ARCTIC CAT

2020

OPERATOR'S MANUAL

p/n: 2262-569

ZR 200

This vehicle can be hazardous to operate.

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, P.O. Box 810, Thief River Falls, MN 56701, 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 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.

Table of Contents

p/n: 2262-569

Foreword

The ZR 200 Snowmobile is intended to be a learning/recreational snowmobile for a responsible operator at least 13 years of age and under adult supervision. This snowmobile is intended to be ridden by the operator only; there shall be no passenger. Use of this snowmobile on public streets, roads, and highways can be hazardous and is prohibited by law in most cases. As a parent or guardian, one must accept the responsibility of training the operator in the safe operation of the snowmobile. Teach all operators the basic principles of operation, snowmobile rules and regulations, and especially how to stop the snowmobile in case of an emergency. Impress upon the operator a sense of snowmobile courtesy and responsibility.

This snowmobile is a quality Arctic Cat product designed, engineered, and assembled to give dependable service. Be sure, as the owner, to become thoroughly familiar with its basic operation, maintenance, and storage procedures. Read this manual and the accompanying Snowmobile Safety Handbook to ensure safe and proper use of the snowmobile.

This manual is divided into sections. The sections “Getting Ready to Operate the ZR 200 Safely” and “Operating the ZR 200” must be read and explained to the operator. The other sections are for the owner/parent/guardian and contain information on snowmobile identification, safe operating instructions, lubrication, maintenance, storage, and after-storage preparation. If 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. Because Arctic Cat Inc. constantly refines and improves its products, no retroactive obligation is incurred.

This Arctic Cat Operator’s Manual should be considered a permanent part of the snowmobile and must remain with the snowmobile at time of resale. If the snowmobile changes ownership, contact Arctic Cat Inc., Product Service and Warranty Department, P. O. Box 810, Thief River Falls, MN 56701, for proper registration information. This manual was prepared by the Product Service and Warranty Department of Arctic Cat Inc.

Every Arctic Cat snowmobile meets or exceeds the standards of the Snowmobile Safety and Certification Committee and displays the SSCC decal. Arctic Cat endorses and encourages the safe use of all snowmobiles. Always wear a helmet and eye protection. Drive with caution, observe all state and local laws, 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 National Snowmobile Foundation, Arctic Cat promotes snowmobiling through education, charity, and research programs.

Printed in U.S.A.

Declaration of Conformity

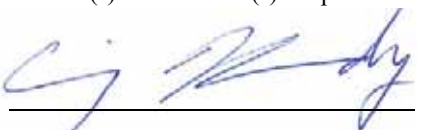
Application of council directives:	EMC Directive 2014/30/EU EC Machinery Directive 2006/42/EEC
Issued by European Commission. Type of Equipment: Snowmobile Brand Name: Arctic Cat	
Model Numbers:	S2020ZRAABUSB S2020ZRAABOSB S2020ZRAABUSR S2020ZRAABOSR S2020ZRAABUSX S2020ZRAACUSB S2020ZRAACUSX S2020ZRAACUSR

Standards to which conformity is declared:

EMC:	EN 55012, EN 61000-6-2, ICES-002
MACHINERY:	2006/42/EEC
Vibration:	ISO 5349, ISO 8041 Vibration Standards

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.



Craig Kennedy
Vice President

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 turvalliste käyttöä.
Näitä sääntöjä tarkkaan noudattaen saat kelkkailusta irti parhaan mahdollisen hyvän 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 sud-dette 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ますよう、下記の安全運転ルールを常にお守りください。

1 Don't drink and ride.
No 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 at 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/mattore del ghiaccio.

薄氷や水が見えている場所は避けること。

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 vägbanevägg.
Ole varovainen kun ajat tien tai reutatien poikki.
Vær forsiktig når du krysser veier/jernbanesklinner.
Usate prudenza nell'attraversare strade/passaggi a livello.

道路や線路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 ajele yökuluttamilla.
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 stel koppling vid bogsering.
Käytä aina vahvoja vetolaitteita.
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 à 1-Place.
B. Maximum deux passagers sur les modèles à 2-Places.
Begränsa antal åkande.
A. Enkelsitsare: Endast förare.
B. Dubbelsitsare: Förare och en passagerare.
Ota huomioon kuormitusrajat.
A. Vain yksi henkilö yhden istuttavaan kelkkaan.
B. Korkeintaan kaksi kohden kerrgan kelkkaan.
Vær oppmerksom på passasjerkapasiteten.
A. Maks. En person på en-setters scootere.
B. Maks. To personer på to-setters scooters.
Osservate la capienza dei veicoli.
1-posto: Massimo 1 passeggero.
2-posti: Massimo 2 passeggeri.

乗車定員を守ること。
一人乗りに二人乗り。
二人乗りに三人まで。

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

操作装置のチェックや機体を整備すること。

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

運転 他の各年 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 du bon sens.
Följ lagar och regler och använd sunt förnuft.
Noudata kaikkia lakeja ja paikallisnormeja ja käytä myös tervettä järkeä.
Overhold lokale lover og regelverk og bruk sunt 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。

Specifications

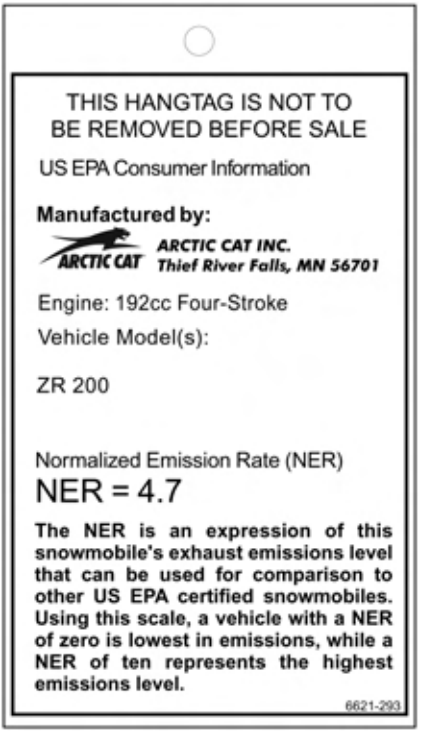
ENGINE AND DRIVE	
Type	Forced Air Cooled/4-Cycle
Bore x Stroke	70 x 50 mm (2.76 x 1.97 in.)
Valve Arrangement	Overhead
Displacement	192 cc (11.7 cu in.)
Lighting Coil Output	96W @ 3000 RPM
Lubrication	Forced Splash
Cooling System	Forced Air
Drive Clutch	Arctic 5.25 in. (RPM sensing)
Brake Type	Hydraulic Brake
Ignition Type	CDI
Track Width	25.4 cm (10 in.)
Track Length	236.2 cm (93 in.)
Track Tension	50 mm (2 in.) @ 20 lb
Track Style	Cobra
Spark Plug Type	NGK BPR4ES
Spark Plug Gap	0.7-0.8 mm (0.028-0.031 in.)
Ignition Timing (Fixed)	28° BTDC @ 3600 RPM
CARBURETOR	
Type (B-25)	Mikuni BS25-157
Type (B-24)	Mikuni BV24-18-586 B
CHASSIS	
Overall Length	213.3 cm (84 in.)
Overall Height	91.4 cm (36 in.)
Overall Width	91.4 cm (36 in.)
Ski Center-to-Center Distance (Stance)	77.5 cm (30.5 in.)
MISCELLANEOUS	
Gasoline (Recommended)	87 Minimum Octane Regular Unleaded
Gas Tank Capacity	8.3 L (2.2 U.S. gal.)
Engine Oil (Recommended)	Synthetic 0W-40
Crankcase Oil Capacity	568 ml (19.2 fl oz)
Taillight (p/n)	0609-963
Headlight Bulb (p/n)	0609-956
Starting System	Electric Start/Manual Recoil
Dry Weight	93.9 kg (207 lb)
Battery	100 Amps (cold)
Vibration — Hand/Arm	$< 3.8\ m/s^2$
Vibration — Seat	$< 0.5\ m/s^2$

