

IGNITION SYSTEM

CIRCUIT D'ALLUMAGE

ZÜNDSYSTEM

- (1) INTERRUPTEUR D'ARRET DU MOTEUR
- (2) UNITE CDI
- (3) BATTERIE
- (4) LATERNATEUR
- (5) GENERATEUR D'IMPULSIONS
- (6) BOBINE D'ALLUMAGE

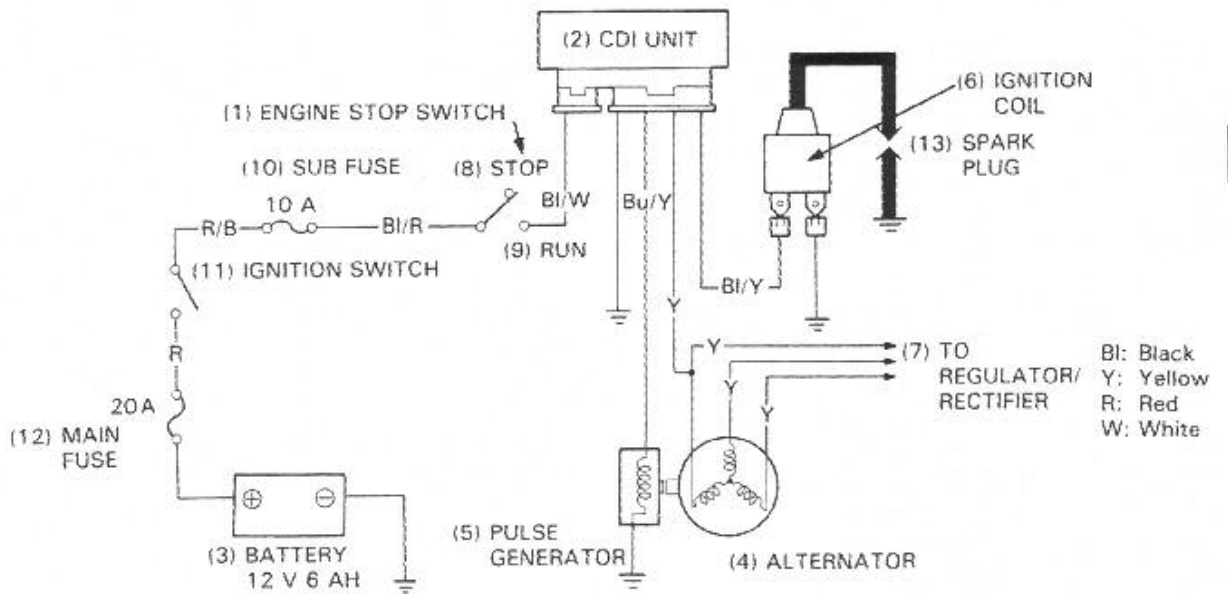
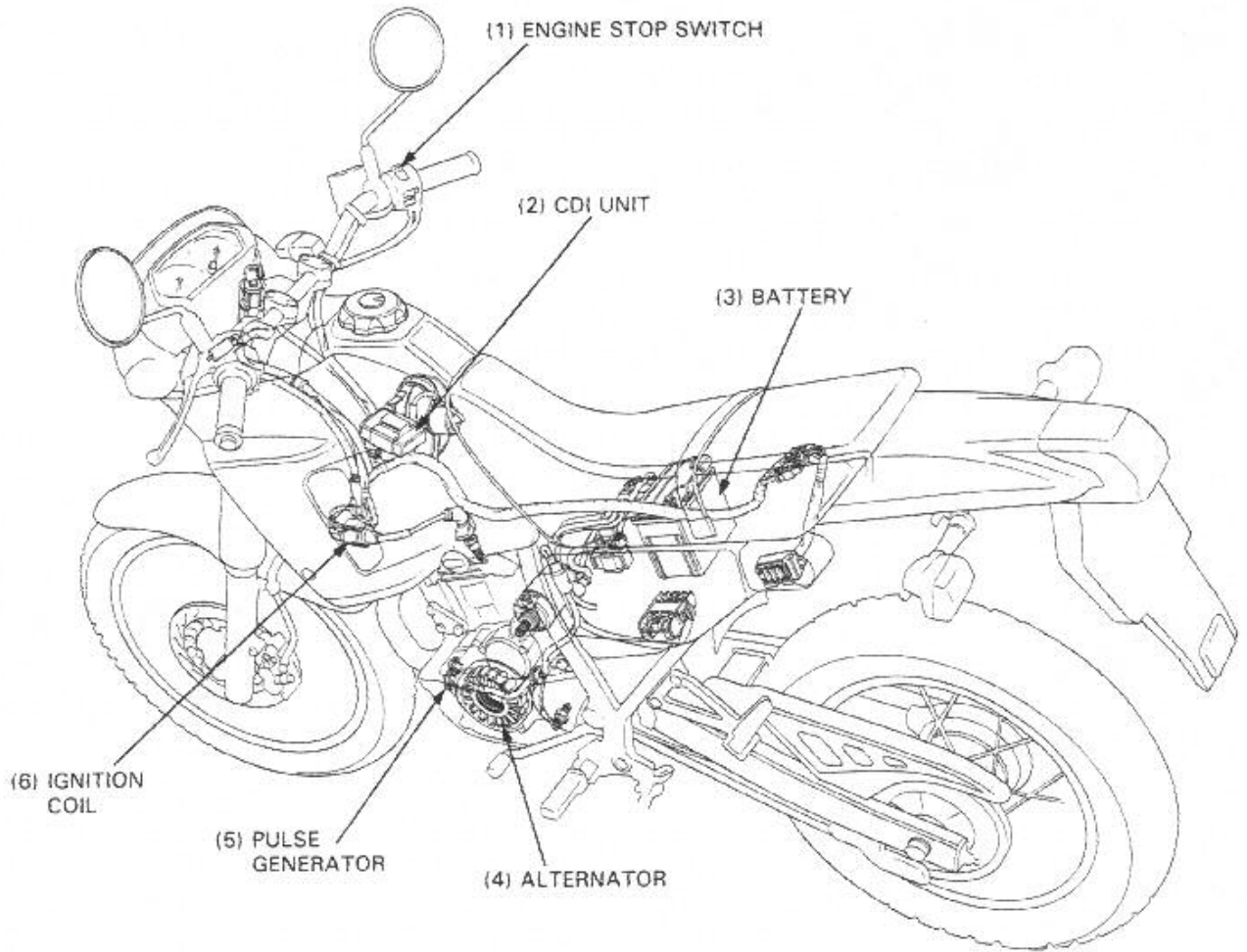
- (1) INTERRUPTEUR D'ARRET DU MOTEUR
- (2) UNITE CDI
- (3) BATTERIE 12 V 6 AH
- (4) ALTERNATEUR
- (5) GENERATEUR D'IMPULSIONS
- (6) BOBINE D'ALLUMAGE
- (7) VERS REGULATEUR/REDRESSEUR
- (8) ARRET
- (9) MARCHE
- (10) FUSIBLE AUXILIAIRE
- (11) CONTACTEUR D'ALLUMAGE
- (12) FUSIBLE PRINCIPAL

