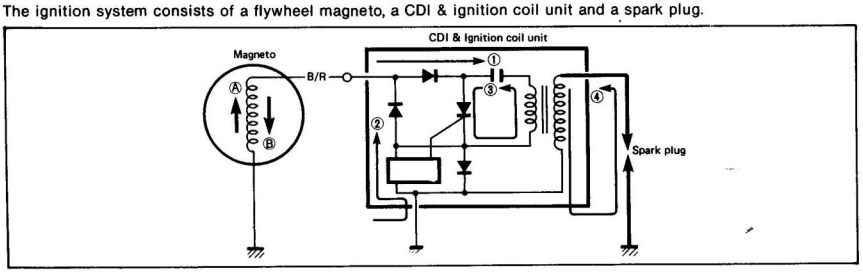
IGNITION SYSTEM

The ignition system consists of a flywheel magneto, a CDI & ignition coil unit and a spark plug.



① As the rotor rotates, an AC current is induced in the coil. The current induced in the Ⓐ direction charges up the capacitor.

② As the rotor rotates further, the current is induced in the reverse direction (Ⓑ direction). This current causes a voltage applied through the ground to the gate of SCR.

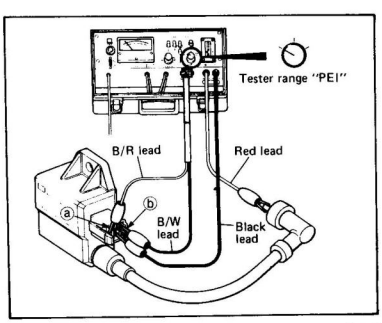
③ As the SCR conducts, the energy which has been charged in the capacitor is instantaneously discharged through the primary winding of the ignition coil.

④ The current which flows in the primary winding of the ignition coil causes a high voltage induced in the secondary winding of the ignition coil. The induced voltage is much higher than the voltage of the primary winding because it is boosted up by the high ratio of turns between primary and secondary windings.
The high voltage is fed to the spark plug, where it produces discharge sparks across the spark plug gap and sparks ignite the fuel/air mixture in the combustion chamber.

CDI UNIT AND IGNITION COIL INSPECTION

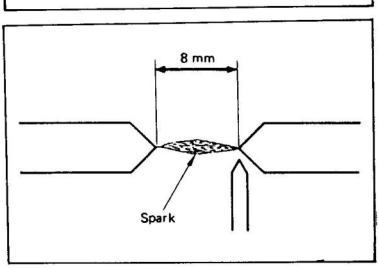
CHECKING WITH ELECTRO TESTER

Connect the CDI test leads with the Black/Red lead attached to the coil's primary tap and Black/White to mounting bracket (ground). Connect the high tension leads with the red ⊕ lead attached to the spark plug cord and the black ⊖ lead to the coil's mounting bracket (ground).



- Set the test selector knob to "P.E.I.".
- Switch the power ON.
- Note the spark in the spark gap window. It should be strong and continuous, not intermittent, across a preset 8 mm gap. Allow the spark to jump the test gap for at least five minutes continuously, to insure proper operation under the temperature conditions of actual riding.

09900 - 28106	Electro tester
09900 - 28617	Test lead



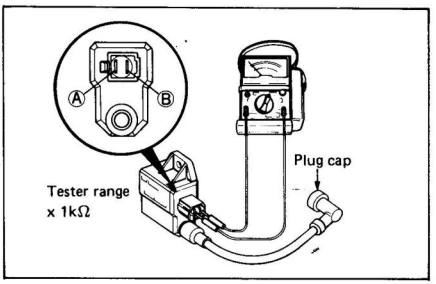
CHECKING WITH SUZUKI POCKET TESTER

Use a SUZUKI pocket tester as an ohm meter, provided that it has a "X 1kΩ" range. In either case, the two testing probes, ⊕ and ⊖, are to be placed on terminals of the CDI & ignition coil unit referring to the chart below.

Unit: kΩ

Negative ⊖ probe of tester to: \ Positive ⊕ probe of tester to:	Terminal	Plug cap	Ground
Terminal		OFF	OFF
Plug cap	25–40		14–23
Ground	2–4	14–23	

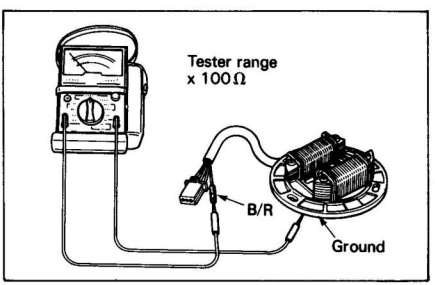
CAUTION:
If use the other tester, the value reading may vary from the above table.



