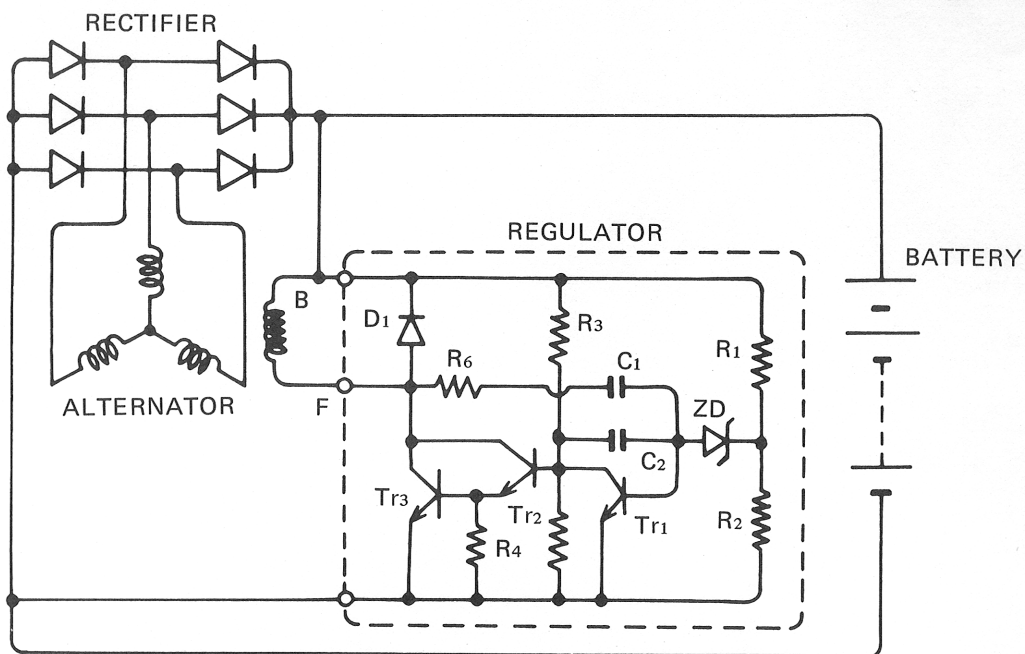
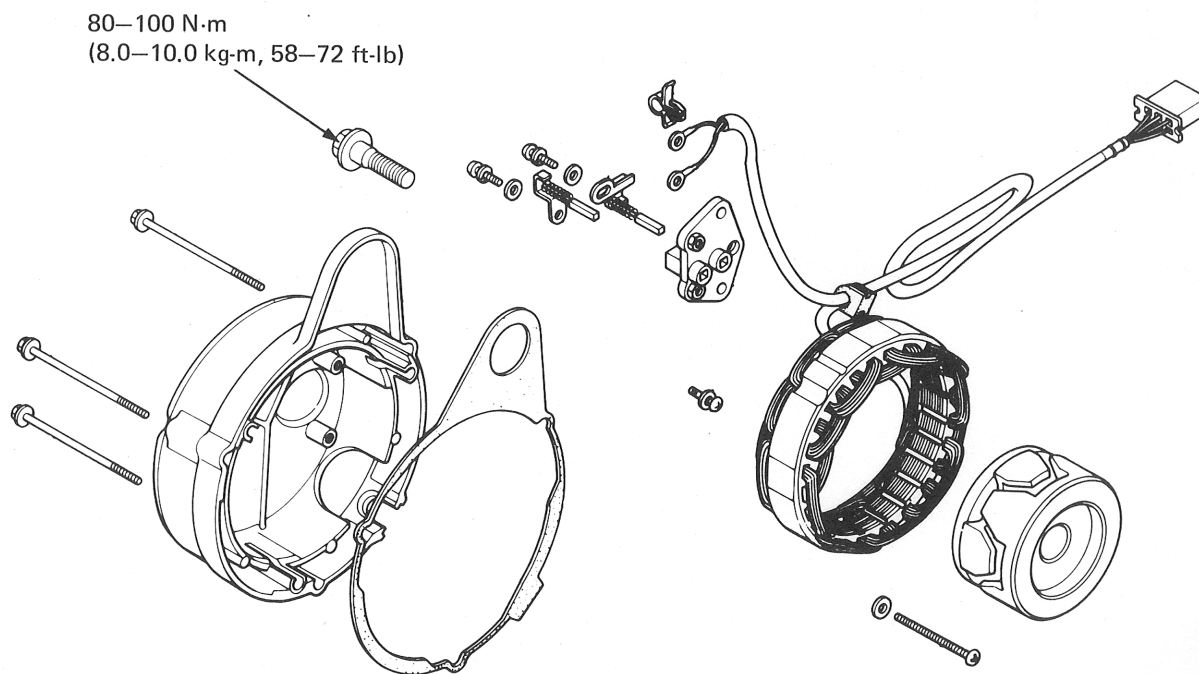