Bl : Noir
 Y : Jaune
 R : Rouge
 W : Blanc

- (1) MOTORSTOPPSCHALTER
- (2) CDI-EINHEIT
- (3) BATTERIE
- (4) LICHTMASCHINE
- (5) IMPULSGEBER
- (6) ZÜNDSPULE

- (1) MOTORSTOPPSCHALTER
- (2) CDI-EINHEIT
- (3) BATTERIE
- (4) LICHTMASCHINE
- (5) IMPULSGEBER
- (6) ZÜNDSPULE
- (7) ZUM REGLER/GLEICHRICHTER
- (8) ABSTELLEN
- (9) ANLASSEN
- (10) NEBENSICHERUNG 10 A
- (11) ZÜNDSCHALTER
- (12) HAUPTSICHERUNG
- (13) ZÜNDKERZE

Bl : Schwarz
 Y : Gelb
 R : Rot
 W : Weiß



IGNITION SYSTEM

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SERVICE INFORMATION

GENERAL

- Ignition timing does not normally need to be adjusted since the CDI (Capacitive Discharge Ignition) unit is factory preset.
- For spark plug inspection, refer to page 3-6.
- For alternator or pulse generator removal/installation, see section 8.
- When inspecting the ignition system, check the system components and lines step-by-step according to the troubleshooting sequence on the next page.

