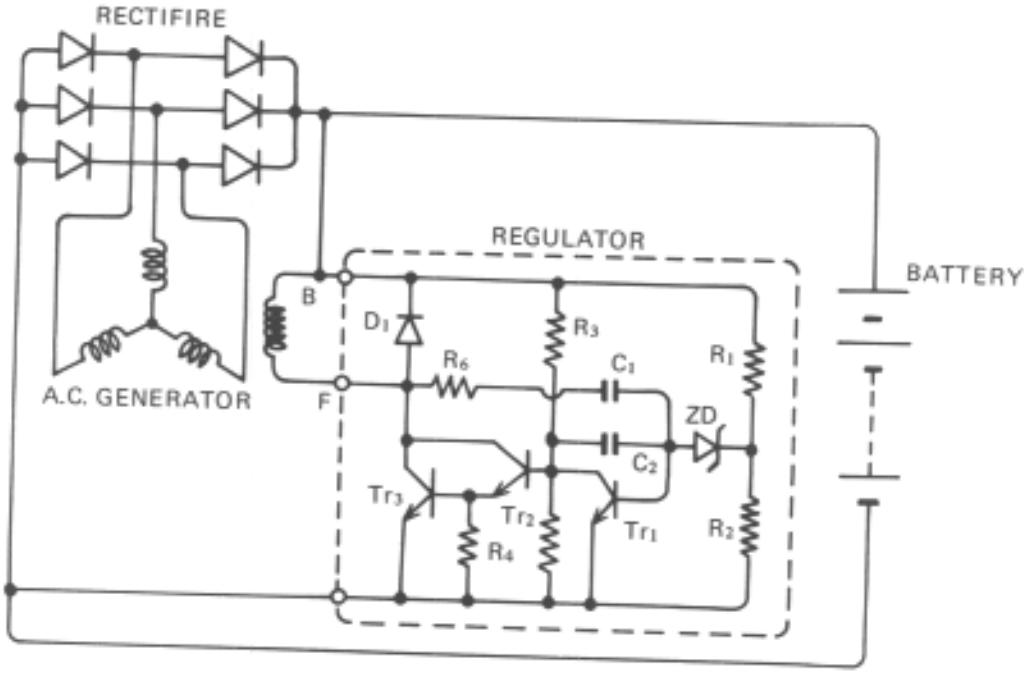
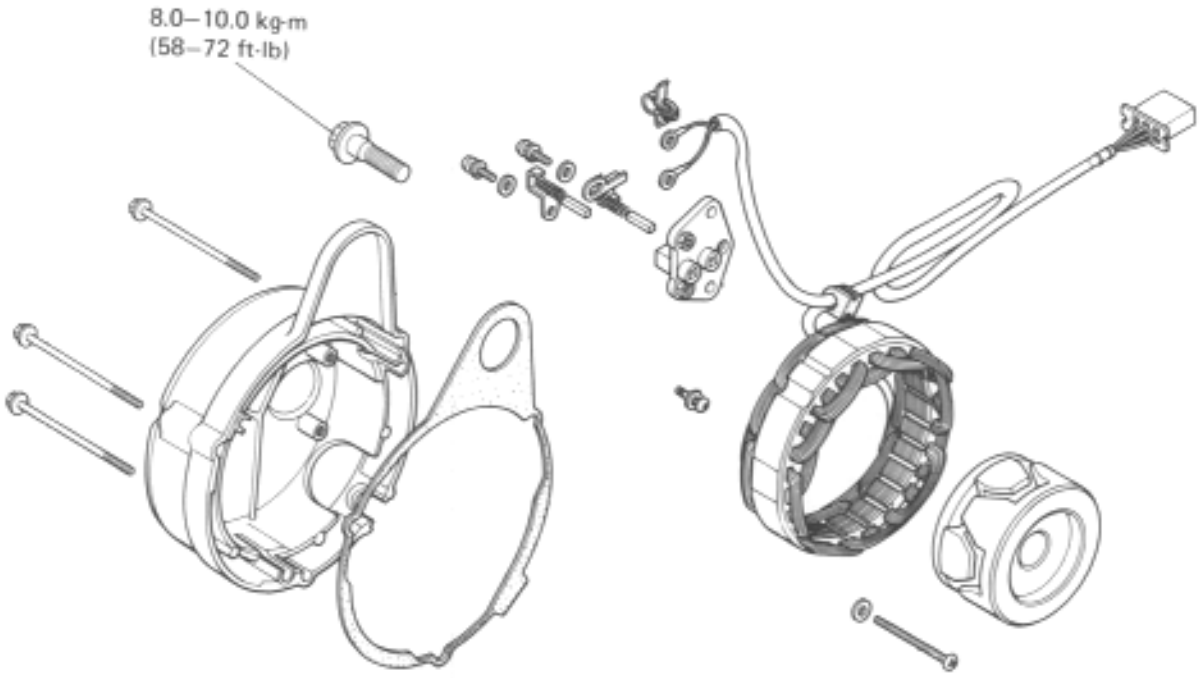