Specifications subject to change without notice.

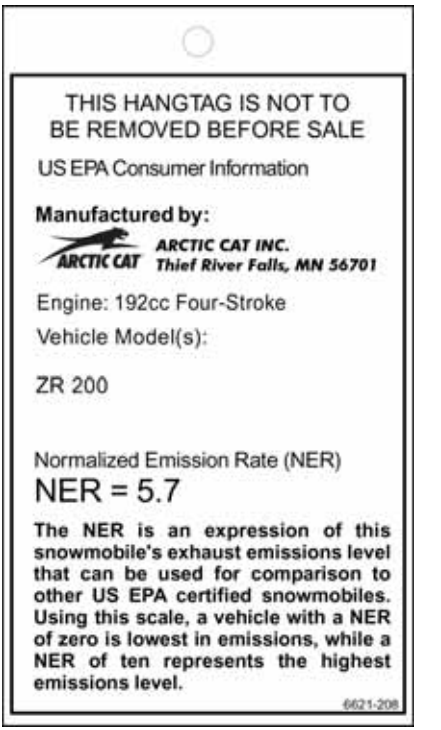
Hangtags

This vehicle comes with hangtags containing important safety information. Anyone who rides the vehicle should read and understand this information before riding.

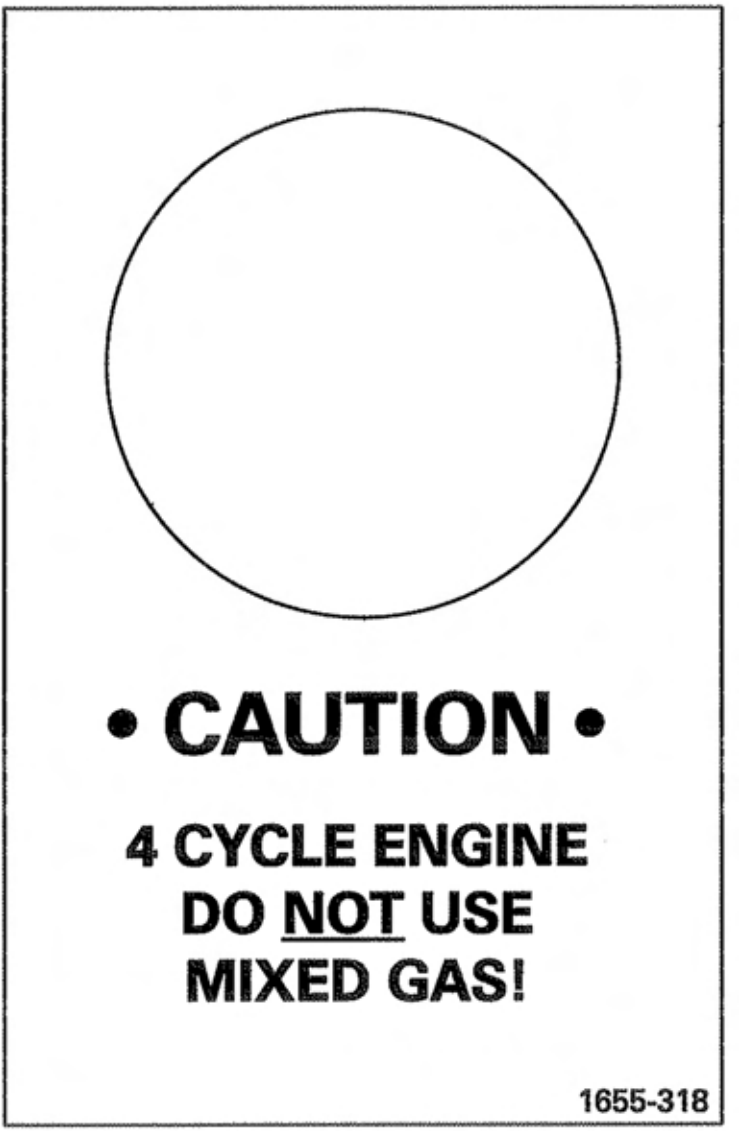
B-24 Carburetor



B-25 Carburetor

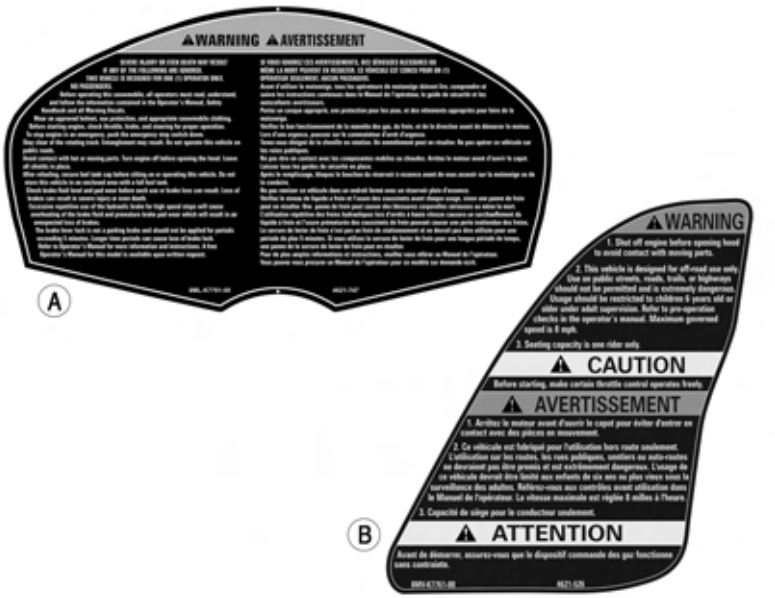


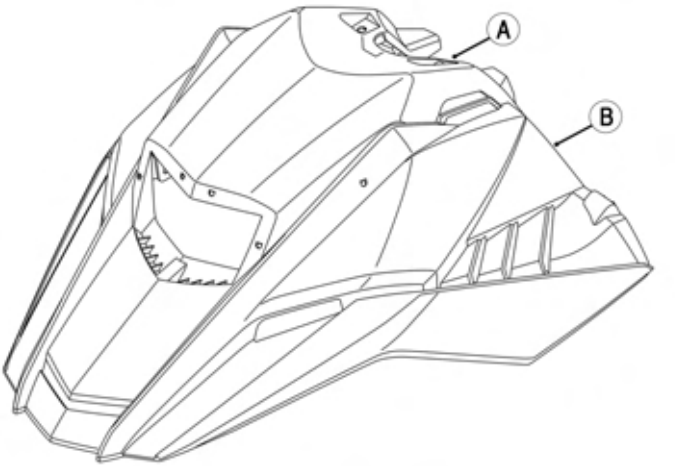
Hangtags



Warning Labels & Information

This vehicle 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.





