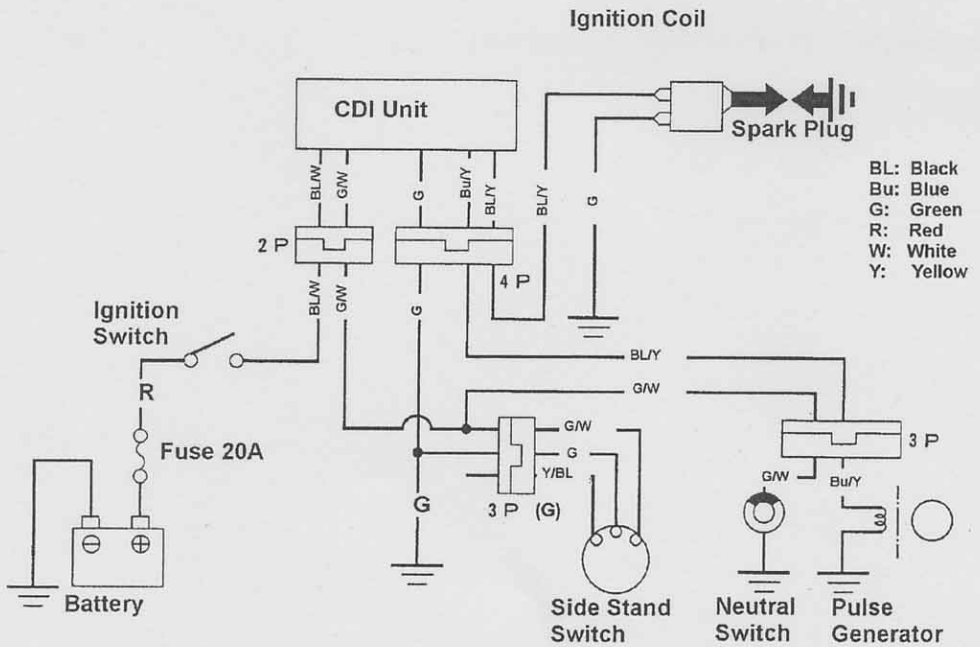
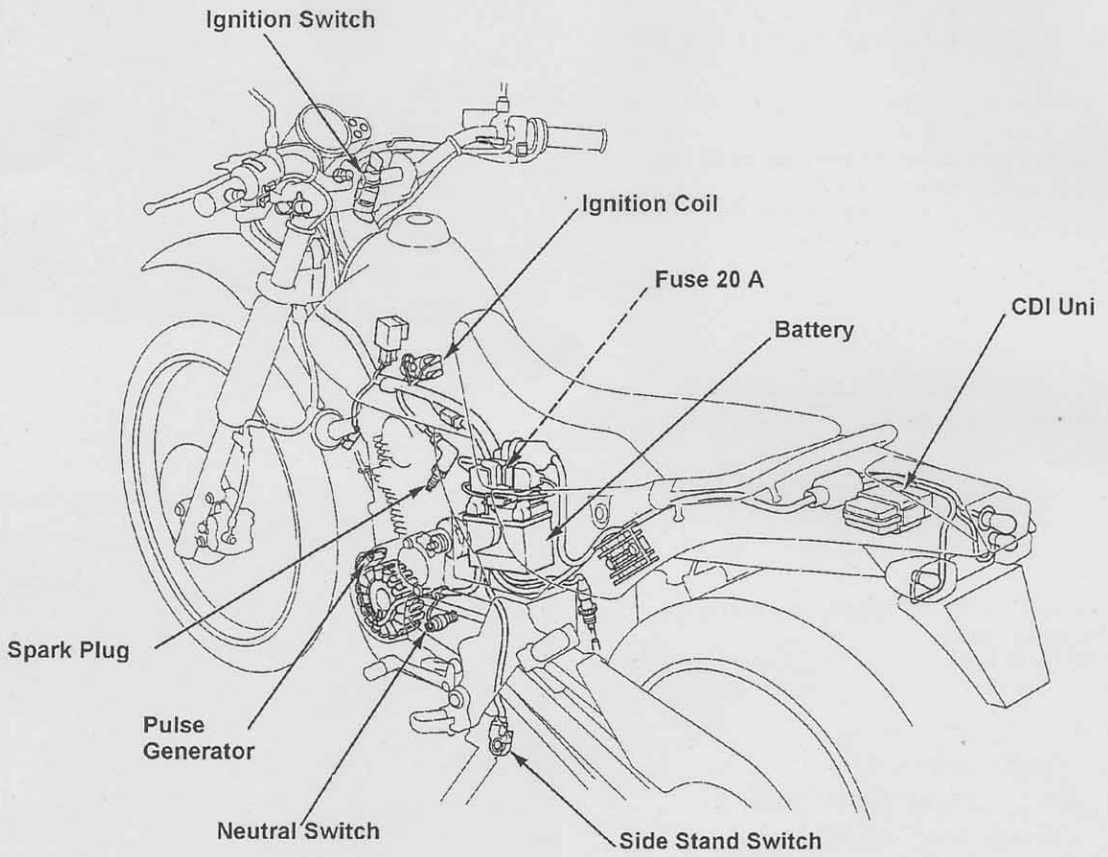