STATOR COIL

Using the pocket tester, measure the resistance between the B/R lead wire and the stator base. If the resistance checked is incorrect, replace the coil.

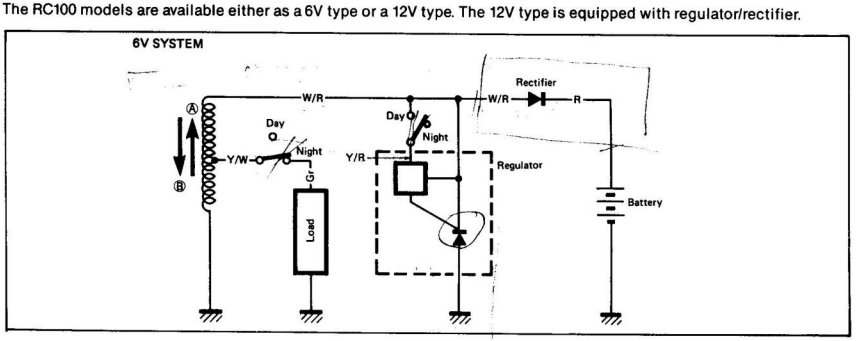
09900 - 25002	Pocket tester
Standard resistance B/R – Ground	Approx. 160 Ω



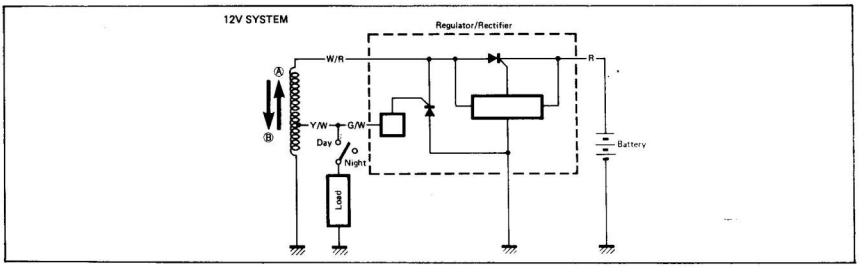
CHARGING AND LIGHTING SYSTEM

The charging system uses the flywheel magneto as shown in the figure. The charging and lighting coils are mounted on the magneto stator and generate AC as the flywheel rotor turns. The charging and lighting system incorporates two circuits, for charging and lighting. These circuits are engaged by setting the ignition key to the ON position. AC generated in the charging coil flows to the rectifier where it is changed to DC. This DC then charges the battery. On the other hand, lighting coil supplies AC current to the head light, tail light, meter light and high beam indicator light under the regulated condition.

The RC100 models are available either as a 6V type or a 12V type. The 12V type is equipped with regulator/rectifier.



12-15 V



CHARGING PERFORMANCE CHECK

Remove the right frame cover and disconnect the battery ⊖ lead. Set the pocket tester knob to DC Ampere range 20A.

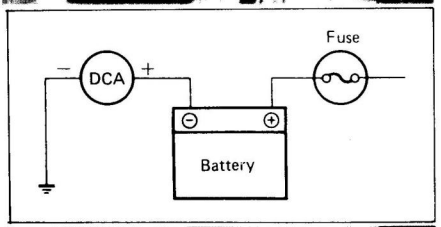
Disconnect the regulator (6V type) or regulator/rectifier coupler (12V type).

Start the engine and turn the lighting switch ON. Check that the proper charging occurs at the specified engine speeds shown in the following table. (Values in the table indicate minimum limit. Therefore, they should be more than indicated under normal condition).

NOTE:
Be sure to use a battery which is completely charged. When connecting the pocket tester terminals, be sure to differentiate the two terminals, plus ⊕ and minus ⊖

09900 - 25002	Pocket tester

STD charging performance (without regulator or regulator/rectifier)	
6V type	Above 0.9A at 4000 r/min
Night time	Below 2.8A at 8000 r/min
12V type	Above 1.2A at 4000 r/min
Night time	Below 3.5A at 8000 r/min



LIGHTING PERFORMANCE CHECK

Set the pocket tester knob (ACV 10 or 25 range).

Disconnect the regulator coupler or regulator/rectifier coupler.

Connect the terminal as shown in figure.

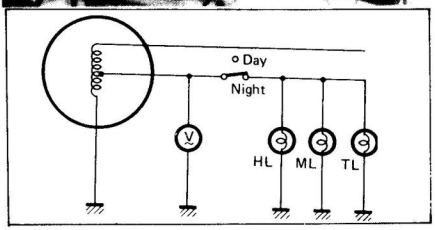
Turn the lighting switch and lighting switch to ON position.

Start the engine.

Check that the voltmeter reads as follows.