ONS-160A

Getting Ready to Safely Operate the ZR 200

■ **NOTE: This section and Operating the ZR 200 section must be read and explained to the operator by the owner/parent/guardian. Refer to Control Locations or the snowmobile while explaining this section.**

Like most riders, you are anxiously waiting to drive the snowmobile. Remember that the snowmobile is not a toy. It must be driven carefully at all times!

First, you must understand the controls, know where the controls are, and know how to use them correctly.

A. **BRAKE LEVER —** To slow down or stop the snowmobile, the brake lever should be pulled (squeezed) toward the handlebar grip.

■ **NOTE: When the brake is being used, the throttle lever must be in the idle (released) position.**

B. **THROTTLE LEVER** — Controls the speed of the snowmobile. The closer the throttle control lever is to the handlebar grip (the more it is squeezed), the faster the snowmobile will go.

C. **IGNITION SWITCH** — When the key is in the OFF position, the engine will neither start nor run. If the key is in the RUN position, the engine will start and run.

D. **EMERGENCY STOP SWITCH** — If something happens that you do not understand or if there is an emergency, move the emergency stop switch to the OFF (down) position to immediately stop the engine.

Second, you must check several things every time before the engine is started.

A. Make sure the brake lever works properly (moves freely) by pulling (squeezing) the brake lever and releasing it several times.

B. Make sure the throttle lever works properly (moves freely) and that it snaps back to the idle position quickly when it is released. The idle position is when the throttle lever is farthest away from the handlebar grip. If the throttle lever does not snap back quickly, the engine must not be started and the throttle system must be repaired.

C. Make sure that you have enough clothes on to keep yourself warm but NEVER wear clothes such as long or loose scarves or long shoe laces that could get caught in a moving part of the snowmobile.

Third, make sure that you can answer yes to all of the following questions before each ride.

A. Do you have permission from the owner or parent or guardian to operate the snowmobile?

B. Are you wearing an approved safety helmet?

C. Are you wearing something to protect your eyes (such as goggles or a visor)?

D. Are you dressed warmly enough?

E. Has your parent or guardian checked to make sure you have enough gasoline?

F. Do the throttle lever and brake lever move freely?

G. Are all shields and covers in the right place and is the hood securely latched?

H. Do you have a safe area to ride in? Is the area free of rocks, wires, trees, traffic, etc.?

Operating the ZR 200

You must be a responsible, careful, and considerate snowmobile operator at all times. Your safety is our concern and must always be yours.

A. When you are learning how to operate the snowmobile, have a parent or guardian take you to an open area to practice figure eights, starting, and stopping. This practice is important and will give you a good "feel" of the snowmobile. You will also be able to learn how the snowmobile handles under different conditions (deep snow, hard-packed snow, etc.).

B. Always sit on the seat and keep both feet on the running boards when operating the snowmobile. Do not get off the snowmobile until it has come to a complete stop.

C. Never drive the snowmobile faster than a safe speed. Do not drive too close to roads, buildings, trees, other snowmobiles, or people. Never show off!

D. Never operate the snowmobile unless the headlight and taillight are in working order.

E. The snowmobile is designed for your enjoyment. DO NOT give rides to your friends. It is made to carry only one person.

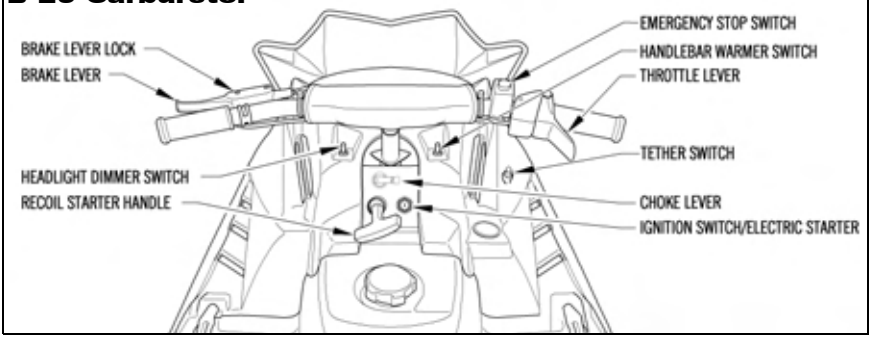
F. Do not pull sleds, sleighs, etc., behind the snowmobile.

G. If you get stuck, shut the engine off and get help.

General Information

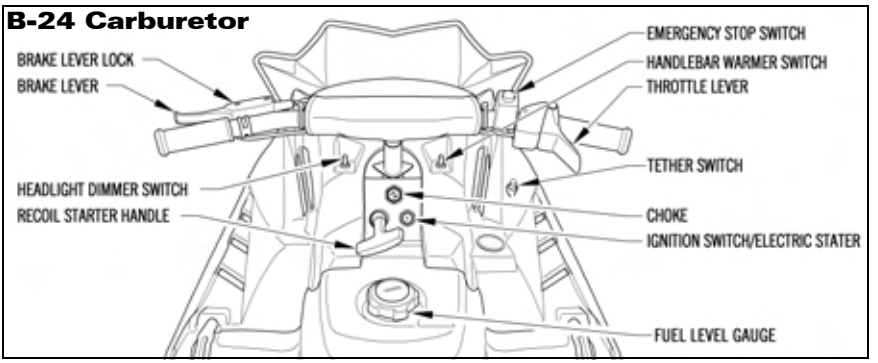
Control Locations

B-25 Carburetor



ONS-181

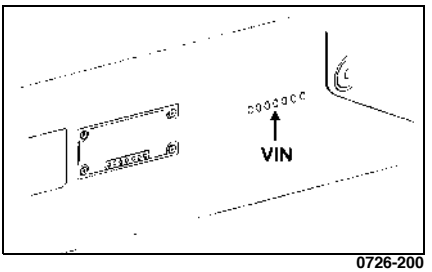
B-24 Carburetor



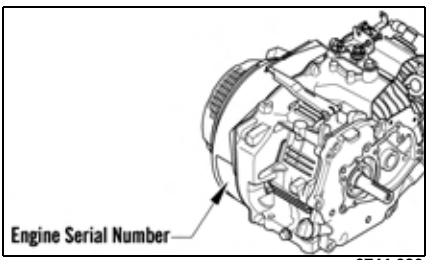
0752-045

Snowmobile Identification

This snowmobile has two identification numbers: The Vehicle Identification Number (VIN) is stamped into the right side of the tunnel and the Engine Serial Number (ESN) is stamped into the front side of the crankcase.



