
FOREWORD





This Arctic Cat Service Manual contains service, maintenance, and troubleshooting information for certain 2007 Arctic Cat ATV models (see cover). The complete manual is designed to aid service personnel in service-oriented applications.

Arctic Cat offers additional publications (when they become available) to aid in servicing other ATV models. To service models not included in this manual, please refer to the following publications:

- **2007 Y-12 Service Manual**
- **2007 DVX/Utility 250 Service Manual**
- **2007 DVX 400 Service Manual**
- **2007 Prowler Service Manual**
- **2007 700 Diesel Service Manual**

This manual is divided into sections. Each section covers a specific ATV 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 the complete 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 ATV 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 ATV-related damage. Follow the directive because it deals with the possibility of damaging part or parts of the ATV. 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.**

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2007
ATV
Service Manual

SECTION 1 - GENERAL INFORMATION

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General Specifications*

(400/400 TRV - Automatic Transmission)

CARBURETOR	
Type	Keihin CVK34
Main Jet	135
Slow Jet	38
Pilot Screw Setting (turns)	1 3/4
Jet Needle	NAZG
Idle RPM (engine warm)	1250-1350
Starter Jet	75
Float Arm Height	17 mm (0.7 in.)
Throttle Cable Free-Play (at lever)	3-6 mm (1/8-1/4 in.)
ELECTRICAL	
Ignition Timing	10° BTDC @ 1500 RPM
Spark Plug Type	NGK CR7E
Spark Plug Gap	0.7-0.8 mm (0.028-0.032 in.)
Spark Plug Cap	8000-12,000 ohms
Ignition Coil Resistance (primary)	Less than 1 ohm (terminal to ground) 5200-7800 ohms (high tension - plug cap removed - to ground)
(secondary)	
Ignition Coil Peak Voltage (primary/CDI)	250-375 DC volts (terminal to ground)
Magneto Coil Resistance (trigger)	160-240 ohms (green to blue) Less than 1 ohm (yellow to white) Less than 1 ohm (black to black)
(source)	
(charging)	
Magneto Coil Peak Voltage (trigger)	5.04-7.56 volts (green to blue) 0.7-1.05 volts (yellow to white)
(source)	
Stator Coil Output (no load)	60 AC volts @ 5000 RPM (black to black #1) (black to black #2)
Magneto Output (approx)	220W @ 5000 RPM
CHASSIS	
Brake Type	Hydraulic w/Brake Lever Lock and Auxiliary Brake
Tire Size	Front - 25 x 8-12 Rear - 25 x 10-12
Tire Inflation Pressure	0.35 kg/cm ² (5 psi)

MISCELLANY	
Gas Tank Capacity (rated)	24.6 L (6.5 U.S. gal.) 20.8 L (5.5 U.S. gal.) - TRV
Rear Drive Capacity	250 ml (8.5 fl oz)**
Differential Capacity (front - 4x4)	275 ml (9.3 fl oz)***
Engine Oil Capacity	3.08 L (3.25 U.S. qt)
Gasoline (recommended)	87 Octane Regular Unleaded
Engine Oil (recommended)	SAE 5W-30
Differential/Rear Drive Lubricant	SAE Approved 80W-90 Hypoid
Drive Belt Width	28.5 mm (1.12 in.)
Brake Fluid	DOT 4
Taillight/Brakelight	12V/8W/27W
Headlight	12V/37W (2)

* Specifications subject to change without notice.

** One inch below filler plug threads.

*** At the oil level plug threads.

General Specifications*

(400 - Manual Transmission)

CARBURETOR	
Type	Keihin CVK34
Main Jet	135
Slow Jet	38
Pilot Screw Setting (turns)	1 3/4
Jet Needle	NAZG
Idle RPM (engine warm)	1250-1350
Starter Jet	75
Float Arm Height	17 mm (0.7 in.)
Throttle Cable Free-Play (at lever)	3-6 mm (1/8-1/4 in.)
ELECTRICAL	
Ignition Timing	10° BTDC @ 1500 RPM
Spark Plug Type	NGK CR7E
Spark Plug Gap	0.7-0.8 mm (0.028-0.032 in.)
Spark Plug Cap	8000-12,000 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)	250-375 DC volts (terminal 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)	5.04-7.56 volts (green to blue) 0.7-1.05 volts (yellow to white)
Stator Coil Output (no load)	60 AC volts @ 5000 RPM (black to black #1) (black to black #2)
Magneto Output (approx)	220 W @ 5000 RPM
CHASSIS	
Brake Type	Hydraulic w/Brake Lever Lock and Auxiliary Brake
Tire Size	Front - 25 x 8-12 Rear - 25 x 10-12
Tire Inflation Pressure	0.35 kg/cm ² (5 psi)