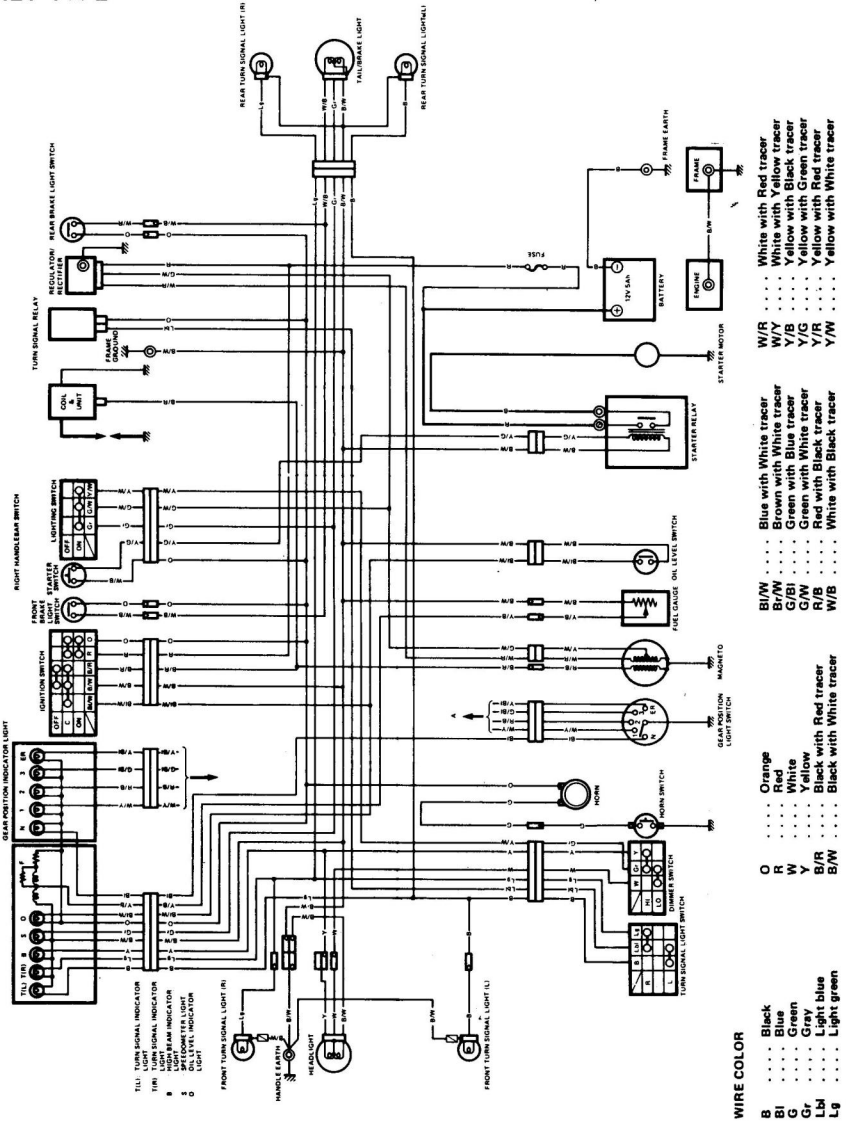
09900 - 25002	Pocket tester

STD Lighting coil output (without regulator or regulator/rectifier)	
6V type	Above 6.2V at 2500 r/min
	Below 9.4V at 8000 r/min
12V type	Above 12V at 2500 r/min
	Below 17.5V at 8000 r/min



WIRING DIAGRAM

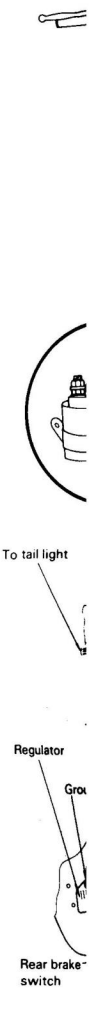
12V TYPE



WIRE COLOR

B	Black	O	Orange
Bl	Blue	R	Red
G	Green	W	White
Gr	Gray	Y	Yellow
Lbl	Light blue	B/R	Black with Red tracer
Lg	Light green	B/W	Black with White tracer
Bl/W	Blue with White tracer	W/R	White with Red tracer
Br/W	Brown with White tracer	W/Y	White with Yellow tracer
G/Bl	Green with Blue tracer	Y/B	Yellow with Black tracer
G/W	Green with White tracer	Y/G	Yellow with Green tracer
R/B	Red with Black tracer	Y/R	Yellow with Red tracer
W/B	White with Black tracer	Y/W	Yellow with White tracer

WIRE,
WIRE RO



วงจรไฟฟ้า

รุ่น RC 110 C/DC