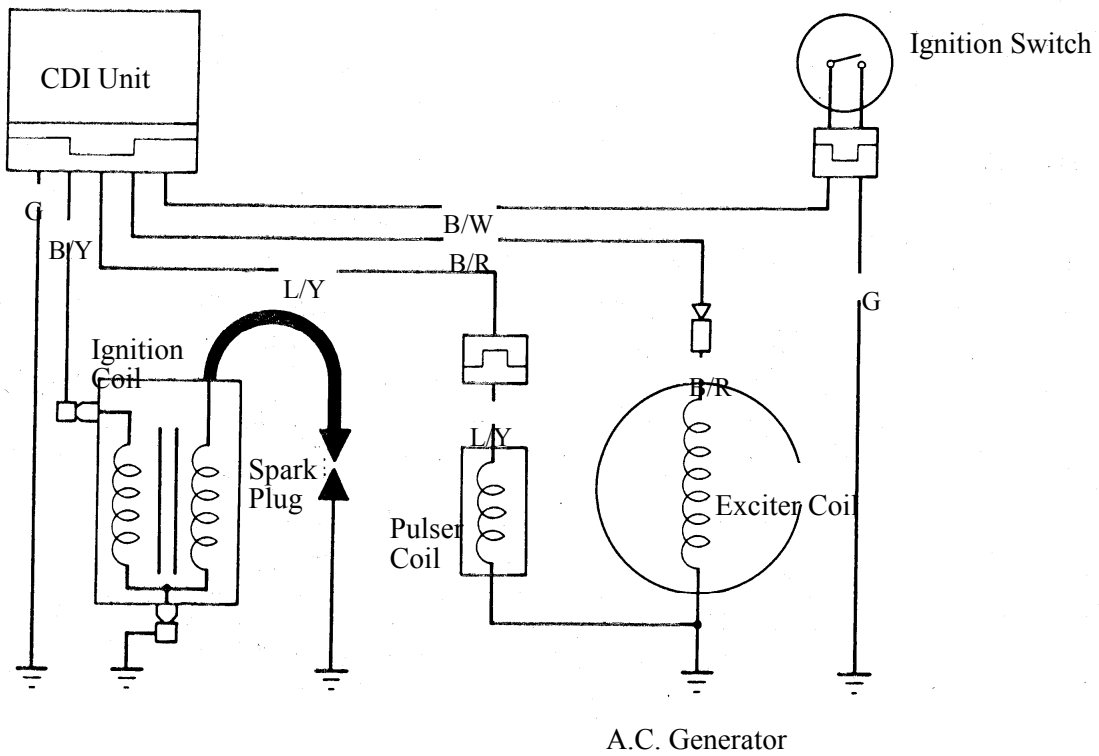
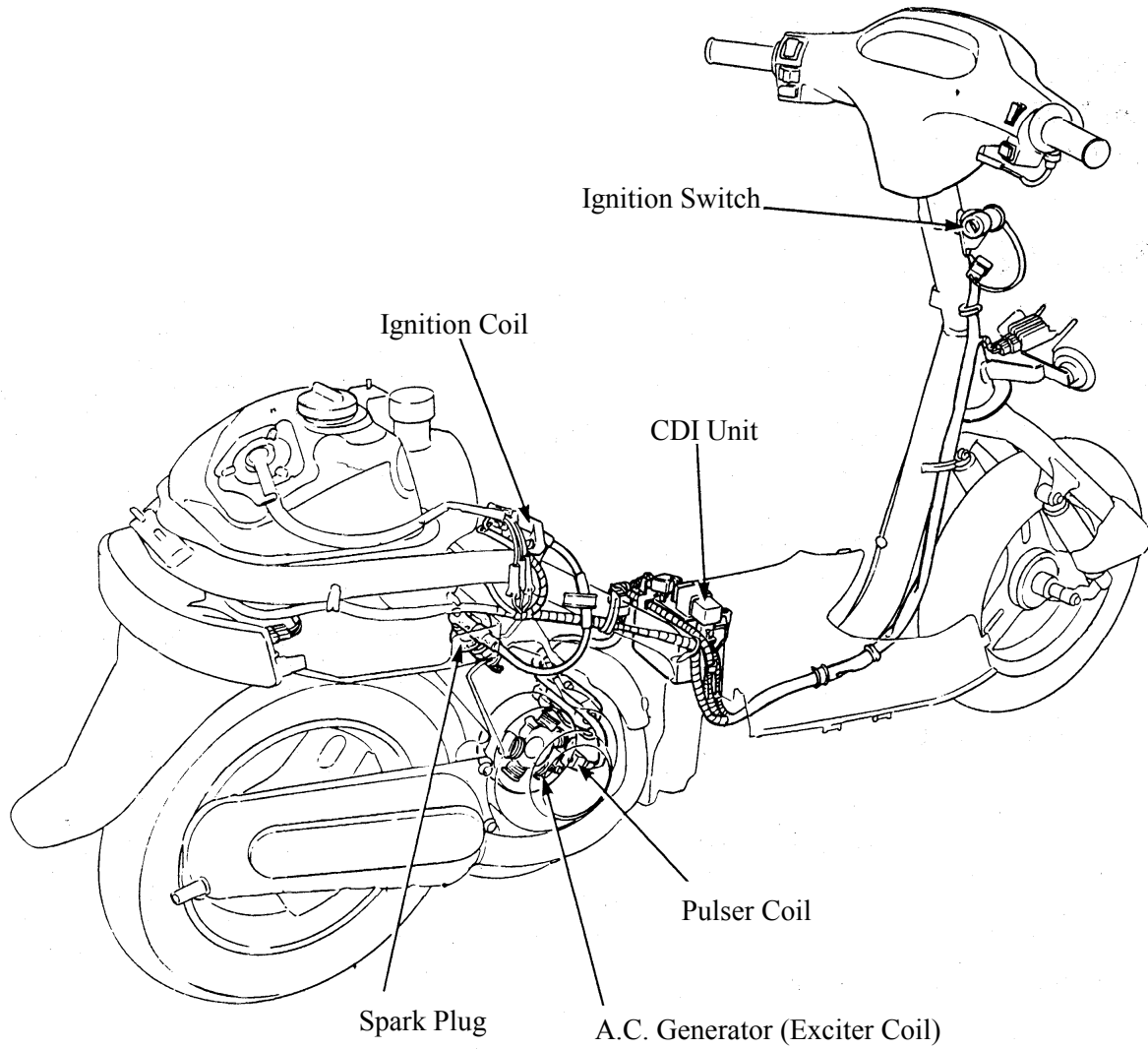


