



# Installation and Troubleshooting Guide

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**CDI P/N: 114-9052**

This switch Box replaces these P/N's: 19052A1, 19052A2, 19052A3, 19052A5, 19052A6 and 19052A8.

Warning! 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.

**Disconnect the engine stop wire(s):** Connect a DC volt meter between the engine stop wires and engine ground. Turn the ignition switch on and off several times. If, at any time, you see DC voltage on the kill wires, there is a problem with the harness or ignition switch. Battery voltage on the kill circuit will destroy most ADI type switch boxes.

## Installation

1. Disconnect the positive battery cable.
2. Check and clean all battery terminals and engine grounds.
3. Remove the wires from the switch box.
4. Unbolt and remove the old switch box, saving the original bolts and nuts.
5. Install the new switch box using the original bolts and nuts.
6. Connect the black ground wire to engine ground.
7. Connect the wires to the new switch box as they were on the old switch box (IF THE OLD SWITCH BOX DID NOT HAVE ANY WIRES CONNECTED TO THE RED TERMINAL, DO NOT CONNECT ANY WIRE TO THE RED TERMINAL ON THE NEW SWITCH BOX). The second black/yellow wire is for use with the rev limiter (if equipped).
8. Connect the ignition coil ground wire to the extra stud in the new switch box if the engine originally had the coil ground wires connected to the side of the switch box.
9. Reconnect battery cable.

## Troubleshooting

### **No spark at spark plugs:**

1. Disconnect stop wire AT THE PACK.
2. Check for broken or bare wires on the unit, stator and trigger.
3. Check the DVA voltage of the stator, (Read from the red and blue wires to engine ground), with everything connected. The readings should be approximately 180 volts or more on the blue wire, and 30 volts or more on the red wire.
4. Disconnect the rectifier. If the engine fires, replace the rectifier.

### **Engine will not stop:**

Check stop circuit in the pack by using a jumper wire connected to the black/yellow terminal or wire coming out of the pack and shorting it to ground. If this stops the engine, the stop circuit in the harness or on the boat is bad, possibly the ignition switch.

### **High speed miss:**

1. Disconnect the rectifier and retest. If miss is gone, the rectifier is usually at fault.
2. Check DVA voltage on the red wire of the stator to engine ground 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.

### **Coils fire with spark plugs out but not in:**

1. Check for dragging starter or low battery causing slow cranking speed. DVA test stator and trigger.
2. Disconnect rectifier, regulator and retest. If the problem goes away, replace the rectifier and/or regulator.

### **No spark on one bank (odd or even cylinders on Inline 6 cylinder engines):**

Check DVA voltage of the stator, checking from the red and blue wire to engine ground. The readings should be approximately 180 volts or more on the blue wire and 30 or more on the red wire.