BATTERY/CHARGING SYSTEM



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SERVICE INFORMATION

GENERAL INSTRUCTIONS

- 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.

SPECIAL TOOLS

Common tools

Rotor puller	07933–4250000

SPECIFICATIONS

Battery	Capacity	12 V 14 AH	
	Specific gravity	1.28/20°C (68°F)	
	Charging rate	1.4 amperes maximum	
A.C. generator	Capacity	1500 rpm	5000 rpm
		6.5A min	18A min
Voltage regulator		Transistorized non-adjustable regulator	

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
3. Faulty silicon rectifier
4. Faulty A.C. generator

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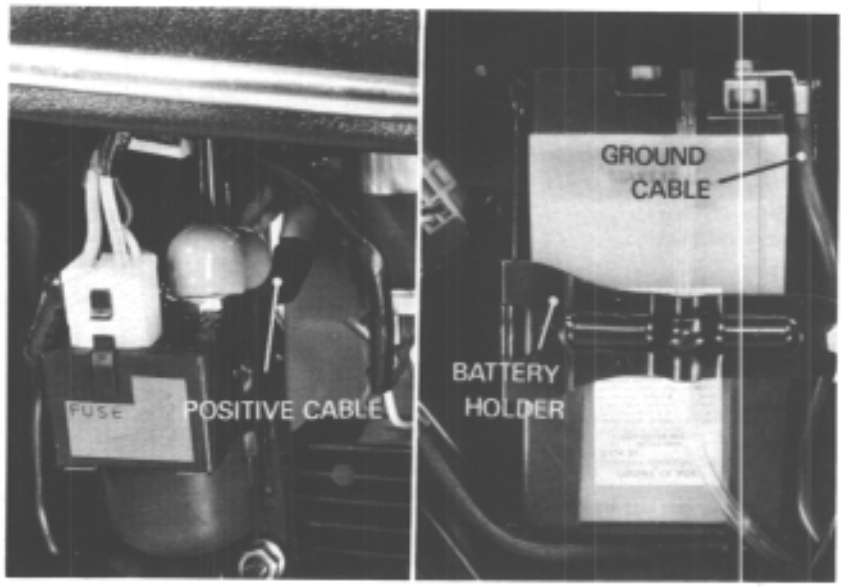
BATTERY

REMOVAL

Remove the right and left side covers.
Disconnect the ground cable at the battery terminal.
Disconnect the positive cable at the starter relay switch terminal.
Remove the battery holder.



TESTING SPECIFIC GRAVITY

Test each cell with a hydrometer.

SPECIFIC GRAVITY:
(20°C, 68°F)

1.26–1.28	Fully charged
Below 1.25	Undercharged

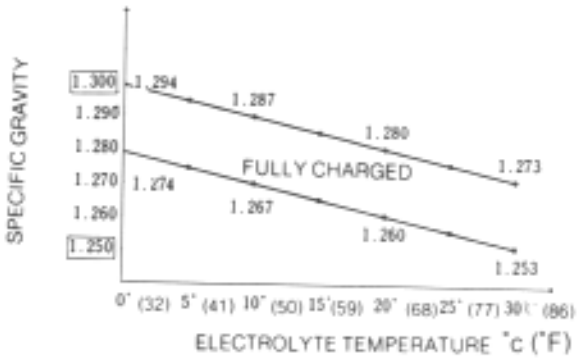
NOTE

- The battery must be recharged if the specific gravity is below 1.22.
- 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.

