

CDI ELECTRONICS INSTALLATION/TROUBLESHOOTING GUIDE

CDI P/N: 194-3072K1

This kit will replace the Mercury P/N: 883072T 2

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.

NOTICE: PLEASE DISCONNECT THE BATTERY BEFORE SERVICING THE REGULATOR!

1. Disconnect and remove the old regulator/rectifier.
2. Cut the two Yellow wires and the Red wire off close to the case of the old regulator/rectifier. Strip, crimp and solder the new female bullet terminals on to the wires. Cut the two Yellow wires and the large Red wire off close to the middle of the new regulator/rectifier. Strip, crimp and solder the new male bullet terminals on to the wires (Ignore the small Red wire – it is not used).
3. Use a quality heat-sink compound (CDI P/N: 989-8109) on the back of the regulator when you install the new regulator/rectifier.
4. Connect the bullet connectors together and connect the plastic connectors.

SERVICE NOTE: It is recommended that dielectric grease (i.e. RAPAIR/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).

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

3. Install an ammeter capable of reading at least 40 amperes in-line on the red wire connected to the starter solenoid.
4. Connect a load bank to the battery.
5. In the water or on a Dynometer, start the engine and bring the RPM up to approximately 4500 in gear.
6. Turn on the load bank switches to increase the battery load to equal 40 Amps.
7. Check the ammeter.
8. 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.
9. 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 RAPAIR/CDI Electronics

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