



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: 117-0009 Ignition Pack 2 Cylinder

This unit replaces P/N: 61N-85540-10-00, 61N-85540-11-00 and 61N-85540-13-00.

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 wires from the old CD Module going to the Kill Circuit, Pulsar Coil's, Charge Coil, Ignition Coils and engine ground.
2. Remove the old CD Module, saving the mounting bolts.
3. Install the new CD Module using the original bolts.
4. Connect the wires from the new CD Module to the trigger, charge coil, kill circuit, ignition coil and engine ground.

Year	CDI Wire Color	Engine Wire Color	Function
1993-1997	White/Red	White/Red	# 1 Pulsar Coil
1993-1997	White/Black	White/Black	# 2 Pulsar Coil
1993-1997	Brown	Brown	Charge Coil
1993-1997	Blue	Blue	Charge Coil
1993-1997	Black/Orange	Black/Orange	# 1 Ignition Coil
1993-1997	Black/ White	Black/ White	# 2 Ignition Coil
1993-1997	White	White	Kill/Stop Switch
1993-1997	Black	Black	Engine and CDI Ground

TROUBLESHOOTING

NO SPARK:

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. Verify the ground wires are not broken inside the terminals.
4. Check the resistance and DVA voltage of the charge coil, trigger coils and ignition coil.

Function	Check From:	Check To:	Ohms Reading:	DVA Connected:
# 1 Pulsar Coil	White/Red	Black (Eng Gnd)	304-430	4 V Minimum
# 2 Pulsar Coil	White/Black	Black (Eng Gnd)	304-430	4 V Minimum
Charge Coil	Blue	Brown	356-534 (1993-96)	125 V Minimum
Charge Coil	Blue	Brown	304-456 (1997)	125 V Minimum
# 1 Coil Lead	Black/Orange	Black (Eng Ground)	Approx 1 ohm	100 V Minimum
# 2 Coil Lead	Black/White	Black (Eng Ground)	Approx 1 ohm	100 V Minimum
	# 1 Sparkplug Lead	Black (Eng Ground)	2.6K to 3.8K	N/A
	# 2 Sparkplug Lead	Black (Eng Ground)	2.6K to 3.8K	N/A

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 magnets to make sure they have 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 Triggers as follows as a defective trigger can cause timing variance:

Function	Check From:	Check To:	Ohms Reading:	DVA Connected
# 1 Pulsar Coil	White/Red	Black (Eng Gnd)	304-430	4 V Minimum
# 2 Pulsar Coil	White/Black	Black (Eng Gnd)	304-430	4 V Minimum

WILL NOT STOP (KILL):

1. Disconnect the White wire from the CD Module.
2. Short the White wire from the CD Module to engine ground. If the engine stops, the problem is in the stop circuit.
NOTE: If the engine continues to run with the White wire shorted to engine ground, the ignition module is likely defective.

NO SPARK ON ONE CYLINDER:

1. Check the resistance and DVA voltage of the charge coil, trigger coils and ignition coil.

Function	Check From:	Check To:	Ohms Reading:	DVA Connected:
# 1 Pulsar Coil	White/Red	Black (Eng Gnd)	304-430	4 V Minimum
# 2 Pulsar Coil	White/Black	Black (Eng Gnd)	304-430	4 V Minimum
Charge Coil	Blue	Brown	356-534 (1993-96)	125 V Minimum
Charge Coil	Blue	Brown	304-456 (1997)	125 V Minimum
# 1 Coil Lead	Black/Orange	Black (Eng Ground)	Approx 1 ohm	100 V Minimum

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

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# 2 Coil Lead	Black/White	Black (Eng Ground)	Approx 1 ohm	100 V Minimum
# 1 Sparkplug Lead	Black (Eng Gnd)	2.6K to 3.8K	N/A	
# 2 Sparkplug Lead	Black (Eng Gnd)	2.6K to 3.8K	N/A	

3. Swap the White/Red and White/Black Pulsar Coil leads and retest. If spark moves to the other cylinder, replace the defective Pulsar Coil. Remember this is a cranking test only. **DO NOT RUN THE ENGINE.**
4. Swap the Black/Orange and Black/White leads to the coils. If the spark moves to the other cylinder, replace the ignition pack. Remember this is a cranking test only. **DO NOT RUN THE ENGINE.**
5. If swapping the Black/Orange and Black/White leads does not move the fire, replace the coil not firing.