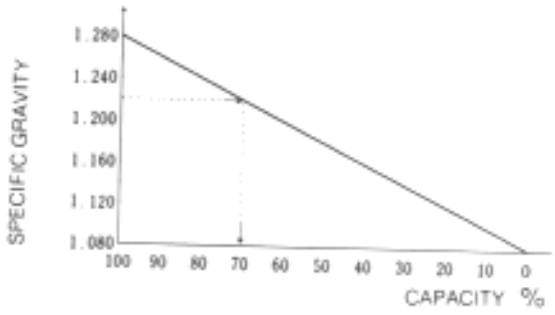
WARNING

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

ELECTROLYTE TEMPERATURE VS SPECIFIC GRAVITY



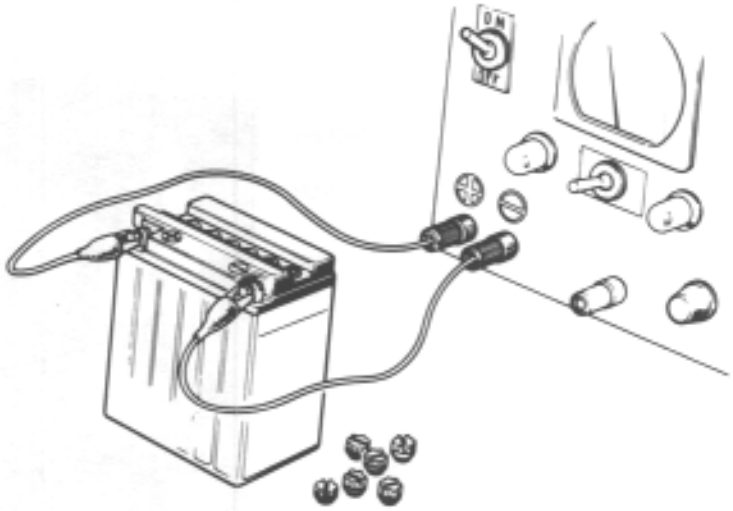
SPECIFIC GRAVITY AND CAPACITY



BATTERY 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 1.26–1.28 at 20°C (68°F).



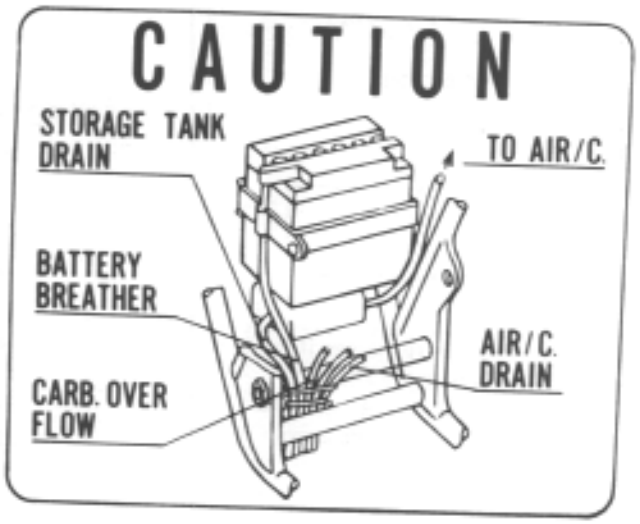
WARNING

- *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.



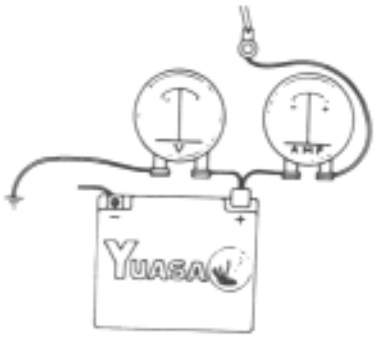
CAUTION

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

CHARGING SYSTEM

CHARGING OUTPUT TEST

Warm up the engine before taking readings.
Connect a voltmeter and an ammeter to check charging system output.



NOTE

Use a fully charged battery to check the charging system output.

TECHNICAL DATA

MAIN SWITCH	LIGHTING SWITCH	INITIAL CHARGING	AT 5,000 RPM
ON	ON (High beam)	1,700 rpm	0 amperes minimum/14 volts

