, or a bent shaft. If any one of these conditions is detected, replacement is necessary. Take the snowmobile to an authorized Arctic Cat Snowmobile dealer for this service. If not under warranty, this service is at the discretion and expense of the snowmobile owner.

Adjusting Front (Ski) Shock Springs

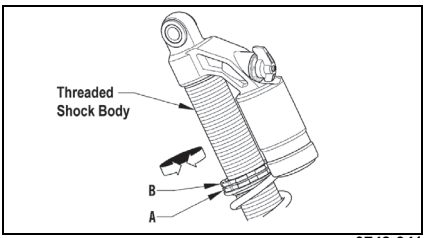
The front (ski) shock springs are individually adjustable for the terrain conditions and driving style of the operator. The spring adjuster nut has been set at the factory so the correct amount of threads are exposed between the adjuster nut and the threaded shock body as an initial setting. Additional ski pressure can be obtained by tightening the spring tension; ski pressure can be decreased by relaxing spring tension.

■ **NOTE: Equal adjustments should be maintained on both sides of the snowmobile.**

Front (ski) shock spring preload adjustment is accomplished by loosening the adjuster nut locking collar (B) from the adjuster nut (A) and using a suitable spring adjuster tool, rotating the adjuster nut in whichever direction is desired. Tighten the locking collar against the adjuster nut.



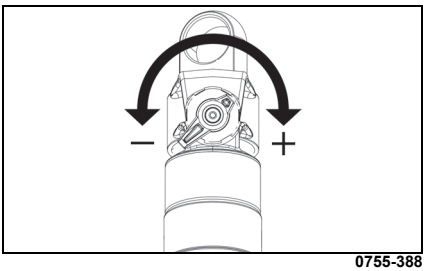
0745-159



0748-941

On models with AC5S shocks, use the adjustment lever located above the remote reservoir on the shock to adjust the damping between settings 1, 2, 3, 4, or 5. Setting #5 is the stiffest and most controlled position.

On models with QS3 shocks, use the adjustment lever located above the remote reservoir on the shock to adjust the damping between settings 1, 2, or 3. Setting #3 is the stiffest and most controlled position.

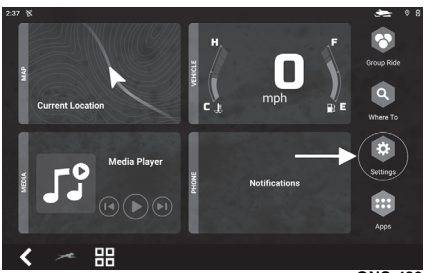


0755-388

iQS Shocks (Modifying customized DRIVER 1 and DRIVER 2 settings)

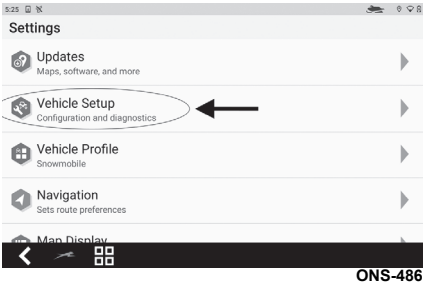
The iQS shocks are adjustable by choosing an overall compression setting (soft, medium, or firm) for both the front and rear shocks, or two customized driver profiles that fine tune the ride separately between the front ski shocks and rear skid shock(s). Adjustments may be made while the snowmobile is in motion using the gauge control on the handlebar.

To set the customized driver profiles, with the engine running, select settings from the main screen.

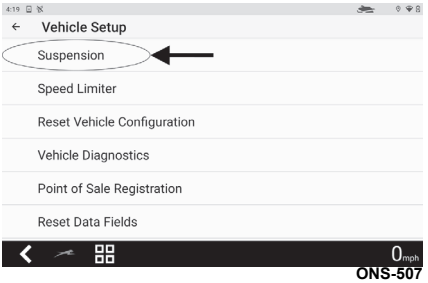


ONS-489

Select vehicle setup and then suspension.



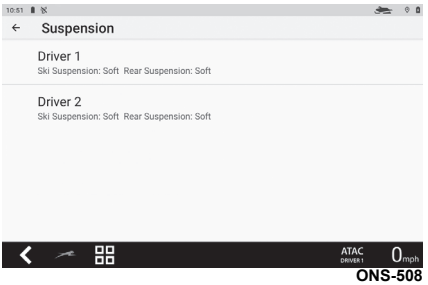
ONS-486



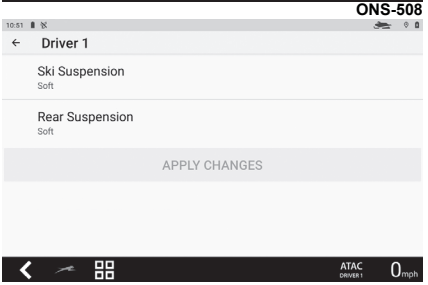
ONS-507

The compression of the front ski shocks and rear skid shock(s) are separately adjustable to the settings of soft, medium, or firm.

Select driver 1 or driver 2; then select either ski suspension or rear suspension.