### **Intermittent spark on one or more cylinders:**

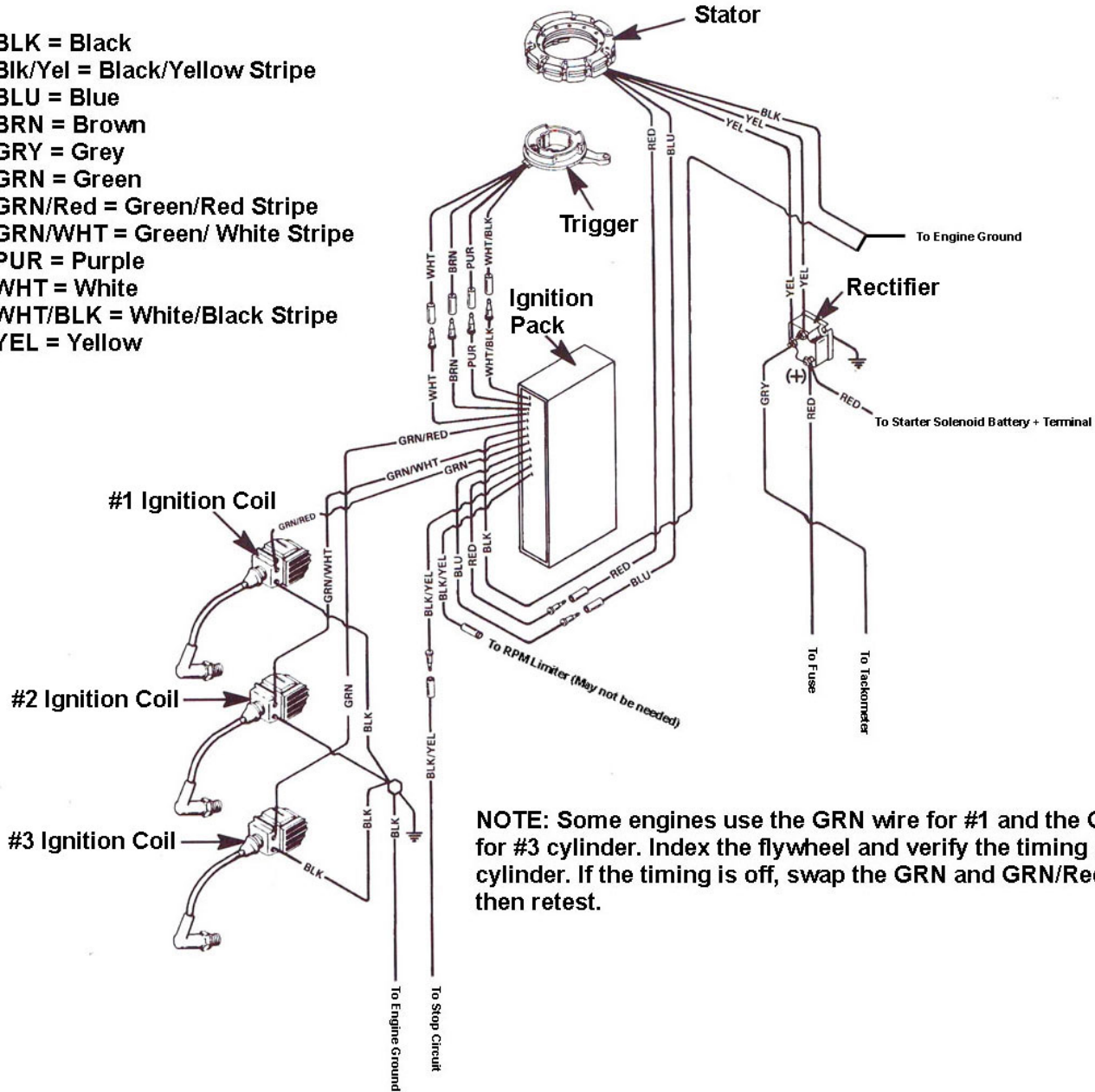
Disconnect the white/black wire between the packs on a 6 cylinder and retest. If all cylinders now fire, replace both packs as there is a problem in the bias circuitry. On all others, check for low voltage from the stator and trigger. Disconnect the rectifier and retest. If the problem disappears, replace the rectifier.

### **All cylinders have spark but the engine will not crank and run:**

Disconnect the white/black wire and check the bias circuit (white/black terminals) resistance to engine ground. Readings should be approximately 15,000Ω . If the readings are correct on the pack, index the flywheel and check timing on all individual cylinders. If the timing varies, replace the pack.

