



'03-on Yamaha WR250/450F Stator Modification Instructions

READ THESE INSTRUCTIONS IN THEIR ENTIRETY BEFORE BEGINNING. This is a very delicate modification that requires crimping and soldering to the stator wiring. If you do not have the proper tools or are not comfortable performing this type of work, **DO NOT BEGIN.** Baja Designs can perform this modification for you for \$30 (call 760.560.2252 for an order number.) If you choose to perform this modification yourself it is critical that you be able to follow these instructions exactly. Any errors will cause the stator to have to be rewound completely.

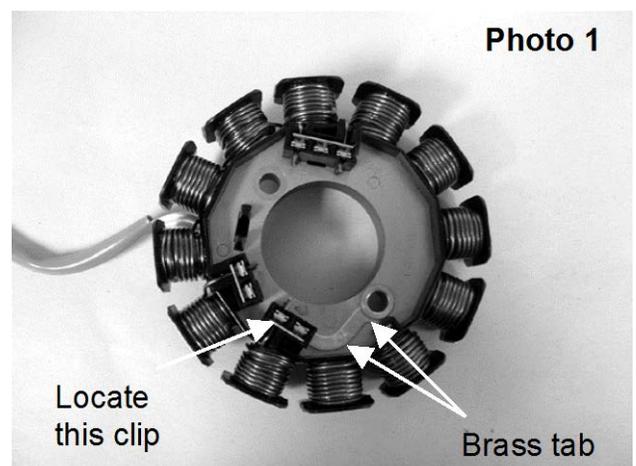
*'03-on WR stators are wound with two separate coil outputs from the factory. One output charges the battery for the electric-start and the other output powers the stock lighting via its own AC circuit (no battery backup.) In stock form the battery cannot be used to power any lighting without becoming discharged. This modification joins the two existing stator outputs together into one and is necessary anytime the stock battery will be used to power a lighting system (such as a dual sport or HID system.) **Once the stator has been modified, the stock rectifier/regulator must be replaced with a Baja Designs unit and the lighting system must be powered via DC from the battery. The stock headlight connector can no longer be used as a lighting power source. Failure to replace the rectifier/regulator or using the stock headlight connector will result in the battery discharging.***

STATOR REMOVAL

1. Remove the seat and fuel tank.
2. Unplug the two plastic connectors that mate the stator wires to the main harness between the radiators. Clip the factory zip-ties and un-route the stator wires so they hang from the left engine case cover.
3. Lay the bike on its right side (to avoid draining the engine oil) and remove the left case cover. Note that on WR450's one of the case bolts is hidden underneath the starter reduction gear.
4. The stator is bolted into the left case cover. Remove it from the case along with the pulsar coil (small black box) and the wire retaining bracket.

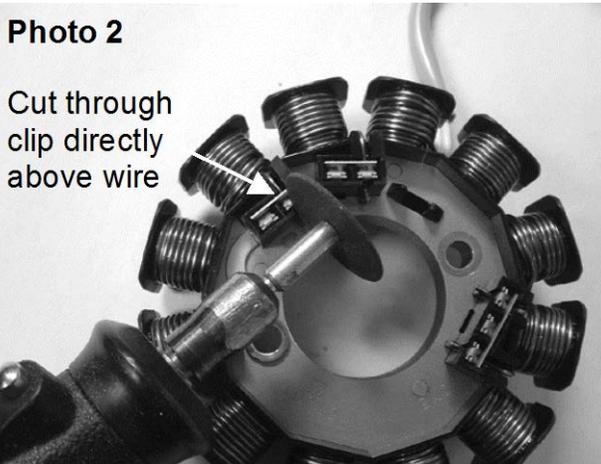
STATOR MODIFICATION

1. Lay the stator on a flat work surface as shown in Photo 1 with the yellow

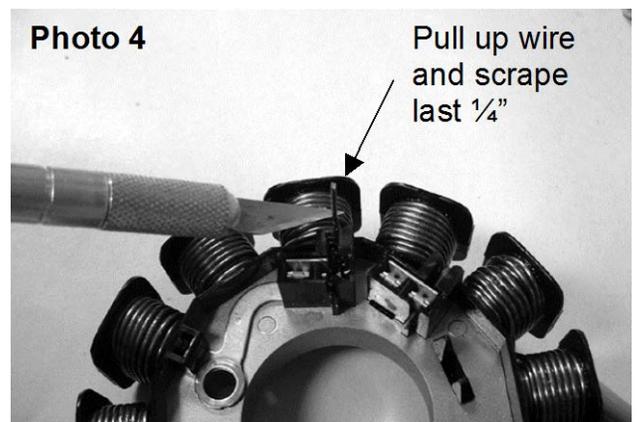


and white wires facing down. There are three groupings of clips that the copper wires attach to. Locate the one that has the brass tab coming out from the bottom.

