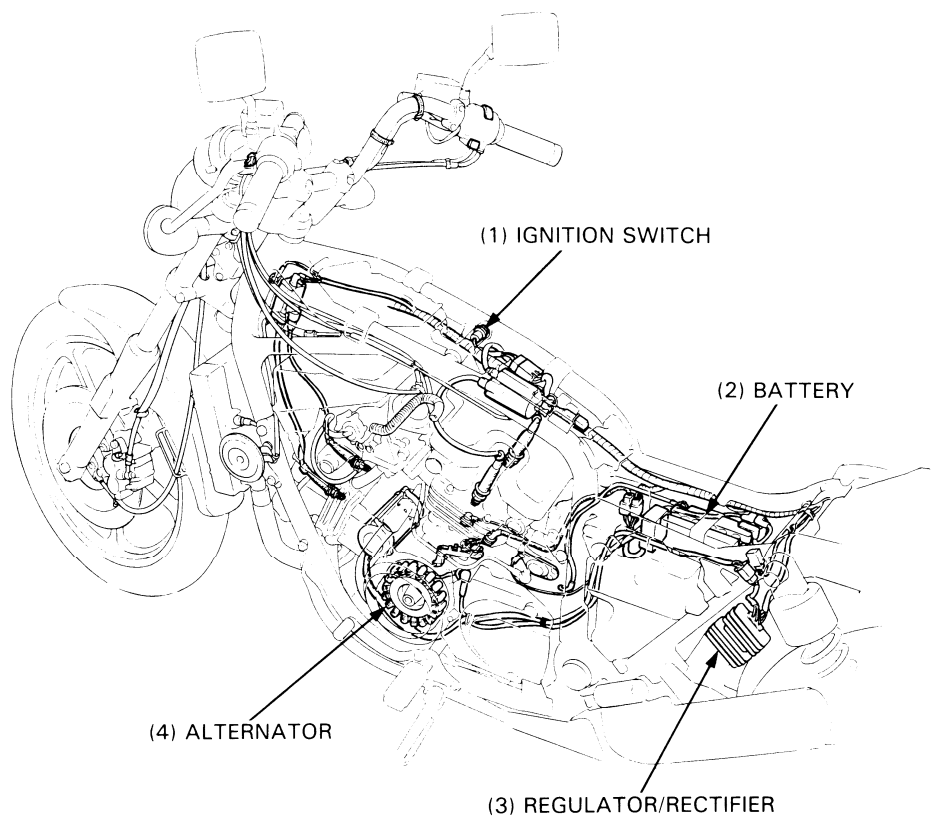
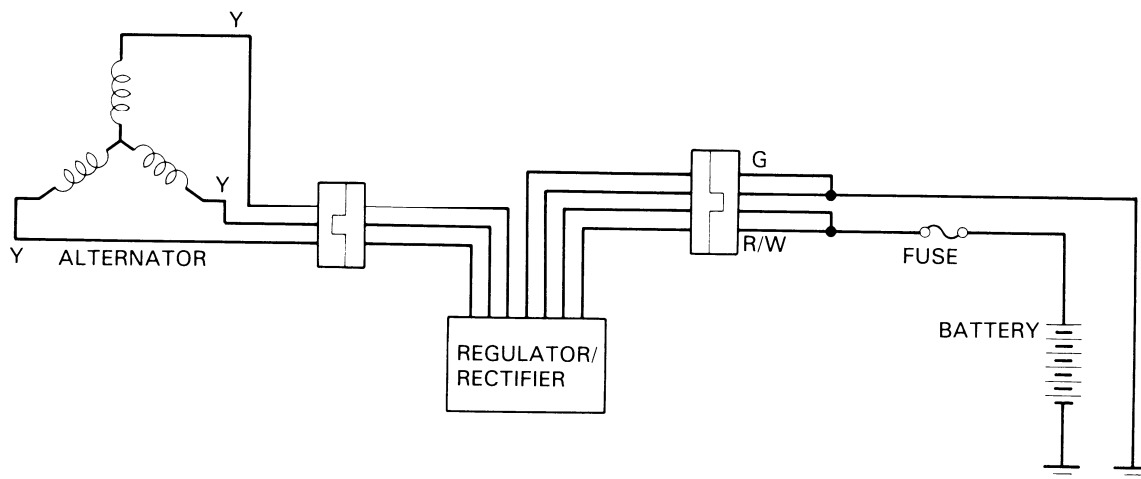