0726-200



0744-926

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

Always provide the snowmobile model name, VIN, and engine serial number 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.

Gasoline — Oil

This snowmobile has a four-cycle engine; therefore, it is unnecessary to premix gasoline and oil.

Recommended Gasoline

The recommended gasoline to use in this snowmobile is 87 minimum octane regular unleaded. Oxygenated gasolines are acceptable gasolines. Do not use gasolines containing methanol.

CAUTION

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

■ NOTE: If not satisfied with gasoline economy of the engine when using a gas/alcohol blend, switch to unleaded gasoline without alcohol.

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.

⚠ WARNING

Always fill the gas tank in a well-ventilated area. Never add gasoline to the gas tank near any open flames or with the engine running. DO NOT SMOKE while filling the gas tank.

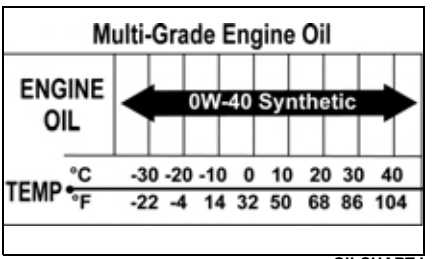
Recommended Oil

■ NOTE: This snowmobile comes from the factory with SAE 0W-40 Synthetic oil installed.

The recommended oil to use in the engine is 0W-40 Synthetic oil. See the viscosity chart for details.

CAUTION

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



OILCHARTJ

Engine Break-In

The engine requires a short break-in period (approximately 10 operating hours) before being subjected to heavy load conditions or full-throttle operation. Strict adherence to the break-in procedure will contribute to optimum performance and longevity of the engine.

During break-in, a maximum of 1/2 throttle is recommended; however, brief full-throttle accelerations and variations in driving speeds contribute to good engine break-in. After the 10 hour break-in period, the snowmobile may be taken to an authorized Arctic Cat Snowmobile dealer for a checkup and oil change. This service is at the discretion and expense of the snowmobile owner.

Muffler

The muffler is designed to reduce engine noise and improve the total performance of the engine. If the engine is run without the muffler installed, severe engine damage will result.

Suspension

An optional Heavy Duty Spring Kit (p/n 7639-887) is available from any Arctic Cat snowmobile dealer. This kit includes stiffer ski shock springs as well as stiffer rear torsion springs.

Battery

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.

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.

CAUTION

Jump-starting the vehicle without a battery is not advisable as it may cause damage. Additionally, running the unit without a battery in place or the use of a "Jumper Pack" could cause damage to the electrical system.

⚠ 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.

1. On the snowmobile to be jump-started, slide any terminal boots away.

⚠ WARNING

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.

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.

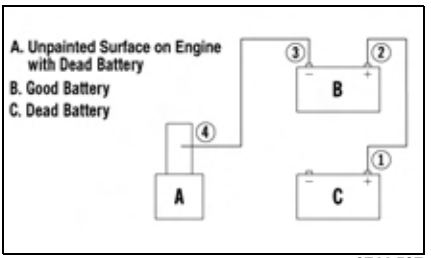
CAUTION

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. 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.

6. Attach one clamp of the negative jumper cable (black) to the negative (-) terminal (3) of good battery (B); then attach the other clamp of the negative (black) jumper cable (4) to an unpainted metal surface (A) on the engine 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.

7. 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.
8. Start the snowmobile with the dead battery and allow it to run for several minutes before disconnecting the jumper cables.
9. 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.

Operating Instructions

Starting and Stopping Engine

B-25 Carburetor

⚠ WARNING

Never allow anyone to stand in front of the snowmobile at any time, especially when starting the engine.

It is imperative that all safety checks found in the accompanying Snowmobile Safety Handbook be performed before attempting to start the engine.

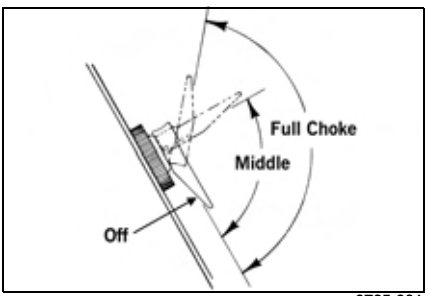
This snowmobile is equipped with a recoil starter as well as an electric stater. The recoil starter handle and the key switch are located below the steering post.

To start the engine, use the following procedure:

1. Test the throttle lever by completely compressing and releasing it several times. The lever MUST return to the idle position quickly and completely.
2. Move the emergency stop switch to the UP or RUN position.

■ NOTE: Make sure the tether cap is connected to the tether switch and tether is attached to the rider.

3. Insert key into ignition switch; then rotate key to the RUN position.
4. For a cold engine, move the choke lever to the full-choke position. If the engine is warm, choking is normally not necessary.



0725-001

5. Using the recoil starter to manually start the snowmobile, pull the recoil starter handle slowly until resistance is felt; then give a short, quick pull. The engine should start; however, if the engine does not start, repeat this step while applying 1/8 throttle until the engine is running.

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.

6. Using the electric start feature, rotate the key to the START position; then when the engine starts, release the key.

CAUTION

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

7. When the engine starts, allow it to warm up for approximately 30 seconds with the choke lever in the full-choke position. After 30 seconds, move the choke lever to the middle position. The choke lever should be moved to the OFF position when engine is warm. Slight throttle control lever compression may be necessary after the engine starts and during warm-up. Idle the engine several minutes until the engine has reached normal operating temperature.
8. Flooding — If the engine does not start when the choke is being used but seems ready to start, move the choke lever to the OFF position.

■ NOTE: Continued choking will only cause the engine to flood more.

■ NOTE: If the engine fails to start during the attempt with the throttle lever compressed, remove the spark plug and clean and dry it throughly or install a new, properly gapped, recommended spark plug.

9. To shut the engine off, turn the ignition key to the OFF position, move the emergency stop switch to the OFF (down) position, or pull the tether cap from the tether switch.

Starting and Stopping Engine

B-24 Carburetor

⚠ WARNING

Never allow anyone to stand in front of the snowmobile at any time, especially when starting the engine.

It is imperative that all safety checks found in the accompanying Snowmobile Safety Handbook be performed before attempting to start the engine.

This snowmobile is equipped with a recoil starter as well as an electric stater. The recoil starter handle and the key switch are located below the steering post.

To start the engine, use the following procedure:

1. Test the throttle lever by completely compressing and releasing it several times. The lever MUST return to the idle position quickly and completely.
2. Move the emergency stop switch to the UP or RUN position.

■ NOTE: Make sure the tether cap is connected to the tether switch and tether is attached to the rider.

3. Insert key into ignition switch; then rotate key to the RUN position.
4. For a cold engine, pull the choke out completely. If the engine is warm, choking is not normally necessary.
5. Using the recoil starter to manually start the snowmobile, pull the recoil starter handle slowly until resistance is felt; then give a short quick pull. The engine should start; however, if the engine does not start, repeat this step while applying 1/8 throttle until the engine is running.