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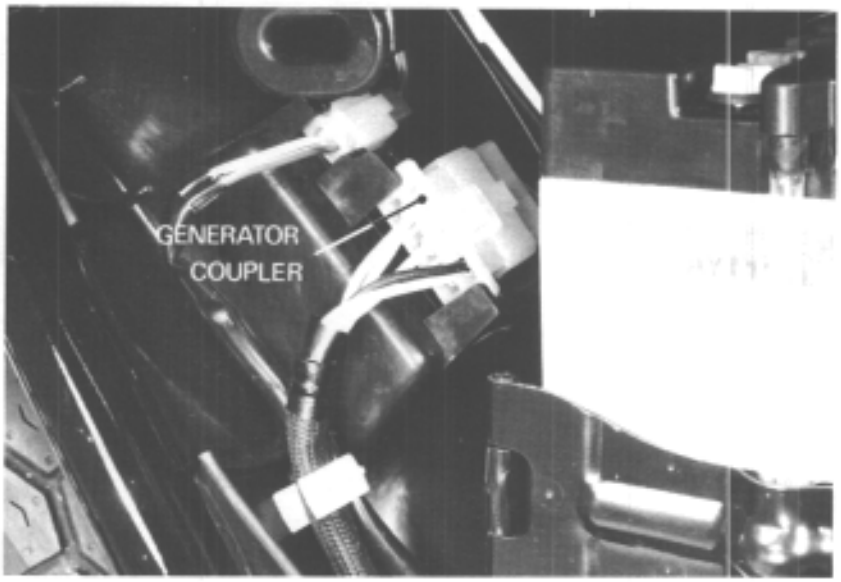
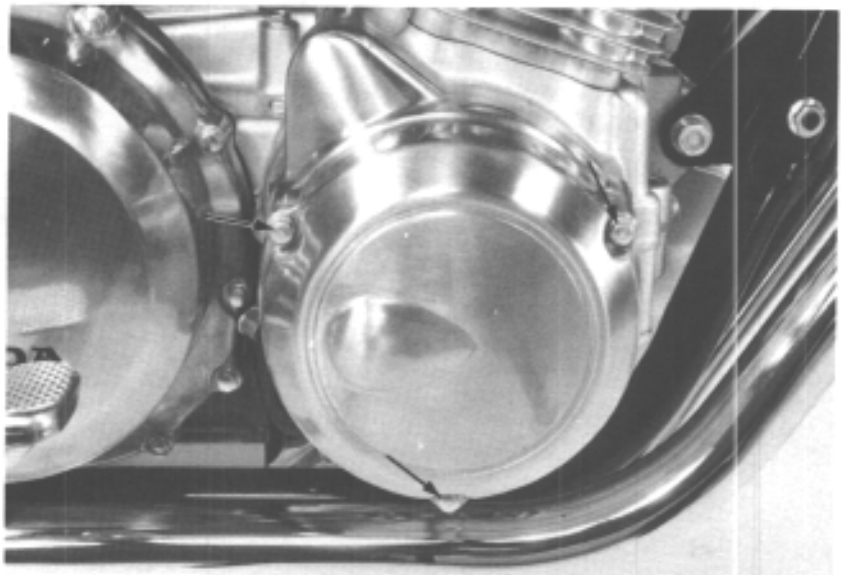
A.C. GENERATOR REMOVAL/ INSTALLATION

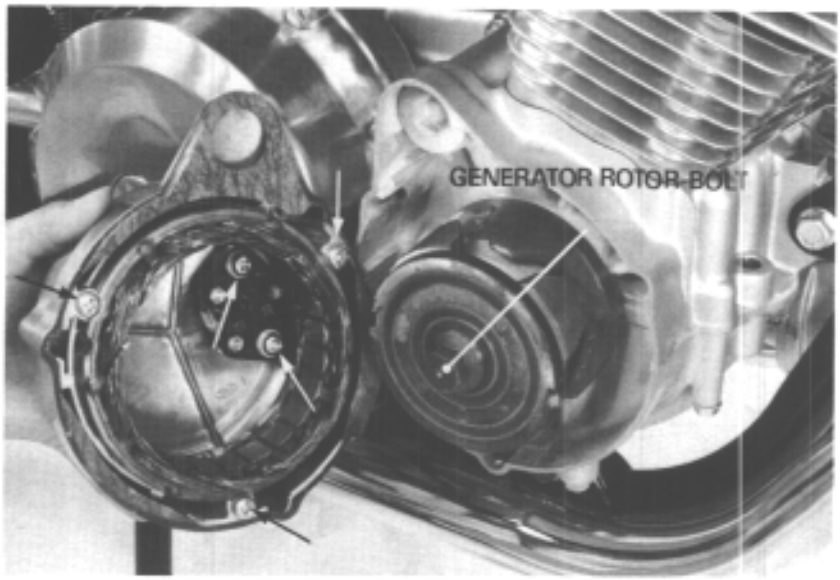
Remove the right side cover and disconnect the A. C. generator coupler.