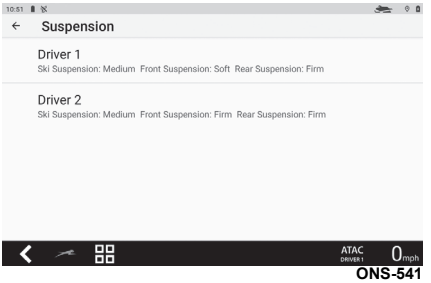


ONS-508



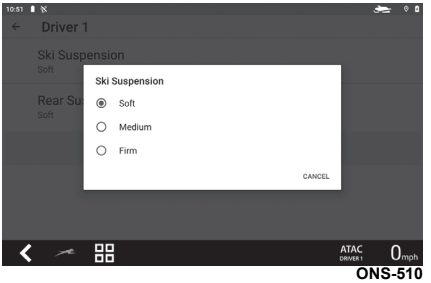
ONS-509

■ **NOTE: On EXT models, the front skid shock and rear skid shock can be adjusted individually.**

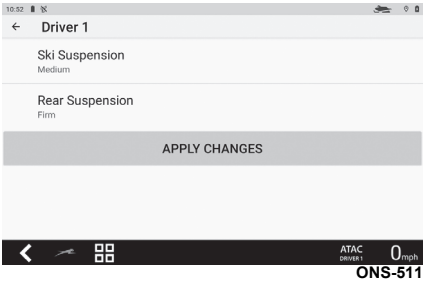


ONS-541

Select the desired suspension setting (soft, medium, or firm); then select apply changes.



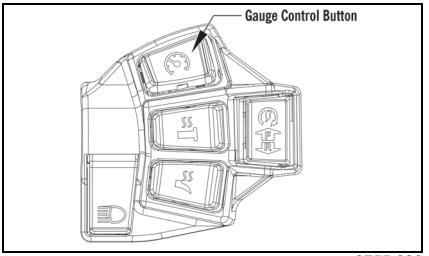
ONS-510



ONS-511

iQS Shocks (Selecting suspension setting)

With the engine running, press the center of the gauge control button on the left-side handlebar control until the ATAC suspension setting changes color from white to green.

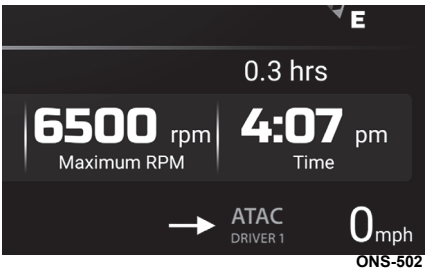


0755-396

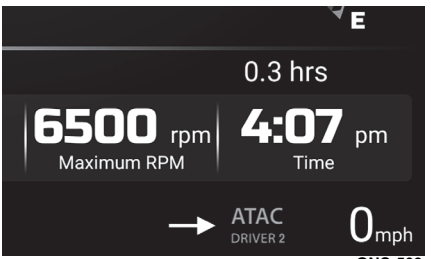
Press the left or right side of the gauge control button to select one of the following suspension settings:

DRIVER 1 or DRIVER 2 for the customized driver profile; or

SOFT, MEDIUM, or FIRM for the overall shock compression setting.

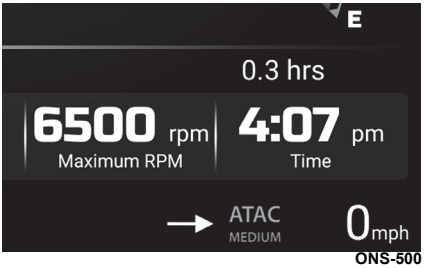


ONS-502

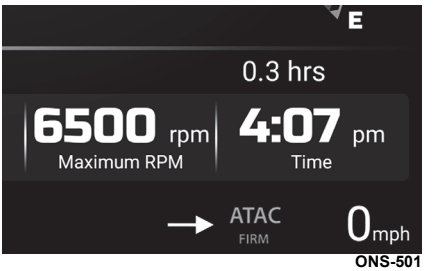


ONS-503

ONS-499



ONS-500

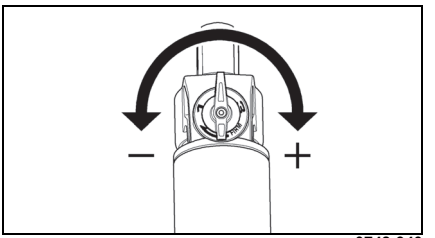


ONS-501

Press the center of the gauge control button to lock the ATAC suspension setting. The suspension setting is locked when the setting changes from green to white.

QSL Rear Arm Shock

On HCR/HCX models, the rear arm shock (QSL) has an adjustment lever on the shock to adjust the damping. There are three settings that may be chosen: 1, 2, or 3.



0748-940

Choose from three specifically calibrated ride control settings, with the 3rd position calibrated specifically for technical mountain riding, allowing increased climbing capabilities and limited transfer of the rear suspension.

The third setting should only be used when riding in the back country. This setting is not designed for trail riding.

Adjusting Skid Frame Front Arm

The skid frame front arm shock spring tension and the limiter straps are adjustable. However, Arctic Cat recommends that the shock spring be maintained at the factory preset of 1/8-1/4 in (3.2-6.4 mm) preload. Tightening the skid frame front arm shock spring may cause improper balance and may ruin the handling features of the snowmobile.