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.

6. Using the electric start feature, rotate the key to the START position; then when the engine starts, release the key.

CAUTION

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

7. When the engine starts, push the choke approximately halfway in. Allow a cold engine to "warm up" for approximately 2-3 minutes. The choke should be pushed in completely after the "warm up."
8. Flooding — If the engine does not start when the choke is being used but seems ready to start, push the choke in completely.

■ NOTE: Continued choking will only cause the engine to flood more.

■ NOTE: If the engine fails to start during the attempt with the throttle lever compressed, remove the spark plug and clean and dry it throughly or install a new, properly gapped, recommended spark plug.

9. To shut the engine off, turn the ignition key to the OFF position, move the emergency stop switch to the OFF (down) position, or pull the tether cap from the tether switch.

Periodic Maintenance/Tune-Up Chart

	Daily	1st 10 Hours (2 Weeks)	Every 20 Hours (1 Month)	Every 50 Hours (3 Months)	Every 100 Hours (6 Months)	Every 300 Hours (12 Months)
Valve Clearance						IA
Engine Compression						I
Spark Plug					I	
Fuel Supply Hose	I**					Replace every 3 years
Carburetor Float Chamber					C*	
Engine Oil	I	R*			R*	
Nuts/Screws/ Cap Screws	I			T		
Rear Suspension			I			
Recoil Starter	I					I-IC-IL-*
Carburetor						IC
Pilot Air Screw						IA
Brake System	I					
In-Line Fuel Filter			I			
Battery	I					

C = Clean
I = Inspect
R = Replace
T = Tighten

IA = Inspect and adjust (if necessary)
IC = Inspect and clean (replace if necessary)
IL = Inspect and lubricate (replace if necessary)
* = Service more frequently if used in adverse conditions
** = Inspect daily and replace if required or as recommended

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.

Maintenance

Engine Oil

■ NOTE: After the engine break-in period, the engine oil should be changed every 100 operating hours (6 months) and before prolonged storage.

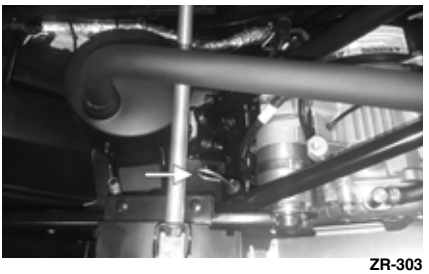
Checking

The engine oil level should be checked each day before operating the snowmobile.

The snowmobile must be on a level surface for this procedure.

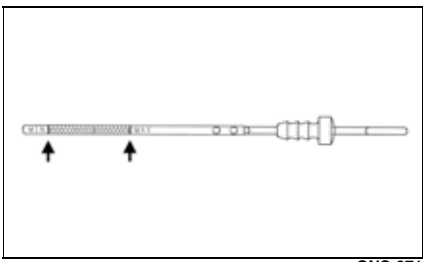
■ NOTE: Ensure the engine is "cooled down" to room temperature to allow the oil to drain into the sump.

1. Release the two hold-down straps and open the hood.
2. Remove the oil level stick and wipe it with a clean cloth.



ZR-303

3. Install the oil level stick and remove the oil level stick; the engine oil level should be within the operating range but not above the MAX/FULL mark.

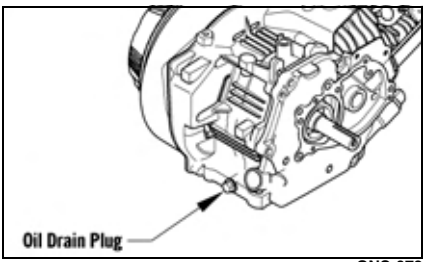


ONS-071

4. If step 1-3 was followed and the oil level is not within the operating range, add the recommended engine oil through the oil stick tube. Install the oil level stick and close and latch the hood.

Changing

1. Remove the access plug; then place a drain pan beneath the engine.
2. Release the two hold-down straps and open the hood.
3. Remove the oil drain plug from the crankcase and allow the oil to drain.



ONS-072

4. Install the drain plug and the access plug.
5. Remove the oil level stick; then pour 568 ml (19.2 fl oz) of recommended oil into the oil level stick tube.
6. Check the oil level using the oil level stick making sure the oil is within the operating range.
7. Close the hood and secure with the two straps.

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.

CAUTION

Jump-starting the vehicle without a battery is not advisable as it may cause damage. Additionally, running the unit without a battery in place or the use of a "Jumper Pack" could cause damage to the electrical system.

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. Open the hood; then remove the negative battery cable and ground wire; then remove the positive cable.
2. Remove the rubber strap securing the battery. Remove the battery.

ZR-306

⚠ 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.

■ 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.

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. Tighten securely.

10. Secure the main black negative cable and the small black negative cable to the battery using a cap screw. Tighten securely.

CAUTION

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

11. Secure the battery to the bracket using the rubber strap.

Carburetor

B-25 Carburetor

The carburetor has been calibrated for average riding conditions; however, altitude, temperature, and general wear may necessitate certain carburetor adjustments. Since carburetor adjustments critically affect engine performance and emissions, Arctic Cat recommends that any changes in internal carburetor calibration be made by an authorized Arctic Cat Snowmobile dealer; however, three external adjustments can be made on the carburetor. These are the throttle stop screw, pilot screw, and throttle cable.

■ **NOTE: When using non-ethanol gasoline, the pilot screw on the carburetor should be turned fully clockwise to the stop. When using gasoline containing ethanol, the pilot screw should be turned fully counterclockwise to the stop.**

Throttle Stop Screw

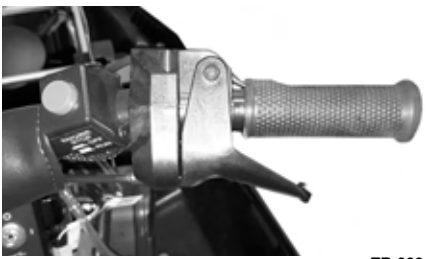
This screw controls the seating position of the throttle valve which in turn determines the proper idle speed. Rotate the screw clockwise to increase engine idle speed and counterclockwise to decrease engine idle speed.

Checking/Adjusting Throttle Lever (Tension)

■ **NOTE: Ensure that the throttle cable is properly seated in the throttle control housing.**

1. Verify when releasing the throttle lever that the round switch in the control housing is compressed. If the switch is not compressed the engine will shut down when the throttle lever is released.

ZR-089A



ZR-090

2. If the throttle cable needs to be adjusted, locate the throttle cable in-line adjuster next to the steering post.
3. Tighten nut against the in-line adjuster and cover the adjuster with rubber boot.

