



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: 18-99433

This unit replaces the following P/N's: 828302A 1 and 855745A11.
This unit replaces CDI P/N: 134-8302-3

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 the Negative battery cable.
2. Remove the flywheel according to the service manual for your engine.
3. Disconnect the Trigger leads from the CDM harness.
4. Disconnect the Trigger linkage arm from the Trigger housing.
5. Remove the Stator bolts and lay the Stator out of the way.
6. Remove the old Trigger and install the new Trigger and the Stator according to the service manual.
7. Connect the Trigger linkage to the Trigger housing.
8. Connect the Trigger leads to the CDM harness.
9. Replace the flywheel according to the service manual.
10. Reconnect the Negative battery cable.
11. Verify and adjust ignition timing as needed according to the service manual.

TROUBLESHOOTING

NO SPARK ON ANY CYLINDER:

1. Disconnect the Black/Yellow kill wires from the harness and retest. If the engine's Ignition now has spark, the stop circuit has a fault. Check the key switch, harness, and shift switch (if present).
2. Check the cranking RPM. A cranking speed of less than 250 RPM may not allow the system to spark properly. This can be caused by a weak battery, dragging starter, bad battery cables, or a mechanical problem inside the engine.
3. Inspect and clean all engine and ignition ground connections.
4. Pull on each wire from each CDM harness plug. Make sure all wires are making proper contact inside plugs.
5. Disconnect one CDM Module at a time and see if the other modules start sparking. If they do, the CDM Module you just unplugged is bad. Remember only one side of the Stator is connected to one CDM Module and the other side is connected to two CDM Modules. If you disconnect the CDM Module using the lone side of the Stator, you will need to ground that side of the Stator .
6. If the bottom two CDM Modules are not sparking, swap the connection between the top and middle cylinder. If the middle cylinder starts sparking, replace the top CDM Module.
7. Check the Stator and Trigger resistance and DVA as given below:

Read from	Read to	OEM Ohms	SIE Ohms	DVA (Connected)	DVA (Disconnected)
White/Green (Stator)	Green/White (Stator)	500-700 Ω	400-550 Ω	180-400 V	180-400 V
Purple (#1 Trigger)	Engine Gnd	Open	Open	1 V Minimum	-
White (#2 Trigger)	Engine Gnd	Open	Open	1 V Minimum	-
Brown (#3 Trigger)	Engine Gnd	Open	Open	1 V Minimum	-

8. Check the Trigger and Charge coil flywheel magnets for cracked, broken, or loose magnets.
9. Disconnect the Yellow wires from the Stator to the Regulator/Rectifier and retest. If the engine now has spark, replace the Regulator/Rectifier.
10. Check the resistance of each of the CDM modules as follows:

	Red Meter Lead	Black Meter Lead	OEM Reading	SIE Reading
CDM Pin #	(A) Ground	(C) Trigger	1.2-1.4K Ω	1.2-1.4K Ω
CDM Pin #	(D) Stator	(A) Ground	Open*	Open*
CDM Pin #	(A) Ground	(D) Stator	Reading*	Reading*
CDM Pin #	(D) Stator	(B) Kill Circuit	Reading*	Reading*
CDM Pin #	(B) Kill Circuit	(D) Stator	Open*	Open*
CDM Pin #	(A) Ground	(B) Kill Circuit	Reading*	Reading*
CDM Pin #	(B) Kill Circuit	(A) Ground	High M Ω or Open*	High M Ω or Open*
-	High Tension Lead	(A) Ground	0.7-1.3K Ω	2.2-2.4K Ω

*** This Measurement is with the meter set to the diode scale. When you see the term "Reading" it represents a value on the meter. When you see the term "Open" it represents no value showing on the meter.**

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

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NO SPARK OR INTERMITTENT SPARK ON ONE OR MORE CYLINDERS:

1. Inspect the spark plug wires, boots, and spark plugs. Check for chafing on the wiring and harnesses.
2. Clean and inspect CDM ground wire connections to engine ground.
3. Check the Trigger DVA as shown below:

Read from	Read to	Ohms	DVA (Connected)
Purple (#1 Trigger)	Engine Gnd	Open	1 V Minimum
White (#2 Trigger)	Engine Gnd	Open	1 V Minimum
Brown (#3 Trigger)	Engine Gnd	Open	1 V Minimum

4. If (#1) or (#3) or (#1 and #2) or (#2 and #3) are not sparking, swap the White/Green and Green/White Stator wires and retest. If the problem moves to the other cylinder(s), the Stator is likely bad. If no change, replace all CDM Modules. A continued no spark condition on the same cylinder(s) indicates a bad Trigger.

You must have both the Green/White and White/Green Stator wire connected, or you will lose spark on all CDM Modules. You can leave one wire connected to the CDM Module and ground the other Stator wire to complete the circuit for the Stator.

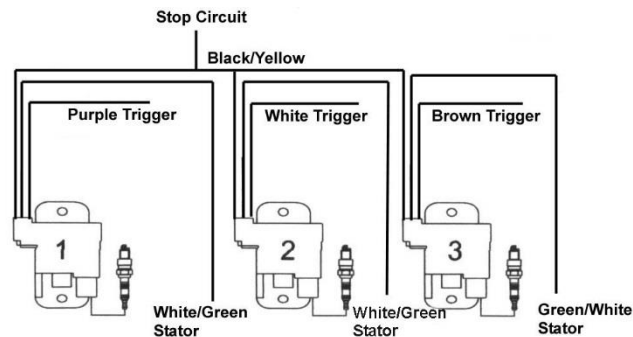
5. If #1 CDM Module is not sparking, disconnect the #2 CDM Module and see if the #1 CDM Module starts sparking. If it does, the CDM Module you just unplugged is bad. If it does not, reconnect #2, then disconnect the #3 CDM Module and see if the #1 CDM Module starts sparking. If it does, the CDM Module you just unplugged is bad.
6. If there is no spark on either # 2 or #3, swap locations with #1 and see if the problem moves. If it does, the CDM Module is bad. A continued no spark on the same cylinder indicates a bad Trigger.
7. If the cylinders are only misfiring above an idle, connect an inductive tachometer to all cylinders and try to isolate the problem cylinders.
8. Check the resistance of each of the CDM Modules (see **NO SPARK ON ANY CYLINDER**).

CDM OR TRIGGER REPEATEDLY BLOWS ON SAME CYLINDER:

1. Check the Trigger wires for shorts to engine ground as a shorted Trigger wire can destroy a SCR inside the CDM Module.
2. In contrast, a shorted SCR inside the CDM Module can destroy a Trigger coil. Check the Trigger resistance and DVA (see **NO SPARK ON ANY CYLINDER**).
3. Cut the Black/Yellow stop wire from the CDM Module not sparking. Measure DC voltage from Black/Yellow (from the harness) to engine ground. Turn the ignition switch on and off several times. DC voltage should never exceed 2 V. If it does, the stop circuit has a fault. Check the key switch, harness, and shift switch.
4. Replace the CDM Module on the cylinder dropping spark.

MISS AT ANY RPM:

1. Connect an inductive tachometer to each cylinder in turn and try to isolate the problem. A high variance in RPM on one cylinder usually indicates a problem in the Trigger or CDM Module. Check the Trigger DVA (see **NO SPARK OR INTERMITTENT SPARK ON ONE OR MORE CYLINDERS**).
2. Perform a high-speed shutdown and read the spark plugs. Check for water. A crack in the block can cause a miss at high speed when the water pressure gets high, but a normal shutdown will mask the problem.
3. Disconnect the Yellow wires from the Stator to the Rectifier and retest. If the miss clears, replace the Rectifier.
4. Check the Triggering and charge coil flywheel magnets for cracked, broken, or loose magnets.



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