BATTERY/CHARGING SYSTEM



BATTERY/CHARGING SYSTEM





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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 a flame or spark is brought near.

- All charging system components can be tested on the motorcycle.

SPECIFICATIONS

Battery	Capacity	12 V 14 AH	
	Specific gravity	1.280/20°C (68°F)	
	Charging rate	1.4 amperes maximum	
Alternator Capacity		1,500 rpm	5,000 rpm
		6.5 A min	18 A min
Voltage regulator		Transistorized non-adjustable regulator	

TOOL

Common

Rotor puller

07733-002001



BATTERY/CHARGING SYSTEM

TROUBLESHOOTING

No power — key turned on:

1. Dead battery.
 - Low fluid level.
 - Low specific gravity.
 - Charging system failure.
2. Disconnected battery cable.
3. Main fuse burned out.
4. Faulty ignition switch.

Low power — key turned on:

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

Low power — engine running:

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

Intermittent power:

1. Loose battery connection.
2. Loose charging system connection.
3. Loose starting system connection.
4. Loose connection or short circuit in ignition system.
5. Loose connection or short circuit in lighting system.

Charging system failure:

1. Loose, broken, or shorted wire or connection.
2. Faulty voltage regulator/rectifier.
3. Faulty alternator.



BATTERY

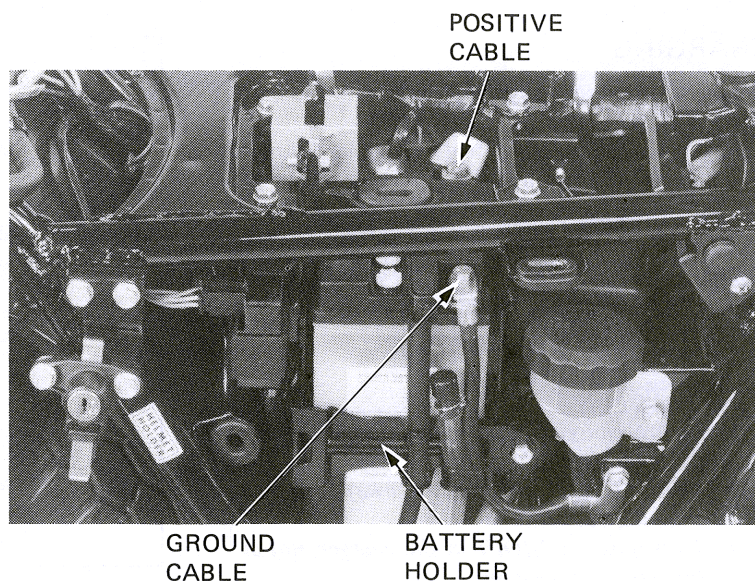
REMOVAL

Remove the frame right and left side covers and the seat.