SPECIFICATION

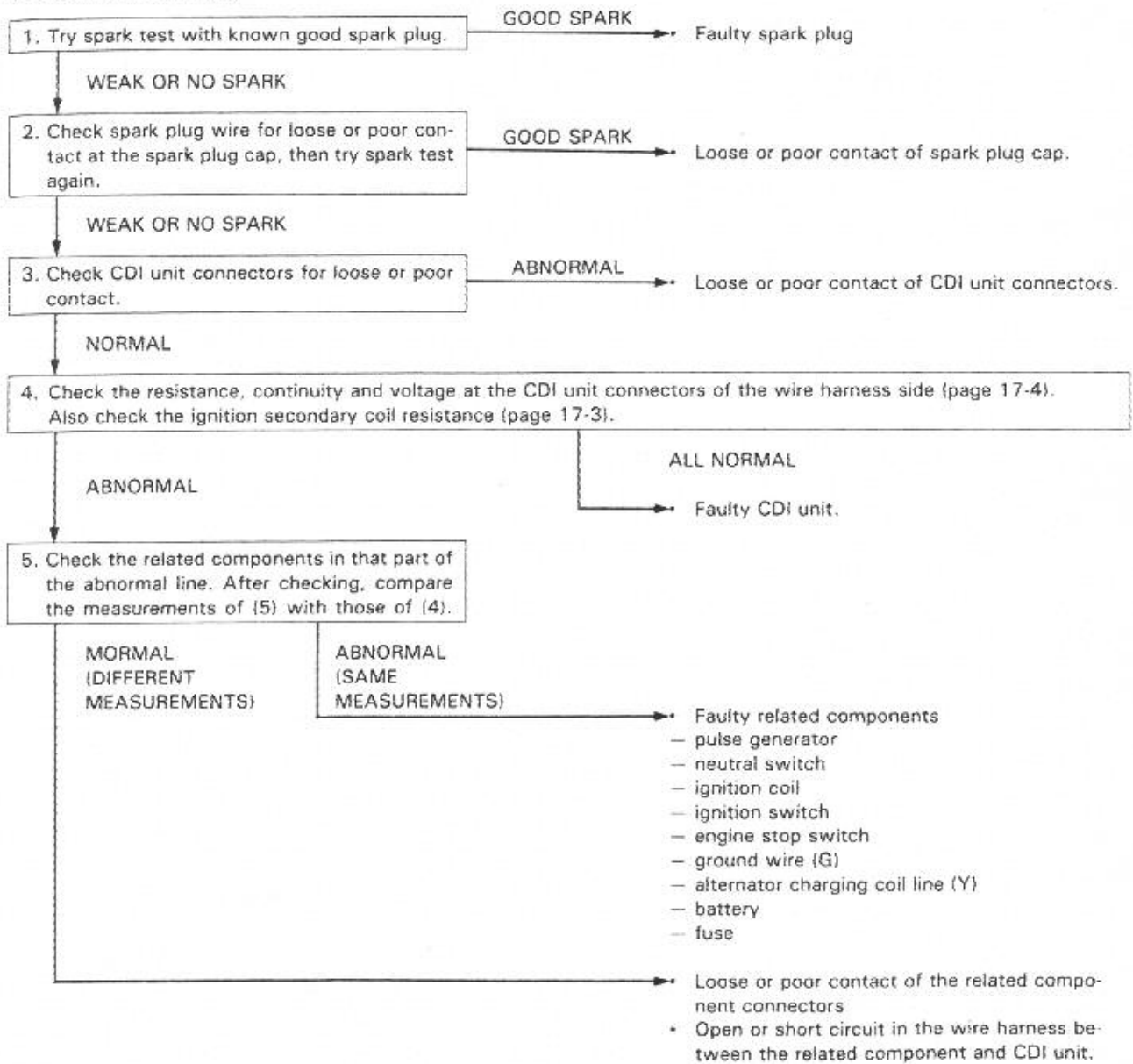
ITEM		STANDARD
Spark plug		CR9EH9 (NGK), U27FER9 (ND)
Spark plug gap		0.8–0.9 mm (0.031–0.035 in)
Ignition timing	At idle (F mark)	8° BTDC at 1,300 ± 100 min ⁻¹ (rpm)
	Full advance	30° BTDC at 4,500 ± 100 min ⁻¹ (rpm)
Ignition coil (20°C/68°F)	Primary coil resistance	0.1–0.2 Ω
	Secondary coil resistance (Without spark plug cap) (With spark plug cap)	3.5–4.7 kΩ
		7.3–11.0 kΩ
Pulse generator resistance (20°C/68°F)		290–360 Ω

