Installation and Troubleshooting Guide

CDI P/N: 194-5279

This kit will replace all of the 815279, 817411, 830179, 854515 and 883072 series regulator/rectifiers, the 194-3072K1 and the (12082A1 regulator, 62351A1 rectifier, and 17602A1 tachometer terminal combination.)

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

DO NOT USE A MAINTAINENCE FREE, AGM OR DRY CELL BATTERY WITH THIS TYPE REGULATOR/RECTIFIER!!!

NEVER DISCONNECT THE BATTERY WHILE THE ENGINE IS RUNNING AS THIS MAY BURN OUT THE REGULATOR/RECTIFIER. *If the boat is equipped with a battery switch, make sure that it is a make before break type.*

SERVICE NOTE: It is recommended that dielectric grease (i.e. CDI P/N 991-9705) be used in the bullet nose connectors to help prevent corrosion.

INSTALLATION NOTE: These regulator/rectifiers will cause a small spark when you reconnect the battery and will draw a very small amount of current from the battery (Less than 0.001 amp).

1. Disconnect the battery negative post.
2. Disconnect and remove ALL rectifiers and regulator/rectifiers.
3. If the unit being replaced has long wires or has plastic connectors on the Red and Yellow wires, cut the wires off close to the ***case of the old regulator/rectifier***, and crimp and solder the new terminals on to the wires. Use the wires on the new regulator/rectifier as a guide for terminal selection. The Yellow/Gray stripe wire on the OEM stator can be connected to either Yellow wire on the new regulator/rectifier. **To replace a regulator having only one Red wire, tape off the unused Red wire on the new regulator/rectifier.**
4. The old regulator's Black wire is no longer needed. The new regulator/rectifier's case is Engine Ground. Use a quality heat-sink compound (CDI P/N: 989-8109) on the back of the regulator when you install the new regulator/rectifier.

Troubleshooting

Tachometer

1. At 800-1000 RPM, check output on the gray wire, reading should be at least 8 volts with a DVA meter. A low reading usually indicates a bad regulator if the system is charging the battery.
2. Check the resistance between the gray wire and engine ground. You should read above 100K (100,000) ohms. Gray to red, and gray to the yellow wires should be a high reading, usually in the M range.

Maximum Output Test

1. Install an ammeter capable of reading at least 40 amperes in-line on the red wire connected to the starter solenoid.
2. Connect a load bank to the battery.
3. In the water or on a Dynometer, start the engine and bring the RPM up to approximately 4500 in gear.
4. Turn on the load bank switches to increase the battery load to equal 40 Amps.
5. Check the ammeter, 16 Amp systems should show approximately 16 Amps and 40 Amp systems will show approximately 20 amps on each regulator/rectifier.
6. If the amperage is low,
   A) Check the load bank for battery draw.
   B) Reconnect the ammeter between the red wires from one of the regulator/rectifiers and the terminal strip. Retest. You should show about 20 Amps from each regulator/rectifier.
   C) If the output is still low, check and clean all connections between the battery and the regulator/rectifier plate.
7. If the amperage is correct, but the battery voltage remains low, replace the battery.

Bench Test

Diode plate check: Test the forward diodes between the two yellow wires and the red wire. You should get a reading of about 45K (45,000) on one and a high reading on the other. Check the resistance from each of the yellow wires to case ground, you should get a reading of about 56K (56,000) on one and a high reading on the other. The red wire should read about 14K (14,000) ohms to ground.

Tachometer Circuit:
Check the resistance between the gray wire and engine ground. You should read above 100K (100,000) ohms. Gray to red, and gray to the yellow wires should be a high reading, usually in the M range

Thank you for using CDI Electronics 7/20/2010