15. IGNITION SYSTEM



15. IGNITION SYSTEM

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SERVICE INFORMATION

GENERAL INSTRUCTIONS

- The ignition system adopts CDI unit and the ignition timing cannot be adjusted. If the timing is incorrect, inspect the CDI unit and A.C. generator and replace any faulty parts. Inspect the CDI unit with a CDI tester.

SPECIFICATIONS

Item		Standard
Spark plug		NGK: BP4HSA, BP6HAS, BP8HAS ND: W14FP-L, W20FP-L, W24FP-L
Spark plug gap		0.6~0.7mm
Ignition coil resistance (20°C)	Primary coil	0.2~0.3Ω
	Secondary coil with plug cap	8.2~9.3KΩ
	Secondary coil without plug cap	3.4~4.2KΩ
Ignition timing		17°BTDC/2000rpm
Pulser coil resistance (20°C)		50~200Ω
Exciter coil resistance (20°C)		500~900Ω

TROUBLESHOOTING

- If there is no spark at plug, refer to Page 1-26 for troubleshooting.

No spark at plug

- Faulty spark plug
- Poorly connected, broken or shorted wire
 - Between A.C. generator and CDI unit
 - Between CDI unit and ignition coil
 - Between CDI unit and ignition switch
 - Between ignition coil and spark plug
- Faulty ignition switch
- Faulty ignition coil
- Faulty CDI unit
- Faulty A.C. generator

Engine starts but turns poorly

- Ignition primary circuit
 - Faulty ignition coil
 - Poorly connected wire or connector
 - Poorly contacted ignition switch
- Ignition secondary circuit
 - Faulty ignition coil
 - Faulty spark plug
 - Faulty high-tension wire
 - Poorly insulated plug cap
- Improper ignition timing
 - Faulty A.C. generator
 - Stator not installed properly
 - Faulty CDI unit

