



CDI P/N: 173-2099

# Installation and Troubleshooting Guide

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This stator replaces P/N's: 581303, 581860 and 582099 used on 1973 through 1977 V4 engines with terminal block style power packs and Power Tilt/Trim systems (12 Amp battery charge capacity).

**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 the Stator

**NOTICE:** Any sign of leakage out of the high voltage coils or bubbling around the battery charge windings indicate a bad stator. Check for burned marks on each pole. If a problem is found on the battery windings, we recommend the rectifier/regulator be closely checked or replaced.

### No fire at all:

1. Disconnect the kill wire and retest. If the ignition now has fire, check the kill circuit.
2. Check resistance between the Brown/Yellow and the Brown wire. You should read approximately 450-600 ohms. DVA (peak voltage) should be 150v or more while connected to the power pack.
3. Inspect the flywheel outer and trigger magnets to see if they are loose or broken.
4. Disconnect the rectifier and retest. If the fire returns, replace the rectifier.

### No fire on One Bank:

1. Swap the Brown wire with the Brown/Yellow wire and see if the problem moves. If it does, the stator is likely bad.
2. Check the power pack and trigger.

### High speed miss or weak hole shot:

1. Connect DVA meter between the Brown/Yellow and the Brown wire 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.

### Overcharging

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 battery.
4. A continued high voltage reading may indicate the need for a regulator/rectifier combination instead of a rectifier only.

Thank you for using CDI Electronics.

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