




FOREWORD

This Arctic Cat Service Manual contains service, maintenance, and troubleshooting information for the 2007 Arctic Cat Prowler/XT. The complete manual is designed to aid service personnel in service-oriented applications.

This manual is divided into sections. Each section covers a specific vehicle component or system and, in addition to the standard service procedures, includes disassembling, inspecting, and assembling 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 each component or system by carefully studying this manual. This manual 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 decals display the words Warning, Caution, Note, and At This Point 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 vehicle-related damage. Follow the directive because it deals with the possibility of damaging part or parts of the vehicle. The symbol  **NOTE:** identifies supplementary information worthy of particular attention. The symbol  **AT THIS POINT** directs the technician to certain and specific procedures to promote efficiency and to improve clarity.

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

TABLE OF CONTENTS

Foreword

Click on the red text to go.

Section

1. General Information

1

2. Periodic Maintenance/Tune-Up

2

3. Engine/Transmission

3

4. Fuel/Lubrication/Cooling

4

5. Electrical System

5

6. Drive System

6

7. Suspension

7

8. Steering/Frame

8

9. Controls/Indicators

9

10. Aids for Maintenance

10

11. Troubleshooting

11

Prowler

Service Manual

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Prowler
Prowler XT

SECTION 1 - GENERAL INFORMATION

TABLE OF CONTENTS

General Specifications	1-2
Break-In Procedure	1-3
Gasoline - Oil - Lubricant	1-3
Genuine Parts	1-4
Preparation For Storage	1-4
Preparation After Storage.....	1-5

General Specifications*

CARBURETOR	
Type	Keihin CVK36
Main Jet	132
Slow Jet	40
Low Speed Fuel Screw Setting (turns)	1 1/4
Jet Needle	Fixed
Needle Jet	6.0/4.0
Idle RPM	1250-1350
Starter Jet	85
Float Arm Height	17 mm (0.7 in.)
ELECTRICAL	
Ignition Timing	10° BTDC @ 1500 RPM
Spark Plug Type	Champion RG6YC
Spark Plug Gap	0.7-0.8 mm (0.028-0.032 in.)
Spark Plug Cap	3750-6250 ohms
Ignition Coil Resistance (primary) (secondary)	Less than 1 ohm (terminal to ground) 5200-7800 ohms (high tension - plug cap removed - to ground)
Ignition Coil Peak Voltage (primary/CDI)	142.4-213.6 DC volts (blue/white to ground)
Magneto Coil Resistance (trigger) (source) (charging)	160-240 ohms (green to blue) Less than 1 ohm (yellow to white) Less than 1 ohm (black to black)
Magneto Coil Peak Voltage (trigger) (source)	4.2-6.3 volts (green to blue) 0.40-0.62 volt (yellow to white)
Stator Coil Output (no load)	60 AC volts @ 5000 RPM (black to black)
Magneto Output (approx)	325W @ 5000 RPM

CHASSIS	
Dry Weight (approx)	526 kg (1160 lb)
Length (overall)	292 cm (115 in.)
Height (overall)	197 cm (77.5 in.)
Width (overall)	156 cm (61.3 in.)
Suspension Travel (front) (rear)	25.4 cm (10 in.) 25.4 cm (10 in.)
Brake Type	Hydraulic
Wheelbase	190 cm (75 in.)
Tracking (front) (rear)	128.3 cm (50.5 in.) 123.2 cm (48.5 in.)
Tire Size (front) (rear)	26 x 9-14 26 x 11-14
Tire Inflation Pressure	0.70 kg/cm ² (10 psi)
Turning Radius	3.3 m (10.8 ft)
MISCELLANY	
Gas Tank Capacity (rated)	31 L (8.2 U.S. gal.)
Coolant Capacity	2.9 L (3.0 U.S. qt)
Differential Capacity	275 ml (9.3 fl oz)**
Rear Drive Capacity	250 ml (8.5 fl oz)**
Engine Oil Capacity	2.5 L (2.6 U.S. qt)
Gasoline (recommended)	87 Octane Regular Unleaded
Engine Oil (recommended)	SAE 5W-30
Differential/Rear Drive Lubricant	SAE Approved 80W-90 Hypoid
Belt Width	35.0 mm (1.38 in.)
Brake Fluid	DOT 4
Taillight/Brakelight	12V/8W/27W
Headlight	12V/27W (2)
Starting System	Electric

* Specifications subject to change without notice.

** 1 inch below plug threads.

Break-In Procedure

A new vehicle and an overhauled engine require a “break-in” period. The first 10 hours (or 200 miles) are most critical to the life of this vehicle. Proper operation during this break-in period will help assure maximum life and performance from the vehicle.

