## **TROUBLESHOOTING**

- Inspect the following before diagnosing the system.
  - -Faulty spark plug
  - -Loose spark plug cap or spark plug wire connections
  - -Water got into the spark plug cap (Leaking the ignition coil secondary voltage)
- If there is no spark at any cylinder, temporarily exchange the ignition coil with the other good one and perform the spark test. If there is spark, the exchanged ignition coil is faulty.

## **NO SPARK AT SPARK PLUGS**

| UNUSUAL CONDITION                   |   | PROBABLE CAUSE (Check in numerical order)  |
|-------------------------------------|---|--|
| Ignition coil<br>primary<br>voltage | Low peak voltage  | <ol> <li>Incorrect peak voltage adaptor connections.</li> <li>The multimeter impedance is too low; below 10 MΩ/DCV. (System is normal if measured voltage is over the specifications with reverse connections.)</li> <li>Cranking speed is too low. (Battery is undercharged)</li> <li>The sampling timing of the tester and measured pulse were not synchronized. (System is normal if measured voltage is over the standard voltage at least once.)</li> <li>Poorly connected connectors or an open circuit in ignition system.</li> <li>Faulty side stand switch or neutral switch.</li> <li>An open circuit or loose connection in No. 6 related circuit wires.</li> <li>Side stand switch line: green/white wire</li> <li>Neutral switch line: light green and light green/black wires</li> <li>Faulty ignition control module (ICM) and/or converter unit (in case</li> </ol>  |
|                                     | No peak voltage   | <ol> <li>when above No. 1 thru. 7 are normal).</li> <li>Incorrect peak voltage adaptor connections. (System is normal if measured voltage is over the specifications with reverse connections.)</li> <li>Battery is undercharged. (Voltage drops largely when the engine is started.)</li> <li>Faulty ignition switch or engine stop switch.</li> <li>Loose or poorly connected ICM or converter unit connectors.</li> <li>No voltage at the black/white wire of the ICM or converter unit.</li> <li>Open circuit or poor connection in green (ground) wire of the ICM or converter unit.</li> <li>Faulty side stand switch or neutral switch.</li> <li>An open circuit or loose connection in No. 7 related circuit wires.</li> <li>Side stand switch line: green/white wire</li> <li>Neutral switch line: light green and light green/black wires</li> <li>Faulty peak voltage adaptor.</li> <li>Faulty ignition pulse generator. (Measure peak voltage.)</li> <li>Faulty ICM and/or converter unit (in case when above No. 1 thru. 10 are normal).</li> </ol> |
| Ignition<br>pulse<br>generator      | Peak voltage is normal,<br>but does not spark<br>Low peak voltage | <ol> <li>Faulty spark plug or leaking ignition coil secondary current ampere.</li> <li>Faulty ignition coils.</li> <li>The multimeter impedance is too low; below 10 M Ω/DCV.</li> <li>Cranking speed is too slow. (Battery is undercharged.)</li> <li>The sampling timing of the tester and measured pulse were not</li> </ol>  |
|                                     | No peak voltage   | synchronized. (System is normal if measured voltage is over the standard voltage at least once.)  4. Faulty ignition pulse generator (in case when above No. 1 thru. 3 are normal).  1. Faulty peak voltage adaptor.  2. Faulty ignition pulse generator.  |