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
# FOREWORD

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This Arctic Cat Service Manual contains service and maintenance information for the Model Year 2007 Arctic Cat 2-Stroke Snowmobiles. This manual is designed to aid service personnel in service-oriented applications.

This manual is divided into sections. The sections cover specific snowmobile components or systems and, in addition to the standard service procedures, includes assembling, disassembling, and inspecting instructions. When using this manual as a guide, the technician should use discretion as to how much disassembly is needed to correct any given condition.

The service technician should become familiar with the operation and construction of the components or systems by carefully studying the complete manual. This will assist the service technician in becoming more aware of and efficient with servicing procedures. Such efficiency not only helps build consumer confidence but also saves time and labor.

All Arctic Cat publications and snowmobile decals display the words Warning, Caution, and Note to emphasize important information. The symbol  **WARNING** identifies personal safety-related information. Be sure to follow the directive because it deals with the possibility of severe personal injury or even death. The symbol  **CAUTION** 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. The symbol  **NOTE:** identifies supplementary information worthy of particular attention.

At the time of publication, all information, photographs, and illustrations were technically correct. Some photographs and 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.

All materials and specifications are subject to change without notice.

Keep this manual accessible in the shop area for reference.

Product Service and Warranty Department  
Arctic Cat Inc.



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**Foreword**

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Snowmobile Service Manual

# SECTION 1 — GENERAL INFORMATION

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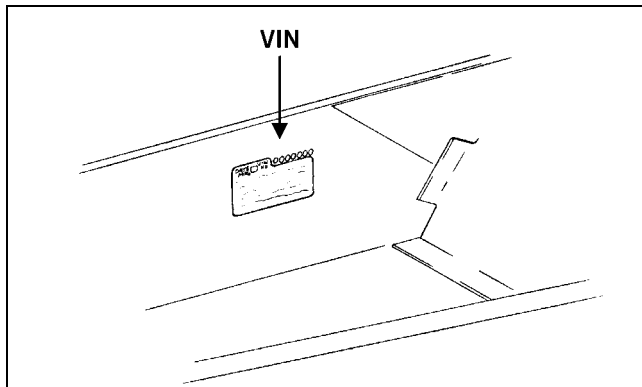
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## Snowmobile Identification

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The Arctic Cat Snowmobile has two important identification numbers. The Vehicle Identification Number (VIN) is stamped into the tunnel near the right-side footrest. The Engine Serial Number (ESN) is stamped into the crankcase of the engine.



0726-383

These numbers are required 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.

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## Recommended Gasoline and Oil

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### RECOMMENDED GASOLINE (Carbureted Models)

The recommended gasoline to use in these snowmobiles is 87 minimum octane regular unleaded. In many areas, oxygenates (either ethanol or MTBE) are added to the gasoline. Oxygenated gasolines containing up to 10% ethanol or up to 15% MTBE are acceptable gasolines; however, whenever using oxygenated gasolines, the carburetor main jet must be one size larger than the main jet required for regular unleaded gasoline. For example, if a 400 main jet is recommended for regular unleaded gasoline, a 410 main jet must be installed if using an oxygenated gasoline.

When using ethanol blended gasoline, it is not necessary to add a gasoline antifreeze since ethanol will prevent the accumulation of moisture in the fuel system.

#### CAUTION

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

### RECOMMENDED GASOLINE (EFI Models)

The recommended gasoline to use in these snowmobiles is 87 minimum octane regular unleaded. In many areas, oxygenates (either ethanol or MTBE) are added to the gasoline. Oxygenated gasolines containing up to 10% ethanol or up to 15% MTBE are acceptable gasolines. Do not use gasolines containing methanol.

#### CAUTION

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

### RECOMMENDED OIL

The recommended oil to use in the oil-injection system is Arctic Cat 50:1 Injection Oil (for standard models) or Arctic Cat Synthetic APV 2-Cycle Oil (for APV models). The oil is specially formulated to be used either as an injection oil or as a pre-mix oil (for carbureted model break-in) and meets all of the lubrication requirements of the Arctic Cat snowmobile engine.