• Ignition Switch



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Troubleshooting.....	15 - 2	Ignition timing.....	15 - 5
Ignition system.....	15 - 3		

◆ Service Information

● General



Exhaust fume is toxic. Ventilation of the working area is essential.

- Follow the troubleshooting (15-2) for the ignition system inspection.
- Refer to (15-0) for the system layout.
- Ignition timing cannot be adjusted, as the system is equipped with an electrical advancing unit.
- Do not apply heavy shock to CDI unit. Handle it with care. Turn the ignition OFF when connecting/disconnecting couplers/connectors.
- The majority of ignition faults are coupler or connector connection faults. Check all connections before servicing.
- Use a battery in a good condition. Weak batteries lose their power by cranking and may be difficult to have adequate spark.
- Use proper spark plug. Improper plug may cause engine trouble.
- The motorcycle is equipped with an ignition cut-off side stand. This enables it to start the engine when the gear is in neutral or the side stand is retracted (or both).
- Refer to Sec. 17 for the following switches inspection:
 - Side stand switch
 - Neutral switch
 - Main switch
 - Kill switch

● Specification

Item		Standard
Ignition type		CDI - magnet
Spark plug	NGK	DPR8EA9
	DENSO	X24EPR-U9
	Plug cap	0.8 ~ 0.9mm
Ignition timing	"F" mark	9° BTDC / 1,400rpm
	Advance start rpm	1,800 ± 200rpm
	Advance stop rpm	4,100rpm
Ignition coil peak voltage		100V or more
Pulse generator peak voltage		0.7V or more

- **Torque Setting**

Timing hole cap

10N.m (1.0kgf-m)

- **Special Tool**

Peak voltage adapter 07HGJ-0020100

(Use it together with normal digital multi meter which has an input resistance of 10MΩ/DCV or more).

- **Troubleshooting**

Firstly, check with a new spark plug to eliminate the possibility of the spark plug fault. Also, check all connection and secondary current leaks (due to moisture) as well.

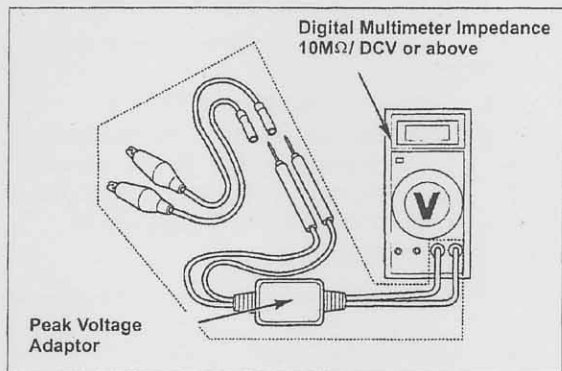
- **No Spark**

Symptom		Suspected cause (check in numerical order)
Ignition coil primary voltage	Low peak voltage	① Internal resistance of the multi meter is too low. ② Too low cranking speed - Battery nearly flat ③ Multi meter sampling time (check few times) ④ Wiring / connection fault ⑤ Faulty side stand switch ⑥ Faulty ignition coil ⑦ Faulty CDI unit (if all of ① - ⑥ are fine)
	Very low or no peak voltage	① Adapter misconnection ② Kill switch short circuit ③ Main / kill switch fault ④ CDI unit coupler connection fault ⑤ CDI unit earth fault ⑥ Side stand switch fault ⑦ Peak voltage adapter fault ⑧ Pulse generator fault (measure the peak voltage) ⑨ Faulty CDI unit (if all of ① - ⑧ are fine)
	Peak voltage is normal but no spark	① Faulty spark plug or ignition coil secondary current leak. ② Ignition coil fault.
Pulse Generator	Low peak voltage	① Internal resistance of the multi meter is too low. ② Too low cranking speed - Battery nearly flat ③ Effect of the multi meter sampling time (measure several times) ④ Faulty pulse generator (if all of ① - ③ are fine).
	Very low or no peak voltage	① Faulty peak voltage adapter. ② Faulty pulse generator.