Disconnect the ground cable at the battery terminal. Disconnect the positive cable at the battery terminal.

Remove the ground cable and the crankcase breather tube from the clamp.

Open the battery holder and remove the battery.



TESTING SPECIFIC GRAVITY

Test each cell with a hydrometer.

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

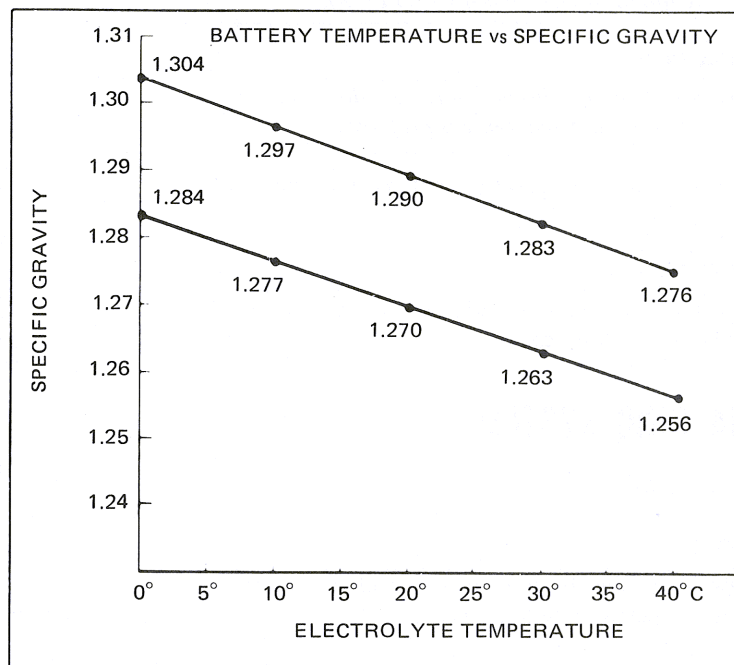
1.270–1.290	Fully charged
Below 1.260	Undercharged

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.*



Specific gravity changes by 0.007 for every 10°C.



BATTERY/CHARGING SYSTEM

CHARGING

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

Connect the 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).

WARNING

- Before charging a battery, remove the cap from each cell.
- Keep flames and sparks away from a charging battery.
- Turn power ON/OFF at the charger, not at the battery terminals.
- Discontinue charging if the electrolyte temperature exceeds 45°C (113°F).

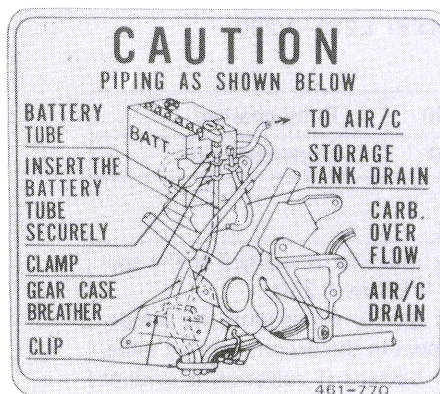
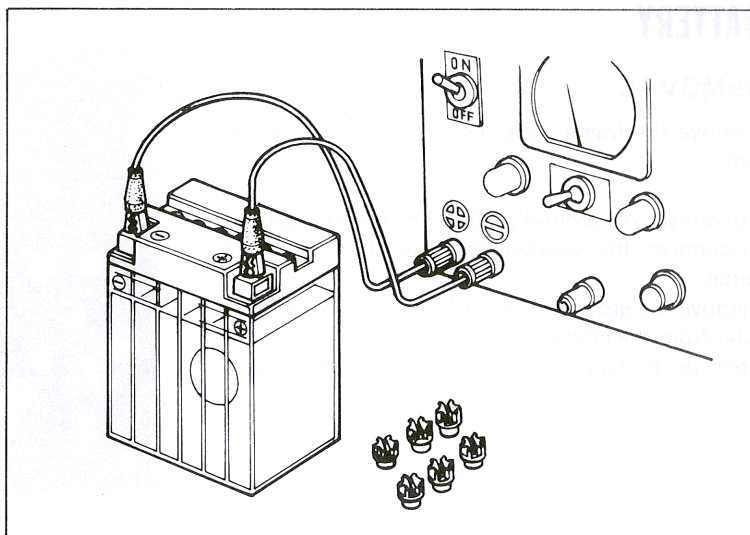
CAUTION

Quick-charging should only be done in an emergency; slow-charging is preferred.

