

# Generator Inspection

*Last update: 2009-01-07*

All of the connection to the stator wires must be checked . A bad connection causes the same problem as a defective stator.

A stator defect may cause problems when the motorcycle is running but may not be detected during the circuit tests. In this case visual inspection is important.

Sometimes, a problem only occurs after the motorcycle is driven some distance and then disappears when the motorcycle is parked for a while. This can indicate a fault that is sensitive to stator temperature. In such a case the engine should be warmed up before making the circuit tests.

## 1. PROBLEM

There are several different problems which can result from a stator assembly failure on the H1D or H2. The purpose of this bulletin is to supply some of the possible affects of a defective stator and to offer a comprehensive guide for checking the stator assembly.

## 2. CAUSES

1. The insulation of the coils can be too thin in areas causing an internal short or a short to ground.
2. Engine vibration can lead to an open or short circuit.
3. Engine heat contributes to stator assembly failure.
4. Water corrosion on the AC generator due partially to condensation on but primarily resulting from leakage is a large contributor to stator assembly failure.

These problems seem to be a little improved from H2B generator but these water and heat problem are not eradicated, because a change of basic design is not done.

## 3. SOLUTION

The most important measures that a technician can take to prevent stator assembly failures are in preventing water from entering the L.H. Engine cover. Because the inspection cover gasket (P/N 14050-005 for H1D and H2) is stiff and quite narrow, it occasionally does not conform well to the sealing surfaces of the L.H. Engine cover and the inspection cover. G.E. Silicone Seal or any similar sealant should be used with this gasket and with the L.H. Engine cover gasket (P/N 14045-012 for H1D and H2).

## 4. STATOR DEFECTIVENESS

There is the following thing on a trouble to be caused by stator.

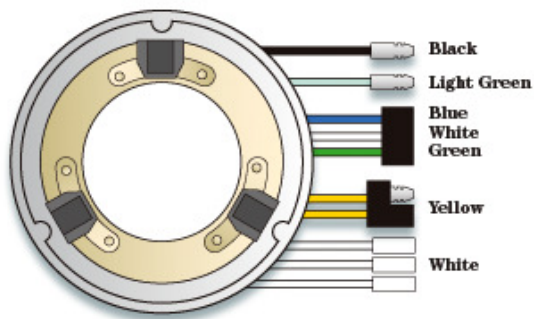
- Low battery charge
- Engine start difficult
- Trouble occurs after warming up
- Misfire occurs during high speed driving

## 5. STATOR INSPECTION

If the stator is suspected to be defective, remove the L.H. Inspection cover and visually check the stator assembly for broken wires, loose coils or other signs of damage. If nothing is found, remove the L.H. side cover and disconnect the stator wires.

### **Note:**

It is advisable to make these checks with the stator installed on the engine, because some problems such as the stator coils touching the engine crankcase may otherwise go undetected.



| Check resistance between | Value (limit) | Circuit Function                           | Related Malfunction   |
|--------------------------|---------------|--|---|
| Yellow to Yellow         | 0.4 $\Omega$  | Battery Charging                           | $\infty$ (Infinity) = Open circuit, dead battery  |
| Yellow to ground         | R = $\infty$  | Battery Charging                           | Continuity = Short to ground dead battery   |
| Blue to Green            | 50 $\Omega$   | Ignition High Speed Coil                   | $\infty$ (Infinity) = Open circuit engine will not run  |
| White to Green           | 200 $\Omega$  | Ignition Low Speed Coil                    | Less than 180 $\Omega$ = Internal short weak spark poor performance, fouling plugs, or no spark at low RPM.<br>$\infty$ (Infinity) = Open circuit, engine will not run at low RPM.  |
| Green to ground          | R = $\infty$  | Ignition Insulation                        | Continuity =<br>(1) If short to ground is in the high speed coil there may be no noticeable effect in performance.<br>(2) If short to ground is in the high speed coil there may be no noticeable effect in or no spark at all. |
| Black to stator body     | 0 $\Omega$    | Auxiliary Ground for Ignition Signal Coils | $\infty$ (Infinity) = Open circuit poor performance of signal coils if stator does not ground well through engine to frame.   |
| Black to White (L, C, R) | 200 $\Omega$  | Ignition Signal Coils                      | $\infty$ (Infinity) = Open circuit. engine will not run on 1,2, or 3 cylinders.<br>Less than 180 $\Omega$ = Internal short. weak spark, poor performance , fouling plugs on 1, 2, or 3 cylinders                                |