During the first 10 hours (or 200 miles) of operation, always use less than 1/2 throttle. Varying the engine RPM during the break-in period allows the components to “load” (aiding the mating process) and then “unload” (allowing components to cool). Although it is essential to place some stress on the engine components during break-in, care should be taken not to overload the engine too often. Do not pull a trailer or carry heavy loads during the 10-hour break-in period.

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.

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.

During the break-in period (or whenever the brake pads are replaced), the hydraulic brake pads must be burnished. Slow disc-speed hydraulic brakes must be properly burnished in order to achieve maximum stopping power.

⚠ CAUTION

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 FOLLOWING PROCEDURE:

- Choose an area sufficiently large to safely accelerate vehicle to 30 mph and to brake to a stop.
- Accelerate to 30 mph; then apply the brake to decelerate to 0-5 mph.
- Repeat procedure five times until brakes are burnished.
- This procedure burnishes the brake pads, stabilizes the pad material, and extends the life of the brake pads.

⚠ WARNING

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

■ **NOTE:** Do not be reluctant to heat up the brake pads during the burnishing procedure.

After the completion of the break-in period, the engine oil and oil filter should be changed. Other maintenance after break-in should include checking of all prescribed adjustments and tightening of all fasteners.

Gasoline - Oil - Lubricant

1

RECOMMENDED GASOLINE

The recommended gasoline to use 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, 5% methane, or 5% MTBE are acceptable gasolines.

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

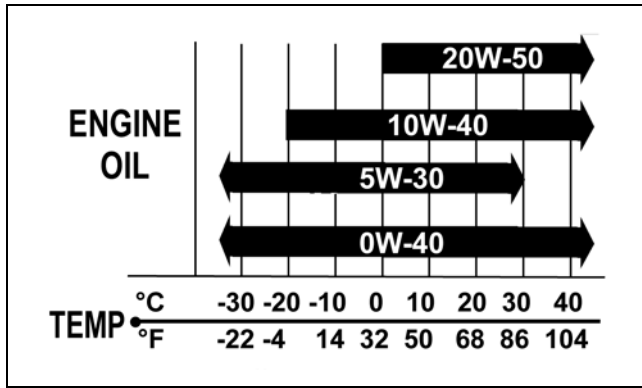
Do not use white gas. Only Arctic Cat approved gasoline additives should be used.

RECOMMENDED ENGINE/ TRANSMISSION OIL

⚠ CAUTION

Any oil used in place of the recommended oil could cause serious engine damage. Do not use oils which contain graphite or molybdenum additives. These oils can adversely affect clutch operation. Also, not recommended are racing, vegetable, non-detergent, and castor-based oils.

The recommended oil to use is Arctic Cat 4-Cycle Engine Oil or an equivalent oil which is rated SE, SF, or SG under API service classification. These oils meet all of the lubrication requirements of the Arctic Cat engine. The recommended engine oil viscosity is SAE 5W-30. Ambient temperature should determine the correct weight of oil. See the following viscosity chart for details.



OILCHARTC

RECOMMENDED FRONT DIFFERENTIAL/REAR DRIVE LUBRICANT

The recommended lubricant is Arctic Cat Gear Lube or an equivalent gear lube which is SAE approved 80W-90 hypoid. This lubricant meets all of the lubrication requirements of the Arctic Cat vehicle front differential and rear drive.

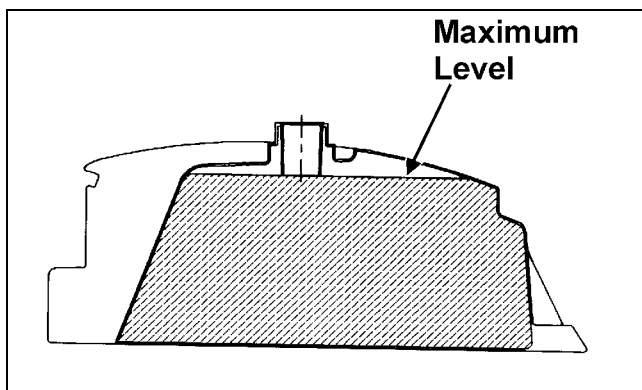
⚠ CAUTION

Any lubricant used in place of the recommended lubricant could cause serious front differential/rear drive damage.

FILLING GAS TANK

⚠ WARNING

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



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Since gasoline expands as its temperature rises, 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

Do not overflow gasoline when filling the gas tank. A fire hazard could materialize. Always allow the engine to cool before filling the gas tank.

