Installation and Troubleshooting Guide

CDI P/N: 134-6454

This item replaces the following P/N's: 77000A1, 96453A1, AND 96453A2
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.

INSTALLATION

1. Disconnect the battery cable and remove the flywheel according to the service manual.
2. Label and disconnect the trigger leads from the switch box.
3. Disconnect the trigger linkage arm from the trigger.
4. Check the bushings included with the new trigger to see which one fits the linkage arm you disconnected. Mark the bushing with a marker.
5. Remove the stator bolts and lay the stator out of the way.
6. Remove the old trigger and install the new trigger and the stator according to the service manual.
7. Lightly grease the bushing with a high quality marine grease and insert the bushing into the trigger arm from the top side.
8. Connect the trigger linkage to the bushing and then connect the trigger leads to the switch box, matching wire colors.
9. Replace the flywheel according to the service manual and reconnect the battery cable.
10. Verify and adjust ignition timing as needed.

TROUBLESHOOTING

NO FIRE ON ANY CYLINDER:

1. Disconnect the black/yellow kill wire AT THE PACK and retest. If the engine's ignition now has spark, the kill circuit has a fault- possibly the key switch or harness..
2. Disconnect the yellow wires from the stator to the rectifier and retest. If the engine now has spark, replace the rectifier.
3. Check the cranking RPM. A cranking speed less than 250-RPM will not allow the system to fire properly.
4. Check the stator resistance and DVA output as given below:

Flywheel With Bolted 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 Glued 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

NO SPARK ON THE TOP OR THE BOTTOM TWO CYLINDERS:

1. Check resistance and DVA of trigger:

WIRE	Read To	OEM Ohms	CDI Ohms	DVA
Purple (Violet)	White	700-900	800-1000	4V or more
Brown	White/Black	700-900	800-1000	4V or more

2. Swap the stator's Red and Blue wire with the Red/White and Blue/White wires to see if the no fire problem follows one side of the stator. If it does, the stator is bad. If the problem remains on the same 2 cylinders, the power pack or trigger is probably at fault.
3. FOR CRANKING TEST ONLY- Swap the trigger Purple wire with the Brown wire, and White wire with the White/Black wire. If the problem moves, the trigger may be defective.

ENGINE WILL NOT SHUT OFF:

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.

ENGINE HAS SPARK, BUT WILL NOT RUN OR BACKFIRES:

1. Verify the wiring is correct to the switchbox and ignition coils.
2. Check the flywheel key to see if it has sheared.
3. Verify the flywheel has not been rotated on the center hub, resulting in the timing grid being out of place.
4. Check resistance and DVA of trigger:

WIRE	Read To	OEM Ohms	CDI Ohms	DVA
Purple (Violet)	White	700-900	800-1000	4V or more
Brown	White/Black	700-900	800-1000	4V or more

NOTE: If the trigger resistance checks are not correct, replace the trigger.

5. Index the flywheel by locating TDC (top dead center) for each cylinder and marking the flywheel with the number of that cylinder.
6. Using a spark tester, connect to each cylinder's sparkplug wire in turn and crank the engine using the starter. Typically, #1 cylinder is near TDC on the timing grid. ALL of the remaining cylinders should have the same off-set of timing as #1 cylinder. If the timing is very different between the top 2 cylinders and the bottom 2 cylinders, the switchbox may be defective.

INTERMITTNAT SPARK 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:

Wire Color	Check to Wire Color	Resistance	DVA (Connected)
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.