• Ignition System

Note:

- If there is no spark on the plug, check all wirings and the measure individual peak voltage.
- The impedance of the multi meter affects the reading.
Use the multi meter with 10M Ω /DCV or above impedance.



Connect a peak voltage adapter to the multi meter.

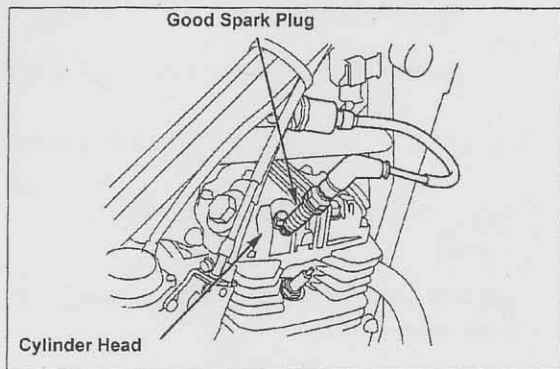
Special tools:

Peak voltage adapter 07HGJ-0020100
(Use in conjunction with a digital multi meter with 10M Ω /DCV or above impedance).

• Ignition coil primary voltage

Notes:

- Check all wirings and connections first.
- Cylinder compression should exist while measuring and do not remove the plug cap. The peak voltage may indicate higher if the plug cap is removed.

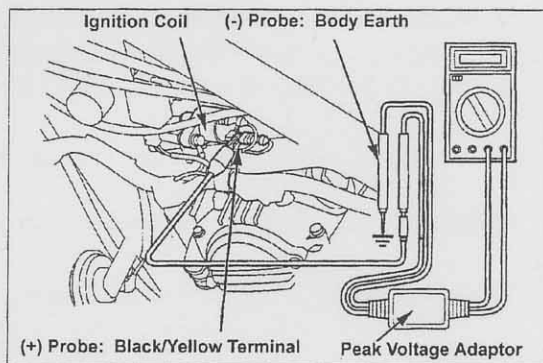


Leave a spark plug attached to the cylinder head in a similar manner with a normal spark test and install a good plug to the plug cap and earth it to the engine.

Remove a fuel tank.

Turn ignition ON and kill switch RUN.

Peel the rubber cover of the ignition coil and connect a lead to the coil. Connect a peak voltage adaptor between the primary voltage lead terminal and the body earth.



Connection: Black/Yellow (+) - Body Earth (-)

Crank the engine with a starter motor and measure the peak voltage.

Peak voltage: 100V or above



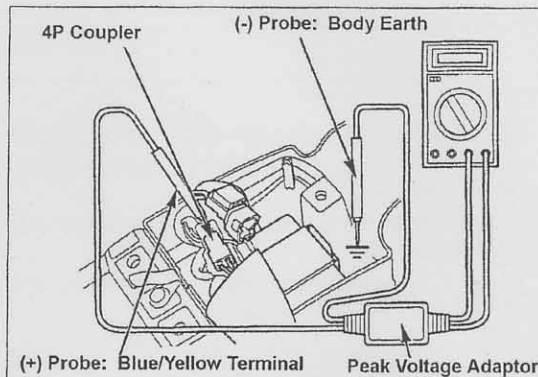
Do not touch the probe while measuring for your own safety.

Refer to the troubleshooting table (15-2) if the measured valve was below the standard.

• Pulse generator peak voltage

Notes:

- Check wirings are correct.
- Cylinder compression should exist while measuring and do not remove the plug cap. The peak voltage may indicate higher if the plug cap is removed.



Remove the rear cowl (2-3).

Disconnect CDI unit 4P coupler.

Connect the peak voltage adapter tester probes to the following terminals on the harness side.

Connection: Blue/Yellow (+) - body earth (-)

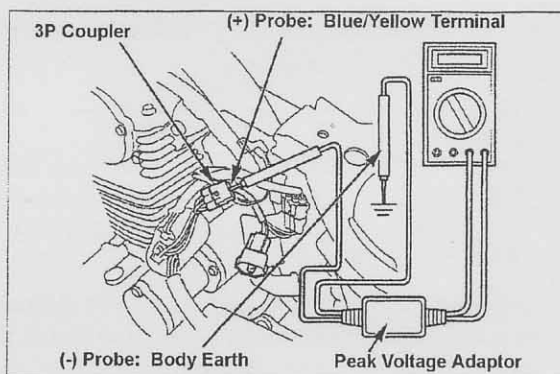
Crank the engine with a starter motor and measure the peak voltage.

Peak voltage: 0.7V or above



Warning

Do not touch the probe while measuring for your own safety.