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

CAUTION

Route the breather tube as shown on the battery caution label.



CHARGING SYSTEM

Current Test

NOTE

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

Warm up the engine and remove the frame left side cover.

Turn headlight high beam on and run engine above 2,000 rpm.

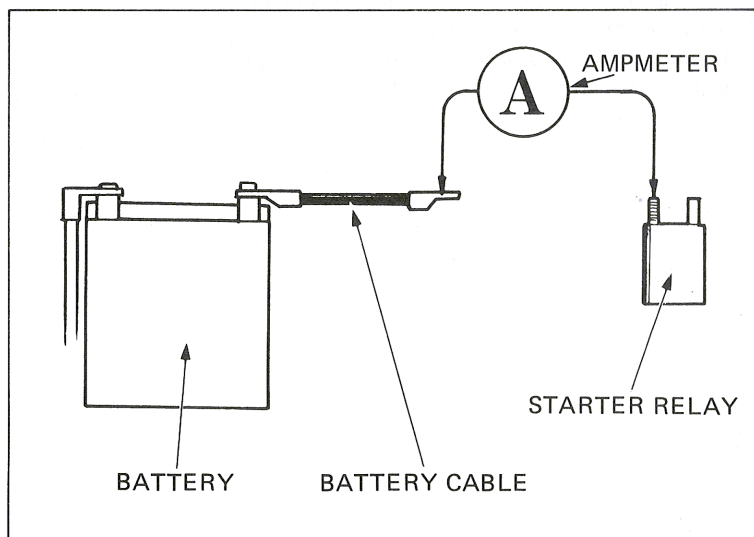
Disconnect the battery positive cable at the starter relay and connect an ammeter between the battery cable and terminal.

Allow engine to idle.

Increase engine speed slowly.

Charging amperage should begin by 1,700 rpm and should be a minimum of 8 amperes at 5,000 rpm.

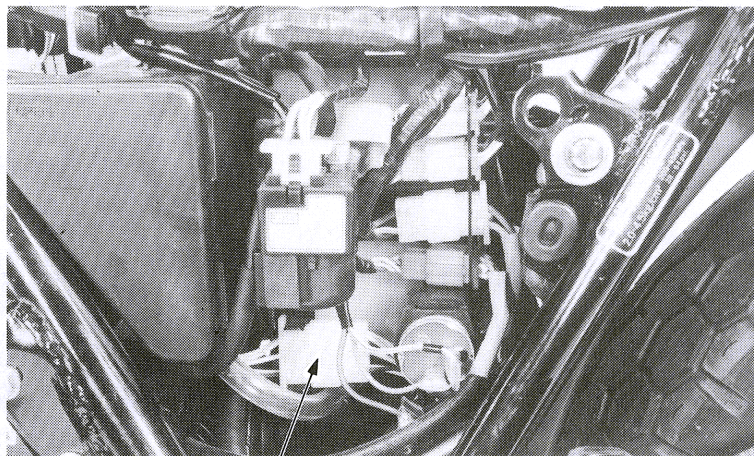
Check the stator (Page 18-7) and then the regulator/rectifier (Page 18-8), if the charging specifications are not met.





