

# CDI Electronics®

## Mercury

### Alternator Driven Ignitions

#### One and Two Cylinder Engines 1971-1975 (With 336-4516 Phase-Maker Ignition)

**SERVICE NOTE:** These engines require the Orange, Red or Green Ignition coils. The Black or Blue ignition coils use a common ground connection internally for the primary and the secondary side of the coils. This system requires that the primary and the secondary side of the coils be separate as the points drive the negative side of the coil to ground, causing the coil to generate spark on the secondary side.

**NO SPARK ON ONE OR BOTH CYLINDERS:**

1. Disconnect the Orange stop and connect it to engine ground. Retest. If the engine now has spark, the stop circuit has a fault.
2. Check the stator resistance and DVA output as given below:

WIRE	READ TO	OEM RESISTANCE	CDI RESISTANCE	DVA (Connected)
Red	Yellow	4600-4700	2200	N/A
Blue	Yellow	170-180	180	N/A
Green	Engine Ground	--	--	180 V +

3. Disconnect the Brown and White points wires one at a time and retest. If the spark comes back on the one still connected when you disconnect one of them, the points or points wire is defective for the disconnected cylinder.
4. Disconnect the Green wires one at a time and retest. If the spark comes back on one cylinder, the ignition coil not connected is defective. Remember that the coils must not be the Black or Blue coils (these coils are not isolated ground).
5. Test the 336-4516 module as follows:

### 336-4516

#### REPAIR & RETURN

**TEST UNIT WITH METER - OHM SCALE**

1.) Check Stator Coils

A.) Blue / Yellow 170-180Ω High-Speed Coil

B.) Red / Yellow 4.6-4.7KΩ OEM / 2.2KΩ CDI

**CHECK WITH METER**  
USE THE DIODE SCALE TO MEASURE THE UNIT AS FOLLOWS:

**START**

STEP#1 DIODE

STEP#2 DIODE

STEP#3 SHORTED

STEP#4 DIODE

STEP#5 DIODE

STEP#6 HIGH or OPEN

STEP#7 DIODE

**FINISH**

Title	CDI Electronics, Inc.
Size	Description
ID	336 - 4516
Date:	06-19-2009 <span style="float: right;">Sheet 1 of 1</span>