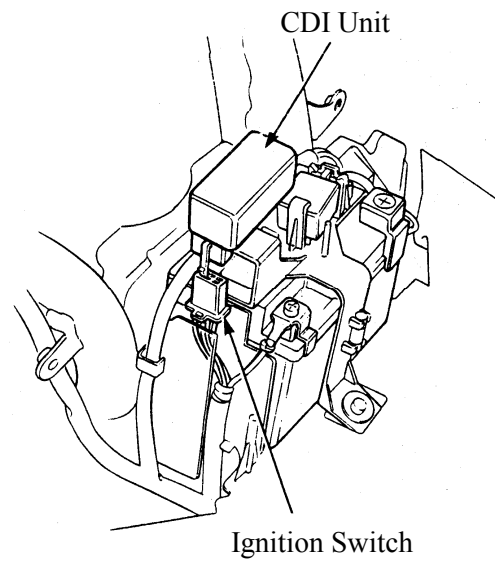
15. IGNITION SYSTEM

CDI UNIT

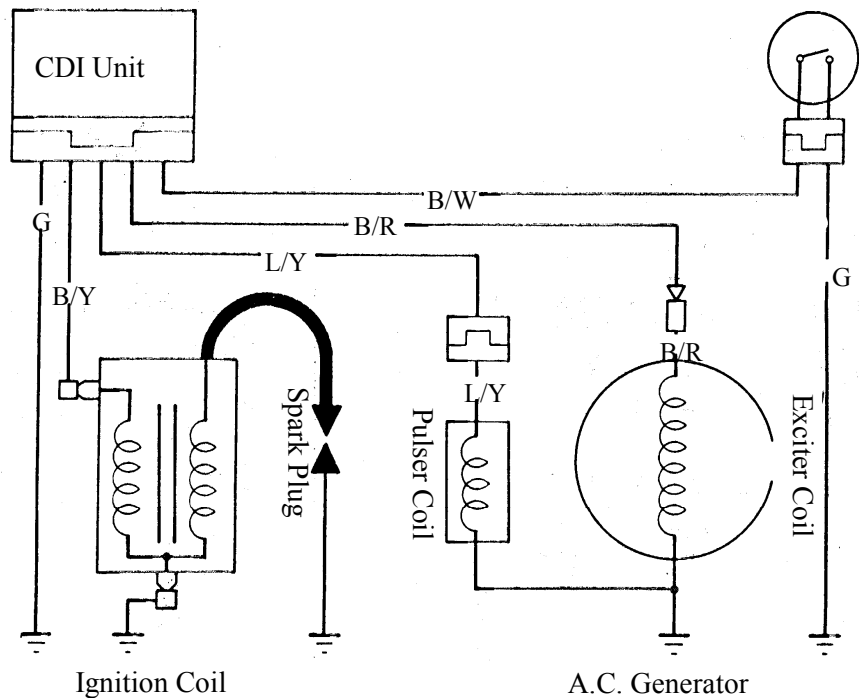
CDI Unit Ignition System Circuit Inspection

Remove the frame center cover. (⇒11-2)
Remove the 6P coupler from the CDI unit and then test the following.

Item	Testing Contents	Standard	
Ignition switch	Black/White-Green	Ignition switch ON with no power supplied	
Exciter coil	Black/Red-Green	500-900Ω(20°C)	
Pulser coil	Blue/Yellow-Green	50-200Ω (20°C)	
Ignition coil	Primary	Black/Yellow-Green	0.2-0.3Ω (20°C)
	Secondary	Green-Plug cap (with plug cap)	8.2-9.3KΩ (20°C)



If the testing results are within the specified ranges, check the CDI unit.

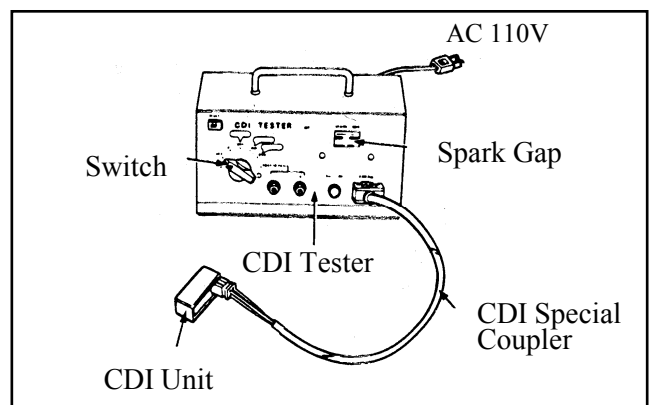


CDI Unit Inspection

* Test the CDI unit following the CDI tester manufacturer's instructions.

Connect the CDI unit to the CDI tester with the special coupler.