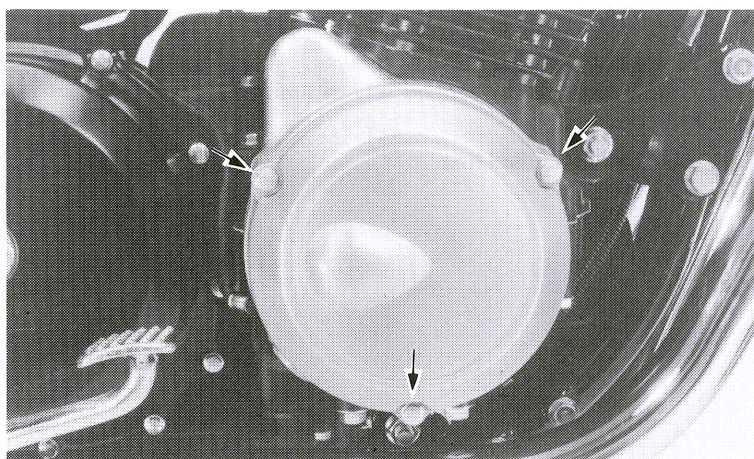
ALTERNATOR REMOVAL/INSTALLATION

Remove the right side cover and disconnect the alternator coupler.

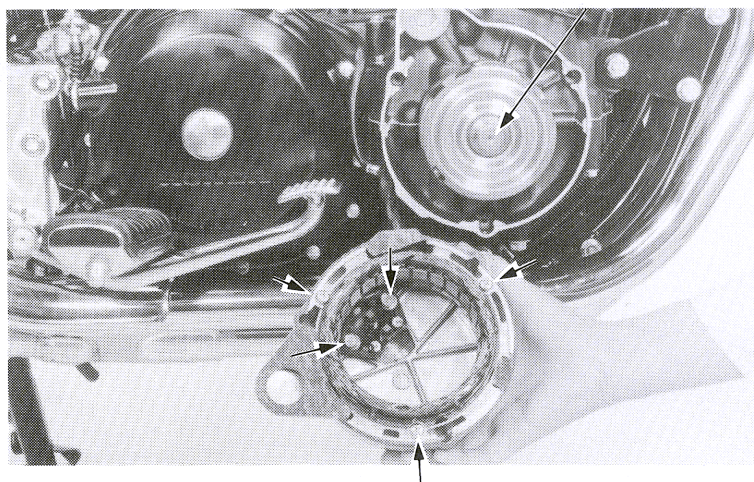


ALTERNATOR
COUPLER

Remove the alternator cover by loosening three bolts.



Remove the alternator stator with the brush holder by loosening five screws.
Shift the transmission into gear and apply the rear brake.
Remove the alternator rotor bolt.

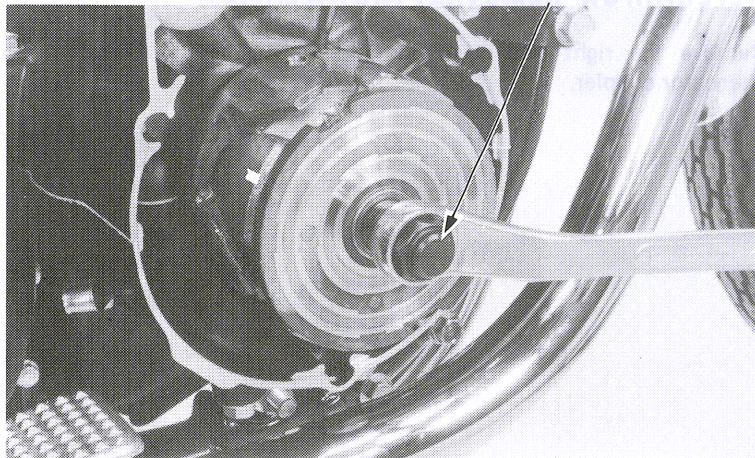


ALTERNATOR
ROTOR BOLT



Remove the rotor with the rotor puller while applying the rear brake.