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## Break-In Procedure

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The Arctic Cat 2-stroke engine (when new or rebuilt) requires a short break-in period before the engine is subjected to heavy load conditions. Arctic Cat requires that the first tankful of fuel be premixed at a 100:1 ratio in all oil-injection models.

During the break-in period, a maximum of 1/2 throttle is recommended; however, brief full-throttle accelerations and variations in driving speeds contribute to good engine break-in.

#### CAUTION

DO NOT exceed the one (1) tankful limitation of a 100:1 gas/oil break-in mixture. Continuous use of a gas/oil mixture, unless consistently operating in extremely cold conditions (-26°C/-15°F or colder), could cause spark plug fouling and excessive carbon buildup. A 100:1 gas/oil mixture must be used in conjunction with the oil-injection system to ensure adequate engine lubrication in extremely cold conditions.

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## Genuine Parts

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When replacement of parts is necessary, use only genuine Arctic Cat parts. They are precision-made to ensure high quality and correct fit.

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## High Altitude Operation

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Operating a snowmobile at varying altitudes requires changes in performance components. These changes affect drive train components (on all models) and carburetion components (on carbureted models).

High altitude information decal(s) are located beneath the hood of the snowmobile.

 **CAUTION**

On carbureted models, carefully follow the Main Jet Chart recommendations for proper main jet selection for altitude, temperature, and gasoline being used.

The M-Series snowmobiles are initially set up at the factory for operation between 6000-9000 feet. Consult the appropriate specifications for this information.

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## Preparation For Storage

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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. To prepare the snowmobile for storage, Arctic Cat recommends the following procedure:

1. Clean the seat cushion with a damp cloth and Arctic Cat Vinyl Protectant (p/n 0638-313).
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.

**NOTE: On all models except the 370 cc/570 cc, the air silencer boot can be pried forward to access the intake bores. Pry the boot forward; then proceed to step 7.**

**NOTE: On the 370 cc/570 cc models, the air-intake silencer includes a cover/tool tray assembly and a baffle/resonator, and the silencer boot cannot be removed to access the intake bores. Proceed to step 4.**

4. Open the air-intake silencer cover; then remove the three screws securing the cover/tool tray assembly to the silencer.
5. Close the cover; then tip the cover/tool tray assembly forward and out of its slots and remove the assembly.

6. Using a large flat-blade screwdriver, remove the baffle/resonator tabs from the air-intake silencer slots and remove the baffle/resonator to access the intake bores.

**NOTE: The baffle/resonator can be removed more easily by removing the back tabs first.**

7. Start the engine and allow to idle. With the engine idling, spray Arctic Cat Engine Storage Preserver (p/n 0436-888) into the intake(s) until the engine exhaust starts to smoke heavily or until the engine starts to drop in RPM. Turn engine off.

**NOTE: On all models except the 370 cc/570 cc, secure the air silencer boots onto the intake bores.**

**NOTE: On the 370 cc/570 cc models, install the baffle/resonator and the cover/tool tray assembly.**

8. Plug the exhaust system outlet with a clean cloth.
9. With the ignition switch in the OFF position:
  - A. Disconnect the high tension lead(s) from the spark plug(s); then remove the plug(s), connect it/them to the lead(s), and ground it/them on the cylinder head(s).

 **CAUTION**

Never crank the engine over without grounding the spark plug(s). Damage to coils and/or CDI unit 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 plug(s) and connect the high tension lead(s).
10. On carbureted models, drain the gas from each carburetor float chamber.
  11. Fill the gas tank to its rated capacity; then add Arctic Cat Fuel Stabilizer (p/n 0436-907) to the gas tank following directions on the container for the stabilizer/gasoline ratio. Tighten the gas tank cap securely.
  12. On models with a chain case, drain the lubricant by removing the chain-case drain plug located on the backside of the chain-case assembly. Remove the chain-case cover and inspect chain, sprockets, chain tensioner, and rollers for wear and the chain for proper tension. Install the drain plug, chain-case cover, and seal; then pour Arctic Cat Transmission Lube (p/n 4639-364) into the filler hole - 236 ml (8 fl oz) for standard transmission or 354 ml (12 fl oz) for reverse transmission.
  13. On models with a gear case, change the gear case lubricant (see Section 8).
  14. Clean and inspect the drive clutch and driven pulley.

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