

17. IGNITION SYSTEM

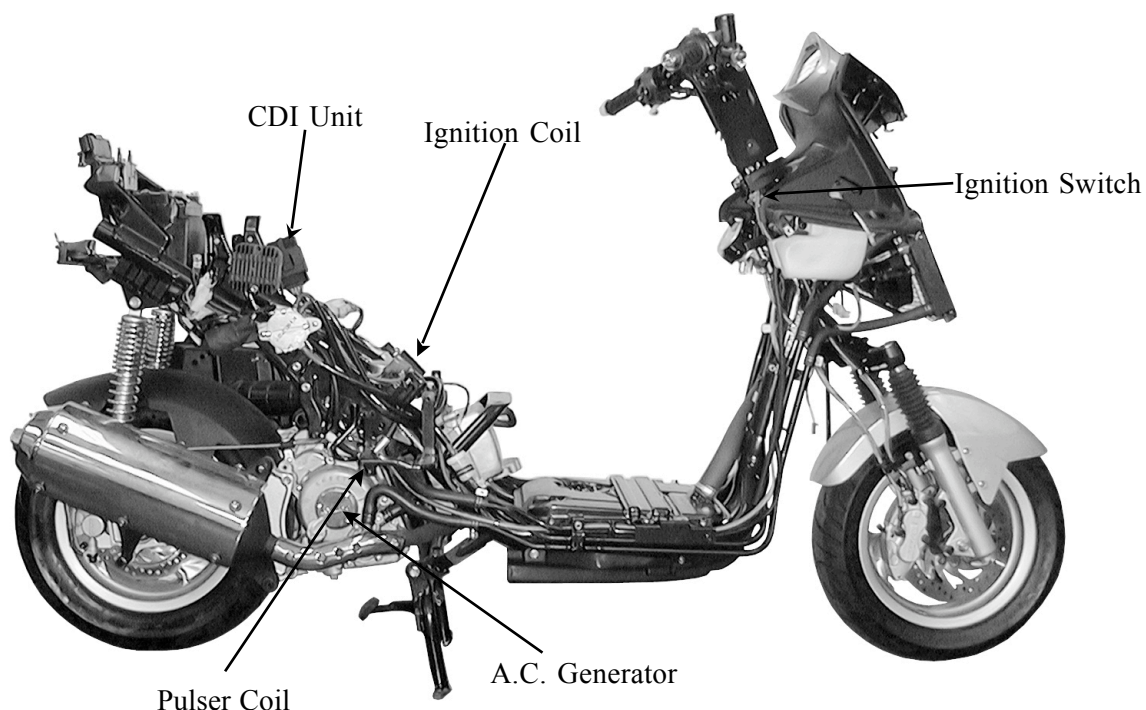
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IGNITION SYSTEM

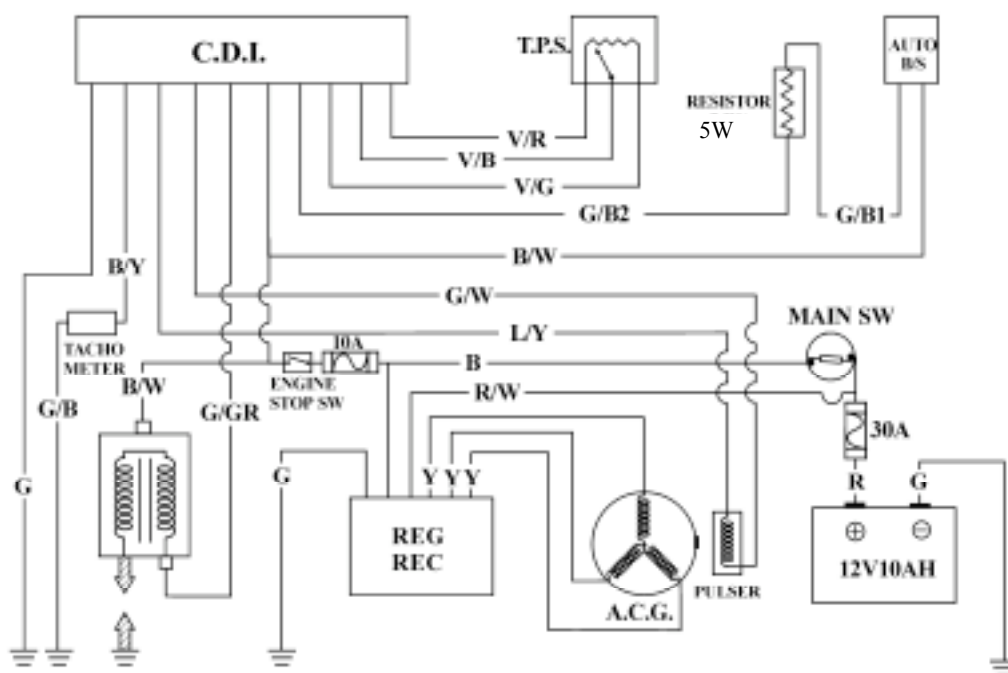
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17. IGNITION SYSTEM

IGNITION SYSTEM LAYOUT



IGNITION CIRCUIT



17. IGNITION SYSTEM

SERVICE INFORMATION

GENERAL INSTRUCTIONS

- Check the ignition system according to the sequence specified in the Troubleshooting. (⇒ 1-28)
- 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
- Loose connector and poor wire connection are the main causes of faulty ignition system. Check each connector before operation.
- Use of spark plug with improper heat range is the main cause of poor engine performance.
- The inspections in this section are focused on maximum voltage. The inspection of ignition coil resistance is also described in this section.
- Inspect the ignition switch according to the continuity table specified in page 19-3.
- Inspect the spark plug referring to Section 3.
- Remove the A.C. generator and pulser coil referring to Section 10.

