

VI. ELECTRICAL SYSTEM

1. CHARGING SYSTEM

The charging system consists essentially of a flywheel type AC generator, a silicon rectifier and a current limiter. Alternating current from the flywheel type rotor installed to crankshaft is converted into direct current (DC) by bridge-type silicon rectifier and then is fed to the battery. Upon battery voltage reaches $15.0 \pm 0.5V$, the regulator begins to actuate in order to bypass a surplus current, reducing the amount of charging current, to prevent the battery from being overcharged.

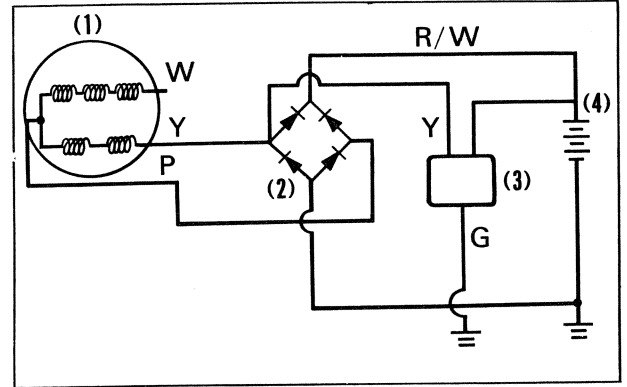


Fig. 6-1 (1) A.C. generator
(2) Silicon rectifier
(3) Regulator
(4) Battery

1. Charging test

1. Check charging current and voltage by means of voltmeter and ammeter.
2. Use a full-charged (12V-12AH) battery
If the specific gravity is lower than 1.26 (at 20° C or 68° F), recharge battery so that the specific gravity is up to 1.27 ± 0.01 (at 20° C or 68° F).
3. Disconnect the battery cable from the + terminal of the battery, and connect it to the + side of ammeter. Then, connect the - side of the ammeter to the + terminal of battery. Next, connect the - side of voltmeter to the + terminal of battery and consequently + side to the - terminal as shown in Fig. 6-2.
4. Check a reading of ammeter and voltmeter during riding at night and in the day time in accordance with the specifications given below:

NOTE:

When checking, disconnect regulator cable.

5. Start the engine. Simulate the nighttime riding and daytime riding conditions and take the ammeter and voltmeter readings at each speed. Compare the readings with those in the table below. If the actual readings are very different from those in the table, check the generator for condition. The generator output may slightly vary with temperature.

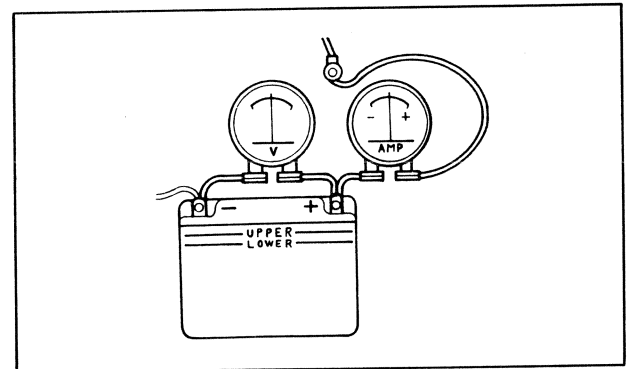


Fig. 6-2 Battery charging test

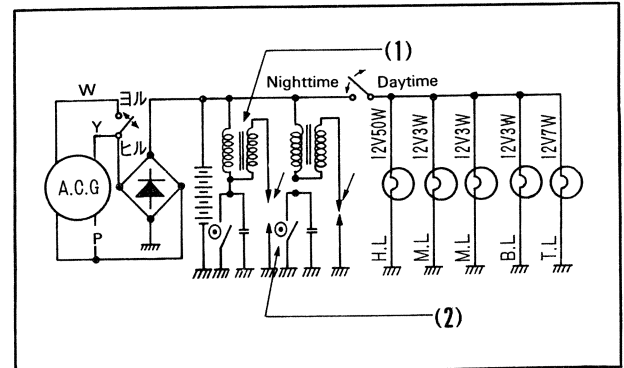


Fig. 6-3 Charging characteristics
(1) Ignition coil
(2) Contact breaker

Charging characteristics (without regulator)

Load		Beginning of charging (rpm)	5,000 rpm	10,000 rpm
Daytime riding	Battery (12V12 AH) + ignition coil x 2	1,550 max. at battery voltage 12.6V	1.2A, min. at battery voltage 14.8V	4A, max. at battery voltage 15.5V
Nighttime riding	Load in daytime riding + 50W + 7W+3Wx3	2,100, max. at battery voltage 12.6V	1.2A, min. at battery voltage 14.8V	4A, max. at battery voltage 15.5V