TOOLS

Digital multimeter	07411–0020000
or	
Circuit tester (SANWA)	07308–0020001
or	
Circuit tester (KOWA)	TH–5H

TROUBLESHOOTING

Weak or no spark at plug



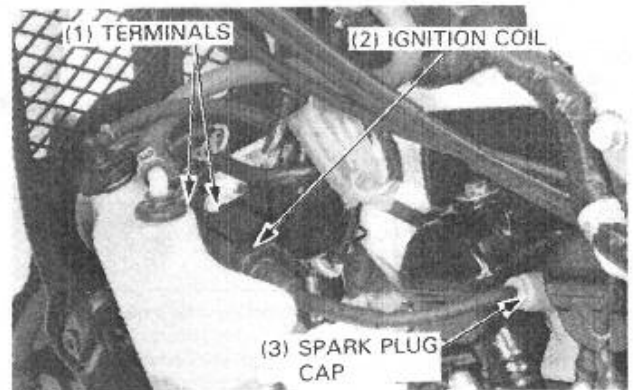
IGNITION SYSTEM

IGNITION COIL

REMOVAL

Remove the fuel tank (page 4-3).
Remove the spark plug cap from the spark plug.

Disconnect the ignition coil wire (B/Y and G) terminals and remove the ignition coil.



INSPECTION

Measure the resistance of the primary coil.

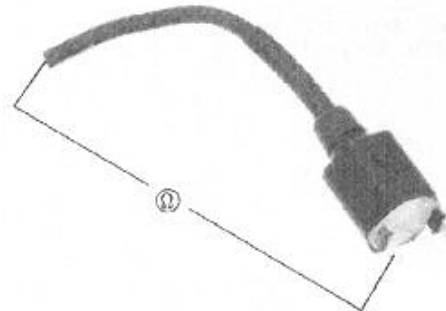
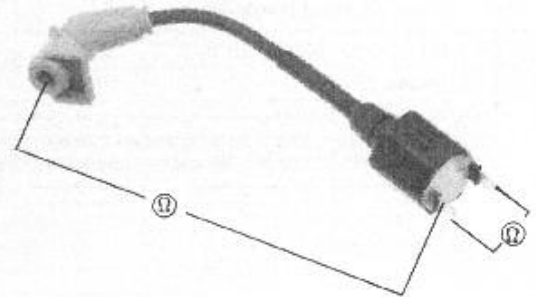
STANDARD (at 20°C/68°F): 0.1–0.2 Ω

Measure the resistance of the secondary coil with the plug cap in place.

STANDARD (at 20°C/68°F): With cap 7.3–11.0 kΩ

If the measured resistance is not within standard values, remove the spark plug cap and measure the secondary coil resistance again.

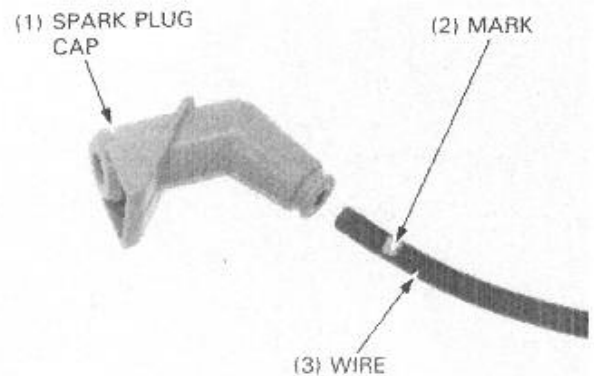
STANDARD (at 20°C/68°F): Without cap 3.5–4.7 kΩ



Install the spark plug cap, making sure that the mark on the wire is completely covered by the end of the cap.

INSTALLATION

Install the ignition coil in the reverse order of removal.
Install the fuel tank (page 4-3).



IGNITION SYSTEM

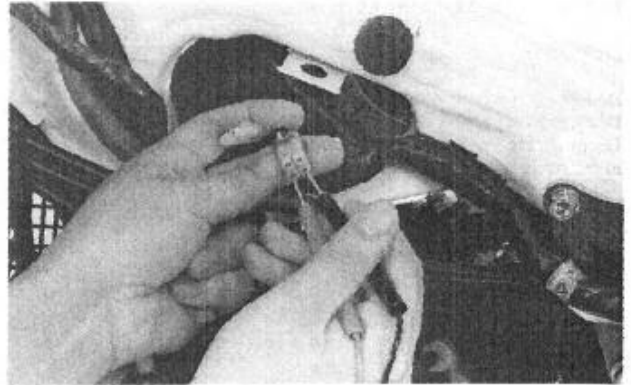
CDI UNIT

INSPECTION

Remove the fuel tank (page 4-3).

