



# Installation and Troubleshooting Guide

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## CDI P/N: 114-6866

This switch box replaces this P/N: 332-826866A 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.

**Disconnect the kill wire(s):** Connect a DC volt meter between the kill wires and engine ground. Turn the ignition switch on and off several times. If, at any time, you see DC voltage on the kill wires, there is a problem with the harness or ignition switch. Battery voltage on the kill circuit will destroy most ADI type switch boxes.

1. Disconnect the positive battery cable.
2. Check and clean all battery terminals and engine grounds.
3. Remove all wires from the old switch box.
4. Unbolt and remove the old switch box, saving the original bolts and nuts.
5. Install the new switch box using the original bolts and nuts.
6. Connect the black ground wire to engine ground.
7. Connect all wires from the old switch box to the new switch box.
8. Reconnect battery cable.

## TROUBLESHOOTING

**Unit will not fire:** Disconnect the black/yellow kill wire AT THE PACK and retest. If the engine's ignition fires now, the kill circuit has a fault-possibly the key switch, harness or shift switch.

1. Disconnect the yellow wires from the stator to the rectifier and retest. If the engine fires, replace the rectifier.
2. Check the cranking RPM. A cranking speed less than 250-RPM will not allow the system to fire properly.
3. Check the stator resistance and DVA output as given below:

### Flywheel With Glued In Magnets

WIRE	Read To	OEM Ohms	CDI Ohms	DVA
Blue	Blue/White	5000-7000	2200-2400	180V or more
Red	Red/White	125-155	45-55	25V or more

### Flywheel With Bolted In Magnets

WIRE	Read To	OEM Ohms	CDI Ohms	DVA
Blue	Blue/White	3250-3650	500-600(a)	180V or more
Red	Red/White	75-90	28-32	25V or more

(a) Encapsulated CDI stators will read 2200-2400 ohms from Blue to Blue/White.

### Red Stator

WIRE	Read To	OEM Ohms	CDI Ohms	DVA
White/Green	Green/White	500-700	500-600	180V or more

### Red Stator Adapter

WIRE	Read To	OEM Ohms	CDI Ohms	DVA
Blue	Blue	OPEN	N/A	180V or more
Blue	Ground	OPEN	N/A	180V or more

### Engine will not kill:

Check kill circuit in the pack by using a jumper wire connected to the black/yellow terminal or wire coming out of the pack and shorting it to ground. If this kills the engine, the kill circuit in the harness or on the boat is bad (possibly the ignition switch).

### High speed miss:

1. Disconnect the rectifier and retest. If miss is gone, the rectifier is usually at fault.
2. Check DVA voltage between the red wires of the stator at high speed. (**NOTICE:** Use caution when doing this and do not exceed the rated voltage range of your meter.) The readings should show a smooth climb in voltage. If there is a sudden or fast drop in voltage right before the miss becomes apparent, the stator is usually at fault. If there is no indication of the problem, it could be mechanical problem.

### Coils fire with spark plugs out but not in:

1. Check for dragging starter or low battery causing slow cranking speed. DVA test stator and trigger.
2. Disconnect rectifier, regulator and retest. If the problem goes away, replace the rectifier and/or regulator.



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## **No fire on Two Cylinders (Top or Bottom Two cylinders):**

Check DVA voltage of the stator, checking from each red and blue wire to engine ground. The readings should be fairly equal and approximately 180 volts or more on the blue wires and 30 or more on the red wires. If the readings are not equal (or if a DVA meter is not available) swap the red with the red/white and the blue with the blue/white stator wires. If the problem moves, replace the stator. If the problem stays on the same cylinders, swap the trigger wires from top to bottom, # 1 for #3 and #2 for #4. If the problem stays on the same cylinders, replace the pack.

## **Intermittent firing on one or more cylinders:**

1. Check stator and trigger resistance and DVA output.
2. Check the trigger resistance and DVA output as given below:

<u>Wire Color</u>	<u>Check to Wire Color</u>	<u>Resistance</u>	<u>DVA (Connected)</u>
Purple (#1)	White wire (#2)	800-1400	4V or more
Brown (#3)	White/Black wire (#4)	800-1400	4V or more
Purple (#1)	Engine GND	Open	1V or more
White (#2)	Engine GND	Open	1V or more
Brown (#3)	Engine GND	Open	1V or more
Wht/Blk (#4)	Engine GND	Open	1V or more

3. Disconnect the rectifier and retest. If the problem disappears, replace the rectifier.

## **All cylinders fire but the engine will not crank and run:**

Index the flywheel and check timing on all individual cylinders. If the timing varies, replace the pack.

Thank you for using CDI Electronics.

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