Tighten the gas tank cap securely after filling the tank.

⚠ WARNING

Do not over-fill the gas tank.

Genuine Parts

When replacement of parts is necessary, use only genuine Arctic Cat parts. They are precision-made to ensure high quality and correct fit. Refer to the Illustrated Parts Manual for the correct part number, quantity, and description.

Preparation For Storage

⚠ CAUTION

Prior to storing the vehicle, it must be properly serviced to prevent rusting and component deterioration.

Arctic Cat recommends the following procedure to prepare the vehicle for storage.

1. Clean the seat cushion (cover and base) with a damp cloth and allow it to dry.
2. Clean the vehicle thoroughly by washing dirt, oil, grass, and other foreign matter from the entire vehicle. Allow it to dry thoroughly. DO NOT get water into any part of the engine or air intake.

3. Either drain the gas tank or add Fuel Stabilizer to the gas in the gas tank. Remove the air filter housing cover and air filter. Start the engine and allow it to idle; then using Arctic Cat Engine Storage Preserver, rapidly inject the preserver into the air filter opening for a period of 10 to 20 seconds; then stop the engine. Install the air filter and housing cover.

⚠ CAUTION

If the interior of the air filter housing is dirty, clean the area before starting the engine.

4. Drain the carburetor float chamber.
5. Plug the exhaust hole in the exhaust system with a clean cloth.
6. Apply light oil to the plungers of the shock absorbers.
7. Tighten all nuts, bolts, cap screws, and screws. Make sure rivets holding components together are tight. Replace all loose rivets. Care must be taken that all calibrated nuts, cap screws, and bolts are tightened to specifications (see Section 10).
8. Fill the cooling system to the bottom of the stand pipe in the radiator neck with properly mixed coolant.
9. Disconnect the battery cables; then remove the battery, clean the battery posts and cables, and store in a clean, dry area.
10. Store the vehicle indoors in a level position.

⚠ CAUTION

Avoid storing outside in direct sunlight and avoid using a plastic cover as moisture will collect on the vehicle causing rusting.

3. Check all control wires and cables for signs of wear or fraying. Replace if necessary.
4. Change the engine/transmission oil and filter.
5. Check the coolant level and add properly mixed coolant as necessary.
6. Charge the battery; then install. Connect the battery cables.

⚠ CAUTION

The ignition switch must be in the OFF position prior to installing the battery or damage may occur to the ignition system.

⚠ CAUTION

Connect the positive battery cable first; then the negative.

7. Check the entire brake systems (fluid level, pads, etc.), all controls, headlights, taillight, brakelight, and headlight aim; adjust or replace as necessary.
8. Tighten all nuts, bolts, cap screws, and screws making sure all calibrated nuts, cap screws, and bolts are tightened to specifications (see Section 10).
9. Check tire pressure. Inflate to recommended pressure as necessary.
10. Make sure the steering moves freely and does not bind.
11. Check the spark plug. Clean or replace as necessary.

1

Preparation After Storage

Taking the vehicle out of storage and correctly preparing it will assure many miles and hours of trouble-free riding. Arctic Cat recommends the following procedure to prepare the vehicle.

1. Clean the vehicle thoroughly.
2. Clean the engine. Remove the cloth from the exhaust system.

SECTION 2 - PERIODIC MAINTENANCE/TUNE-UP

TABLE OF CONTENTS

Periodic Maintenance Chart.....	2-2
Lubrication Points.....	2-3
Battery.....	2-3
Fuses.....	2-4
Air Cleaner/Filter.....	2-4
Valve/Tappet Clearance (Feeler Gauge Procedure).....	2-6
Valve/Tappet Clearance (Valve Adjuster Procedure).....	2-6
Testing Engine Compression.....	2-7
Spark Plug.....	2-7
Muffler/Spark Arrester.....	2-8
Gas/Vent Hoses.....	2-8
Adjusting Engine RPM (Idle).....	2-8
Engine/Transmission Oil - Filter.....	2-9
Front Differential/Rear Drive Lubricant.....	2-10
Tires.....	2-11
Steering Components.....	2-11
Driveshaft/Coupling.....	2-11
Suspension/Shock Absorbers/Bushings.....	2-11
Nuts/Bolts/Cap Screws.....	2-12
Ignition Timing.....	2-12
Headlight/Taillight-Brakelight.....	2-12
Switches.....	2-13
Low Range/High Range/Neutral/Reverse Lever....	2-13
Frame/Welds.....	2-14
Electrical Connections.....	2-14
Hydraulic Brake System.....	2-14
Parking Brake.....	2-16
Burnishing Brake Pads.....	2-18
Coolant.....	2-18
Checking/Replacing V-Belt.....	2-18

