



INSTALLATION INSTRUCTIONS

AC to DC Ignition Conversion Kit
RM22957



IMPORTANT:

Polaris changed the AC ignition system to a DC ignition system in late 2004 Sportsman 600 & 700 Carb. This kit works **ONLY** with the factory AC ignition configuration. The CDI box is mounted under the front wiring panel, and is easy to identify.



This kit **WILL** work on models that have a combined CDI box & ignition coil with 2 attached spark plug leads and 2 molded-in connectors.

This kit **WILL NOT** work on models with a factory DC ignition. You can identify this by the CDI box, which has one large 16-pin connector molded into it. It does NOT have attached spark plug leads, and you will have a separately mounted ignition coil with the attached spark plug leads.

PLEASE read this section carefully and verify you have a compatible ignition system!

Fits models

2003-2005 Polaris Sportsman 600 Carb

2002-2006 Polaris Sportsman 700 Carb



VIDEO TUTORIAL:

Don't forget to watch our video tutorial guide to complete our products installation.

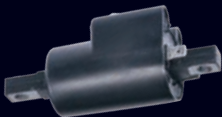
www.aceignition.com

YOUR KIT INCLUDES



A CDI Box

This CDI Box, along with the Ignition Coil, replaces your CDI & Coil assembly unit on your ATV.



B Ignition Coil & Mounting Hardware

This Ignition Coil, along with the CDI Box replaces your combination CDI & Coil unit on your ATV. The included 2 self-tapping screws and 2 standoffs will be used for mounting the Ignition Coil.



C Harness and bolts

This plug & play wiring harness is used to interface your new CDI Box & Ignition Coil with your existing Pickup/ Pulser Coil attached to your stator.

NOTE

This AC to DC Ignition Conversion Kit requires your stator's Pickup/Pulser Coil to be in good working condition to provide ignition timing pulses to the CDI Box. This kit can be used with a failed stator Source Coil, since it will be completely bypassed. Your new DC ignition system is powered by the battery and requires a fully functioning charging system. Your stator's Charging Coils, your Voltage Regulator Rectifier and your Battery must be in good working condition. Step 1 below includes testing of your stator's Charging Coils, however Voltage Regulator Rectifier testing is out of the scope of these instructions.

Please refer to your service manual, or contact RMSTATOR Customer Support for help testing or troubleshooting your charging system. You must complete Step 1 below to prevent any issues after installation.

If your stator fails Step 1 testing, replace with RMSTATOR P/N: RM01292.



STEP 1 | Verify If Stator's Pickup/Pulser Coil & Charging Coils Are Good

1.1 Pickup/Pulser Coil Testing

- a) Pickup/Pulser Coil specification is 470 ohms +/- 20%.
- b) Set multimeter to nearest resistance range > 470 ohms.
- c) Connect multimeter RED lead to stator RED wire.
- d) Connect multimeter BLACK lead to stator BLACK wire.
- e) If measurement is in range, you CAN install this kit.
- f) If measurement is not in range, stator MUST be replaced first.

1.2 Source Coil Testing (not necessary for installation)

- a) Testing the Source Coil is not necessary for installation since it will be bypassed.
- b) Source Coil specification is 10 ohms +/- 20%.

STEP 1 | Verify If Stator's Pickup/Pulser Coil & Charging Coils Are Good

- c) Set multimeter to nearest resistance range > 10 ohms.
- d) Connect multimeter RED lead to stator YELLOW wire.
- e) Connect multimeter BLACK lead to stator BROWN wire.
- f) If measurement is in range, you CAN install this kit.
- g) If measurement is not in range, you CAN still install this kit.
This source coil is often what fails on the stator.

1.3 Charging Coils Testing

- a) Charging Coils specification is 0.4 ohms $\pm 20\%$.
- b) Set multimeter to nearest resistance range > 0.4 ohms.
- c) Use multimeter RED and BLACK leads to measure between each pair of stator YELLOW wires. Take 3 measurements total.

STEP 1 | Verify If Stator's Pickup/Pulser Coil & Charging Coils Are Good

- d) If all 3 measurements are in range, you CAN install this kit.
- e) If 1 or more measurements are not in range, stator MUST be replaced first.

STEP 2 | Identify and Remove OEM Parts

2.1 Remove wiring panel on front of ATV, located in front and below headlight

2.2 Remove CDI/Ignition Coil Assembly

- a) Locate OEM CDI/Ignition Coil assembly, located at top center of wiring panel cavity.
It is a black box with 2 wiring connectors and spark plug leads exiting each side.
- b) Unplug spark plug leads from spark plugs on each side of motor.
- c) Gently pull spark plug leads up into wiring cavity.
- d) Unplug both wiring connectors from OEM CDI/Ignition Coil assembly.

STEP 2 | Identify and Remove OEM Parts

- e) Remove 2 TORX screws mounting OEM CDI/Ignition Coil assembly.
- f) Remove and set aside complete assembly with spark plugs, which will be reused.

