

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: 113-3748 Power Pack 3 Cylinder with S.L.O.W. Function.

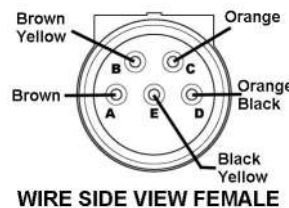
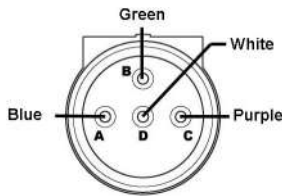
This unit replaces the following P/N's: 18-5766, 583786, 583748, 763801 and 878949.

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. 6700 RPM LIMIT.

### INSTALLATION

**PLEASE USE THE FACTORY RECOMMENDED CHAMPION QL77JC4 SPARK PLUGS Gapped At 0.035 in.**

1. Check for DC voltage on the kill (stop) wire (usually Black/Yellow) with the key-switch in the on and off position. At no time should you see over 2 volts DC on this wire as severe damage to the power pack can occur. This can be caused by a defective keyswitch, boat harness or engine harness.
2. Disconnect the negative battery cable.
3. Remove power pack mounting bolts and disconnect all of the wires going to the old power pack.
4. **CLEAN ALL ENGINE GROUNDS, ESPECIALLY THE AREA WHERE THE POWER PACK IS TO BE GROUNDED!**
5. Connect the stator and timer base wires to the new power pack. Use a small amount of dielectric silicone grease in the connectors.
6. Verify wire colors in the plugs, looking at the wires going into the plug:



7. Connect the Tan wire to the Tan wire from the harness using a small amount of dielectric grease in the connector to seal out moisture.
8. Mount the new power pack using the original bolts.
9. Connect the orange wires to the ignition coils as follows:

Wire	Cylinder	Wire	Cylinder	Wire	Cylinder
Orange/Blue	#1 Cylinder (Top)	Orange/Violet	#2 Cylinder (Middle)	Orange/Green	#3 Cylinder (Bottom)

**SERVICE NOTE:** Use a small amount of dielectric grease in the boots and use a twisting motion to install the terminals on the coils. The dielectric grease will seal out moisture and make the terminals easier to install.

10. Reconnect the battery cable.

### TROUBLESHOOTING

*Service Note: Please use the Factory recommended spark plug (Champion QL77JC4) gapped at 0.030".*

#### NO SPARK ON ANY CYLINDER:

1. Disconnect the black yellow stop wire and retest. If the engine's ignition has spark, the stop circuit has a fault-check the key switch, harness and shift switch.
2. Disconnect the yellow wires from the rectifier and retest. If the engine now sparks, replace the rectifier.
3. Check the stator resistance. Reading should be about 500 ohms from the brown wire to brown/yellow wire.
4. Check the DVA output from the stator. You should have a reading of at least 150V or more from the brown wire to the brown/yellow wire (while connected to the pack) and 12 Volts on the Orange to Orange/Black power coil wires.
5. Check the resistance and DVA output of the Timer Base:

Read from	Read to	Reading	DVA (connected to pack)
Blue Trigger wire	White	10-20 ohms	0.5 Volts Minimum
Purple Trigger wire	White	10-20 ohms	0.5 Volts Minimum
Green Trigger wire	White	10-20 ohms	0.5 Volts Minimum

6. Check the DVA voltage on the Black/Yellow wire to engine ground. You should have a reading of at least 150V or more (while connected to the pack). If the reading is low, disconnect the stator 5 pin connector from the pack. Using a meter set to diode scale, check from the Black/Yellow wire to the Brown (and Brown/Yellow) wires. You should show a high or no reading at all. If you show a normal diode reading, the kill (Stop) diode is shorted and the pack needs to be replaced.
7. Check the resistance of the power pack SCR's:

Read from	Read to	Reading
Blue Trigger wire	Orange/Blue	110 ohms*
Purple Trigger wire	Orange/Green	110 ohms*
Green Trigger wire	Orange	110 ohms*

\*Readings will vary slightly depending upon your meter. Readings should be fairly consistent.

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

Web Support: [www.cdielelectronics.com](http://www.cdielelectronics.com) • Tech Support: 1-866-423-4832 • Order Parts: 1-800-467-3371

All rights reserved. Reproduction or use of content, in any manner, without express written permission by CDI Electronics, LLC., is prohibited.



# 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.**

- 8. Check the kickback diodes connected to the power pack's SCR's, using a meter set to diode scale. If the readings show a short or open, replace the power pack and the ignition coil the Org wire was connected to.

Red meter lead	Black meter lead	Reading
Black Ground wire	Orange/Blue	0.500**
Black Ground wire	Orange /Violet	0.500**
Black Ground wire	Orange/Green	0.500**

\*\* The actual reading will vary, depending upon your meter.

- 9. Check the cranking RPM. A cranking speed of less than 250-RPM may 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 Timer Base:

Read from	Read to	Reading	DVA (connected to pack)
Blue Trigger wire	White	10-20 ohms	0.5 Volts Minimum
Purple Trigger wire	White	10-20 ohms	0.5 Volts Minimum
Green Trigger wire	White	10-20 ohms	0.5 Volts Minimum

- 2. Check the DVA output on the orange wires from the power pack while connected to the ignition coils. You should have a reading of at least 150V or more. If the reading is low on one cylinder, disconnect the orange 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 Timer Base (test per above).

### ENGINE WILL NOT GO OVER 2500 RPM AND SHAKES BADLY:

- 1. Use a temperature probe and verify that the engine is not overheating.
- 2. Disconnect the Tan temperature wire from the pack and retest. If the engine now performs properly, replace the temperature switch.
- 3. Make sure the Tan temperature switch wire is not located next to a spark plug wire.
- 4. If the engine will not rev above 2500 and the Tan wire is disconnected (and not near a spark plug wire), the pack is likely defective.