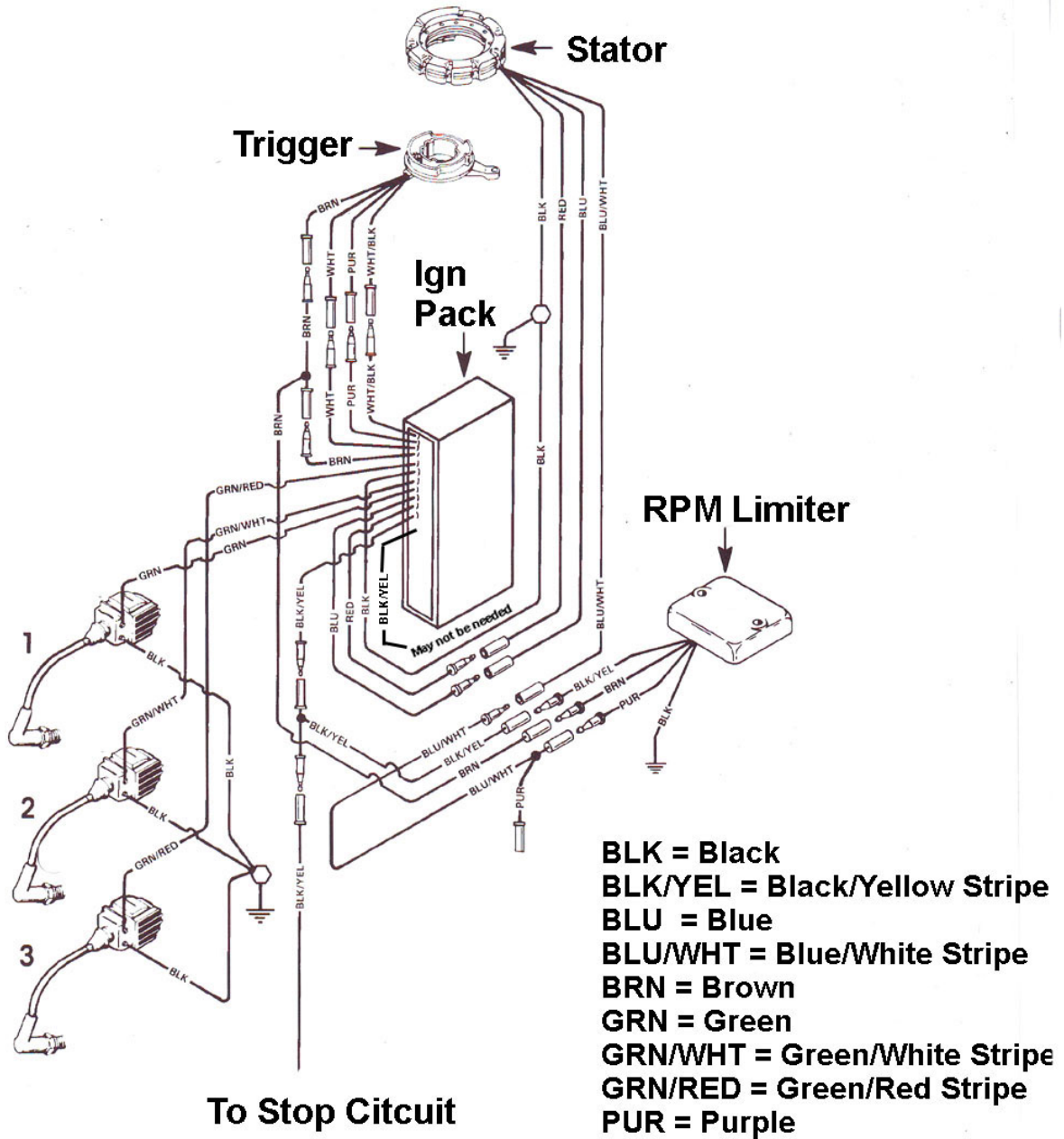
## Electric Start Wiring Diagram

- BLK = Black
- Blk/Yel = Black/Yellow Stripe
- BLU = Blue
- BRN = Brown
- GRY = Grey
- GRN = Green
- GRN/Red = Green/Red Stripe
- GRN/WHT = Green/ White Stripe
- PUR = Purple
- WHT = White
- WHT/BLK = White/Black Stripe
- YEL = Yellow



**NOTE:** Some engines use the GRN wire for #1 and the GRN/Red for #3 cylinder. Index the flywheel and verify the timing on each cylinder. If the timing is off, swap the GRN and GRN/Red wires, then retest.

## Manual Start Wiring Diagram



**NOTE:** Some engines use GRN/RED for #1, GRN/WHT for #2 and GRN for #3 cylinder. If engine backfires or seems to be out of time, index the flywheel and verify timing on each cylinder. Adjust the Green wires to reflect the correct firing order for your engine.