



Installation and Troubleshooting Guide

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CDI P/N: 144-1889-51

NOTE: This 5200 RPM Limiter will replace the following part numbers: 821889A19, 821889A22, 821889A29, 821889A34, 821889A38, 821889A40, 821889A42, 821889A45, 821889A46, 821889A50, 821889A51.

This product is designed for installation by a professional marine mechanic. CDI cannot be held liable for injury or damage resulting from improper installation, abuse, neglect or misuse of this product.

INSTALLATION

1. Disconnect the battery's negative post.
2. Disconnect the Purple, Tan (or Brown), Black/Yellow and Black wires from the old RPM Limiter.
3. Remove the old RPM Limiter and save the mounting bolts.
4. Clean all ground wires and mounting plate.
5. Install the new RPM Limiter, re-using the original mounting screws.
6. Lubricate the Bullet connectors using a good quality dielectric grease and connect the Purple, Tan (or Brown), Black/Yellow and Black wires to the new RPM Limiter.
7. Re-connect the battery's negative post.

TROUBLESHOOTING

NO SPARK OR WEAK SPARK ON ALL CYLINDERS:

1. Disconnect the Black/Yellow Kill wire from the new RPM Limiter and retest for spark. If spark returns, the RPM Limiter is defective.
2. If there is no change, disconnect the Black/Yellow Kill wire from the switch box and re-test. If the spark returns, the kill circuit has a fault, possibly the key-switch, emergency kill, or harness.
3. Disconnect the yellow wires from the stator to the rectifier and retest. If the engine fires, replace the rectifier.
4. Check the cranking RPM. A cranking speed less than 250-RPM will not allow the system to fire properly.
5. Check the connections from the stator, trigger and engine grounds to make sure they are clean, free of corrosion and tight.
6. If the engine is using CDM Modules, disconnect one CDM module at a time and see if the other modules start firing. If they do, the module you just unplugged is bad.
7. Check the stator resistance and DVA output as given below:

RED STATOR

| WIRE | Read To | OEM RESISTANCE | DVA |
|-------------|-------------|----------------|-------------------|
| White/Green | Green/White | 380-430 ohms | 160V to 320 Volts |

3 Cylinder Engine

| WIRE | Read To | OEM RESISTANCE | CDI Resistance | DVA |
|------------------|---------------|----------------|----------------|--------------------|
| Blue (Low Speed) | Engine Ground | 3200-3600 ohms | 500-700 | 180V Volts or more |
| Red (High Speed) | Engine Ground | 75-90 | 28-32 | 25V or more |

4 Cylinder Engine

| WIRE | Read To | OEM RESISTANCE | CDI Resistance | DVA |
|------------------|------------|----------------|----------------|--------------------|
| Blue (Low Speed) | Blue White | 3200-3600 ohms | 500-700 | 180V Volts or more |
| Red (High Speed) | Red/White | 75-90 | 28-32 | 25V or more |

HIGH SPEED MISS:

1. Disconnect the rectifier and retest. If miss is gone, the rectifier is usually at fault.
2. Disconnect the RPM Limiter and retest. If miss is gone, the RPM Limiter may be defective.
3. Check DVA voltage of the high speed circuit of the stator at high speed. (**NOTICE:** Use caution when doing this and do not exceed the rated voltage range of your meter. The readings should show a smooth climb in voltage. If there is a sudden or fast drop in voltage right before the miss becomes apparent, the stator is usually at fault. If there is no indication of the problem, it could be mechanical problem.

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