Installation and Troubleshooting Guide

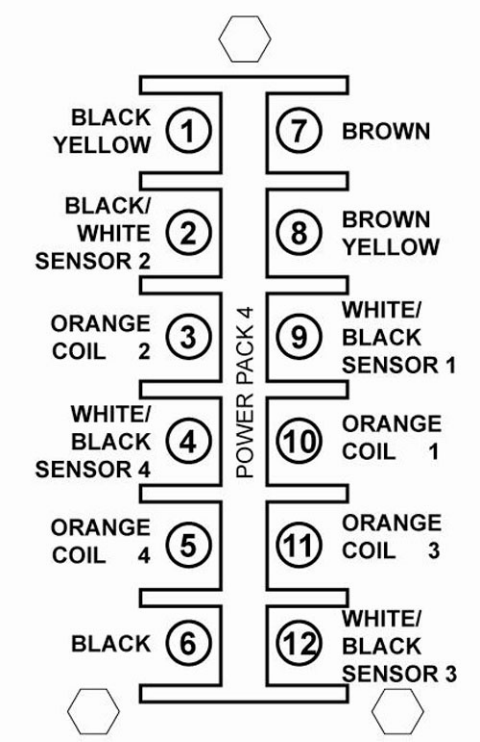
CDI P/N: 113-1731

Note - This unit replaces P/N's: 581311, 581731, 581895, 5812056 (Power Pack 4 w/cover & gasket)

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. 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. Install the new power pack using the original bolts.
5. 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.
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.

Troubleshooting

No Spark 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 sparking, 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 the stator is connected to the power pack. You should read 150V or more from the brown wire to the brown/yellow wire while they are 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. Sensor #1 to Sensor #3 and Sensor #2 to Sensor #4 should read 10 – 20 ohms for each set. DVA output should read 0.5V or more from Sensor #1 to Sensor #3 and Sensor #2 to Sensor #4 while 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 #6	approx 0.500
Terminal #2	Terminal #6	approx 0.500
Terminal #3	Terminal #6	approx 0.500
Terminal #4	Terminal #6	approx 0.500
Terminal #5	Terminal #6	approx 0.500
Terminal #7	Terminal #6	approx 0.500
Terminal #8	Terminal #6	approx 0.500
Terminal #9	Terminal #6	approx 0.500
Terminal #10	Terminal #6	approx 0.500
Terminal #11	Terminal #6	approx 0.500
Terminal #12	Terminal #6	approx 0.500
Terminal #9	Terminal #7	approx 0.500
Terminal #12	Terminal #7	approx 0.500
Terminal #1	Terminal #7	approx 0.500
Terminal #2	Terminal #7	approx 0.500
Terminal #4	Terminal #7	approx 0.500

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

No Spark 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 is likely bad. If the fire stays on the same cylinder, the ignition coil is probably bad.
2. Test per No Spark on any Cylinder above.

No Spark on One Bank

1. Swap the #1 trigger wire with the #2 trigger wire and Swap the #3 trigger wire with the #4 trigger wire and retest. If the fire moves from one bank to the other, replace the trigger. If it does not move, the pack is likely bad.
2. Swap the orange coil wire of one of the cylinders not firing with one that does fire to see if the fire moves from one cylinder to the other one. If it does, the pack is likely bad. If the fire stays on the same cylinder, the ignition coil is likely bad. Repeat the test for the other cylinder that is not firing.

No Spark on Two or More Cylinders on Different Banks

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 is likely bad. If the fire stays on the same cylinder, the ignition coil is likely bad.

Thank you for using CDI Electronics.