Periodic Maintenance Chart

A = Adjust
C = Clean
D = Drain

I = Inspect
L = Lubricate
R = Replace
T = Tighten

Item	Initial Service After Break-In (First Mo or 100 Mi)	Every Day	Every Month or Every 100 Miles	Every 3 Months or Every 300 Miles	Every 6 Months or Every 500 Miles	Every Year or Every 1500 Miles	As Needed
Battery	I		I				C
Fuses				I			R
Air Filter/Drain Tube	I	I	C*				R
Valve/Tappet Clearance	I				I		A
Engine Compression						I	
Spark Plug	I			I	I		R (4000 Mi or 18 Mo)
Muffler/Spark Arrester					C		R
Gas/Vent Hoses	I	I					R (2 Yrs)
Throttle Cable Ends/Accelerator Pedal Pivot	I	I			C-L		A-R
Carb Float Chamber				D*			
Engine RPM (Idle)	I				I		A
Engine-Transmission Oil Level		I					A
Engine-Transmission Oil/Filter	R			R*			R
Oil Strainer	I				I		C
Front Differential/Rear Drive Lubricant	I		I				R (4 Yrs)
Tires/Air Pressure	I	I					R
Steering Components	I	I		I			R
V-Belt	I				I		R
Suspension (Ball joint boots, drive axle boots front and rear, tie rods, differential and rear drive bellows)	I	I					R
Nuts/Bolts/Cap Screws	T		T				A
Ignition Timing						I	
Headlight/Taillight-Brakelight	I	I					R
Switches	I	I					R
Shift Lever					I		A-L
Gauges/Indicators	I	I					R
Frame/Welds	I		I		I		
Electrical Connections					I		C
Complete Brake System (Hydraulic & Parking)	I	I					
Brake Pads	I			I*			R
Brake Fluid	I			I			R (2 Yrs)
Brake Hoses	I			I			R (4 Yrs)
Coolant/Cooling System	I		I				R (2 Yrs)
Wheel Lug Nuts	T			T			

* Service/Inspect more frequently when operating in adverse conditions.

Lubrication Points

It is advisable to lubricate certain components periodically to ensure free movement. Apply light oil to the components using the following list as reference.

- A. Accelerator Pedal Pivot/Cable Ends
- B. Brake Pedal Pivot
- C. Parking Brake Cable Ends
- D. Shift Linkage
- E. Differential Lock Cable End (XT)
- F. Idle RPM Screw (Carburetor)

Battery



The level of the battery fluid must be kept between the upper and lower level lines at all times. If the level drops below the lower level line, add only **distilled water** until it reaches upper level line.

⚠ WARNING

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

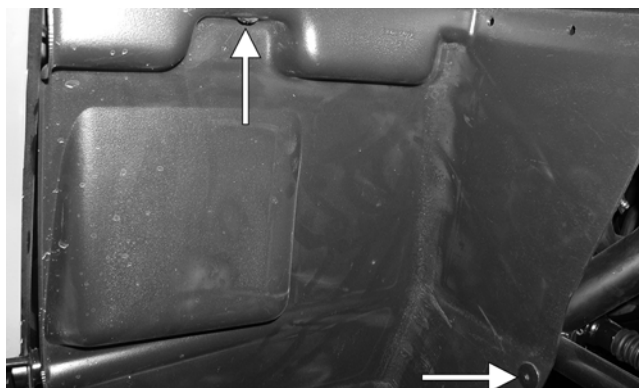
If the battery is discharged, remove the battery from the vehicle and charge the battery at the standard charging rate of 1.5 amps for 10 hours.

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

⚠ WARNING

Anytime 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 battery in enclosed space, keep the area well-ventilated. Make sure battery venting is not obstructed.

1. Remove the fasteners holding the left-rear splash panel in place; then remove the battery access panel.



2

2. Remove the negative battery cable; then remove the positive cable and the battery vent tube. Remove the battery from the vehicle. Care should be taken not to damage the vent tube.

⚠ WARNING

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

⚠ CAUTION

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

3. Remove the vent plugs; then (if necessary) fill the battery with **distilled water** to the UPPER level indicated on the battery.

NOTE: Electrolyte should be at room temperature before filling. Do not use water or any other liquid to activate a battery.

⚠ WARNING

Electrolyte is a sulfuric acid solution. Avoid spillage and contact with skin, eyes, and clothing.

4. Allow the battery to stand for 15-30 minutes after filling. Electrolyte level may fall during this time. Refill with electrolyte to UPPER level line.