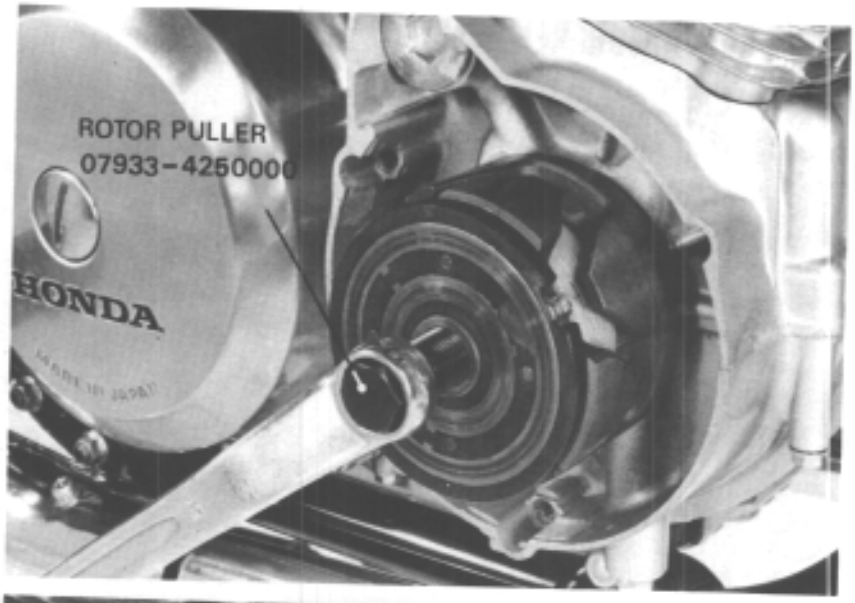
Remove the A. C. generator cover by loosening three bolts.



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



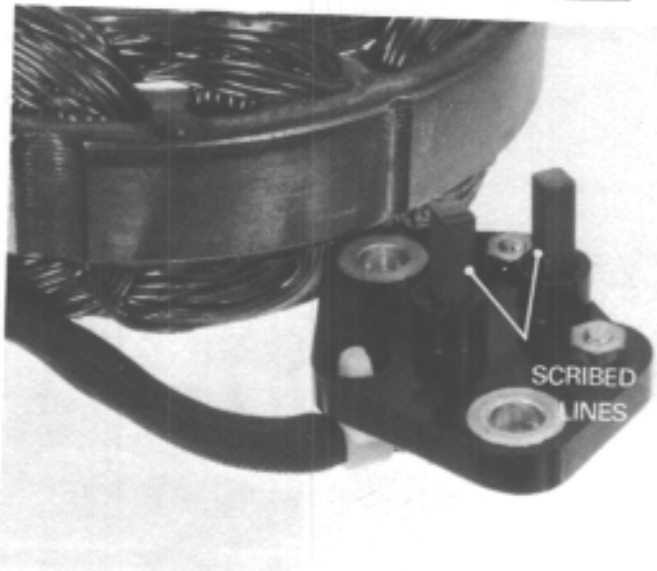
Remove the generator rotor while applying the rear brake.



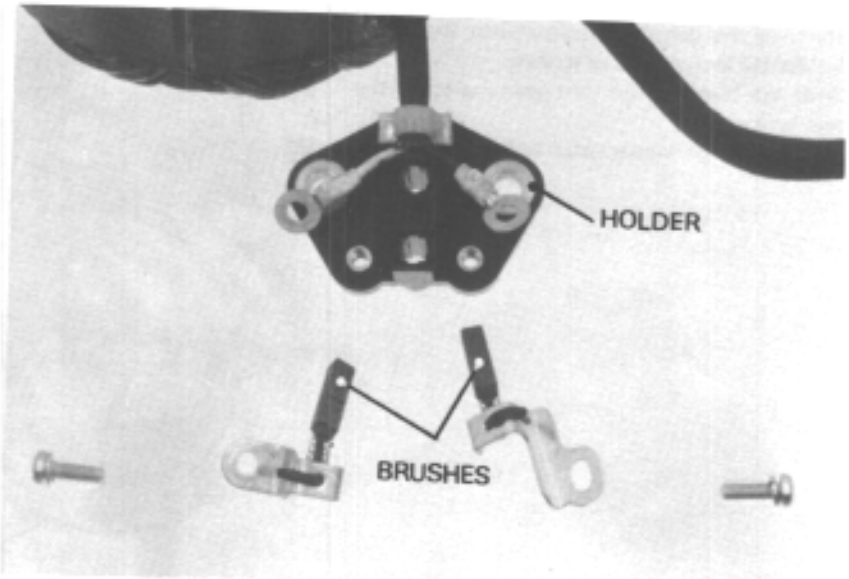
INSPECTION

Inspect the length of each brush as shown. If it shows wear to the scribed service limit line, replace the brush.

