

CDI Electronics

Installation and Troubleshooting Guide

CDI P/N: 153-1778

This unit replaces P/N: 18-5708, 580895, 581603, 582399 and 583408.

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 RECTIFIER!

1. Disconnect and remove the old rectifier.
2. Install the replacement rectifier using the original bolts.
3. Connect the rectifier's yellow wires to the stator's yellow wires. The stripes on the stator wires are for assembly purposes. Therefore, it does not matter which yellow rectifier wire is connected to which stator yellow wire.
4. Connect the gray tachometer wire with any of the yellow stator wires.

Troubleshooting

Before troubleshooting the charging system, check the water level in the battery and make sure it is fully charged. DO NOT USE A LOW MAINTAINENCE or MAINTAINENCE FREE BATTERY IN THIS TYPE SYSTEM!!!!

Tachometer

At 800-1000 RPM, check output on the yellow wire where the gray wire is attached, reading should be at least 8 volts with a DVA meter. If you get a low reading, move the gray wire to the other yellow wire. If the tach now reads, the stator or rectifier is shorted to ground.

Maximum Output Test

1. Install an ammeter capable of reading at least 15 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 Dynamometer, 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 10 Amps.
5. Check the ammeter. You should show approximately 5 Amps.
6. If the amperage is low,
 - A) Check the load bank connections and meter for battery draw.
 - B) If the output is still low, check and clean all connections between the battery and the rectifier.
7. If the amperage is correct, but the battery voltage remains low, replace the battery.

Overcharges (above 15.5 volts):

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 quality MARINE battery. (You may have to run the engine for several minutes to make sure the battery is topped off).

Bench Test

Diode check:

Using an ohmmeter, check the resistance of the forward diodes between the three yellow wires and the red wire. You should get a low reading in one direction and a high reading on the other. Check the resistance from each of the yellow wires to case ground, you should get a low reading in one direction and a high reading on the other.

Red Lead	Black Lead	Reading
Red wire	Yellow wire	High
Yellow wire	Red wire	Low
Yellow wire	Case Ground	High
Case ground	Yellow wire	Low