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 Materiel Authorization**.

CDI P/N: 117-6H3-11 Ignition Pack 3 Cyl.

This unit replaces the following P/N's: 6H3-85540-10-00 and 6H3-85540-11-00.

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 power pack mounting bolts and disconnect all of the wires going to the old power pack.
3. Connect the wires to the new power pack.
4. Mount the new power pack using the original bolts.
5. Connect the wires as follows:

Brown	Brown Stator Wire
Pink	Pink Warning System Alarm
White	White Kill (Stop) Wire
Yellow/Red	Yellow/Red Power Wire for LED Alarm
Black	Black Engine Ground Wire
4 Pin Connector	4 Pin Connector From Trigger Plate (White/Red, White/Black, White/Green and Black)
Black/Orange #1	Ignition Coil for #1 (Top) Cylinder
Black/White #2	Ignition Coil for #2 (Middle) Cylinder
Black/Yellow #3	Ignition Coil for #3 (Bottom) Cylinder
Grey	Grey (Over-Rev Limiter is active when connected)

6. Reconnect the battery cable.

Troubleshooting

NO SPARK ON ANY CYLINDER:

1. 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.
2. Verify the correct spark plugs are installed.
3. Check the resistance and DVA output of the Stator and Trigger:

Read from	Read to	OEM Reading	DVA (connected to pack)	DVA Disconnected
White/Red Trigger wire	Black wire	115-145 ohms	2.5 Volts Minimum	2.7 Volts Minimum
White/Black Trigger wire	Black wire	115-145 ohms	2.5 Volts Minimum	2.7 Volts Minimum
White/Green Trigger wire	Black wire	115-145 ohms	2.5 Volts Minimum	2.7 Volts Minimum
Brown Stator wire	Black wire	145-185 ohms	140 Volts Minimum	170 Volts Minimum

4. Check the cranking RPM. A cranking speed of less than 250-RPM will not allow the system to fire properly.

NO SPARK OR INTERMITTENT ON ONE OR MORE CYLINDERS:

1. Check the resistance and DVA output of the Trigger:

Read from	Read to	OEM Reading	DVA (connected to pack)	DVA Disconnected
White/Red Trigger wire	Black wire	115-145 ohms	2.5 Volts Minimum	2.7 Volts Minimum
White/Black Trigger wire	Black wire	115-145 ohms	2.5 Volts Minimum	2.7 Volts Minimum
White/Green Trigger wire	Black wire	115-145 ohms	2.5 Volts Minimum	2.7 Volts Minimum

2. Check the DVA output on the Black/Orange, Black/White and Black/Yellow wires from the power pack while connected to the ignition coils. You should have a reading of at least 100V 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 load resistor. Retest. If the reading is now good, the ignition coil is likely bad. A continued low reading indicates a bad power pack or trigger (test per above).

ENGINE WILL NOT ACCELERATE ABOVE APPROXIMATELY 2000 RPM:

1. Verify the engine is not overheating and causing the power pack to limit the RPM.
2. Disconnect the Pink wire from the power pack 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.
3. Check the position of the Pink wire and make sure it is not next to a spark plug wire.
4. Disconnect the Grey wires and retest. If the engine now operates correctly, the pack is likely defective.

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, power pack or spark plug.
2. If all cylinders show the same RPM and the engine will only rev to approximately 2500 RPM, check the running stator DVA output from idle thru WOT. You should show a steady increase in voltage on the Blue to the Brown stator wires throughout the RPM range. A sudden drop in voltage can be the result of a bad stator coil or a bad pack.

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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 coil, power pack or spark plug.

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

Disconnect the Pink warning wire from the power pack. Connect a jumper wire to engine ground and connect it to the Pink wire from the power pack (If it still fails to engage, the power pack is likely bad). If the engine now limits at approximately 2000 RPM, check the wiring from the temperature sensor and oil tank to the power pack.

ENGINE WILL NOT KILL (STOP)

Disconnect the White kill wire and connect a jumper wire from the White wire to engine ground. If you still have spark, the power pack is likely bad. If the engine has no spark with the jumper connected, either the wiring harness, keyswitch or emergency stop switch is bad.

WARNING LED WILL NOT WORK:

1. Disconnect the Pink wire from the temperature sensor and short it to ground. Start and run the engine, the warning LED and the horn should sound (if equipped with a horn).
2. Disconnect the Pink wire from the LED and short the Pink wire from the LED to engine ground. Start and run the engine, if the LED now works, check the wiring from the temperature sensor to the LED connection.
3. Disconnect the Pink wire from the LED and short the Pink wire from the LED to engine ground. Connect a DC voltmeter to the Yellow/Red wire coming from the CD module and check the voltage. You should have 0.5 – 1.5 volts.

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