SERVICE LIMIT: Scribed line



Remove and replace the brush by removing the mounting screws.



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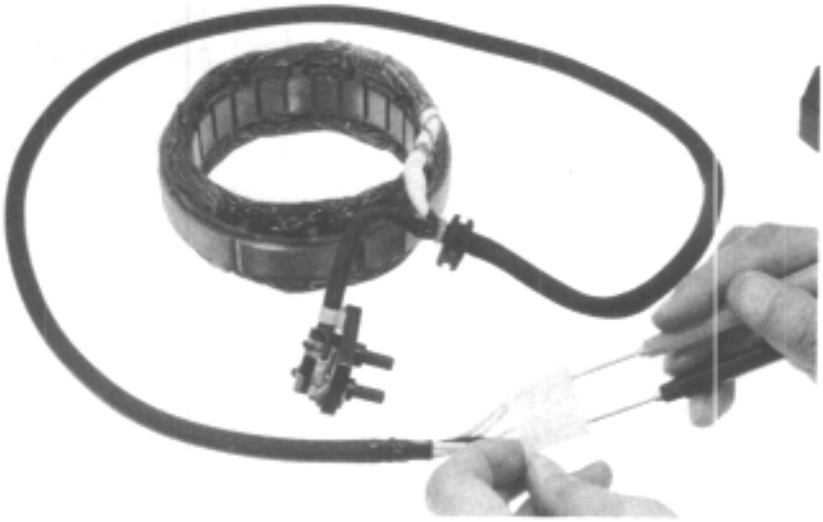
STATOR COIL CONTINUITY TEST

NOTE

It is not necessary to remove the stator to make this test.

Check the yellow leads to the A. C. generator stator for continuity with each other. Replace the stator if any yellow lead is not continuous with the others, or if any lead has continuity to ground.

SPECIFIED RESISTANCE: 0.41–0.51Ω

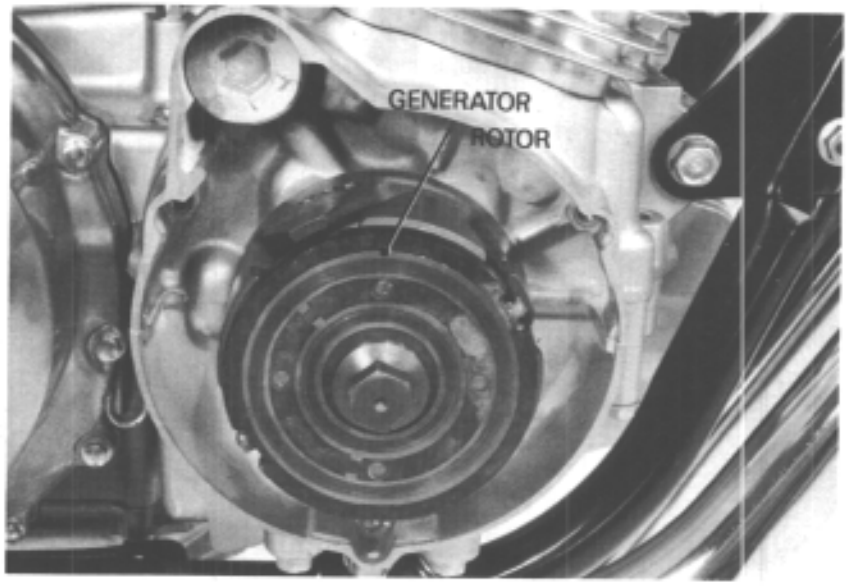


INSTALLATION

Install the generator rotor.

TORQUE: 8.0–10.0 kg-m (58–72 ft-lb)

Route the generator leads properly.