SPECIFICATIONS

Item			Standard	
Spark plug	Standard type		NGK DPR7EA9	
Spark plug gap			0.8_	1.0mm
Ignition timing	“F” mark Full advance		repeatedly	
Ignition coil resistance (20℃)	Primary coil		1.5_	3.5□
	Secondary	without plug cap	12_	16K□
	coil	with plug cap	17_	21K□
Pulser coil resistance (20℃)			50_	170□
Exciter coil resistance (20℃)			50_	350□
Ignition coil primary side max. voltage			14V	
Pulser coil max. voltage			1.6V	
Exciter coil max. voltage			14V	

TESTING INSTRUMENT

Electric tester

TROUBLESHOOTING

No spark at plug

- Faulty spark plug
- Poorly connected, broken or shorted wire
- 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

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SPARK PLUG

For spark plug inspection and adjustment, refer to page 3-5.

IGNITION COIL INSPECTION

Remove the seat and met-in box. (⇒ 2-3)
Remove the ignition coil

IGNITION COIL CONTINUITY TEST

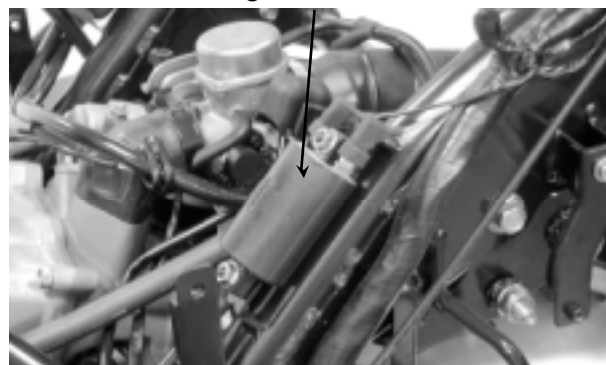
Inspect the continuity of the ignition coil, primary coil and secondary coil.

* This is a general test. Accurate ignition coil test must be performed with a CDI tester.

Measure the ignition coil resistances at 20°C .

Primary coil	1.5_ 3.5Ω
Secondary coil without plug cap	12_ 16KΩ
Secondary coil with plug cap	17_ 21KΩ

Ignition Coil



Ignition Coil

Primary Coil



Ignition Coil

Secondary Coil



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A .C. GENERATOR INSPECTION

EXCITER COIL/PULSER COIL INSPECTION

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

Remove the frame right cover. (⇒ 2-4)
Disconnect the A.C. generator connector.
Measure the exciter coil resistance between the black/white wire terminal and ground.

Black/white_	Ground	23_	35K Ω
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- * Measure the resistance in the X Ω range.

For A.C. generator removal/installation, refer to pages 10-3 and 10-6.
Disconnect the pulser coil wire coupler.
Measure the pulser coil resistance between the blue/white and green/white wire terminals.

Blue/white_	Green/white	50_	170 Ω
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Pulser Coil Wire Coupler

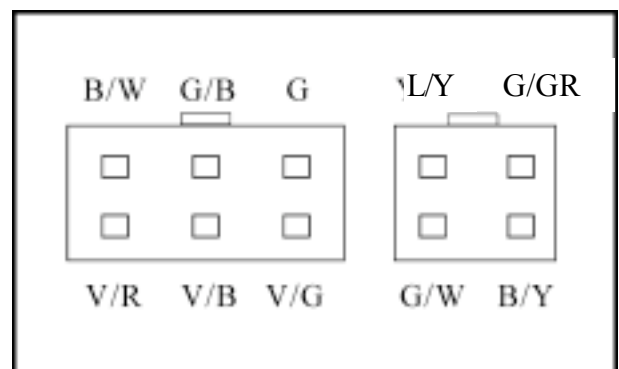
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CDI UNIT

RESISTANCE INSPECTION

Measure the resistance between the terminals.
Replace the CDI unit if the readings are not within the specifications in the table below.

- *
- Due to the semiconductor in circuit, it is necessary to use a specified tester for accurate testing. Use of an improper tester in an improper range may give false readings.
 - In this table, “Needle swings then returns” indicates that there is a charging current applied to a condenser. The needle will then remain at “ ∞ ” unless the condenser is discharged.



Unit: Ω

(+) (-)	L/Y	B/Y	G/GR	G/W	B/W	G/B	V/R	V/B	V/G	G
L/Y		∞	∞	67~125K Ω	∞	∞	36~67K Ω	110~200K Ω	36~67K Ω	36~67K Ω
B/Y	11~22M Ω		∞	11~22M Ω	0.5~2 K Ω	∞	11~22M Ω	11~22M Ω	11~22M Ω	11~22M Ω
G/GR	∞	∞		∞	∞	∞	∞	∞	∞	∞
G/W	67~125K Ω	∞	∞		∞	∞	36~67K Ω	110~200K Ω	36~67K Ω	36~67K Ω
B/W	11~22M Ω	0.5~2 K Ω	∞	11~22M Ω		∞	11~22M Ω	11~22M Ω	11~22M Ω	11~22M Ω
G/B	∞	∞	∞	∞	∞		∞	∞	∞	∞
V/R	36~67K Ω	∞	∞	36~67K Ω	∞	∞		72~133 K Ω	2~5 K Ω	2~5 K Ω
V/B	110~200K Ω	∞	∞	110~200K Ω	∞	∞	72~133 K Ω		72~133 K Ω	72~133 K Ω
V/G	36~67K Ω	∞	∞	36~67K Ω	∞	∞	2~5 K Ω	72~133 K Ω		0.1~1 Ω
G	36~67K Ω	∞	∞	36~67K Ω	∞	∞	2~5 K Ω	72~133 K Ω	0.1~1 Ω	