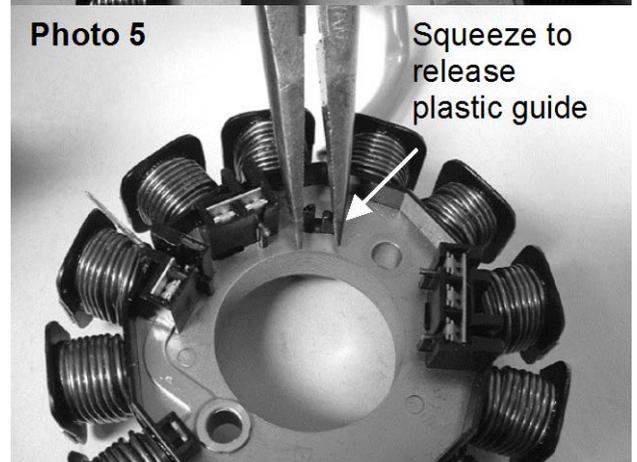
2. Using a Dremel (or equivalent) high speed cut-off wheel, CAREFULLY cut through the clip that secures the single copper wire. The goal is to free the copper wire from the clip without damaging the wire. See Photos 3 & 4. Note that if you break the copper wire, the stator will have to be rewound so be extra careful when performing this step.



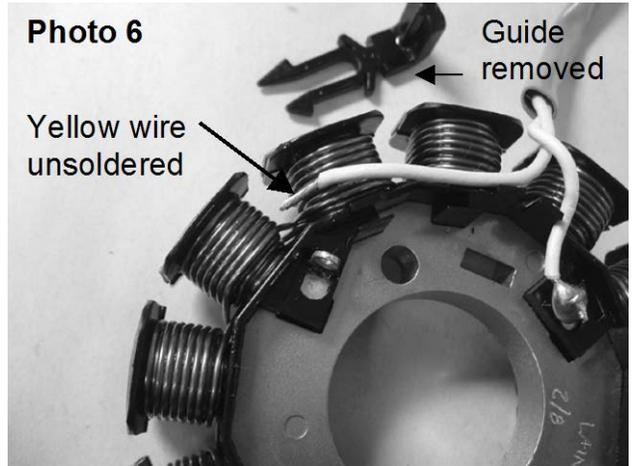
3. Once the clip has been cut, grab the wire with a pair of needle nose pliers and carefully bend it up out of the clip slot. Use a sharp blade to scrape the layer of brown enamel coating from the last $\frac{1}{4}$ " of the wire to expose shiny bare copper. See Photo 4.



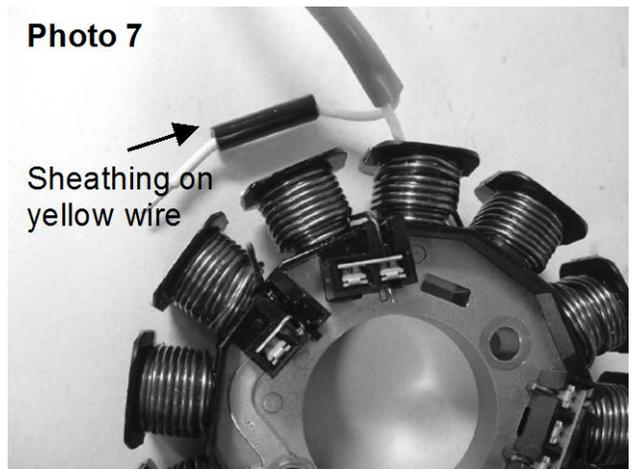
4. Use needle nose pliers to squeeze the two tabs that lock the black plastic guide bracket into the stator and remove it from the stator. See Photo 5.