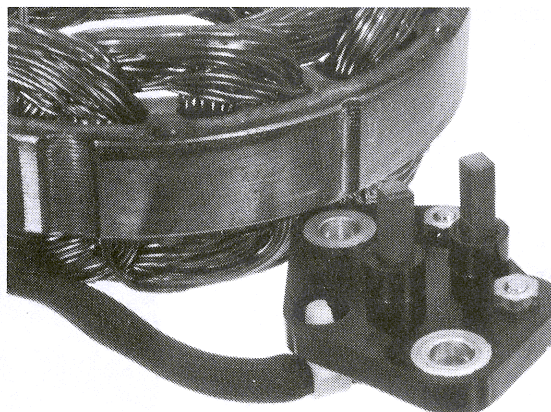
ROTOR PULLER
07733-00200



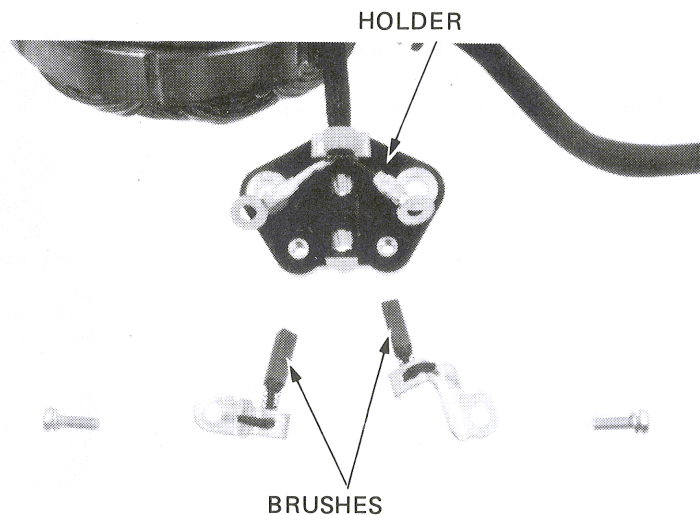
INSPECTION

Inspect the length of each brush as shown.
If they show wear to the scribed service limit line, replace the brushes.

SERVICE LIMIT: Scribed line



Remove and replace the brushes by removing the mounting screws.





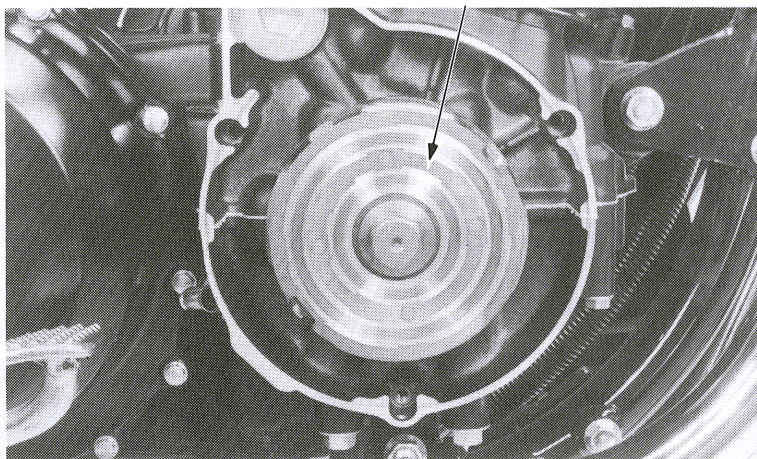
INSTALLATION

Install the alternator rotor.

TORQUE: 80–100 N·m
(8.0–10.0 kg-m, 58–72 ft-lb)

Route the alternator leads properly.