Disconnect the CDI unit connectors and check them for loose contact or corroded terminals.

Measure the resistance, continuity and voltage between connector terminals of the wire harness side as follows:



ITEM	TERMINAL	STANDARD
Ignition coil primary coil	Bl/Y and G	0.1—0.2 Ω (at 20°C/68°F)
Pulse generator coil	Bu/Y and G	290—360 Ω (at 20°C/68°F)
Ignition switch and engine stop switch (Turn the ignition switch ON and the engine stop switch to RUN)	Bl/W and G	The battery voltage should register.
Ground line	G and ground	Continuity
AC sensor line	Y and G	No continuity

If any one item does not meet the standard, test the individual component and replace it or repair open or short circuit in wire or loose connector as required.

IGNITION SYSTEM

PULSE GENERATOR

INSPECTION

NOTE

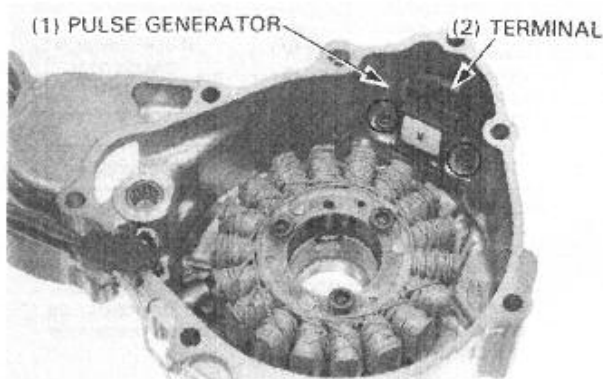
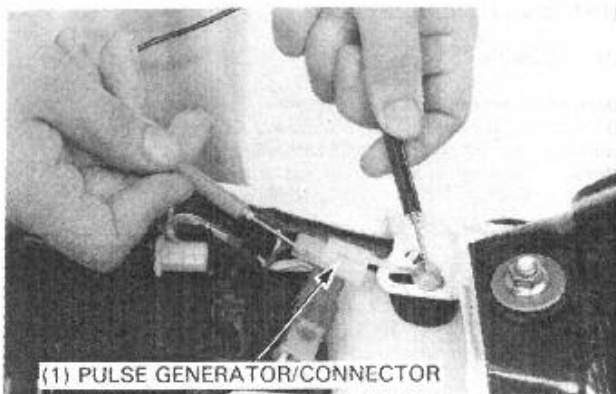
- It is not necessary to remove the left crankcase cover to make this test.

Remove the fuel tank (page 4-3).
Remove the connector box cover (page 8-2) and disconnect the pulse generator (2P White) connector.

Measure the resistance between the Bu/Y wire and frame ground.

STANDARD: (at 20°C/68°F) 290–360 Ω

If the reading is far beyond the standard, remove the left crankcase cover (page 8-2), disconnect the pulse generator wire connector from the pulse generator terminal and measure the resistance between the terminal and frame ground.
Replace the pulse generator if necessary.



IGNITION TIMING

NOTE

- The Capacitive Discharge Ignition (CDI) system is factory pre-set and does not require adjustment. To inspect the function of the CDI components, ignition timing inspection procedures are given here.

Warm up the engine to the operating temperature.

WARNING

- If the engine must be running to do some work, make sure the area is well-ventilated. Never run the engine in an enclosed area. The exhaust contains poisonous carbon monoxide gas that may cause loss of consciousness and lead to death.*

Remove the timing hole cap.
Connect a tachometer and timing light.
Start the engine and allow it to idle.

IDLE SPEED: 1,300 ± 100 min⁻¹ (rpm)

Inspect the ignition timing.
Timing is correct if the "F" mark on the alternator rotor is aligned with the index mark on the left crankcase cover at idle.

To check the advance, raise the engine speed to 4,500 ± 100 min⁻¹ (rpm). The index mark should be between the advance marks.

If the ignition timing is incorrect, perform the system inspection (page 17-2).