Carburetor

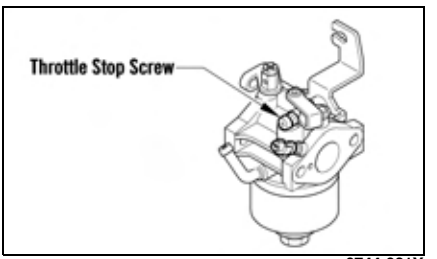
B-24 Carburetor

The carburetor has been calibrated for average riding conditions; however, altitude, temperature, and general wear may necessitate certain carburetor adjustments. Since carburetor adjustments critically affect engine performance and emissions, Arctic Cat recommends that any changes in internal carburetor calibration be made by an authorized Arctic Cat Snowmobile dealer; however, three external adjustments can be made on the carburetor. These are the throttle stop screw, pilot screw, and throttle cable.

■ **NOTE: When using non-ethanol gasoline, the pilot screw on the carburetor should be turned fully clockwise to the stop. When using gasoline containing ethanol, the pilot screw should be turned fully counterclockwise to the stop.**

Throttle Stop Screw

This screw controls the seating position of the throttle valve which in turn determines the proper idle speed. Rotate the screw clockwise to increase engine idle speed and counterclockwise to decrease engine idle speed.



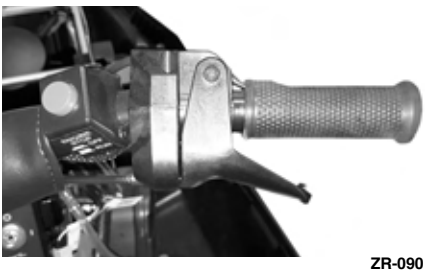
0744-921Y

Checking/Adjusting Throttle Lever (Tension)

■ **NOTE: Ensure that the throttle cable is properly seated in the throttle control housing.**

1. Verify when releasing the throttle lever that the round switch in the control housing is compressed. If the switch is not compressed the engine will shut down when the throttle lever is released.

ZR-089A



ZR-090

2. If the throttle cable needs to be adjusted, locate the throttle cable in-line adjuster next to the steering post; then adjust the in-line adjuster until the governor arm (A) starts to move.

ZR-090A

3. Tighten nut against the in-line adjuster and cover the adjuster with rubber boot.

In-Line Fuel Filter

⚠ WARNING

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

Arctic Cat recommends that the in-line fuel filter be checked once a month. The filter is located in the fuel hose between the gas tank and fuel pump. The only cleaning possible is to back-flush the filter using clean gasoline. To check, clean, or replace the filter, use the following procedure:

1. Using a suitable hose clamping pliers, pinch off the fuel hose between the gas tank and the filter.
2. Remove and discard the clamps; then slowly remove the fuel hoses from the fuel filter. Dispose of the excess fuel from the filter properly.
3. Install the in-line fuel filter in the fuel hose so the arrow on the filter points toward the fuel pump. Make sure the fuel hoses fit tightly on the filter. If a fuel hose does not fit tightly, cut 6 mm (1/4 in.) from the end of the fuel hose; then install on the filter. Install new clamps and remove the clamping pliers.

CAUTION

The fuel hoses must fit tightly on the fuel filter. If the fuel hose length doesn't permit this procedure, replace the fuel hose. Also, after installing the fuel hoses on the filter, check to be sure that the fuel hoses do not contact any hot or rotating components.

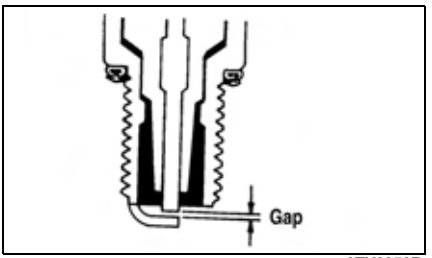
Spark Plug

This snowmobile comes equipped with a specified spark plug. See the specifications chart for the correct spark plug. A light brown insulator indicates that the plug is correct. A white or dark insulator indicates that the engine may need to be serviced or the carburetor may need to be adjusted. Consult an authorized Arctic Cat Snowmobile dealer if the plug insulator is not a light brown color. To help prevent cold weather fouling, make sure to thoroughly warm up the engine before operating.

To maintain a hot, strong spark, keep the plug free of carbon.

Before removing the spark plug, be sure to clean the area around the spark plug. If you do not, dirt could enter engine when removing or installing the spark plug.

Adjust the gap to specified amount (see specifications chart) for proper ignition. Use a feeler gauge to check the gap.



ATV0052B

When installing the spark plug, be sure to tighten it securely. A new spark plug should be tightened 1/2 turn once the washer contacts the cylinder head. A used spark plug should be tightened 1/8-1/4 turn once the washer contacts the cylinder head.

Braking

The following items are items that the operator must be familiar with when operating this snowmobile and its hydraulic brake system.

1. Use the brakes wisely. Each time the brakes are applied in all hydraulic brake systems, heat is transferred to the brake fluid.
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.

Checking Brake Lever Travel

1. Test the operation of the hydraulic brake system by compressing the brake lever.
2. The brake lever must feel firm when compressed.
3. To verify lever travel, compress and hold the brake lever to its maximum resistance.

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

4. Make sure there is clearance between brake lever and the handlebar. The lever should not meet the handlebar.

⚠ WARNING

Do not operate the snowmobile if the brake lever touches the handlebar. Brake loss may occur. Brake loss can result in severe personal injury.

Burnishing Brake Pads

Disc brakes require a special burnish period to achieve maximum braking power. The burnish period lasts for about hard 30-50 stops. During this period some noise may occur.

To properly burnish the brakes, use following procedure:

1. Choose an area sufficiently large to safely accelerate and to brake to a stop.

■ NOTE: This procedure can also be accomplished using a shielded jack stand.

2. Accelerate; 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.

⚠ 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.

Track Tension

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

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. Arctic Cat recommends that the track tension be checked once a month and adjusted accordingly.

⚠ WARNING

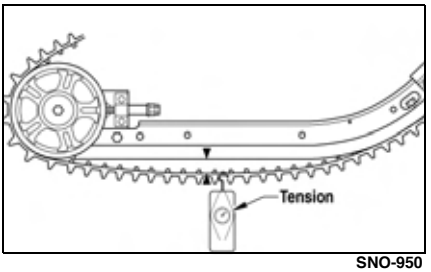
Track tension must be properly maintained. Personal injury could result if a track is allowed to become excessively loose.

Checking Track Tension

⚠ 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.

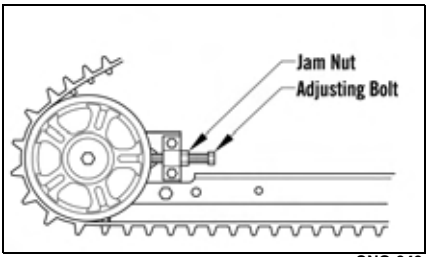
1. Remove excess ice and snow buildup from the track, track drive sprockets, and the inside of the skid frame.
2. Place the rear of the snowmobile up on a safety stand high enough so the track is free of the floor.
3. At the lower mounting position of the rear shock, hook a spring scale around a track clip; then pull down on the scale to 9 kg (20 lb). Measure the deflection (distance) between the bottom of the wear strip and the inside surface of the track clip. Measurement should be 50 mm (2.0 in.).