MISCELLANY	
Gas Tank Capacity (rated)	24.6 L (6.5 U.S. gal.)
Rear Drive Capacity	250 ml (8.5 fl oz)**
Differential Capacity (front - 4x4)	275 ml (9.3 fl oz)***
Engine Oil Capacity	3.08 L (3.25 U.S. qt)
Gasoline (recommended)	87 Octane Regular Unleaded
Engine Oil (recommended)	SAE 5W-30
Differential/Rear Drive Lubricant	SAE Approved 80W-90 Hypoid
Brake Fluid	DOT 4
Taillight/Brakelight	12V/8W/27W
Headlight	12V/37W (2)

* Specifications subject to change without notice.

** One inch below filler plug threads.

*** At the oil level plug threads.

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General Specifications*

(500 - Manual Transmission)

CARBURETOR	
Type	Keihin CVK36
Main Jet	138
Slow Jet	40
Pilot Screw Setting (turns)	1 3/4
Jet Needle	NFKG
Idle RPM (engine warm)	1250-1350
Starter Jet	85
Float Arm Height	17 mm (0.7 in.)
Throttle Cable Free-Play (at lever)	3-6 mm (1/8-1/4 in.)
ELECTRICAL	
Ignition Timing	10° BTDC @ 1500 RPM
Spark Plug Type	NGK CR6E
Spark Plug Gap	0.7-0.8 mm (0.028-0.032 in.)
Spark Plug Cap	8000-12,000 ohms
Ignition Coil Resistance (primary)	Less than 1 ohm (terminal to ground) 5200-7800 ohms (high tension - plug cap removed - to ground)
(secondary)	
Ignition Coil Peak Voltage (primary/CDI)	140-215 DC volts (terminal to ground)
Magneto Coil Resistance (trigger)	160-240 ohms (green to blue)
(source)	Less than 1 ohm (yellow to white)
(charging)	Less than 1 ohm (black to black)
Magneto Coil Peak Voltage (trigger)	4.2-6.3 volts (green to blue)
(source)	0.40-0.62 volt (yellow to white)
Stator Coil Output (no load)	60 AC volts @ 5000 RPM (black to black #1) (black to black #2)
Magneto Output (approx)	325W @ 5000 RPM
CHASSIS	
Brake Type	Hydraulic w/Brake Lever Lock and Auxiliary Brake
Tire Size	Front - 25 x 8-12 Rear - 25 x 10-12
Tire Inflation Pressure	0.35 kg/cm ² (5 psi)

MISCELLANY	
Gas Tank Capacity (rated)	24.6 L (6.5 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	3.4 L (3.5 U.S. qt)
Gasoline (recommended)	87 Octane Regular Unleaded
Engine Oil (recommended)	SAE 5W-30
Differential/Rear Drive Lubricant	SAE Approved 80W-90 Hypoid
Brake Fluid	DOT 4
Taillight/Brakelight	12V/8W/27W
Headlight	12V/27W (2)

* Specifications subject to change without notice.

** At the oil level plug threads.

*** At the filler plug threads.



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General Specifications*

(500 - Automatic Transmission)

CARBURETOR	
Type	Keihin CVK36
Main Jet	138
Slow Jet	40
Pilot Screw Setting (turns)	1 3/4
Jet Needle	NFKG
Idle RPM (engine warm)	1250-1350
Starter Jet	85
Float Arm Height	17 mm (0.7 in.)
Throttle Cable Free-Play (at lever)	3-6 mm (1/8-1/4 in.)
ELECTRICAL	
Ignition Timing	10° BTDC @ 1500 RPM
Spark Plug Type	NGK CR6E
Spark Plug Gap	0.7-0.8 mm (0.028-0.032 in.)
Spark Plug Cap	8000-12,000 ohms
Ignition Coil Resistance (primary)	Less than 1 ohm (terminal to ground) 5200-7800 ohms (high tension - plug cap removed - to ground)
(secondary)	
Ignition Coil Peak Voltage (primary/ CDI)	140-215 DC volts (terminal to ground)
Magneto Coil Resistance (trigger)	160-240 ohms (green to blue) Less than 1 ohm (yellow to white) Less than 1 ohm (black to black)
(source)	
(charging)	
Magneto Coil Peak Voltage (trigger)	4.2-6.3 volts (green to blue) 0.40-0.62 volt (yellow to white)
(source)	
Stator Coil Output (no load)	60 AC volts @ 5000 RPM (black to black #1) (black to black #2)
Magneto Output (approx)	325W @ 5000 RPM

CHASSIS	
Brake Type	Hydraulic w/Brake Lever Lock and Auxiliary Brake
Tire Size	Front - 25 x 8-12 Rear - 25 x 10-12
Tire Inflation Pressure	0.35 kg/cm ² (5 psi)
MISCELLANY	
Gas Tank Capacity (rated)	24.6 L (6.5 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
Drive Belt Width (minimum)	38 mm (1.33 in.)
Brake Fluid	DOT 4
Taillight/Brakelight	12V/8W/27W
Headlight	12V/27W (2)

* Specifications subject to change without notice.