Switch	Good CDI	Faulty CDI
1. OFF	No spark	—
2. P	↑	—
3. EXT	↑	Good spark
4. ON1	Good spark	No spark
5. ON2	↑	↑



15. IGNITION SYSTEM

IGNITION COIL

REMOVAL

Remove the right and left side covers. (⇒11-2)

Remove the spark plug cap.

Disconnect the ignition coil wires and remove the ignition coil bolt to remove the ignition coil.

INSTALLATION

The installation sequence is the reverse of removal.

* Be sure to route wires properly.

IGNITION COIL INSPECTION

Continuity Test

* This test is to inspect the continuity of ignition coil.

Measure the resistance between the ignition coil primary coil terminals.

Resistance (20°C): 0.2~0.3Ω

Measure the secondary coil resistance between the spark plug cap and the primary coil terminal.

Resistance (with plug cap): 8.2~9.3KΩ

Measure the secondary coil resistance between the high-tension coil terminal and the primary coil terminal.

Resistance (without plug cap): 3.4~4.2KΩ

Inspect the ignition coil with an ignition coil tester.

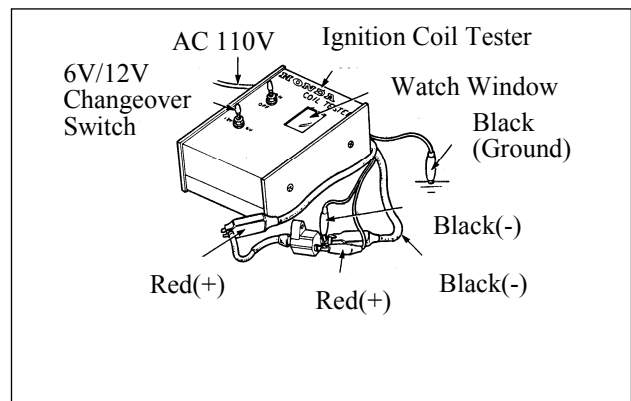
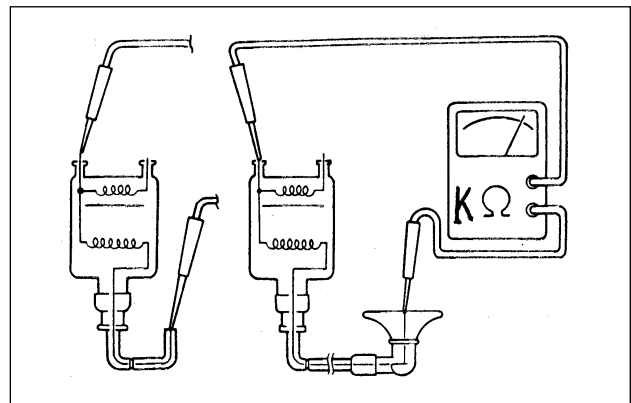
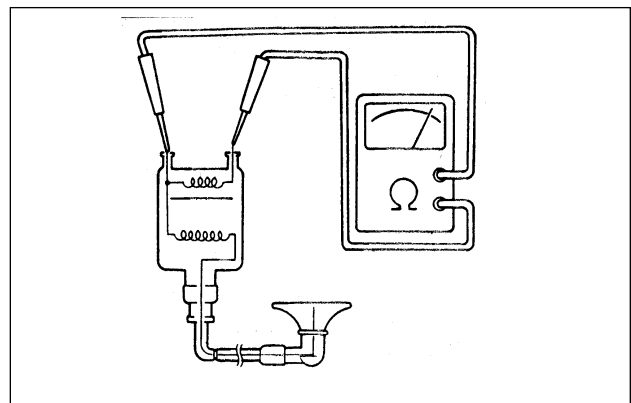
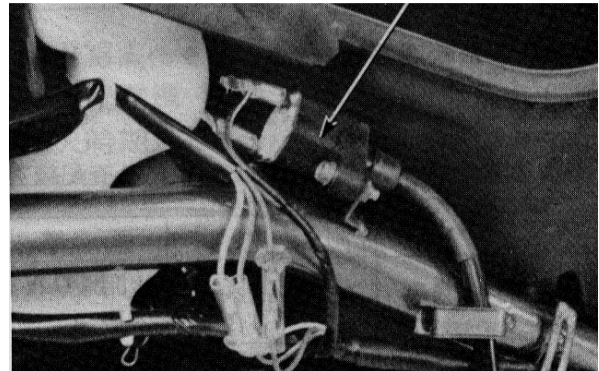
* Follow the ignition coil tester manufacturer's instructions.