The length adjustment of the front arm limiter straps determines the weight distribution between the front of the skid frame and the skis. Tightening the limiter strap (shortening the strap) will pull up on the front of the skid frame and will increase ski pressure. Loosening the limiter strap (lengthening the strap) lowers the front of the skid frame and decreases ski pressure.

When customizing the amount of ski pressure, be sure to adjust both straps equally and do not over-adjust the limiter straps to adversely affect steering and operator control of the snowmobile. Some experimentation may be required until the proper adjustment for the operator's individual style is obtained.

■ NOTE: If the limiter straps are adjusted, it is highly recommended that a minimum of 1/8 in (3.2 mm) preload be maintained on the shock spring.

⚠ WARNING

Do not adjust the front arm limiter straps to a point at which steering and operator control of the snowmobile are adversely affected.

Adjusting Rear Spring Preload

Proper adjustment of rear spring preload is necessary to get the most desirable ride. The chart is designed to help in setting up rear spring preload; however, riding style is the single greatest factor in determining rear spring requirements.

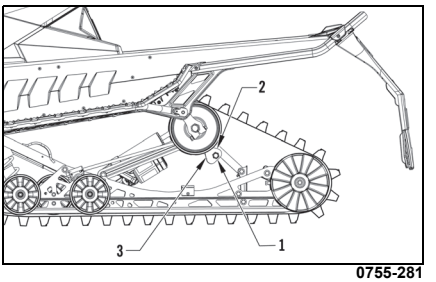
Rider Weight	Cam Position
Up to 180 lb (80 kg)	1
180-240 lb (80-110 kg)	2
Over 240 lb (110 kg)	3

■ NOTE: These cam position settings are <u>suggestions only</u>. Personal riding style will greatly influence cam position settings. Spend time to determine setting preferences.

Rear spring preload adjustment is accomplished by rotating the adjusting cams. Position 3 provides the stiffest ride, and Position 1 is for the lightweight operator or slow-speed trail riding. Position 2 is for the average operator under normal conditions. Always rotate the cam from the lighter position to the heavier position.

CAUTION

Never force the adjustment cams from the low position to the high position. Cam damage may occur.



0755-281

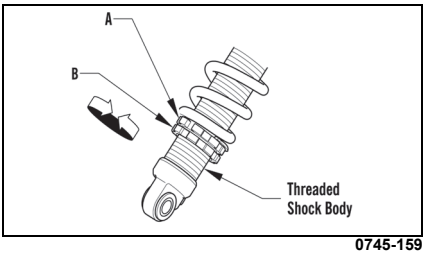
To rotate an adjusting cam, use a 13/16-in spark plug wrench. Rotate the wrench until the cam is in the desired position. To stiffen the ride, rotate the cam so as to raise the spring end. Make the appropriate adjustment on the other cam.

Adjusting Skid Frame Rear Arm Shock Spring

Proper adjustment of rear arm shock absorber spring preload is necessary to get the most desirable ride.

The rear arm shock spring is adjustable for the terrain conditions and driving style and weight of the operator. The spring adjuster nut has been set at the factory so the correct amount of threads are exposed between the adjuster nut and the threaded shock body as an initial setting.

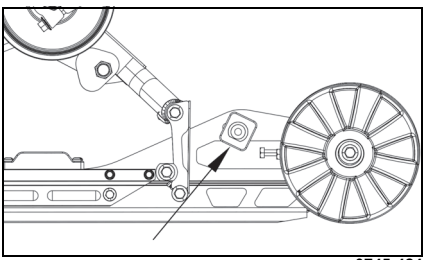
Rear spring preload adjustment is accomplished by loosening the adjuster nut locking collar (B) from the adjuster nut (A), and using a spring adjuster tool to rotate the adjuster nut in the appropriate direction. Tighten the locking collar against the adjuster nut.



0745-159

Coupler Block Adjustment

The coupler blocks have three settings (1, 2, and 3) that can be achieved by loosening the cap screws on the outside of the slide rails and rotating the assembly to the desired setting.


0745-424

The coupler block side (1) will provide less coupling and allow the rear arm to move the farthest rearward. The block incrementally gets taller (2 or 3) which increases the coupling effect.

■ NOTE: When adjusting/re-positioning the coupling block assembly, the two cap screws should have blue Loctite #243 applied and tightened to 40 ft-lb (54 N-m).

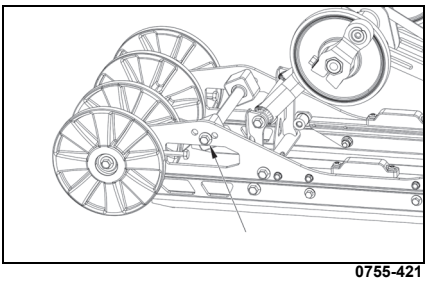
■ NOTE: For optimal positioning of the block against the rear arm, one should compress the suspension so that the rear arm touches off on the coupler blocks when tightening.

Coupler Block Assembly Adjustment (R-XC)

Slide rail position (1) (front hole) is recommended for ice racing settings where the rear suspension travel may be reduced by the operator to achieve a lower ride profile.

Slide rail position (2) (middle position) is the factory setting and is the desired position for trail riding. This position will provide a level of coupling that is not as aggressive as position (1).