SNO-950

Adjusting Track Tension

1. Loosen the idler wheel cap screws.
2. Loosen the rear idler wheel adjusting bolt jam nuts.



SNO-949

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

3. If the deflection (distance between the bottom of the wear strip and the inside of the track) exceeds specifications, tighten the adjusting bolts to take up excessive slack in the track.
4. If the distance between the bottom of the wear strip and the inside surface of the track is less than specified, loosen the adjusting bolts to increase the slack in the track.
5. Check track alignment (see Track Alignment section).
6. When proper track tension is obtained, tighten the adjusting bolt jam nuts against the axle housings.
7. Tighten idler wheel cap screws securely.

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

⚠ WARNING

If jam nuts are not tightened properly, the adjusting bolts could loosen causing the track to become extremely loose and, under some operating conditions, allow the idler wheels to climb over the track lugs forcing the track against the tunnel causing the track to "lock." If a track "locks" during operation, severe personal injury could result.

Track Alignment

Proper track alignment is obtained when the outside of the rear idler wheels are equal distance from the edge of the track. 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. 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 for safety.

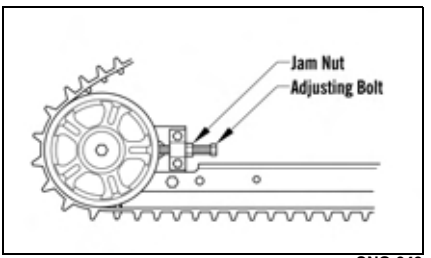
2. Start the engine and accelerate slightly. Use only enough throttle to turn the track several revolutions. SHUT ENGINE OFF.

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

3. When the track stops rotating, check the relationship of the idler wheels and the edge of the track. If the distance from the rear idler wheels to the edge of the track is the same on both sides, no adjustment is necessary.
4. If the distances from the idler wheels to the edge of the track are not the same on both sides, an adjustment is necessary.

Adjusting Track Alignment

1. On the side of the track which has the edge of the track furthest to the outside of the rear idler wheel, loosen the idler wheel cap screw and the adjusting bolt jam nut; then rotate the adjusting bolt clockwise 1 to 1 1/2 turns.



SNO-949

2. Check track alignment and continue adjustment until proper alignment is obtained.

■ NOTE: Make sure correct track tension is maintained after adjusting track alignment (see Track Tension section).

3. After proper track alignment is obtained, tighten both the adjusting bolt jam nut and the idler wheel cap screw securely.

⚠ WARNING

If a jam nut is not tightened properly, the adjusting bolt could loosen causing the track to become dangerously loose.

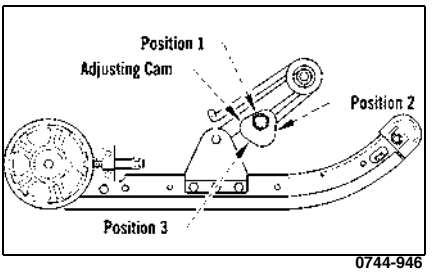
4. Field test the track under actual conditions.
5. After the field test, check the alignment of the track. If additional adjustment is necessary, repeat Adjusting Track Alignment procedure.

Adjusting Rear Spring Tension

Rear spring tension adjustment is accomplished by rotating the adjusting cams. Position 3 provides the stiffest ride, and position 1 is for the light driver 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.



0744-946

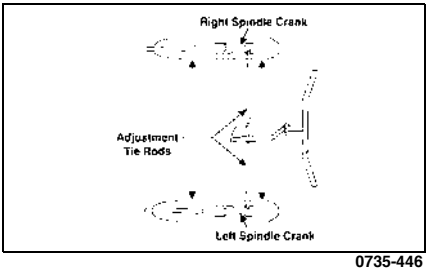
Using a 13/16 in. wrench, rotate the cam until it is in the desired position. To stiffen the ride, rotate the cam so as to raise the spring end. Make the adjustment on the other cam and be sure both cams are adjusted equally.

Ski Alignment

The skis have been aligned during setup of the snowmobile. Ski alignment usually will not change unless a rock or similar hard object is hit while the snowmobile is being operated. Arctic Cat recommends that the ski alignment be checked once a week.

Checking

1. Turn the handlebar to the straight-ahead position.
2. Measure the distances to the inside edges of the skis. Measure 5 inches in front of the ski mounting bolt and 5 inches behind the ski mounting bolt.



0735-446

■ NOTE: Ski alignment is correct when the skis are parallel to each other (equal measurements front and rear) or when the skis have up to a maximum of 1.58-6.35 mm (1/16-1/4 in.) "toe out" (front measurement 1.58-6.35 mm [1/16-1/4 in.] more than rear measurement).

3. If ski alignment is not as specified, the snowmobile will have a tendency to wander and may be difficult to control; therefore, an adjustment is necessary.

Adjusting

1. Make sure the ignition key is in the OFF position.
2. Visually examine the skis to determine which ski is out of alignment with respect to the handlebar.
3. Open the hood and loosen the jam nut on each end of the adjustment tie rod.
4. While holding the ski in position, rotate the adjustment tie rod until the measurement between the skis is within specifications.
5. When the ski alignment is correct, apply blue Loctite #243 to the jam nut threaded areas and tighten each jam nut securely against its adjustment tie rod.

⚠ WARNING

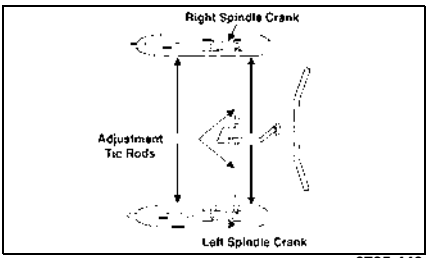
Neglecting to lock the tie rod by tightening the jam nuts against the adjustment tie rod may cause loss of snowmobile control and possible personal injury.

Steering Alignment

Visually examine the steering alignment by placing the handlebar in the straight-ahead position and checking to be sure the skis are pointing straight ahead. If the skis are not pointing straight ahead, adjust using the following procedure:

■ NOTE: The following procedure can be used to adjust the alignment of either ski.

1. Determine which ski is out of alignment; then unlock the adjustment tie rod by loosening the jam nuts.



0735-446

2. Adjust the ski alignment by rotating the adjustment tie rod.
3. When steering alignment is correct, apply blue Loctite #243 to the jam nut threaded areas and tighten each jam nut securely against its adjustment tie rod.

⚠ WARNING

Neglecting to lock the steering tie rod by tightening the jam nuts against the adjustment tie rod may cause loss of snowmobile control and possible personal injury.

Ski Wear Bar

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.

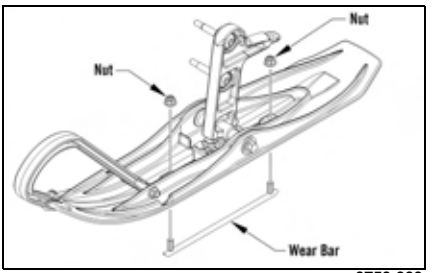
To maintain positive steering characteristics, Arctic Cat recommends that the ski wear bars be checked once a week and replaced if worn to 1/2 of original diameter. Ski wear bars are available from an authorized Arctic Cat Snowmobile dealer.

