



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: 18-99417

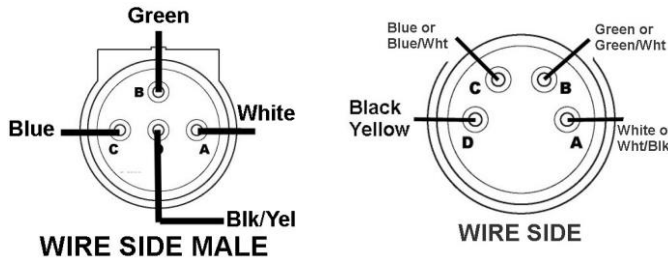
This unit replaces the following P/Ns: 581812, 582041, 583127, 583128, 583376, and 763783.

This unit replaces CDI P/N: 133-3376

Warning! This product is designed to be installed 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. Disconnect the old Timer Base.
3. Remove the flywheel according to the service manual for your engine.
4. Remove the Stator.
5. Remove the retainers holding the Timer Base in place and remove the old Timer Base.
6. Install the new linkage bushing in the Timer Base arm of the new Timer Base according to the service manual for your engine.
7. Lubricate the inside area of the new Timer Base where the White slip ring goes and the area where the inside of the new Timer Base contacts the upper bearing carrier.
8. Install the White slip ring on the new Timer Base.
9. Compress the White slip ring and seat the new Timer Base into the bearing carrier.
10. Make sure the Timer Base is fully seated and secure the slip ring using the retainers removed during disassembly.
11. If the 4 pin connectors pin out pattern matches the pattern of the old Timer Base, connect the timer Base to the Power Packs. If the old Timer Base has the semi-circle pattern, remove the 4 pin Amphenol connectors from the new Timer Base and insert the pins into the 4 pin connectors supplied with the new Timer Base as shown below, matching wires colors when possible:



12. Connect the linkage to the new Timer Base.
13. Install the Stator and Flywheel according to the Service Manual for your engine.
14. Reconnect the Negative battery cable.
15. Adjust the ignition timing according to the Service Manual.

TROUBLESHOOTING

NO SPARK ON ANY CYLINDER:

1. 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.
2. Perform a visual inspection of all ground wire connections to make sure that they are clean and tight.
3. Disconnect the Black/Yellow stop wire from the Power Packs and retest. If the engine's ignition has spark, the stop circuit has a fault. Check the key switch, harness, and shift switch (if present).
4. Disconnect the Yellow wires from the Rectifier and retest. If the engine now sparks, replace the Rectifier.
5. Check Stator and Timer Base resistance and DVA as shown:

Read from	Read to	OEM Ohms	SIE Ohms	DVA (Connected)	DVA (Disconnected)
Brown (Stator)	Brown/Yellow (Stator)	485-635 Ω	520-640 Ω	150-400 V	150-400 V
Brown (Stator)	Brown/Yellow (Stator)	485-635 Ω	520-640 Ω	150-400 V	150-400 V
White (Common)	Blue (#2 Timer Base)	30-50 Ω	27-36 Ω	0.6 V Minimum	0.6 V Minimum
White (Common)	Green (#4 Timer Base)	30-50 Ω	27-36 Ω	0.6 V Minimum	0.6 V Minimum
White/Black (Common)	Blue/White (#1 Timer Base)	30-50 Ω	27-36 Ω	0.6 V Minimum	0.6 V Minimum
White/Black (Common)	Green/White (#3 Timer Base)	30-50 Ω	27-36 Ω	0.6 V Minimum	0.6 V Minimum

Dometic • 1 Sierra Place • Litchfield, IL 62056 USA

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

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6. Rare causes include a weak or broken flywheel Charge coil or Timer Base magnets. If possible, try another flywheel.

NO SPARK ON ONE BANK:

1. Disconnect the Black/Yellow stop wire from the Power Packs and retest. If the engine's ignition has spark, the stop circuit has a fault. Check the key switch, harness, and shift switch (if present).
2. Check the Stator and Timer Base DVA (see **NO SPARK ON ANY CYLINDER**).
3. Swap the Stator wire pairs from one side of the engine to the other side and see if the problem moves. If it does, either the Stator is faulty or there is a poor connection between the Stator and the Power Pack.
4. Check the DVA on the Orange Primary wires from the Power Pack to the Ignition coils while connected to the Ignition coils. You should have a reading of at least 150 V or more. If the reading is low on one cylinder, disconnect the Orange Primary wire from the Ignition coil for that cylinder and reconnect it to a Pack Load resistor. Retest. If the reading is now good, the Ignition coil is likely bad. A continued low reading usually indicates a bad Power Pack.
5. Visually inspect the Ignition coils for burned or discolored areas or cracks in the casing (indicating arcing inside the Ignition coil).

ENGINE WILL NOT STOP (KILL):

1. Disconnect the Black/Yellow wire at the Power Pack. Connect a jumper wire to the stop wire from the Power Pack and short it to engine ground. If this stops the Power Pack from sparking, the stop circuit has a fault. Check the key switch, harness, and shift switch (if present). If this does not stop the Power Pack from sparking, replace the Power Pack.

MISS AT ANY RPM:

1. Disconnect the Yellow wires from the Stator to the Rectifier and retest. If the miss clears, replace the Rectifier.
2. In the water or on a Dynamometer, check the DVA on the Orange wires from the Power Pack while connected to the Ignition coils. You should have a reading of at least 150 DVA or more, increasing with engine RPM until it reaches 300-400 DVA maximum. A sharp drop in DVA right before the miss becomes apparent on all cylinders will normally be caused by a bad Stator. A sharp drop in DVA on less than all cylinders will normally be the Power Pack or Timer Base.
3. 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 Power Pack or Ignition coil. Occasionally a Timer Base will cause this same problem. Check the Timer Base DVA (see **NO SPARK ON ANY CYLINDER**).
4. 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.
5. Check the Trigger and Charge coil flywheel magnets for cracked, broken, or loose magnets.

HIGH SPEED MISS OR WEAK HOLE SHOT:

1. Disconnect the Rectifier and retest. If the problem disappears, replace the Rectifier and retest.
2. Connect DVA meter between the Brown/Yellow and the Brown wires and do a running test on each set. AT NO TIME SHOULD THE VOLTAGE EXCEED 400 DVA. If it does, the regulator circuit in the Power Pack is faulty. The voltage should show a smooth climb and stabilize, gradually falling off at high RPM (above 5000). If you see a sudden drop in voltage right before the miss becomes apparent, the problem is likely in the Stator.