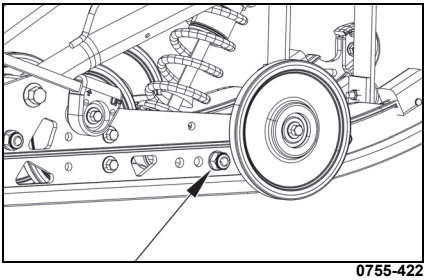
Slide rail position (3) (rear hole) will provide an option for an operator who is going to be riding off trail conditions as this will provide no coupling and make the snowmobile more compliant in non-groomed terrain where cornering performance can be reduced.


0755-421

■ NOTE: It is not advised to completely remove the coupling block assembly from the rear suspension. This will reduce the integrity of the rear suspension in this area and may cause an unexpected failure.

Adjusting Front Arm Shock Position (R-XC)

The R-XC rear suspension has three slide rail mounting locations for front arm shock. The factory position is (1) which is the furthest position forward in the rail. This position provides the highest rate of shock motion ratio for maximum shock absorption.



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Slide rail position (2) (middle hole) should be used to reduce the shock motion ratio when reducing the front arm travel via adjusting the limiter straps to a desired setting. Reducing the motion ratio of the shock will result in a softer feeling shock since less shock stroke is being used for a given amount of vertical travel.

Slide rail position (3) (rear hole) will reduce the shock motion ratio even more than position (2) which may be desired in certain ice racing conditions.

■ NOTE: If re-positioning the front shock position, a new nut should be used and tightened to 52 ft-lb (70 N-m).

■ NOTE: The operator should evaluate the amount of spring preload on the shock assembly if this position is to be adjusted. A recommendation of 0.25-in. (6.35 mm) of preload is recommended and should not be any less.

Lights

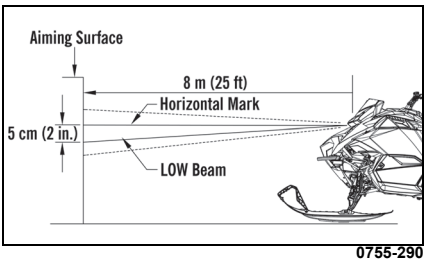
Adjusting Headlight Aim

The headlight can be adjusted for vertical aim of the HIGH/LOW beam. The LOW beam is used for vertical aiming.

1. Position the snowmobile on a level floor so the headlight is approximately 25 ft (8 m) from an aiming surface (wall or similar surface).

■ NOTE: There should be an "average" operating load on the snowmobile when adjusting headlight aim.

2. Measure the distance from the floor to midpoint of the headlight.
3. Using the measurement obtained in step 2, make a horizontal mark on the aiming surface directly in front of the headlight.
4. Make a vertical mark which intersects the horizontal mark on the aiming surface directly in front of the headlight.
5. Engage the brake lever lock and start the engine. Move the headlight dimmer switch to the LOW beam position. DO NOT USE HIGH BEAM.
6. Observe the LOW beam aim. Proper aim is when the top of the LOW beam is 5 cm (2 in) below the horizontal mark on the aiming surface.



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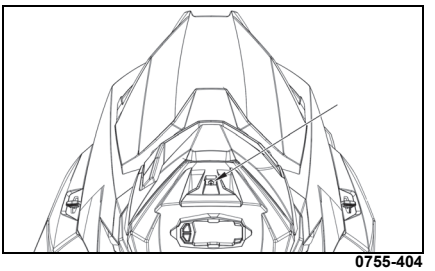
7. Adjust the headlight using the adjusting screw on the hood until correct aim is obtained. Shut the engine off; then disengage the brake lever lock.



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Ski Wear Bars

The ski wear bar is a replaceable bar attached to the underside of the ski. The purpose of the wear bar is to assist in turning the snowmobile, to minimize ski wear, and to maintain good steering control. If the snowmobile is operated primarily in deep snow, ski wear bar wear will be minimal; however, if the snowmobile is operated on terrain where the snow cover is minimal, the ski wear bar will wear faster. To maintain positive steering characteristics, Arctic Cat recommends that the ski wear bars be checked before each use and replaced if worn beyond 1/2 of the original diameter.

Ski wear bars are available from an authorized Arctic Cat Snowmobile dealer.

⚠ WARNING

Operating the snowmobile with excessively worn ski wear bars may result in a loss of steering control.

Removing Ski Wear Bars

1. Elevate the front of the snowmobile.
2. Remove the lock nuts securing the wear bar to the ski.
3. Remove the wear bar from the ski.

Installing Ski Wear Bars

1. Move the wear bar into position on the bottom of the ski.

■ NOTE: If installing a double-offset wear bar, the carbide edge should be directed to the inside of the ski.

2. Align the wear bar studs with the holes in the ski; then install the lock nuts. Tighten to 15 ft-lb (20 N-m).

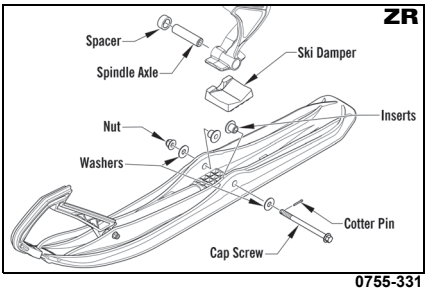
Adjusting Ski Stance

■ NOTE: Local laws and/or regulations as to maximum width of the ski stance on these snowmobiles may be applicable. Always comply with the maximum width laws and/or regulations when adjusting ski stance.

