



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: 18-99446

This unit replaces the following P/N's: 828301, 854509, 854509A 9, 855744A 2, and 855744A11.

This unit replaces CDI P/N: 134-5744-2

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. Check and clean all battery terminals and engine grounds.
3. Remove the flywheel and Stator according to the service manual for your engine.
4. Remove the Trigger wires from the engine harness.
5. Connect the new Trigger leads to the engine harness, matching wire colors.
6. Re-install the Stator and flywheel according to the service manual for your engine.
7. Reconnect the Negative battery cable.
8. Set and verify the ignition timing according to the service manual for your engine.

TROUBLESHOOTING

NO SPARK ON ANY CYLINDER:

1. Check the cranking RPM. A cranking speed of less than 250 RPM will 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.
2. Disconnect the Black/Yellow stop wires from the harness and retest. If the engine's ignition sparks, the stop circuit has a fault. Check the key switch, harness, and shift switch (if applicable).
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. Inspect the spark plug wires, boots, and spark plugs. Check for chafing on the wiring and harnesses.
6. Disconnect one CDM Module at a time and using a set of piercing probes and jumper wires, short the Stator wire in the CDM connector to engine ground. Retest. If the other CDM Module starts sparking, the CDM Module you unplugged is bad.
7. Check the Stator resistance and DVA as follows:

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	200-400 V

8. Check the resistance of each of the CDM Modules as follows:

	Red Meter Lead	Black Meter Lead	OEM Reading	CDI 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. Where you see the term "Reading", it represents a value on the meter. Where you see the term "Open", it represents no value showing on the meter.**

9. Disconnect the Yellow wires from the Stator to the Rectifier and retest. If the engine now has spark, replace the Rectifier.
10. Check the center hub Triggering magnet in the flywheel. A loose magnet can cause this problem.
11. Check the Triggering and charge coil flywheel magnets for cracked, broken, or loose magnets.



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NO SPARK OR INTERMITTENT SPARK ON ONE CYLINDER:

1. Clean and inspect CDM Module ground wire connections to engine ground.
2. Inspect the spark plug wires, boots, and spark plugs. Check for chafing on the wiring and harnesses.
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

4. If one cylinder is not sparking, swap the White/Green and Green/White Stator wires and retest. If the problem moves to the other cylinder, the Stator is likely bad. If no change, replace both CDM Modules. A continued no spark condition on the same cylinder 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 the cylinders are only misfiring up above an idle, connect an inductive tachometer to all cylinders and try to isolate the problem cylinder(s).
6. Check the resistance of each of the CDM Modules (see **NO SPARK ON ANY CYLINDER**).

CDM MODULE 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 VDC. If it does, the stop circuit has a fault. Check the key switch, harness, and shift switch (if applicable).
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 CYLINDER**).
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. Check the Triggering and charge coil flywheel magnets for cracked, broken, or loose magnets.
4. Disconnect the Yellow wires from the Stator to the Rectifier and retest. If the miss clears, replace the Rectifier.

