

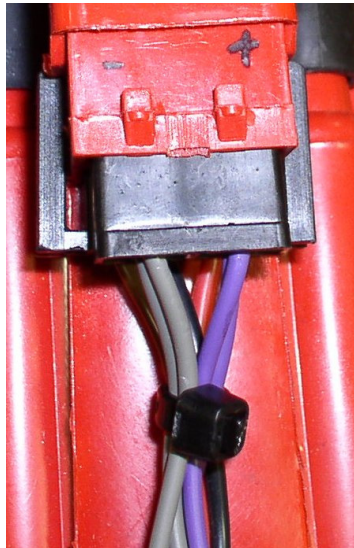
NOTE: This installation is to be completed by an Authorized Dealer or Professional Service Technician. For questions regarding installation or warranty, call CDI Tech Support at 866-423-4832. **Do not return to the Dealer or Distributor where the part was purchased. Contact CDI Electronics Directly for Return Material Authorization.**

CDI P/N: 423-3000 ESA Conversion Kit

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.

423-2000 HARNESS INSTALLATION

1. Verify the ignition has good spark on all cylinders.
2. Remove the harness connector from the distributor cap. It may be a single or dual terminal connector.
3. Connect the new connector to the distributor, making sure the connector is pushed up into the housing as far as it will go. Secure the wires from the adapter harness to the other wires from the distributor cap.



4. Cut the connector off of the existing wire(s) you disconnected from the distributor. Strip approximately 3/16" of insulation from the engine harness Red power wire and the Tachometer wire if used.
5. Slide a plastic boot over the Red wire from the engine harness and crimp & solder the Barrel terminal to the Red wire from the harness.
6. Slide a plastic boot over the Grey wire from the engine harness and crimp & solder the Bullet terminal to the Tachometer wire from the harness (may or may not be present).
7. Connect the two pin connector to the 123-9800 ESA module.
8. Make sure the ESA module's Black ground wire is properly grounded.

TROUBLESHOOTING THE 423-2000 HARNESS

NO FIRE ON ANY CYLINDER:

1. If the distributor had good fire before you installed the adapter harness,
 - A) Disconnect the ESA from the adapter harness and check for spark from the distributor.
 - B) If the distributor still has no spark, unplug the adapter harness and verify the connectors on the adapter harness for a weak connection.
2. Verify the wiring between the ESA, Adapter harness and the engine harness. All wire colors should be continuous through the connectors.
3. Check for voltage on the Purple wire to the ESA, you should show battery voltage between 12 and 15.6 volts with the ignition switch in the on position.
4. Check the voltage on the Grey wire, you should show approximately 400 Volts using a DVA meter/adaptor. If the voltage is low, connect the grey wire to a pack load resistor and retest. If the voltage now shows correct, the ignition coil is defective. If the voltage remains low, the unit is likely defective as long as the voltage into the ESA unit.

123-9800 ESA INSTALLATION

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1. With the engine OFF, disconnect and remove the old ESA module.
2. Using the original bolts, mount the new ESA to the mounting bracket, being careful not to pinch any wires.
3. Connect the wires as the original ESA was connected.
4. The following is a color code/function explanation:

Violet - Switched 12V power to the ESA module.

Grey – Negative side of ignition coil for the ESA to monitor the engine RPM & override the distributor during shift.

Black – Engine ground reference for the ESA module. The ESA must have a good ground connection.

Blue – Ground signal from the shift switch indicating a shift is occurring. This activates the ESA.

TROUBLESHOOTING THE 123-9800 ESA

HARD SHIFTING—ESA DOES NOT APPEAR TO STUMBLE ENGINE:

Verify all connections are correct. Inspect the connectors and make sure the wire colors and pin locations are the same on both sides of the connector. Check for pins that may have pushed out of the connector shell.

Back probe the Blue wire (*you may remove the wire from the connector if needed*) and with the engine idling in neutral, short the Blue wire (*the end going to the ESA module*) to engine ground. You should notice a slight drop in engine Rpm. If the engine works correctly with this test, but does not work when the Blue wire is connected to the shift switch, check the shift switch and wires to ensure it is providing the ESA with a ground when the switch is activated.

Note: If the engine is idling too fast, or too slow, the ESA will not engage. If the ESA does not work with the Blue wire shorted to engine ground, recheck the engine RPM, ground wire connection and 12V power to the ESA.

ENGINE MISFIRE:

With the engine OFF, disconnect everything from the negative side of the coil except the distributor. If the condition persists, the distributor or coil requires servicing. If the problem clears up, reconnect wires to the negative side of the coil one at a time to isolate the problem. A defective tachometer gauge can affect ignition performance.