

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.

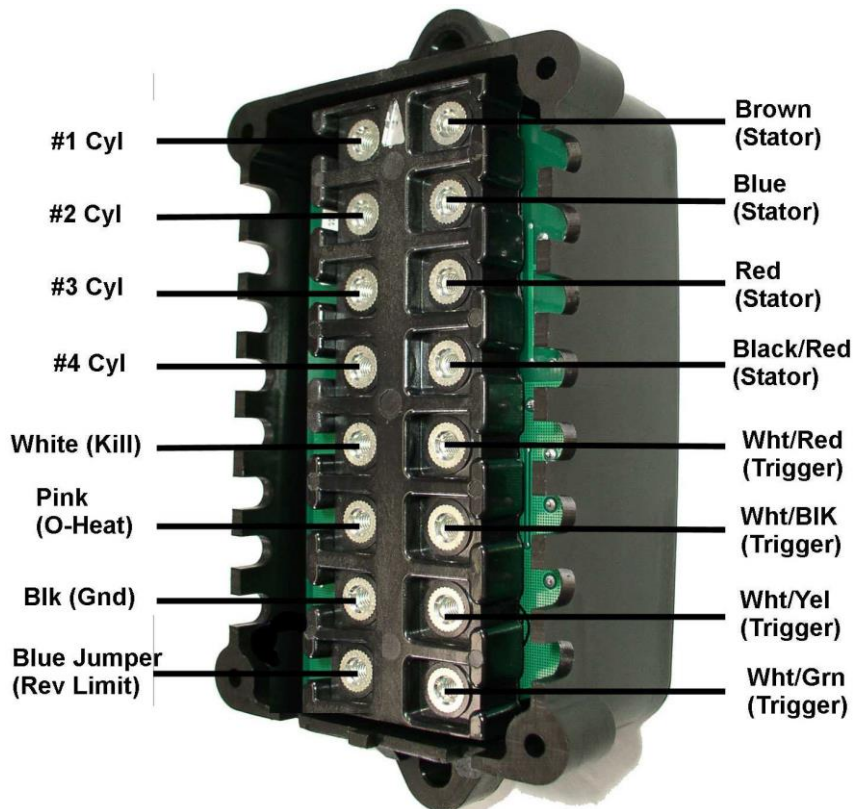
CDI P/N: 117-6E5-12

This unit replaces the following P/N's: 6E5-85540-10-00, 6E5-85540-11-00, and 6E5-85540-12-00.

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.

INSTALLATION

1. Disconnect the Negative battery cable.
2. Remove the CDI unit mounting bolts and disconnect all of the wires going to the old CDI unit.
3. Connect the wires to the new CDI unit.
4. Mount the new CDI unit using the original bolts.
5. Connect the wires using the diagram below.
6. Check continuity of the Black ground wire of the CDI unit to ground to verify that the wire has a good connection to ground.
7. Reconnect the Negative battery cable.





Installation and Troubleshooting Guide



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TROUBLESHOOTING

NO SPARK OR INTERMITTENT ON ONE OR MORE CYLINDERS:

1. Check the cranking RPM. A cranking speed of less than 250 RPM may not allow the system to spark properly. This can be caused by a weak battery, dragging starter, bad battery cables, or a mechanical problem inside the engine.
2. Perform a visual inspection of all ground wire connections to make sure that they are clean and tight.
3. Disconnect the White stop wire and retest. If the engine's ignition now has spark, the stop circuit has a fault. Check the key switch, Harness, and shift switch.
4. Disconnect the Green wires to the Regulator/Rectifier and retest. If the engine now has spark, the Regulator/Rectifier is likely faulty.
5. Clean and verify all engine and ignition ground wires. Make sure the wires are not broken at the terminals.
6. Check resistance of the CDI unit ground wire to the engine block. It should show a dead short, 0.5 Ω or less. If not, run a new ground wire from the engine block to the CDI unit.
7. Disconnect the Blue Jumper wire from terminal 8. If spark returns, replace the CDI unit.
8. Check the resistance and DVA of the Charge and Pulser coils:

Read from	Read to	OEM Reading	CDI Reading	DVA (Connected)	DVA (Disconnected)
Brown (Low speed coil)	Red (Low speed coil)	665-815 Ω	675-825 Ω	160 V Minimum	160 V Minimum
Blue (High speed coil)	Black/Red (High speed coil)	62-78 Ω	13-18 Ω	45 V Minimum	45 V Minimum
White/Red (#1 Pulser)	White/Yellow (#3 Pulser)	285-352 Ω	324-396 Ω	2.5 V Minimum	2.5 V Minimum
White/Black (#2 Pulser)	White/Green (#4 Pulser)	285-352 Ω	324-396 Ω	2.5 V Minimum	2.5 V Minimum
Brown (Low speed coil)	Engine Gnd	Open	Open	160 V Minimum	-
Red (Low speed coil)	Engine Gnd	Open	Open	160 V Minimum	-
Blue (High speed coil)	Engine Gnd	Open	Open	45 V Minimum	-
Black/Red (High speed coil)	Engine Gnd	Open	Open	45 V Minimum	-
White/Red (#1 Pulser)	Engine Gnd	Open	Open	2.5 V Minimum	-
White/Black (#2 Pulser)	Engine Gnd	Open	Open	2.5 V Minimum	-
White/Yellow (#3 Pulser)	Engine Gnd	Open	Open	2.5 V Minimum	-
White/Green (#4 Pulser)	Engine Gnd	Open	Open	2.5 V Minimum	-

9. Check the DVA on the Black/White wires from the CDI unit while connected to the Ignition coils. You should have a reading of at least 160 V or more. If the reading is low on one cylinder, disconnect the wire from the Ignition coil for that cylinder and reconnect it to a Pack Load resistor. Retest. If the reading is now good, the Ignition coil is likely bad. A continued low reading indicates a bad CDI unit or Pulser coil.

ENGINE WILL NOT ACCELERATE ABOVE APPROXIMATELY 2000 RPM:

1. Verify the engine is not overheating and causing the CDI unit to limit the RPM.
2. Disconnect the Blue Jumper wire from terminal 8. If the engine runs normally, replace the CDI unit.
3. Disconnect the Pink wire from the CDI unit and retest. If the engine now performs correctly, check the overheat sensor, oil level in the oil tank mounted on the engine, and the wiring harness.
4. Check the position of the Pink wire and make sure it is not next to a spark plug wire.

ENGINE WILL NOT ACCELERATE ABOVE APPROXIMATELY 2500 RPM:

1. Using an inductive tachometer, check the RPM on all cylinders. A difference in readings between the individual cylinders can be caused by a bad coil, CDI unit, or spark plug.
2. Disconnect the Blue Jumper wire from terminal 8. If the engine runs normally, replace the CDI unit.
3. If all cylinders show the same RPM and the engine will only rev to approximately 2500 RPM, check the running Stator DVA from idle thru WOT. You should show a steady increase in voltage from the Blue to the Black/Red Stator wires throughout the RPM range. A drop in voltage can be the result of a bad Charge coil or a bad Regulator/Rectifier.

HIGH SPEED MISS:

1. Verify the engine is not overheating and causing the problem.
2. Using an inductive tachometer, check the RPM on all cylinders. A difference in readings between the individual cylinders can be caused by a bad Ignition coil, CDI unit, or spark plug.
3. Disconnect the Green wires to the Regulator/Rectifier and retest. If the engine now runs well, the Regulator/Rectifier is likely faulty.
4. Disconnect the Blue Jumper wire from terminal 8. If the engine runs normally, replace the CDI unit.

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

Web Support: www.cdielectronics.com • Tech Support: 1-866-423-4832 • Order Parts: 1-800-467-3371

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S.A.F.E. WILL NOT ENGAGE:

1. Disconnect the Pink warning wire from the CDI unit. Connect a jumper wire to engine ground and connect it to the terminal where the Pink wire connects. If the engine now limits at approximately 2000 RPM, check the wiring from the temperature sensor and oil tank to the CDI unit. If it still fails to engage, the CDI unit is likely bad.

ENGINE WILL NOT KILL (STOP)

1. Disconnect the White kill wire and connect a jumper wire from engine ground to the white wire terminal of the CDI unit. If you still have spark, the CDI unit is likely bad. If the engine has no spark with the jumper connected, either the wiring harness, key switch, or emergency stop switch is faulty.