

ELECTRICAL SYSTEM

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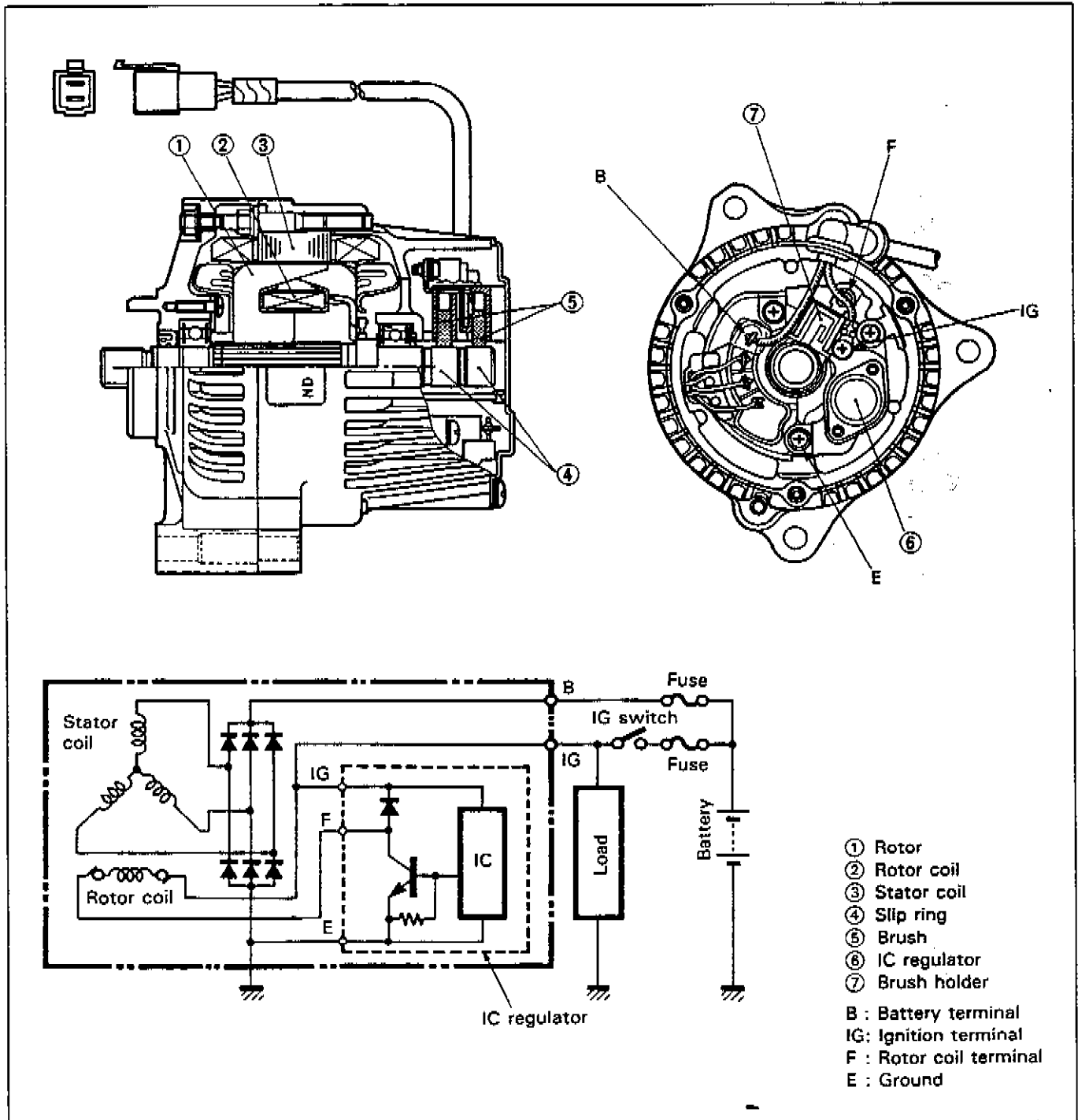
6-1 ELECTRICAL SYSTEM

CHARGING SYSTEM

DESCRIPTION (GENERATOR WITH IC REGULATOR)

The generator features a solid state regulator that is mounted inside the generator. All regulator components are enclosed into a solid mold, and this unit is attached to the brush holder frame. The regulator voltage setting cannot be adjusted.

Two brushes carry current through the two slip rings to the rotor coil mounted on the rotor. The stator windings are assembled on the inside of a laminated core that forms part of the generator housing. A rectifier bridge connected to the stator windings contains six diodes, and electrically changes the stator A.C. voltages to a D.C. voltage which appears at the generator output terminal.



CHARGING OUTPUT CHECK

- Remove the front seat.
- Start the engine and keep it running at 5 000 r/min.
- Measure the DC voltage between the battery terminals \oplus and \ominus with a pocket tester. If the tester reads under 13.5V, check the stator coil, rectifier and IC regulator mounted in the generator.

CAUTION:

If the pocket tester is set to read current or resistance and a voltage is applied across the test probes, damage will result. Therefore, it is important that the tester knob on the pocket tester be set the proper position before making any measurements.