■ NOTE: Ski stance can be increased/decreased by (1 in) 2.5 cm.

ZR/RIOT

1. Place the front of the snowmobile on a support stand.
2. Remove the cotter pin; then remove the nut and cap screw securing the ski assembly to the spindle. Remove the ski. Account for the ski damper, inserts, and washers.
3. To increase ski stance, place ski stance spacers to the outside of the spindle and adjust the ski damper.



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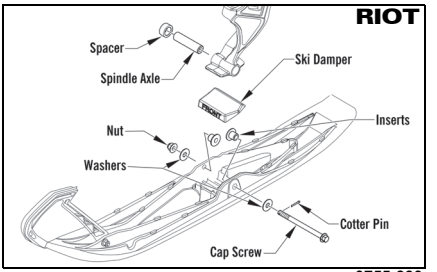

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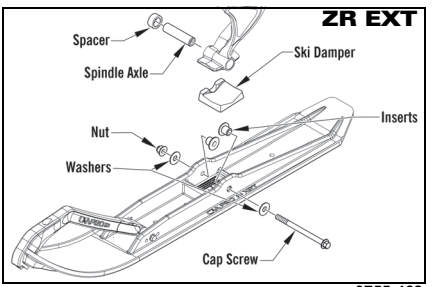


0755-462

4. To decrease ski stance, place ski stance spacers to the inside of the spindle and adjust the ski damper.

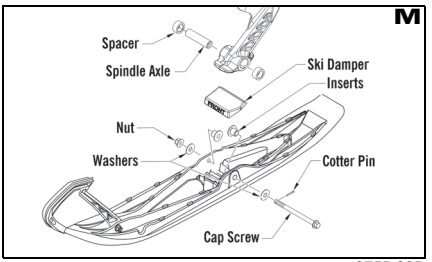
5. Apply a low-temperature grease to the non-threaded portion of the cap screw; then slide the cap screw through the ski accounting for the ski damper, inserts, and washers.

■ NOTE: Install the cap screw so the nut will be located to the inside of the ski.

6. Apply red Loctite 271 to the threads of the cap screw; then tighten the nut to 35 ft-lb (47 N-m).
7. Place the cotter pin into the ski cap screw and spread the pin.
8. Repeat procedure for the other ski.

M

1. Place the front of the snowmobile on a support stand.
2. Remove the cotter pin; then remove the nut and cap screw securing the ski assembly to the spindle. Remove the ski. Account for the ski damper, inserts, spacers and washers.
3. To increase ski stance, place ski stance spacers to the outside of the spindle and adjust the damper.



0755-385

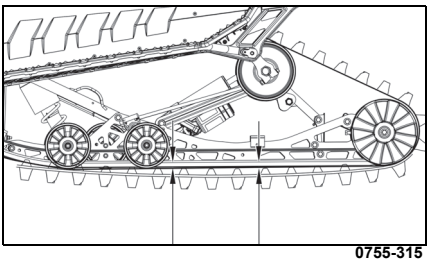
4. To decrease ski stance, place ski stance spacer to the inside of the spindle and adjust the damper.
5. Apply a low-temperature grease to the non-threaded portion of the cap screw; then slide the cap screw through the ski accounting for the rubber damper, inserts, spacers and washers.

■ NOTE: Install the cap screw so the nut will be located to the inside of the ski.

6. Apply red Loctite 271 to the threads of the cap screw; then tighten the nut to 35 ft-lb (47 N-m).
7. Place the cotter pin into the ski cap screw and spread the pin.
8. Repeat procedure for the other ski.

Rail Wear Strips

Arctic Cat recommends that the wear strips be checked weekly and replaced as necessary. Measure the wear strips at 25.4 cm (10 in) intervals. Wear strips must be 10.7 mm (0.42 in) thick or thicker.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If wear strip measurements are less than specified, replacement of both wear strips is necessary to prevent premature track clip wear and possible track damage. Take the snowmobile to an authorized Arctic Cat Snowmobile dealer for this service. This service is at the discretion and expense of the snowmobile owner.

Each time a new set of wear strips are installed, they should be tempered. Temper the wear strips by driving the snowmobile for approximately a mile on a hard pack trail; then immediately drive into deep snow and allow the wear strips to cool. Repeat the procedure (warming up the wear strips; then cooling them down) two or three times.

■ NOTE: The rail wear strips will wear rapidly if the snowmobile is operated on terrain on which the snow cover is minimal. Loose snow is required to cool and lubricate the wear strips and prevent accelerated wear.

■ NOTE: If operating on ice or hard-packed snow conditions, it is recommended that Ice Scratchers (p/n 5639-897) be installed to reduce wear strip wear and engine overheating.

