

# Installation and Troubleshooting Guide

TECHNICAL INSTITUTE

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CDI P/N: 173-3837 This stator replaces P/N: 583837

**WARNING!** This product is designed to be installed by a professional marine mechanic. CDI Electronics cannot be held liable for injury or damage resulting from improper installation, abuse, neglect or misuse of this product.

SERVICE NOTE: Discoloration of all the battery windings is an indication of a problem in the rectifier/regulator. Discoloration of only one post of the battery windings indicates a problem in the stator.

## **INSTALLATION**

- 1. Remove the negative battery cable.
- 2. Remove the flywheel.
- 3. Disconnect the original stator wires.
- 4. Remove the original stator, saving the original bolts.
- 5. Install the new stator using the original bolts with a good thread-locker applied (CDI 989-3977 is recommended) to the bolts and tightened to the factory torque specifications.
- 6. Connect the new stator to the power pack.
- 7. Connect the new stator to the regulator/rectifier (ignore any stripes on the rectifier as the new stator does not require the Yellow wires to be connected to a particular rectifier wire).
- 8. Replace the flywheel according to the service manual.
- 9. Clean all battery cable connections, both on the battery and the engine.
- 10. Replace the battery cable.

#### TROUBLESHOOTING

#### NO FIRE ON ANY CYLINDER:

- 1. Disconnect the kill wire and retest. If the ignition now has fire, check the kill circuit.
- Check the resistance between the brown and brown/yellow wires. You should read approximately 500-650 ohms.
  DVA (peak voltage) should be 150v or more.
- 3. Inspect the flywheel outer and trigger magnets to see if they are loose or broken.
- 4. Disconnect the rectifier/regulator and retest. If the fire returns, replace the rectifier/regulator.

# NO FIRE ON ONE CYLINDER:

- 1. Disconnect the spark plug wires from the spark plugs and install a spark gap tester (511-9766 is recommended) on all cylinders.
- 2. Swap the brown wire and brown/yellow wire and see if the problem moves. If it does, the stator is likely bad.
- 3. Check the power pack and trigger.

#### HIGH SPEED MISS-FIRE OR WEAK HOLE SHOT:

- Connect a DVA meter between the brown and brown/yellow wires in each set and do a running test. AT NO TIME SHOULD THE VOLTAGE EXCEED 400v. If it does, the regulator circuit in the power pack is bad. The voltage should show a smooth climb and stabilize, gradually falling off at high RPM (above 5000). If you see a sudden drop in voltage right before the miss becomes apparent, the problem is likely in the stator.
- 2. Disconnect the rectifier and retest. If the problem disappears, replace the rectifier and retest to verify that the problem was in the rectifier.

## **OVER CHARGING THE BATTERY:**

- 1. Using a voltmeter, check the voltage on the battery and compare it to the voltage on the red wire connected to the starter solenoid to engine ground.
- 2. If the voltage is high on the engine compared to the voltage on the battery, do a voltage drop test and try to isolate the area where the problem is.
- 3. If the voltage is the same on the battery and the engine, but is over 15.5 volts at 4500 RPM, replace the battery with a known good high quality MARINE FLOODED CELL battery.
- 4. A continued high voltage reading may indicate the need for a regulator/rectifier combination instead of a rectifier only.