⚠ WARNING

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

Removing

1. Raise the front of the snowmobile.
2. Remove the lock nuts securing the wear bar to the ski.



0750-990

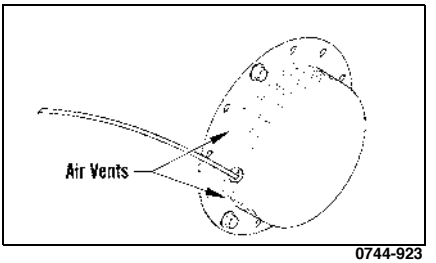
3. Remove the wear bar.

Installing

1. Insert the wear bar studs into the holes in the ski.
2. Center the wear bar studs in the holes and install the lock nuts.
3. Tighten lock nuts securely.

Recoil Starter Air Vents

It is important for proper engine cooling that the air vents located on the recoil starter are kept clean. These air vents should be checked periodically and cleaned if necessary.



0744-923

CAUTION

Serious overheating of the engine and engine damage will result if the air vents are not kept clean.

Lights

The correct headlight bulb is p/n 0609-956. The correct taillight is p/n 0609-963.

To change the headlight bulb, use the following procedure:

1. Open the hood; then disconnect the harness connector from the headlight bulb.
2. Remove the bulb from the housing by rotating it counterclockwise until loose.

CAUTION

Do not touch the glass portion of the bulb. If the glass portion is touched, it must be cleaned with a dry cloth before installing.

3. Install the new bulb into the housing; then rotate the bulb clockwise to lock it into place.

Adjusting Headlight Aim

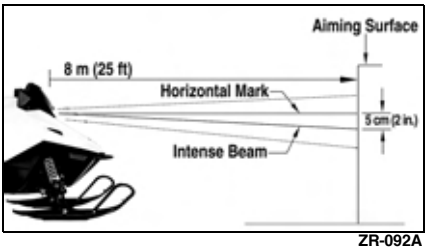
The headlight can be adjusted for vertical aim of the HIGH/LOW beam. The geometric center of HIGH beam zone is to be used for vertical aiming.

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

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

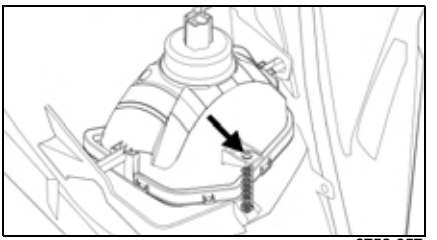
2. Measure the distance from the floor to midpoint of the headlight.

3. Using the measurement obtained in step 2, make a horizontal mark on the aiming surface.
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 HIGH beam position. DO NOT USE LOW BEAM.
6. Observe the HIGH beam aim. Proper aim is when the HIGH beam is centered on the vertical mark 5 cm (2 in.) below the horizontal mark on the aiming surface.



ZR-092A

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


0752-957

Preparation for Storage

Prior to storing the snowmobile, it is extremely important that it be properly serviced to prevent corrosion and component deterioration. Arctic Cat recommends the following procedure to prepare the snowmobile for storage.

1. Clean the seat cushion with Vinyl Protectant and a damp cloth.
2. Clean the snowmobile thoroughly by hosing dirt, oil, grass, and other foreign matter from the undercarriage, tunnel, hood, and belly pan. Allow the snowmobile to dry thoroughly. DO NOT get water into any part of the engine.
3. Drain all gas from the gas tank; then drain the gasoline from the carburetor by loosening the drain screw on the carburetor float chamber.
4. Plug the muffler outlet with a clean cloth.
5. With the ignition key in the OFF position:
   A. Disconnect the high tension wire from the spark plug; then remove the spark plug.
   B. Pour 10 ml (approximately two teaspoons) of petroleum-based oil into the spark plug hole; then pull the recoil starter handle slowly about five times.
   C. Install the spark plug and connect the high tension wire.
6. Change the oil.
7. Tighten all screws, nuts, and cap screws securely.
8. Make sure all rivets holding components together are tight. Replace all loose rivets.
9. Clean and polish the hood, console, and chassis with Cat Cleaner (p/n 4639-371). DO NOT USE SOLVENTS. THE PROPELLANT WILL DAMAGE THE FINISH.

■ **NOTE: Disconnect the battery cables making sure to disconnect the negative cable first; then clean the battery posts and cables. Charge the battery.**

10. If possible, store the snowmobile indoors. Raise the rear of the snowmobile off the floor and block up the rear end. Cover the snowmobile with a snowmobile cover to protect it from dirt and dust.
11. If the snowmobile must be stored outdoors, block the entire snowmobile off the ground and cover it with a snowmobile cover to protect it from dirt, dust, and rain.

CAUTION

Never crank the engine over without grounding the spark plug. Damage to the transistorized ignition may result.

CAUTION

Avoid using a plastic cover as moisture will collect on the snowmobile causing corrosion.

Preparation after Storage

Taking the snowmobile out of storage and correctly preparing it for operation will ensure many miles and hours of trouble-free snowmobiling. Arctic Cat recommends the following procedure to prepare the snowmobile.

1. Clean the snowmobile thoroughly. Polish the exterior of the snowmobile using the cleaner.
2. Clean the engine cooling fins and the recoil starter vents. Remove the cloth from the muffler.
3. Check 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. Check brake-lever travel distance, throttle lever tension, all controls, ski alignment, track tension, track alignment, brake pads, and ski wear bars; adjust or replace as necessary.
5. Examine the in-line fuel filter and clean or replace if necessary.
6. Fill the gas tank.
7. Clean the seat cushion with the vinyl protectant.
8. Check the spark plug (clean, gap, and/or replace as necessary); then start the engine and ensure proper carburetor adjustments.
9. Fully charge the battery; then connect the battery cables making sure to connect the positive cable first. Test the electric start system.

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	Wear Strips
Wear Bars	Brake Pads	Spark Plugs	Drive Clutch/Driven Pulley Wear Parts	
Torn or Punctured Upholstery		Shock Absorber(s)*		

* 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:
(U.S.) 218-681-9851 or (Canada) 204-982-1656.

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 Inc., P.O. Box 810, Thief River Falls, MN 56701 218-681-9851

U.S. EPA Emission Control Statement/Warranty Coverage — Snowmobile (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:

Fuel/Air System
Fuel Pump
Carburetor

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

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: 218-681-9851.

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 as stated in the Operator's Manual. Proper maintenance generally includes replacement and service, at the owner's choosing, such items as air filter, oil and oil filter, or any other part, item, or device related to emissions control as specified in the Operator's Manual. It is the owner's responsibility to ensure that the snowmobile is used in a manner for which it was designed.

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.

- ❑ 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.
PO BOX 810
THIEF RIVER FALLS MN 56701

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.

NOTES