Preparation for Storage

Prior to storing the snowmobile, it must be properly serviced to prevent corrosion and component deterioration. An authorized Arctic Cat Snowmobile dealer should perform this service; however, the owner/operator can perform this service if desired. This service is at the discretion and expense of the snowmobile owner. To prepare the snowmobile for storage, Arctic Cat recommends the following procedure:

1. Clean the seat cushion with a damp cloth and a Vinyl Protectant.
2. Clean the snowmobile thoroughly by hosing dirt, oil, grass, and other foreign matter from the skid frame, tunnel, hood, and belly pan. Allow the snowmobile to dry thoroughly. DO NOT get water into any part of the engine.
3. Place the rear of the snowmobile up on a shielded safety stand.
4. Start the engine and allow to idle.
5. Spray an Engine Storage Preserver into the intakes until the engine exhaust starts to smoke heavily or until the engine starts to drop in RPM. Turn engine off.
6. Plug the exhaust system outlet with steel wool.
7. With the ignition switch in the OFF position:
   A. Disconnect the high tension leads from the spark plugs; then remove the plugs, connect them to the leads, and ground them on the cylinder heads.

CAUTION

Never crank the engine over without grounding the spark plugs. Damage to coils and ECM may result.

   B. Pour 29.5 mL (1 fl oz) of SAE 30 petroleum-based oil into each spark plug hole and pull the recoil starter handle slowly about 10 times.
   C. Install the spark plugs and connect the high tension leads.
8. Fill the gas tank to its rated capacity; then add Arctic Cat Fuel Treatment (p/n 2436-868) to the gas tank following directions on the container for the treatment/gasoline ratio. Tighten the gas tank cap securely.
9. Remove the drive belt from the drive clutch/driven clutch. Lay the belt on a flat surface or slide it into a cardboard sleeve to prevent warping or distortion during storage.
10. Clean and inspect the drive clutch and driven clutch.
11. Apply light oil to the upper steering post bushing and shafts of the shock absorbers.
12. Lubricate the rear suspension with low-temperature grease.
13. Tighten all nuts, bolts, and cap screws making sure all nuts, bolts, and cap screws are tightened securely. Make sure all rivets holding the components together are tight. Replace all loose rivets.
14. Clean and polish the hood, console, and chassis. DO NOT USE SOLVENTS. THE PROPELLANT WILL DAMAGE THE FINISH.

■ NOTE: On electric start models, disconnect the battery cables making sure to disconnect the negative cable first; then clean the battery posts and cables. Charge the battery.

CAUTION

Sealed batteries require charging if left for extended non-start periods. Arctic Cat recommends trickle charging once a month. Follow the manufacturer's instructions and cautions.

15. If possible, store the snowmobile indoors. Raise the track off the floor by blocking up the back end making sure the snowmobile is secure. Loosen the track adjusting bolts to reduce track tension. Cover the snowmobile with a machine cover or a heavy tarpaulin to protect it from dirt and dust.

16. If the snowmobile must be stored outdoors, position the snowmobile out of direct sunlight; then block the entire snowmobile off the ground making sure the snowmobile is secure. Loosen the track adjusting bolts to reduce track tension. Cover with a machine cover or a heavy tarpaulin to protect it from dirt, dust, and rain.

CAUTION

Avoid storing in direct sunlight and using a plastic cover as moisture may collect on the snowmobile causing corrosion.

Preparation after Storage

Taking the snowmobile out of storage and correctly preparing it for another season will ensure trouble-free snowmobiling. Arctic Cat recommends the following procedure:

1. Clean the snowmobile thoroughly. Polish the exterior of the snowmobile.
2. Clean the engine. Remove the steel wool from the exhaust system. Check exhaust system and air-intake silencer for obstructions.
3. Inspect all control wires and cables for signs of wear or fraying. Replace if necessary. Use cable ties or tape to route wires and cables away from hot or rotating parts.
4. Inspect the drive belt for cracks and tears. Check belt specifications. Replace if damaged or worn. Install the drive belt.

■ NOTE: If the old belt is worn but in reasonable condition, retain it with the snowmobile as a spare in case of emergency.

5. Inspect all fuel hoses and oil hoses for deterioration or cracks; replace if necessary. Make sure all connections are tight; then fill the oil-injection reservoir with the recommended 2-cycle oil.
6. Inspect the spark plugs. Replace, gap, or clean as necessary.
7. Tighten all nuts, bolts, and cap screws making sure all nuts, bolts, and cap screws are tightened securely.
8. If not done during preparation for storage, lubricate the rear suspension with low-temperature grease.
9. Check the coolant level and all coolant hoses and connections for deterioration or cracks. Add properly mixed coolant as necessary.
10. On electric start models, charge the battery until fully charged; then connect the battery cables making sure to connect the positive cable first. Test the electric start system.
11. Inspect the entire brake system, all controls, headlight, taillight, brake light, ski wear bars, and headlight aim; adjust or replace as necessary.
12. Adjust the track to the proper tension and alignment.

Limited Warranty

Arctic Cat Inc. (hereinafter referred to as Arctic Cat) extends a limited warranty as described below on each new Arctic Cat Snowmobile it assembles and on each genuine Arctic Cat Snowmobile part and accessory assembled and sold by an authorized Arctic Cat Snowmobile dealer. The limited warranty on an Arctic Cat Snowmobile is extended to the original retail purchaser for the time periods described below; however, the balance of the remaining warranty may be transferred to another party unless the purchase is for commercial use (see below). Warranty coverage is only available in the country in which the original retail purchase occurs to the original retail purchaser resident in that country or to a transferee resident in that country of the balance of the remaining warranty.

Arctic Cat warrants only the products it assembles and/or sells and does not warrant that other products will function properly when used with an Arctic Cat Snowmobile or will not damage the Arctic Cat Snowmobile. Arctic Cat does not assume any liability for incidental or consequential damages.