2.3 Remove & Install Spark Plug Leads On New Ignition Coil

- a) Remove spark plug leads from OEM CDI/Ignition Coil assembly.
Remove the rubber boot, and gently twist each lead counter-clockwise where it attaches to the assembly until free.
- b) Install spark plug leads on new Ignition Coil by turning clockwise onto the mounting points. Make sure they are firmly seated and tight.

STEP 3 | **Install New Ignition Coil and CDI Box**

3.1 Install New Ignition Coil

- a) Orient new Ignition Coil in the location of the original CDI/Ignition Coil, with spark plug leads exiting downwards.
- b) Use the 2 self-tapping screws & the 2 standoffs to attach Ignition Coil to wiring cavity.

3.2 Route Spark Plug Leads

- a) Route each spark plug lead following the original path, and reattach them to the spark plugs.

STEP 3 | **Install New Ignition Coil and CDI Box**

3.3 Mount New CDI Box

- a) Orient the new CDI Box centered on the crossmember behind the radiator, with the 2 wiring harness connectors facing towards the rear of the ATV.
- b) Attach the new CDI Box to crossmember using 2 self-tapping screws.

STEP 4 | Install New Wiring Harness

4.1 Connect Wiring Harness to New Ignition Coil

- a) Attach the ORANGE wire with female spade terminal to the Ignition Coil terminal marked +.
- b) Attach the BLACK wire with female spade terminal to the Ignition Coil terminal marked -.

4.2 Connect Wiring Harness to New CDI Box

- a) Attach the larger 6-terminal female connector to the mating male connector on the new CDI Box.
- b) Attach the smaller 4-terminal female connector to the mating male connector on the new CDI Box.

STEP 4 | Install New Wiring Harness

4.3 Connect Grounding Ring Terminal

- a) Locate the grounding bolt in the upper section of the wiring panel cavity just beneath the headlight. There will be multiple BROWN wires from the ATV's wiring harness all grounded at this point.
- b) Remove the bolt, add the new BLACK wire with ring terminal, and reinstall the grounding bolt.

4.4 Connect Keyed Ignition Power Wire

- a) On the left side of the ATV, in the wiring panel cavity, locate the insulated connection where the 3 RED/WHITE wires are attached together.
- b) Using wire cutters, remove the original splice where the 3 RED/WHITE wires attach.

STEP 4 | Install New Wiring Harness

- c) Strip the insulation from the end of all 3 RED/WHITE wires.
- d) Locate the 12V labeled RED wire from the new wiring harness.
- e) Slide the supplied heat shrink tubing onto the new RED wire.
- f) Using the supplied butt connector, tightly crimp the new RED wire to the 3 RED/WHITE wires.
- g) Fully insulate the crimped butt connector with the heat shrink tubing.

4.5 Connect Pickup/Pulser Coil

- a) Locate the 2-pin female Pickup/Pulser Coil connector from your stator harness in the wiring panel cavity.
- b) Connect the 2-pin female Pickup/Pulser Coil connector from your stator to the mating 2-pin male connector on the new wiring harness.

STEP 4 | Install New Wiring Harness

4.6 Cleanup

- a) Organize and secure new wiring harness to existing wiring in the wire panel cavity using plastic zip-ties.
- b) Reinstall wiring panel cover.

STEP 5 | Start Your Engine!

Turn on your ignition key, make sure your kill switch is in the RUN position, and fire up your engine. You should be ready to ride!

Troubleshooting

- A. Make sure you have carefully followed each step of the installation instructions!**
- B. If your motor won't start, check for spark.**
 - a) Remove each spark plug, and ground against the cylinder head. Use the starter to turn the motor over and watch carefully for spark on each plug.
 - b) If you HAVE spark, check for fuel or air problem.
 - c) If you DO NOT have spark continue troubleshooting.
- C. No spark condition**
 - a) Make sure you have KNOWN FUNCTIONING or BRAND NEW spark plugs installed.
 - b) Return to STEP 1. Repeat Pickup/Pulser Coil Test. This test MUST pass for the new ignition kit to function. If test fails, replace stator.
 - c) Contact RMSTATOR customer service.

Troubleshooting

D. Engine Stops While Running, Will Not Restart

- a) Your ATV's charging system **MUST** be in good working order. The battery must stay charged for the new ignition system to operate.
- b) Make sure you have a **KNOWN FUNCTIONING** or **BRAND NEW**, fully charged battery installed.
- c) Return to STEP 1. Repeat the Charging Coils test. This test **MUST** pass to keep your battery charged and your new ignition system working. If test fails, replace stator.
- d) Perform Voltage Regulator Rectifier diode test per OEM Service Manual or contact RMSTATOR customer service for help. Your Voltage Regulator Rectifier must be working.
- e) Contact RMSTATOR customer service.



**Improves
ignition
performance**



**Quick and
easy
installation**



**Converts to
reliable DC
powered
system**



**Much less
expensive**



**Stabilizes
the ignition**



**Easier
diagnosis**



Customer Service

Need help? Have a question?

Call us at: 1-877-838-1399



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