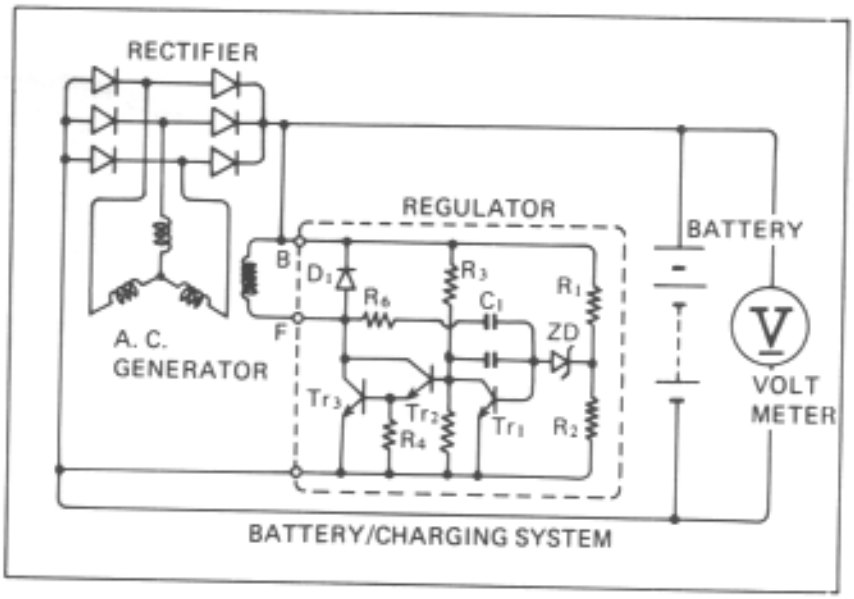


VOLTAGE REGULATOR

VOLTAGE REGULATOR PERFORMANCE TEST

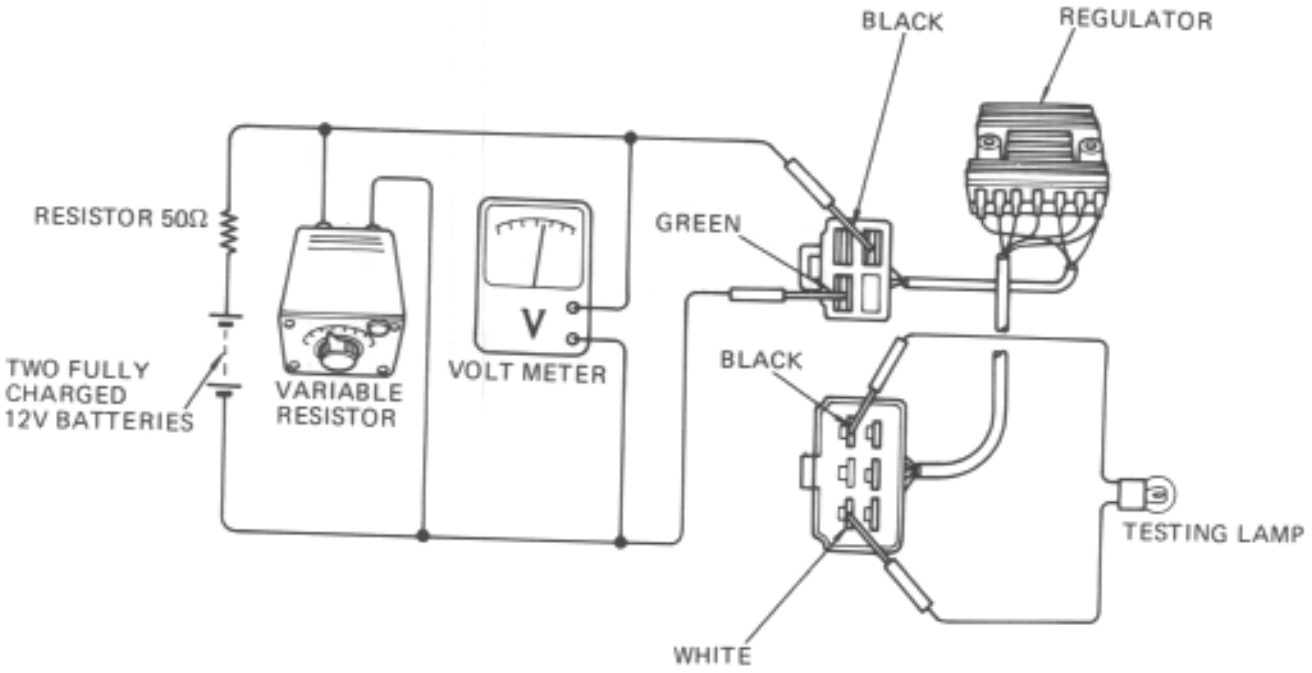
a. Testing with a voltmeter

Connect a voltmeter across the battery.
Check regulator performance with the engine running.
Regulator must cut off the field coil current when battery voltage reaches 14–15V.



b. Testing with a variable resistor

Connect two 12V batteries in series.
Connect a variable resistor (0–100Ω) across the battery with a 50Ω resistor in between.
Test lamp must go out when voltage reaches 14–15V on the voltmeter by adjusting the variable resistor.