Arctic Cat will repair or replace, at its option, free of charge (including any related labor charges), any parts that are found to be warrantable in material or workmanship. This repair work MUST be done by an authorized Arctic Cat Snowmobile dealer. No transportation charges, rental charges, or inconvenience costs will be paid by Arctic Cat. The warranty is validated upon examination of said parts by Arctic Cat or an authorized Arctic Cat Snowmobile dealer. Arctic Cat reserves the right to inspect such parts at its factory for final determination if warranty should apply.

The warranty periods are as follows:

1. For snowmobiles used for recreational purposes:
—If purchased between May 1 and November 30, warranty expires ONE (1) YEAR from December 1 of the current year.
—If purchased between December 1 and April 30, ONE (1) YEAR from the date of sale.
2. For snowmobiles used for commercial purposes (including rental operations), ONE (1) YEAR from the date of invoice and/or 5000 MILES whichever comes first (non-transferable).
3. THIRTY (30) DAYS from date of sale of snowmobile on Arctic Cat supplied batteries.

Exclusions to this warranty include normal wear, abuse (i.e. a track run on marginal snow conditions without proper lubrication or additional idler wheels), and the following parts:

Fuel Filter	Light Bulbs	Windshield	Drive Belt	Torn or Punctured Upholstery
Wear Bars	Brake Pads	Spark Plugs	Drive Clutch/Driven Clutch Wear Parts	
Wear Strips	Shock Absorber(s)*		Non-Warning Decals	

*Limited to one (1) year or 1000 miles of "normal" riding conditions — replace for defective or leaking shock, corroded or pitted shaft, peeling chrome.

■ **NOTE: Snowmobiles that are factory equipped with FOX shocks and experience a shock failure within the factory warranty period (1 year) must not be tampered with. Only the "Schrader" (air pressure) valve is serviceable during the warranty period. Failures (air leaks) must be confirmed by following the test procedure as shown in the service manual. Any other tampering with the shock will void the FOX warranty.**

The following will VOID Arctic Cat's warranty:

1. Failure to perform the proper break-in procedure and all related maintenance, storage procedures (if stored for extended periods), and/or service as recommended in the Operator's Manual.
2. Repairs and/or adjustments by anyone other than an authorized Arctic Cat Snowmobile dealer.
3. Use of an improper fuel mixture ratio.
4. Use of improper carburetor jets.
5. Use of improper gasoline, lubricating oils, or spark plugs.
6. An accident or subjecting the snowmobile to misuse, abuse, or negligent operation.
7. Any modification, addition, or removal of parts unless instructed to do so by Arctic Cat.
8. Use of the snowmobile in any way for racing purposes.
9. Removal of the engine for use in another vehicle.
10. Removal or mutilation of the Vehicle Identification Number or Engine Serial Number.
11. Use of parts not sold or approved by Arctic Cat.
12. Track and tunnel damage resulting from either ice stud or hooker plate installation.
13. Damage due to improper transportation.

Arctic Cat shall not be responsible for and this limited warranty excludes recovery of economic, punitive, consequential and incidental damages, lost profits, and loss of use. Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. Arctic Cat's aggregate liability may not exceed the price of the product. The law of the State of Minnesota shall apply to all claims or disputes, exclusive of its conflicts of law provisions.

IMPLIED WARRANTY EXCLUSION AND DISCLAIMER

To the fullest extent permitted by law, Arctic Cat excludes and disclaims all implied warranties of merchantability and fitness for a particular purpose.

If you are not satisfied with warranty service or repairs, you should contact Arctic Cat at 1-800-279-2281.

Warranty Procedure/Owner Responsibility

At the time of sale, an Owner Registration form is to be completed by the selling dealer and consumer. The receipt of the registration form by Arctic Cat is a condition precedent to warranty coverage. It is the selling dealer's responsibility to retain and/or submit the appropriate copies of the form to the appropriate place(s) to initiate warranty coverage.

The dealer will furnish to the consumer a signed copy of the form which must be presented to the dealer when requesting warranty service. The registration form is the consumer's proof of ownership and warranty eligibility. The form is used by the dealer to validate the warranty claim. Retain your copy of the form and keep it in a safe place.

When warranty repair is suspected, the snowmobile should be taken to the selling dealer, who has the primary responsibility to perform warranty repairs. Subject to the limitations set forth in the Limited Warranty, in the event the selling dealer has ceased to do business, you have moved, or you are in a location away from your selling dealer, warranty may be performed by any authorized Arctic Cat Snowmobile dealer.

The authorized Arctic Cat Snowmobile dealer will examine the snowmobile or part to determine if, in his opinion, a warrantable condition exists. If a warrantable condition appears to exist, the dealer will repair or replace, at Arctic Cat's option, free of charge, including any related labor costs, all parts that are found to be warrantable and any other parts which the warrantable part caused to be damaged. You, the consumer, will then be asked to sign a warranty form to ensure Arctic Cat that the warranty work was actually performed.

It is the consumer's responsibility to maintain and service the snowmobile in accordance with Arctic Cat's recommendations in the Operator's Manual. To protect yourself and your snowmobile, follow all safety and service tips. Arctic Cat will NOT warrant repairs required as a result of not performing standard operator maintenance, storage procedures, and service as outlined in the Operator's Manual.

