



# Installation and Troubleshooting Guide



NOTE: This installation is to be completed by an Authorized Dealer or Professional Service Technician. For questions regarding installation or warranty, call CDI Tech Support at 866-423-4832. **Do not return to the Dealer or Distributor where the part was purchased. Contact CDI Electronics Directly for Return Material Authorization.**

## CDI P/N: 117-696-12 Ignition Pack 2 Cylinder

This unit replaces P/N's: 696--85540-10-00, 696--85540-11-00, 696-85540-12-00.

### WARNINGS:

**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.**

1. All DVA output tests are done at cranking speed unless otherwise noted.
2. All resistance tests are done disconnected from all other components.
3. Please use the Factory recommended spark plug specified and gapped at the correct setting.

**WARNING!!! NEVER DISCONNECT THE SPARK PLUG WIRES WHILE THE ENGINE IS RUNNING AS THIS WILL DAMAGE THE CDI UNIT. DO NOT ATTEMPT TO START THE ENGINE WITH THE SPARK PLUG WIRES NOT CONNECTED EITHER TO THE SPARK PLUGS OR A SPARK TESTER.**

## INSTALLATION

**NOTICE: Do NOT fire the ignition coil with the sparkplug leads disconnected from a spark tester as damage to the ignition coil may result.**

1. Disconnect the negative battery cable.
2. Disconnect the wires from the old CD Module.
3. Remove the old CD Module, saving the mounting bolts.
4. Install the new CD Module using the original bolts.
5. Connect the wires from the new CD Module to the trigger, charge coil, kill circuit and ignition coil.

## TROUBLESHOOTING

### NO SPARK ON ANY CYLINDER:

1. Connect a spark tester (gapped at about 3/8") to the spark plug wire and check for spark. If the engine has spark on a spark tester but does not appear to have spark on the spark plug, replace the spark plug and retest.
2. Disconnect the White stop wire and retest. If the ignition system now has spark, the stop circuit has a problem.
3. Inspect and clean all engine and ignition ground connections.
4. Check the resistance and DVA of the Charge coil, Pulsar coil, CDI unit, and ignition coil:

Read from	Read to	Ohms	DVA Connected
Brown (Charge coil)	Black	81-99 Ω	110 V Minimum
White/Red (Pulsar coil wire, fires both cylinders)	Black	82-122 Ω	2.5 V Minimum
Orange (Primary wire)	Black	0.12-0.18 Ω	110 V Minimum
Spark Plug Cap 1	Spark Plug Cap 2	2.8K-4.2K Ω	-

**NOTE: Never test the CDI unit disconnected or damage to the CDI unit could occur!**

### HAS SPARK BUT WILL NOT RUN:

1. Make sure the engine is getting fuel to the combustion chamber (make sure there is no water or residue in the carburetor).
2. Check flywheel shear key to make sure it has not sheared due to backfiring or impact on the propeller.
3. Check flywheel magnet to make sure it has not broken loose and moved, causing a timing shift.
4. Check spark plug for presence of water, indicating a possible cracked block or blown head gasket.
5. Check compression, carburetor, reeds, and do a cylinder leak down test.
6. Check the Pulsar coil as follows; a defective Pulsar coil can cause a timing variance.

Read from	Read to	Ohms	DVA Connected
White/Red (Pulsar coil wire, fires both cylinders)	Black	82-122 Ω	2.5 V Minimum

### WILL NOT STOP (KILL):

Short the White wire from the CDI unit to engine ground. If the engine stops firing, the problem is in the stop circuit. If the engine continues to run with the White wire shorted to engine ground, replace the defective CDI unit.

### ONLY HAS SPARK ON ONE CYLINDER:

If only one cylinder has spark, replace the ignition coil.

CDI Electronics • 353 James Record Road SW • Huntsville, AL 35824 USA

Web Support: [www.cdielectronics.com](http://www.cdielectronics.com) • Tech Support: 1-866-423-4832 • Order Parts: 1-800-467-3371

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