ALTERNATOR ROTOR



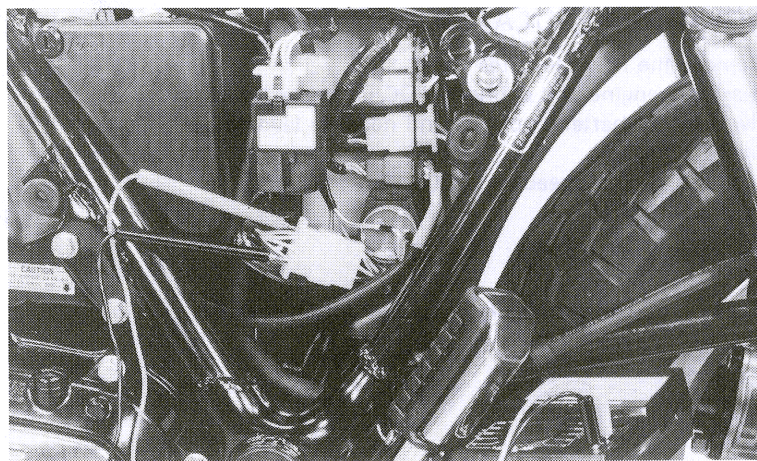
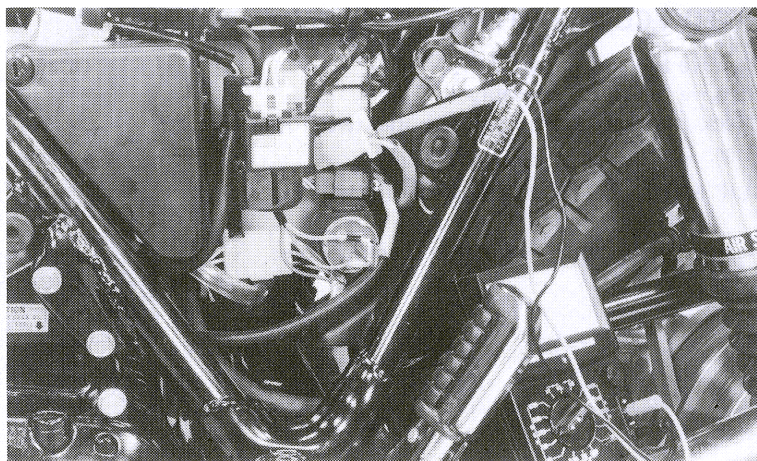
STATOR/ROTOR

INSPECTION

Remove the frame right and left side covers.
Turn the ignition switch on and measure battery voltage.

Connect a DC voltmeter to regulator R/W wire and ground. Read the voltage, it should be equal to the battery voltage. Check wire and battery cable connections, if not.

Connect a DC voltmeter to the stator six pole connector B and W wires, without disconnecting them. Read the voltage, it should be equal to the battery voltage. Check the wire and battery cable connections if battery voltage is not equal.





STATOR CONTINUITY TEST

Warm up the engine.
Stop the engine and remove the frame right side cover.
Check the resistance of the stator six pole connector wires.

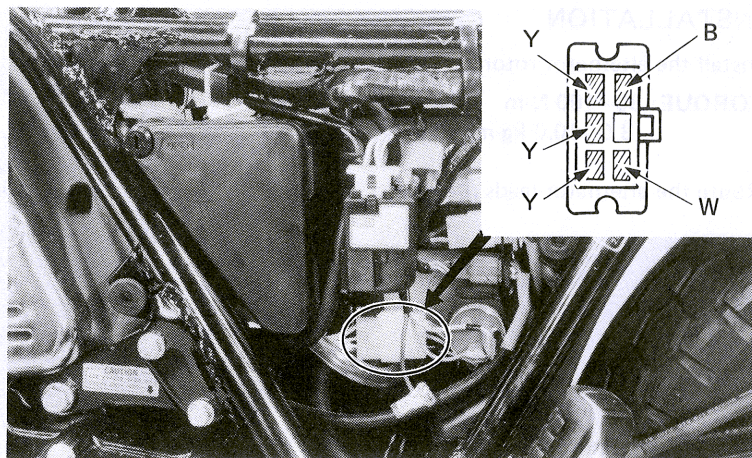
Use the R x 1 ohmmeter scale.