BATTERY/CHARGING SYSTEM



SYSTEM DIAGRAM



16. BATTERY/CHARGING SYSTEM

SERVICE INFORMATION

16-1 BATTERY

16-3

TROUBLESHOOTING

16-2 CHARGING SYSTEM

16-4

SERVICE INFORMATION

GENERAL

- Battery fluid level should be checked regularly. Fill with distilled water when necessary.
- Quick charge a battery only in an emergency. Slow-charging is preferred.
- Remove the battery from the motorcycle for charging. If the battery must be charged on the motorcycle, disconnect the battery cables.

WARNING

- *Do not smoke and keep flames away from a charging battery. The gas produced by a battery will explode if flames or sparks are brought near.*

- All charging system components can be tested on the motorcycle.
- Alternator removal is in Section 8.

SPECIFICATIONS

ITEM		STANDARD	
Battery	Capacity	12V 12 AH	
	Specific gravity	1.280/20°C (68°F)	
	Charging rate	1.2 amperes maximum	
Alternator capacity		1,000 rpm	5,000 rpm
		6.0 A min. (No. load)	24.7 A min. (No. load)
Voltage regulator		Transistorized non-adjustable regulator	
		14.0–15.0 V at 5,000 rpm	
Charging coil resistance		0.5–10 k Ω /20°C (68°F)	

TOOL

Circuit tester (SANWA)

07308–0020000

or

Circuit tester (KOWA)

TH–5H–1 or TH–5H–2

16

TROUBLESHOOTING

No power-key turned on:

- Dead battery
 - Low fluid level
 - Low specific gravity
 - Charging system failure
- Disconnected battery cable
- Failed main fuse
- Faulty ignition switch

Low power-key turned on:

- Weak battery
 - Low fluid level
 - Low specific gravity
 - Charging system failure
- Loose battery connection

Low power-engine running:

- Battery undercharged
 - Low fluid level
 - One or more dead cells
- Charging system failure

Intermittent power:

- Loose battery connection
- Loose charging system connection
- Loose starting system connection
- Loose connection or short circuit in ignition system
- Loose connection or short circuit in lighting system

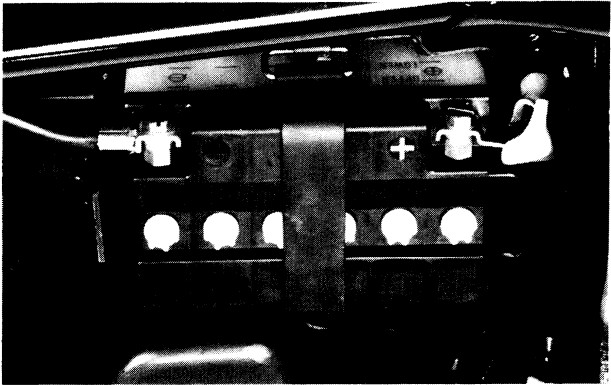
Charging system failure:

- Loose, broken or shorted wire or connection
- Faulty voltage regulator/rectifier
- Faulty alternator

BATTERY

REMOVAL

Remove the seats.
Disconnect the ground cable at the battery terminal then disconnect the positive cable.
Remove the battery holder band and the battery.

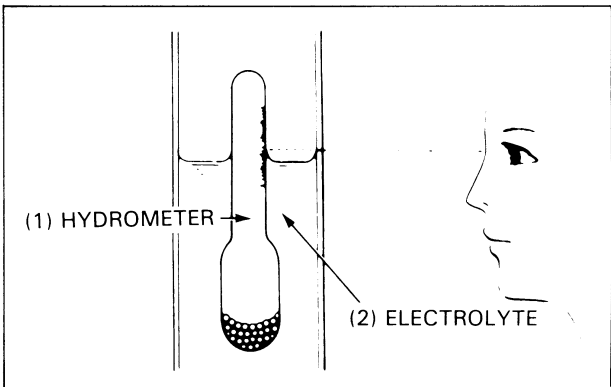


TESTING SPECIFIC GRAVITY

Test each cell with a hydrometer.