1. Turn the changeover switch to 12V and connect the ignition coil to the tester.
2. Turn the power switch ON and check the spark from the watch window.

Good : Normal and continuous spark

Faulty: Weak or intermittent spark

Ignition Coil



15. IGNITION SYSTEM

A.C. GENERATOR

Exciter Coil/Pulser Coil Inspection

* This test is performed with the stator installed in the engine.

Remove the frame center cover. (⇒11-2)
Disconnect the A.C. generator black/red wire connector.

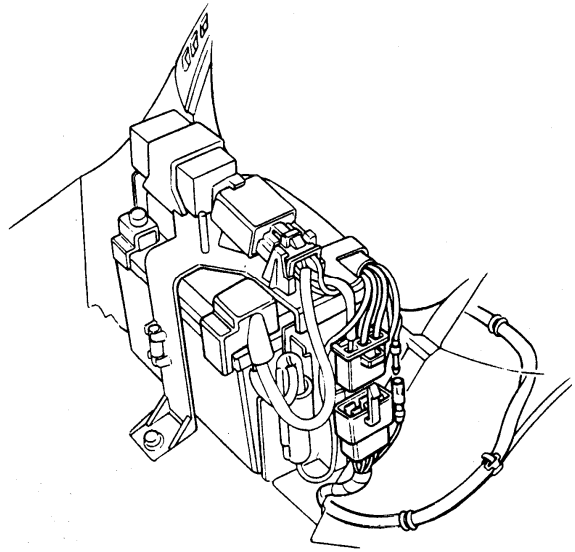
Measure the exciter coil resistance between the black/red and green wire terminals.

Resistance (20°C): 500~900Ω

Disconnect the A.C. generator 6P coupler.
Measure the pulser coil resistance between the blue/yellow and green wire terminals.

Resistance (20°C): 50~200Ω

Refer to Section 7 for the removal of A.C. generator.



IGNITION TIMING INSPECTION

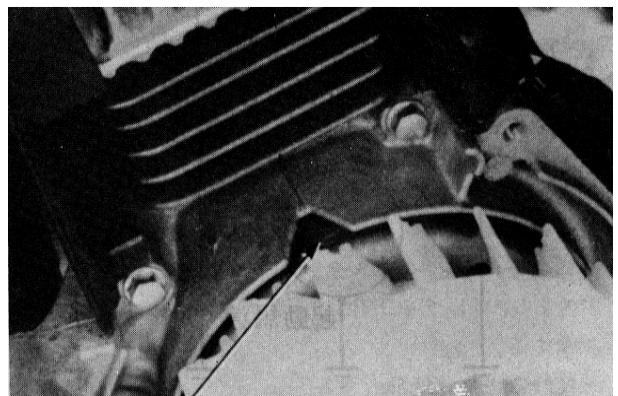
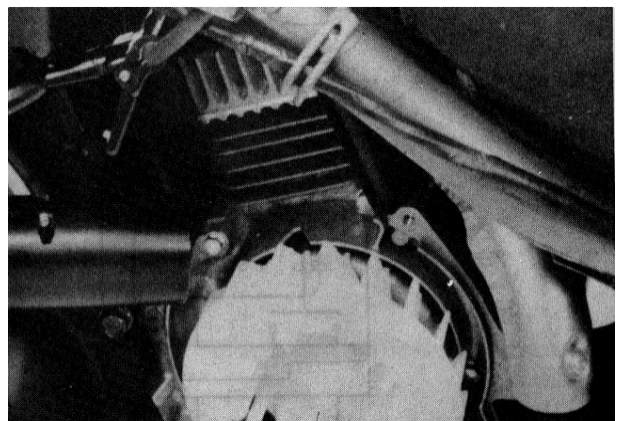
* The ignition timing cannot be adjusted.
If the timing is incorrect, inspect the CDI unit, pulser coil or A.C. generator and replace any faulty parts.

Remove the right side rail. (⇒11-2)
Remove the two fan cover attaching bolts and the fan cover.

Warm up the engine and inspect the ignition timing using a timing light.

The timing is correct if the index mark aligns with the F mark within $\pm 3^\circ$ at 2000 rpm.

Ignition Timing: 17°BTDC/2000rpm



“F” Mark