B – W: 10 – 12 Ω

Y – Y: 0.4 – 0.5 Ω

Y – ground: ∞

Replace the stator if not within specifications.

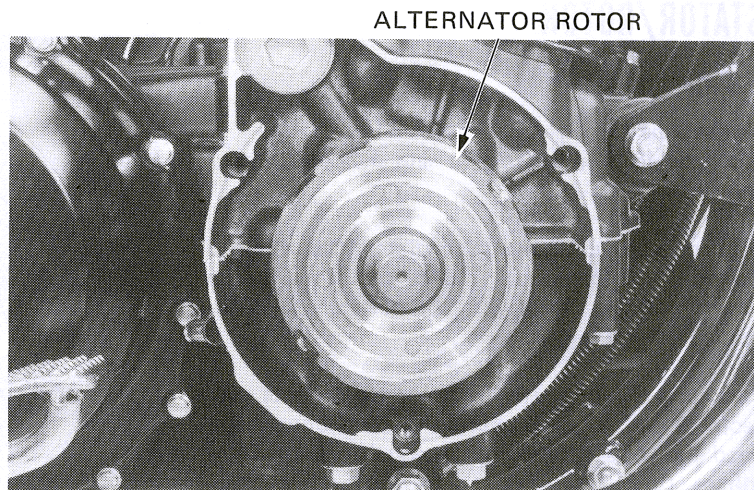


ROTOR CONTINUITY TEST

Remove the alternator cover.
Remove the brush assembly.
Check the resistance between the two rotor slip rings.

SLIP RING - TO - SLIP RING: 3.6 – 4.4 Ω

Replace the rotor, if not within specifications.



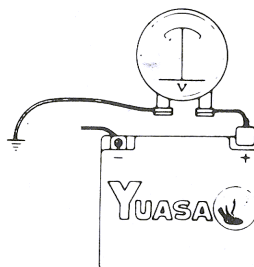
VOLTAGE REGULATOR/RECTIFIER

VOLTAGE REGULATOR TEST

Remove the frame left side cover.
Start the engine and connect a DC voltmeter; positive lead to battery positive and negative lead to a frame ground.
Increase engine speed to 3,000 rpm and read the voltmeter.

MAXIMUM VOLTAGE: 14 – 15 V

Replace the voltage regulator, if not within specifications.





RECTIFIER TEST

Check the resistance between the leads with an ohmmeter.

RESISTANCE IN ONE DIRECTION:

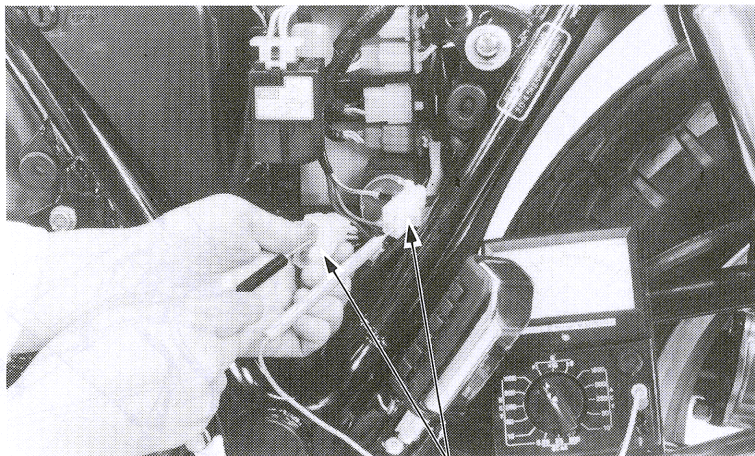
Green and any yellow: 5–40 Ω

Red/white and any yellow: 5–40 Ω

RESISTANCE IN OTHER DIRECTION:

Red/white and any yellow: 2000 Ω min.

Green and any yellow: 2000 Ω min.



REGULATOR/
RECTIFIER
COUPLER

