



# Installation and Troubleshooting Guide

This installation is to be completed by an Authorized Dealer or Professional Service Technician. For questions regarding installation or warranty, call Technical Support at (800) 648-3976. Do not return to the Dealer or Distributor where the part was purchased. Contact Sierra Directly for Return Goods Authorization.

## SIERRA P/N: 18-99331

This unit replaces P/N: 817323A3, A4  
This unit replaces CDI P/N: 116-7323

Warning! This product is designed for installation by a professional marine mechanic. Dometic cannot be held liable for injury or damage resulting from improper installation, abuse, neglect or misuse of this product.

### Installation

1. Disconnect and remove the old switch box.
2. Check for DC voltage on the kill (stop) wires (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.
3. Loosely attach the mounting plate to the switch box (Potted side) using the supplied screws.
4. Route the Green coil wires through the hole in the mounting plate.
5. Connect the trigger wires according to the color of the wires.
6. Connect the Black/Yellow wire to the Black/Yellow kill wire from the engine harness.
7. Slide the mounting bracket through the hole in the mounting plate so that the mounting bracket will clamp the mounting plate when tightened.
8. Position the switch box as shown below and install the remaining mounting screw.
9. Tighten the two mounting brackets screws.
10. Connect the green coil wires to the coils.
11. Connect the Purple/White, Blue and Black wires to the Converter box.



Mounting bracket shown

#### CONNECTION LEGEND

| Function            | Color        | Trigger Color |
|---------------------|--------------|---------------|
| Coil # 1            | Green        | Brown         |
| Coil # 2            | Green/White  | White         |
| Coil # 3            | Green/Red    | Violet        |
| Coil # 4            | Green/Black  | Black         |
| Coil # 5            | Green/Yellow | Yellow        |
| Bias Circuit        | White/Black  | White/Black   |
| Kill/Stop           | Black/Yellow |               |
| Inverter Activation | Violet/White |               |
| High Voltage        | Blue         |               |
| Ground              | Black        |               |

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Web Support: [www.catalog.sierraparts.com](http://www.catalog.sierraparts.com) • Technical Support and Customer Service (800) 648-3976

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## TROUBLESHOOTING

### NO SPARK ON ANY CYLINDER:

1. Disconnect kill wire AT THE PACK.
2. Check for broken or bare wires on the switch box, converter and trigger.
3. Check the DVA voltage of the converter, (Read from the blue wire to engine ground), with everything connected. The readings should be approximately 180 volts or more on the blue wire, and 11.5 volts or more on the red wire to engine ground.
4. If a Sierra or CDI Electronics inverter stator is installed, Check resistance and DVA from the Blue to the black wire. You should read approximately 130-160 ohms. DVA voltage should be 180V or more at cranking.

### ENGINE WILL NOT STOP RUNNING:

Check kill circuit in the pack by using a jumper wire connected to the Black/Yellow 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. Check DVA voltage on the Blue wire reference to engine ground at high speed. DVA voltage should not drop below 180V.
2. Disconnect the rectifier/regulator. If the miss is gone, replace the rectifier/regulator and check the stator for signs of overheating.
3. If using the inverter box: If the voltage drops too low, check the battery voltage going to the inverter. It should not drop below 11 volts DC.

### ONLY HAS SPARK WHEN THE SPARKPLUGS ARE REMOVED:

1. Check for dragging starter or low battery causing slow cranking speed and low voltage to the Converter.
2. DVA test Blue wire to switchbox and trigger. You should have over 180V DVA.

### INTERMITTANT FIRE ON ONE OR MORE CYLINDERS:

1. Check for low voltage from the converter and trigger.
2. Dismount the ignition coils and inspect the coils for cracks and broken ferrite cores.
3. Using the connection legend, swap the problem trigger wire input to the switchbox and the associated output wire to see if the problem moves to the other cylinder. If it does, the switchbox is likely bad.
4. If it stays on the same cylinder, Cross the sparkplug wires between the two cylinders and move the Green wires as they are supposed to be. If the problem stays on the same cylinder, the trigger is likely bad. If it moves to another cylinder, replace the ignition coil.

#### CONNECTION LEGEND

| Cylinder # | Coil Color   | Trigger Color |
|------------|--------------|---------------|
| 1          | Green        | Brown         |
| 2          | Green/White  | White         |
| 3          | Green/Red    | Violet        |
| 4          | Green/Black  | Black         |
| 5          | Green/Yellow | Yellow        |

### HAS SPARK ON ALL CYLINDERS BUT ENGINE WILL NOT RUN:

1. Index the flywheel and check timing on all individual cylinders.
2. Check the resistance on the White/Black wire from the switch box to engine ground. You should read approximately 8.5K ohms. Readings below 8K ohms or above 9K ohms indicate a bad switch box.
3. If the ignition timing is significantly out of spec (10 or more degrees), check the flywheel center hub triggering magnet to see if it is loose or possibly shifted.
4. If the flywheel center hub triggering magnet is OK, replace the switch box.

### SWITCH BOX REPEATLY BLOWS ON ONE OR MORE CYLINDERS AFTER RUNNING FOR A SHORT TIME PERIOD:

1. Dismount the ignition coils and inspect the coils for cracks and broken ferrite cores.
2. Connect a DC volt meter from engine ground to the kill wire from the engine harness and turn the key switch on and off several times, AT NO TIME SHOULD YOU SEE ABOVE .8 VOLTS. A reading above 0.8 volts indicates a problem in the keyswitch or harness.