5. Turn the stator over and unsolder the yellow wire from its tab retaining as much wire as possible. See Photo 6.

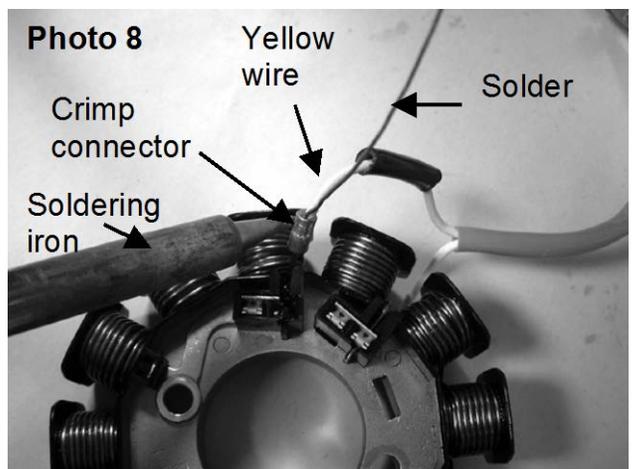


6. Locate the strip of black sheathing in the hardware bag. Slide this sheathing over the yellow wire you just unsoldered and turn the stator back over as shown in Photo 7.



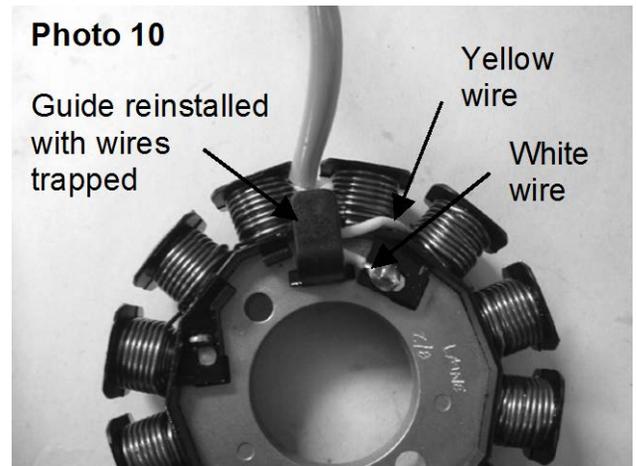
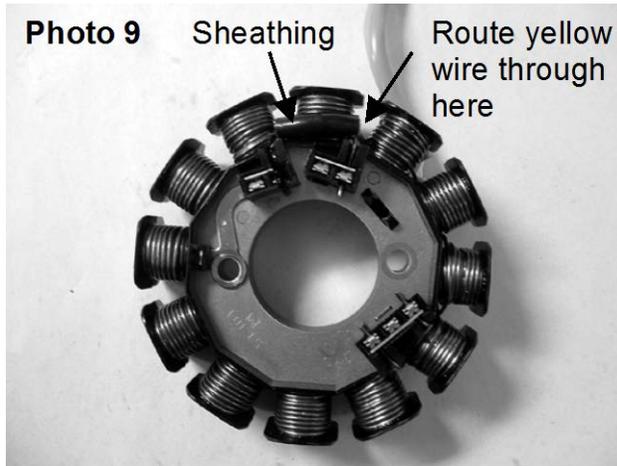
7. Locate the crimp connector in the hardware bag. You will use this to join the yellow wire you just unsoldered to the copper wire you scraped. Insert the stripped yellow wire into one end of the crimp connector and insert the scraped copper wire into the other so they're side by side inside the connector. Carefully crimp the connector so these wires are locked in together.

Once crimped, heat it up with a



soldering iron and lightly solder the connection as shown in Photo 8.

8. Once cooled, slide the piece of sheathing over the new crimp connection. Carefully bend the copper wire to the side in the clockwise direction. Route the yellow wire between the posts directly in front of where the white wire is attached and reinstall the plastic guide bracket so the two wires are trapped like they were originally. The bracket should hold enough tension on the wire so the sheathing cannot move from its spot over the crimp connection. See Photos 9 & 10.



The modification is now complete. Before reinstalling the stator you can check your work by verifying with an Ohmmeter that the yellow and white wires from the stator have continuity only with each other and not with the metal body of the stator. There should be very low resistance (approximately .5 Ohm) between the yellow and white wires. If it looks good, go ahead and reinstall the stator onto the motorcycle.

*The stock rectifier/regulator **MUST** be replaced with a Baja Designs unit once this modification has been performed. If not, the battery will not charge.*