



# Installation and Troubleshooting Guide

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CDI P/N: 113-1726

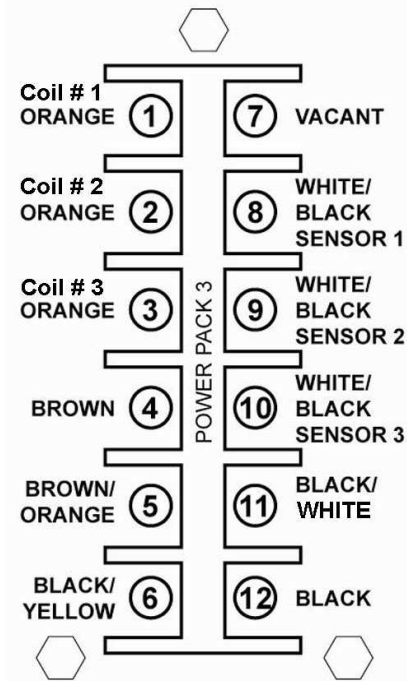
Note - This unit replaces P/N's: 581334, 581551, 581552, 581726, 582057 (Power Pack 3 w/cover & gasket), 18-5763 and 18-5765.

**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

### 3 Cylinder Engine:

1. Remove the old power pack cover.
2. Disconnect all wires from the old power pack.
3. Remove the old power pack and save the mounting bolts.
4. 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.
5. Install the new power pack using the original bolts.
6. Reconnect the wires according to the connection guide below (also located on the cover).



7. Install the new cover and gasket using the new screws included with the new pack.

### 6 Cylinder Engine:

1. Remove the old power pack cover.
2. Disconnect all wires from the old power pack. Watch for the connections from the Timer Base to the pack.
3. Remove the old power pack and save the mounting bolts.
4. 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.
5. Install the new power pack using the original bolts.
6. Connect the stator, kill and coil wires to the new pack.
7. Connect the White Timer Base wire to the Black/White Terminal.
8. Connect the Blue Timer Base wire to the White/ Black Terminal for # 1.
9. Connect the Green Timer Base wire to the White/ Black Terminal for # 2
10. Connect the Violet Timer Base wire to the White/ Black Terminal for # 3.
11. Reconnect the wires according to the connection guide located on the cover.
12. Install the new cover and gasket using the new screws included with the new pack.



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## Troubleshooting

### No Fire Any Cylinder

1. Disconnect the kill (Black/yellow) wire and retest. If the pack fires, there is a problem in the harness or key-switch.
2. Remove the spark plugs and retest. If the engine starts firing, the trigger is likely bad. (You may be able to re-gap the sensor using the gap gauge P/N: 553-9702 and get the fire back with the spark plugs installed). Also check the cranking speed, the engine should be turning 250 RPM or more. (Check the battery and starter).
3. Check the stator for signs of leakage out of the charge coils, check stator resistance (450-850 ohms) and DVA output voltage while it is connected to the power pack. You should read 150V or more from the brown wire to the brown/yellow wire while it is connected to the pack. If low, disconnect the brown and brown/yellow wires from the pack and retest. If the voltage jumps to over 225V – the pack is likely bad. A reading that remains below 175V usually indicates a bad stator.
4. Check the trigger resistance and output. Black/white to the White/blacks should read 10 – 20 ohms. DVA output should read 0.5V or more from Black/white to the White/black wires (Connected to the pack) at cranking speed.
5. Using an digital ohmmeter set to Diode scale, check the power pack as follow:

Red lead	Black Lead	Reading
Terminal #1	Terminal #12	approx 0.500
Terminal #2	Terminal #12	approx 0.500
Terminal #3	Terminal #12	approx 0.500
Terminal #4	Terminal #12	approx 0.500
Terminal #5	Terminal #12	approx 0.500
Terminal #6	Terminal #12	approx 1.060
Terminal #7	Terminal #12	Open
Terminal #8	Terminal #12	approx 0.550
Terminal #9	Terminal #12	approx 0.550
Terminal #10	Terminal #12	approx 0.550
Terminal #11	Terminal #12	approx 0.500

6. Using an digital ohmmeter set to Ohm scale, check the power pack as follow:

Red lead	Black Lead	Reading
Terminal #11	Terminal #8	approx 175 ohms
Terminal #11	Terminal #9	approx 175 ohms
Terminal #11	Terminal #10	approx 175 ohms

NOTE: If one reading shows a shortage, you can lose spark on all cylinders.

7. Disconnect the rectifier and retest. If the system fires, replace the rectifier.

### No Fire on One Cylinder

1. Swap the orange coil wire of the cylinder not firing with one that does on the pack and see if the fire moves from one coil to the other one. If it does, the pack or trigger is likely bad. If the fire stays on the same cylinder, the ignition coil is probably bad. If the fire moves, swap the trigger wire for the non-firing cylinder with another one. If this moves the fire again, the trigger is likely bad.
2. Swap the trigger wires on the pack and see if the fire moves from one cylinder to the other one. If it does, the trigger is likely bad. If the fire stays on the same cylinder, the power pack is likely bad.
3. Disconnect the trigger (timerbase) from the pack and check the resistance in the pack as follows:

Red meter lead	Black meter lead	Reading
Terminal #11	Terminal #8	approx 175 ohms
Terminal #11	Terminal #9	approx 175 ohms
Terminal #11	Terminal #10	approx 175 ohms

All readings should be fairly even. If the sensor reading in the pack for the cylinder not firing shows over a 10% different reading compared to the other sensors, the pack needs replacing.

4. Disconnect the trigger (timerbase) wires and check the resistance of the trigger (timerbase) as follows:

Red meter lead	Black meter lead	Reading
White/ Black wire, Sensor 1	Black/White wire	10-45 ohms
White/ Black wire, Sensor 2	Black/White wire	10-45 ohms
White/ Black wire, Sensor 3	Black/White wire	10-45 ohms

NOTE: An open reading on one sensor usually indicates a defective trigger (timerbase).