If the peak voltage measured at the CDI unit 4P coupler terminal was below the standard, measure the peak voltage at the pulse generator/neutral switch 3P coupler. Remove a battery casing (14-6).

Disconnect the pulse generator/neutral switch 3P coupler. Connect the peak voltage adapter probes to the following terminals on the harness side:

Connection: Blue/Yellow (+) - body earth (-)

Crank the engine with a starter motor and measure the peak voltage.

Peak voltage: 0.7V or above



Warning

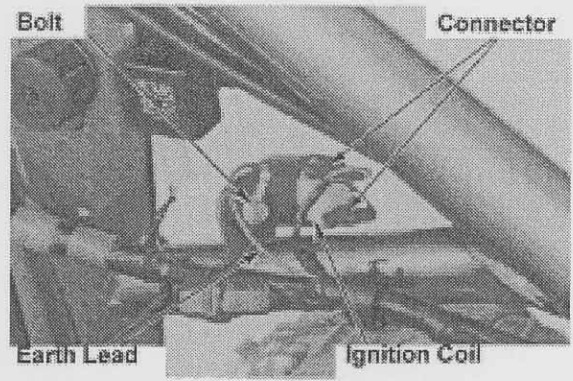
Do not touch the probe while measuring for your own safety.

- If the voltage was abnormal at the CDI unit 4P coupler and was fine at the pulse generator / neutral switch 3P coupler, check wire harness and couplers.
- If both voltages were abnormal, replace the pulse generator (14-9).

- Ignition Coil

- Removal / Installation

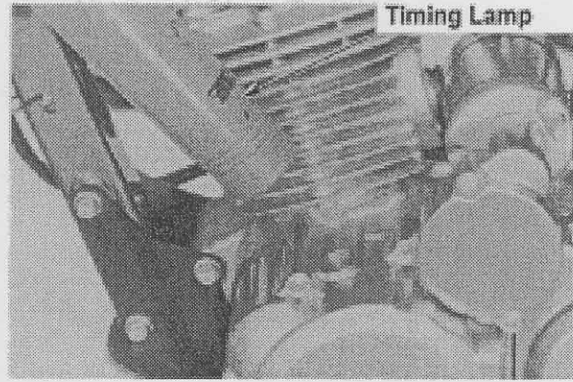
Remove a fuel tank (2-10).
Remove a spark plug cap from the plug.
Disconnect an ignition coil primary and connector.
Remove a bolt to remove ground earth cable and the ignition coil.



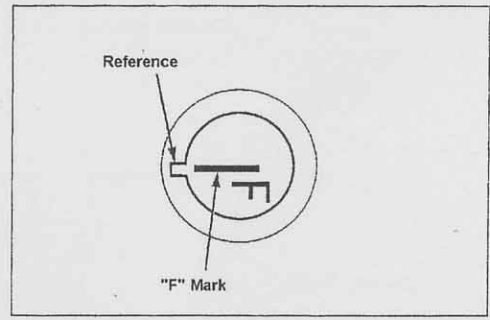
Reverse the above procedure for installation.

- Ignition Timing

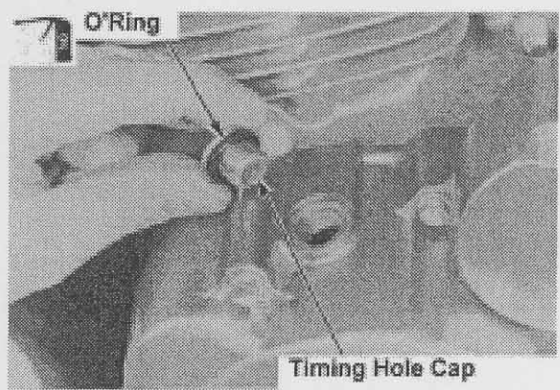
- Notes:**
- Check the timing after warming up the engine.
 - Ignition timing cannot be adjusted as the engine is equipped with an electrical advancing system.
 - If the timing is out, inspect the CDI unit and the pulse generator and replace if necessary.
 - Read the instructions before using a timing light and engine tachometer.



Warm up the engine.
Shut down the engine and connect the timing light to the high tension lead.
Remove a timing hole cap.
Install the engine tachometer.
Start and idle the engine (1,400 ± 100rpm).



The "F" mark on the flywheel should align to the reference mark on a left crankcase cover.
Gradually increase rpm. The reference mark should be within the range of the advance mark.



Inspect an O-Ring on the timing hole cap for damages.
Replace if necessary.
Apply engine oil to the O-Ring and install the cap.

Torque: 10N.m (1.0kgf-m)