** At the oil level plug threads.

*** At the filler plug threads.

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General Specifications*

(650 H1/650 H1 TBX/650 H1 TRV)

CARBURETOR	
Type	Keihin CVK36
Main Jet	132
Slow Jet	40
Pilot Screw Setting (turns)	1 1/4
Jet Needle	NFKS
Idle RPM (engine warm)	1250-1350
Starter Jet	85
Float Arm Height	17 mm (0.7 in.)
Throttle Cable Free-Play (at lever)	3-6 mm (1/8-1/4 in.)
ELECTRICAL	
Ignition Timing	10° BTDC @ 1500 RPM
Spark Plug Type	NGK CR6E
Spark Plug Gap	0.7-0.8 mm (0.028-0.032 in.)
Spark Plug Cap	4000 ohms
Ignition Coil Resistance (primary)	Less than 1 ohm (terminal to ground) 5200-7800 ohms (high tension - plug cap removed - to ground)
(secondary)	
Ignition Coil Peak Voltage (primary/ CDI)	142.4-213.6 DC volts (terminal to ground)
Magneto Coil Resistance (trigger)	160-240 ohms (green to blue) Less than 1 ohm (yellow to white) Less than 1 ohm (black to black)
(source)	
(charging)	
Magneto Coil Peak Voltage (trigger)	4.2-6.3 volts (green to blue) 0.40-0.62 volt (yellow to white)
(source)	
Stator Coil Output (no load)	60 AC volts @ 5000 RPM (black to black #1) (black to black #2)
Magneto Output (approx)	325W @ 5000 RPM

CHASSIS	
Brake Type	Hydraulic w/Brake Lever Lock and Auxiliary Brake
Tire Size	Front - 25 x 8-12 Rear - 25 x 10-12
Tire Inflation Pressure	0.35 kg/cm ² (5 psi)
MISCELLANY	
Gas Tank Capacity (rated)	24.6 L (6.5 U.S. gal.) 20.8 L (5.5 U.S. gal.) - TBX/TRV
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	3.4 L (3.5 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	35.5 mm (1.40 in.)
Brake Fluid	DOT 4
Taillight/Brakelight	12V/8W/27W
Headlight	12V/27W (2)

* Specifications subject to change without notice.

** At the oil level plug threads.

*** At the filler plug threads.



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General Specifications*

(700 EFI)

FUEL INJECTION	
Type	Electronic Throttle Body
Idle RPM (engine warm)	1200-1400
Throttle Cable Free-Play (at lever)	3-6 mm (1/8-1/4 in.)
ELECTRICAL	
Spark Plug Type	NGK CR6E
Spark Plug Gap	0.7-0.8 mm (0.028-0.032 in.)
Spark Plug Cap	8000-12,000 ohms
Ignition Coil Resistance (primary)	Less than 1 ohm (terminal (+) to terminal (-)) 12k-19k ohms (plug cap to terminal (+))
(secondary)	
Ignition Coil Peak Voltage (ECU)	80 volts or more (wire (+) to wire (-))
Stator Coil Resistance (crankshaft position sensor) (charging)	150-250 ohms (blue to white) Less than 1 ohm (yellow to yellow)
Crankshaft Position Sensor Peak Voltage	5.0 volts or more (blue to white)
Stator Coil Output (no load)	75 AC volts @ 5000 RPM (yellow to yellow)

CHASSIS	
Brake Type	Hydraulic w/Brake Lever Lock and Auxiliary Brake
Tire Size	Front - 25 x 8-12 Rear - 25 x 10-12
Tire Inflation Pressure	0.35 kg/cm ² (5 psi)
MISCELLANY	
Gas Tank Capacity (rated)	24.6 L (6.5 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	2.45 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
Drive Belt Width (minimum)	35.6 mm (1.40 in.)
Brake Fluid	DOT 4
Taillight/Brakelight	12V/8W/27W
Headlight	12V/27W (2)

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** One inch below plug threads.

*** At the plug threads.



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