SPECIFIC GRAVITY: 1.270–1.290 (20°C, 68°F)

1.270–1.290	Fully charged
Below 1.260	Undercharged

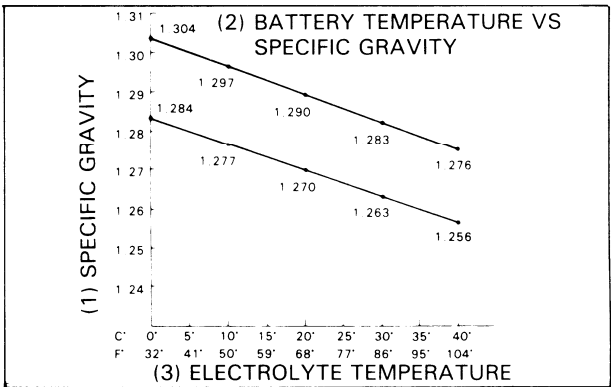


NOTE

- The battery must be recharged if the specific gravity is below 1.230.
- The specific gravity varies with the temperature as shown in the accompanying table.
- Replace the battery if sulfation is evident or if the space below the cell plates is filled with sediment.

WARNING

- *The battery contains sulfuric acid. Avoid contact with skin, eyes or clothing.*
Antidote: Flush with water and get prompt medical attention.



CHARGING

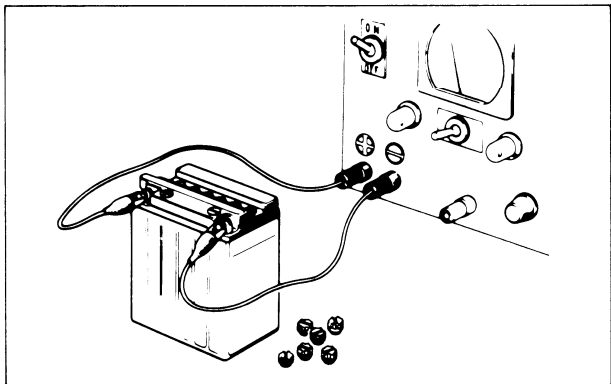
Remove the battery cell caps. Fill the battery cells with distilled water to the upper level line, if necessary.

Connect the charger positive (+) cable to the battery positive (+) terminal and charger negative (–) cable to the battery negative (–) terminal.

Charging current: 1.4 amperes max.

Charging:

Charge the battery until specific gravity is 1.270–1.290 at 20°C (68°F).



BATTERY/CHARGING SYSTEM

WARNING

- Before charging a battery, remove the cap from each cell.
- Keep flames and sparks away from a charging battery.
- Make sure the charger is OFF, when connecting or disconnecting the battery.
- Discontinue charging if the electrolyte temperature exceeds 45°C (113°F).

CAUTION

- Quick-charging should only be done in an emergency; slow-charging is preferred.
- Route the breather tube as shown on the battery caution label.

After installing the battery, coat the terminals with clean grease.

CHARGING SYSTEM

VOLTAGE LEAK TEST

Turn the ignition switch off and disconnect the negative cable from the battery.

Measure the voltage between the battery negative terminal and negative (ground) cable.

There should be no voltage with the ignition switch off.

If there is voltage, check the wire harnesses, and connectors for a short circuit and the ignition switch for proper function.

CHARGING VOLTAGE INSPECTION

NOTE

- Be sure the battery is in good condition before performing this test.

Warm up the engine.

Connect a voltmeter across the battery terminals.

CAUTION

- Be careful not to let the battery positive cable touch the frame while testing.

Start the engine and read the voltmeter.

Gradually increase the engine speed and check that the voltage is regulated.

REGULATED VOLTAGE: 14.0–15.0 V at 5,000 rpm

If there is no voltage, or it is over the specification, stop the engine and perform the following inspections (see page 16-5).