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VOLTAGE REGULATOR/ RECTIFIER TEST

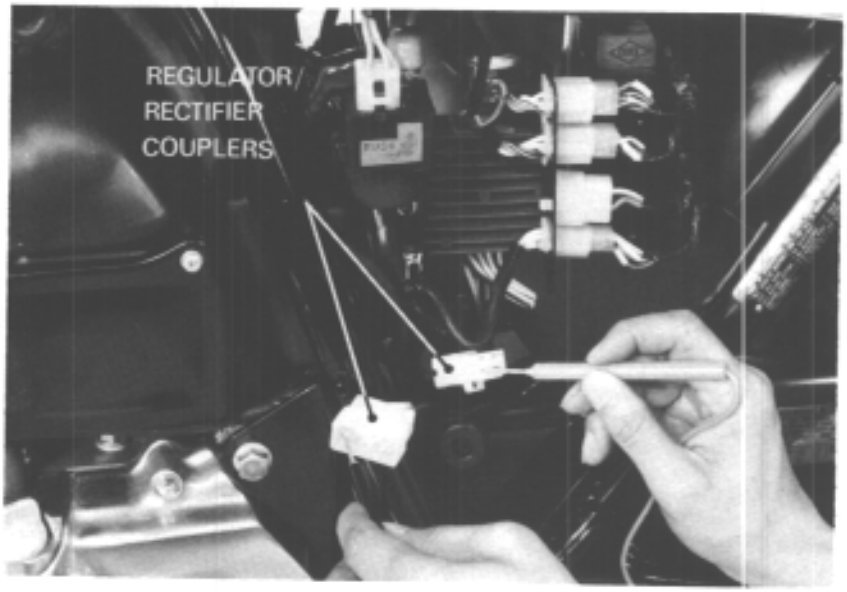
Check the resistance between the leads with an ohmmeter.

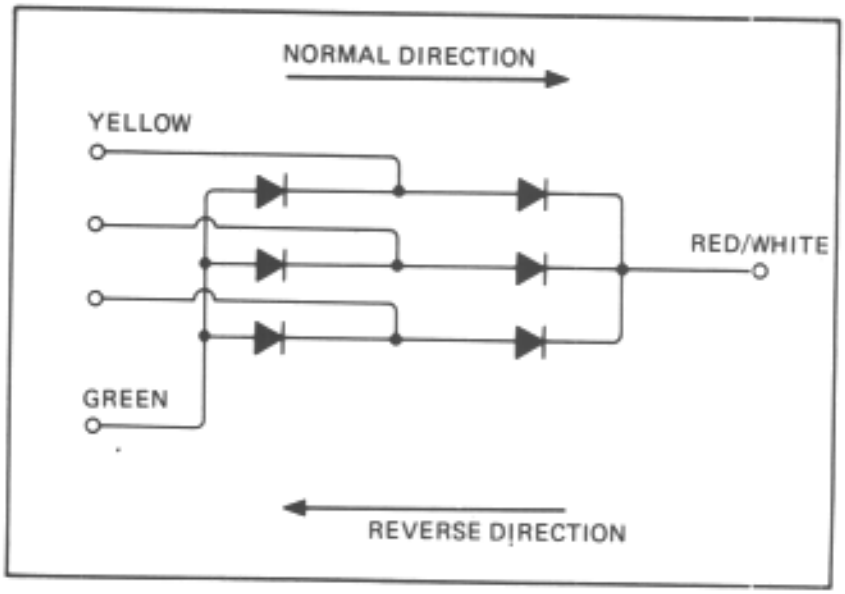
RESISTANCE IN NORMAL DIRECTION:

Green and any yellow:	5–40Ω
Red/white and any yellow	5–40Ω

RESISTANCE IN REVERSE DIRECTION:

Red/white and any yellow	2000Ω min.
Green and any yellow	2000Ω min.





MEMO

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