Should you have any questions concerning the warranty, contact an authorized Arctic Cat Snowmobile dealer.

Arctic Cat, 601 Brooks Ave, Thief River Falls, MN 56701 USA — 1-800-279-2281

U.S. EPA Emission Control Statement/ Warranty Coverage (U.S. Only)

STATEMENT/WARRANTY

Arctic Cat warrants to the original retail purchaser, and each subsequent purchaser, that all U.S. EPA-certified Arctic Cat snowmobiles are designed, built, and equipped to conform to all U.S. EPA Emission Control Regulations. Please read the following information completely.

Your authorized Arctic Cat snowmobile dealer will repair or replace any defective emission-related component at no cost to you during the warranty period. You may have non-warranty service performed by any repair establishment that uses equivalent components. The regulations provide significant civil penalties for tampering that causes your snowmobile to no longer meet U.S. EPA emission standards.

Arctic Cat further warrants that the engine and its emission-related components are free from defects in materials or workmanship that could cause the engine to fail to comply with applicable regulations during the warranty period.

If you have any questions about this information, or the emission warranty coverage statement, contact your local authorized Arctic Cat snowmobile dealer.

WARRANTY PERIOD

The emission warranty period for this snowmobile begins on the same date as the standard warranty coverage and continues for 30 months or 2500 miles, whichever comes first.

COMPONENTS COVERED

The emissions warranty covers major emissions control components and emission-related components listed as follows:

Engine Management and Sensors
- Barometric Pressure Sensor
- Camshaft Position Sensor
- Engine Control Module (ECM)
- Engine Coolant Temperature Sensor
- Intake Air Temperature Sensor
- Manifold Absolute Pressure Sensor
- Throttle Position Sensor

Fuel/Air System
- Fuel Injectors
- Fuel Pressure Regulator
- Fuel Pump
- Carburetor(s)
- Throttle Bodies
- Oxygen Sensor
- Crankcase Ventilation System
- ISC Valve
- Gas Tank
- Gas Tank Cap
- Fuel Line

Ignition System
- Ignition Coil
- Knock Sensor System
- Crankshaft Position Sensor
- Exhaust Temperature Sensor
- Capacitive Discharge Ignition (CDI) Module
- Magneto Pick-Up
- Spark Plugs

Miscellaneous Items Used in Aforementioned Systems
- Connectors
- Switches
- Grommets
- Clamps
- Hoses
- Ties
- Gaskets
- Wiring

For U.S. EPA Emission Control Warranty coverage questions, contact Arctic Cat at 1-800-279-2281.

OWNER'S RESPONSIBILITIES

The owner of any snowmobile warranted under this Arctic Cat Emission Control Statement is responsible for the proper maintenance and use of the snowmobile in accordance with Arctic Cat's recommendations in the Operator's Manual.

Change of Address, Ownership, or Warranty Transfer

Arctic Cat Inc. keeps on file the current name and address of the owner of this vehicle. This allows Arctic Cat to reach the current owner with any important safety information which may be necessary to protect customers from personal injury or property damage. Please make sure a copy of this form is completed and returned to Arctic Cat Inc. if you move or if the vehicle is sold to another party.

This form may also be used to transfer the unused portion of the original warranty to a second party. In order to transfer warranty, fill out this form completely; then return a copy of this form to Arctic Cat Inc. Arctic Cat will then process the application and issue warranty for the balance of the time remaining of the original warranty. Warranty coverage is only available in the country in which the original retail purchase occurs to the original retail purchaser resident in that country or to a transferee resident in that country of the balance of the remaining warranty. This form may also be scanned and emailed to arcticcatwarranty@arcticcat.com.

- ❑ Address Change
- ❑ Ownership Change
- ❑ Warranty Transfer

CHANGE OF ADDRESS/OWNERSHIP/WARRANTY TRANSFER TO:

Name _____

Address _____

City/State (Province) _____

Zip Code (Postal Code)_____

Phone ( )_____

Email _____

Year and Model _____

Vehicle Identification Number (VIN) _____

Fold Back

Place
Stamp
Here

CHANGE OF ADDRESS/OWNERSHIP

ARCTIC CAT INC.
PRODUCT SERVICE AND WARRANTY DEPT.
601 BROOKS AVE
THIEF RIVER FALLS MN 56701
USA

Reference Information

Write the appropriate information for your Arctic Cat Snowmobile in the spaces below.

Always use these numbers when referring to your snowmobile.

Model: _____
Date of Purchase: _____
Vehicle Identification Number: _____
Engine Serial Number: _____
Your Arctic Cat Dealer: _____
Address: _____
Phone: _____

Parts and Accessories

When in need of replacement parts, oil, or accessories for your Arctic Cat Snowmobile, be sure to only use GENUINE ARCTIC CAT PARTS, OIL, AND ACCESSORIES. Only genuine Arctic Cat parts, oil, and accessories are engineered to meet the standards and requirements of your Arctic Cat Snowmobile. For a complete list of accessories, refer to the current Arctic Cat Accessory Catalog. To aid in service and maintenance procedures on these snowmobiles, an Illustrated Parts Manual and a Service Manual are available through your local Arctic Cat Snowmobile dealer.

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Phone: 1-800-279-2281