Installation and Troubleshooting Guide

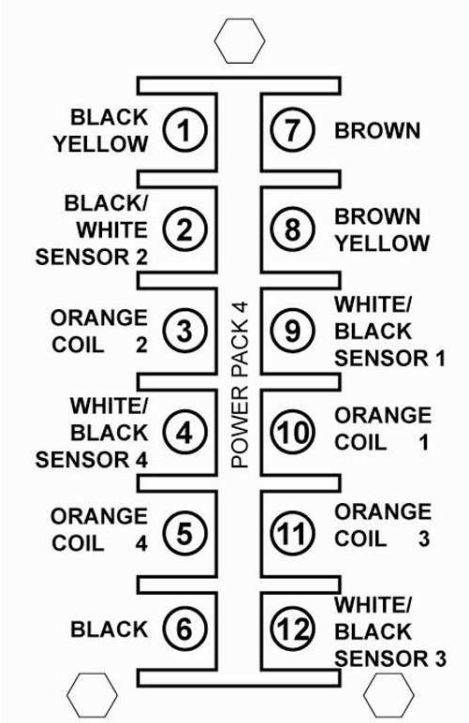
CDI P/N: 133-1900

Note: This unit replaces P/Ns: 385433, 581300, 581900, 763778.

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.

INSTALLATION

1. Disconnect the Negative battery cable.
2. Remove the cover from the power pack.
3. Disconnect the old Timer Base and remove the flywheel, stator and old Timer Base.
4. 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.
5. Install the White slip ring on the new Timer Base and compress the White slip ring and seat the new Timer Base into the bearing carrier.
6. Make sure the Timer Base is fully seated and secure the slip ring using the retainers removed during disassembly.
7. Remove the bushing link kit from the old Timer Base link arm and install it in the new Timer Base arm.
8. Connect the linkage to the new Timer Base.
9. Re-install the Stator and Flywheel according to the Service Manual and reconnect the negative battery cable.
10. Reconnect the wires according to the connection guide below (also located on the cover for the power pack).



11. Re-install the cover and gasket.
12. Start and run the engine, adjusting the ignition timing according to the Service Manual.

TROUBLESHOOTING

Service Note: Please use the Factory recommended spark plug gapped at 0.030".

NO SPARK ON ANY CYLINDER:

1. Disconnect the Black/Yellow stop wire AT THE POWER PACK and retest. If the engine's ignition has spark, the stop circuit has a fault. Check the key switch, harness and shift switch.
2. Disconnect the Yellow wires from the rectifier and retest. If the ignition now has spark, replace the rectifier.

3. 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.
4. Inspect and clean all engine and ignition ground connections.
5. Check the stator resistance and DVA output as given below:

WIRE	READ TO	RESISTANCE (Disconnected)	DVA (Connected)	DVA (Disconnected)
Brown	Brown/Yellow	450-850	150 V +	150 V + (*)

6. Check the center hub triggering magnet in the flywheel. A loose or broken magnet can cause this problem.
7. Check the triggering and charge coil flywheel magnets for cracked, broken and loose magnets.

NO SPARK OR INTERMITTENT SPARK ON ONE OR MORE CYLINDERS:

1. Swap the orange coil wire of the cylinder not firing with one that does on the pack and see if the fire moves from one coil to the other one. If it does, the pack is likely bad. If the fire stays on the same cylinder, the ignition coil is probably bad.
2. Test per No Spark on any Cylinder above.

NO SPARK ON ONE BANK:

1. Swap the #1 trigger wire with the #2 trigger wire and Swap the #3 trigger wire with the #4 trigger wire and retest. If the fire moves from one bank to the other, the trigger is likely defective. If it does not move, the pack is likely bad.
2. Swap the orange coil wire of one of the cylinders not firing with one that does fire to see if the fire moves from one cylinder to the other one. If it does, the pack is likely bad. If the fire stays on the same cylinder, the ignition coil is likely bad. Repeat the test for the other cylinder that is not firing.

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 Dynameters, check the DVA output on the Orange wires from the power pack while connected to the ignition coils. You should have a reading of at least 150V DVA or more, increasing with engine RPM until it reaches 300-400V 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 voltage (see NO SPARK ON ANY CYLINDER above).
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 triggering and charge coil flywheel magnets for cracked, broken and loose magnets.