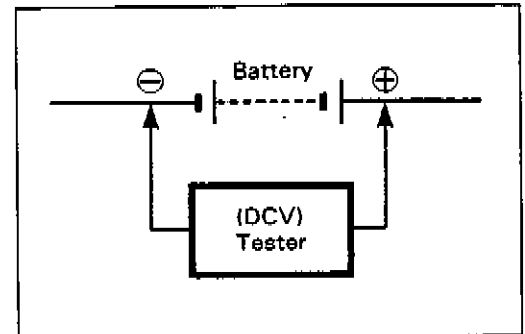
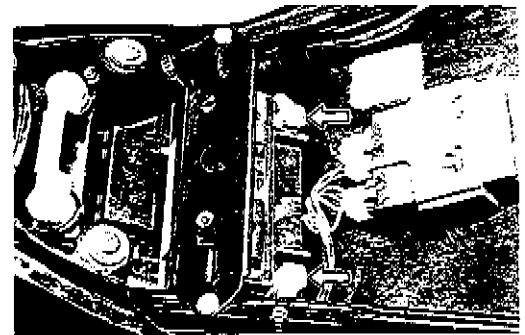
NOTE:

When making this test, be sure that the battery is fully-charged condition.

09900-25002: Pocket tester

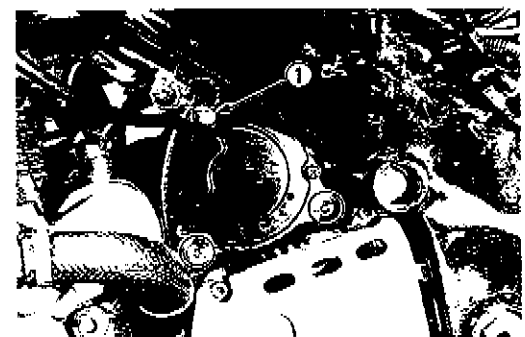
Tester knob indication: DC25V

STD charging output	Above DC13.5V at 5 000 r/min
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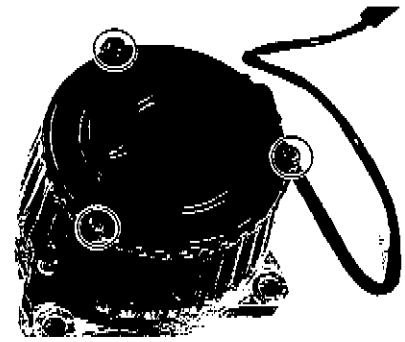
REMOVAL AND DISASSEMBLY

- Remove the seats and frame cover assembly.
- Remove the lower cowling. (Refer to page 7-2.)
- Disconnect the generator lead wires coupler.
- Remove the throttle stop screw bracket bolt ①.
- Remove the generator by removing the bolts.

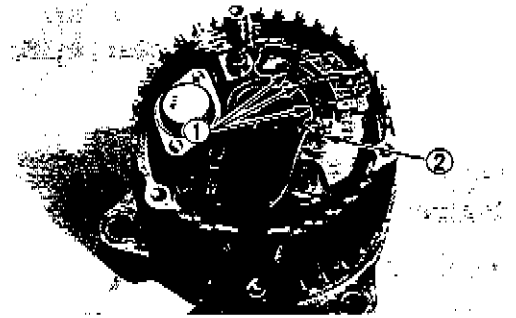


6-3 ELECTRICAL SYSTEM

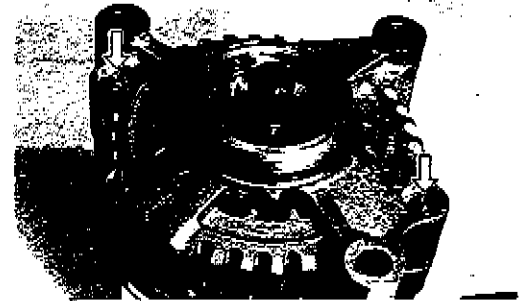
- Remove the generator end cover.



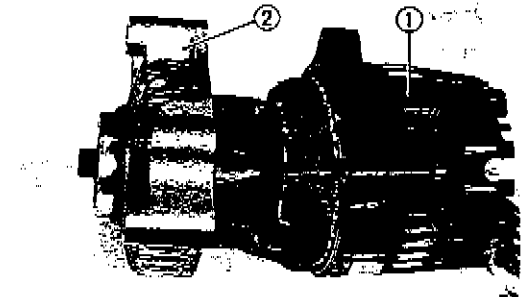
- Disconnect the stator coil lead wires ① and battery lead wire ② by using a soldering iron.
- Remove the brush holder, IC regulator and rectifier to remove three screws.



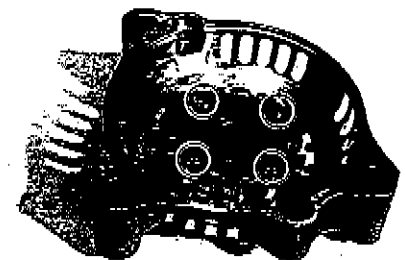
- Remove the two nuts.



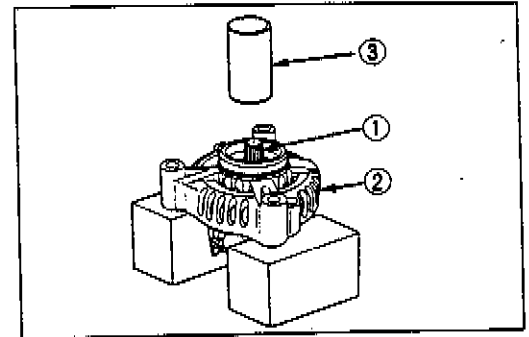
- Remove the generator housing ① from generator end housing ②.



- Remove the four bearing retainer screws.



- Remove the rotor ① from generator end housing ② by using a hand-press ③ as shown.



INSPECTION

ROTOR BEARING

Inspect the rotor bearings for abnormal noise and smooth rotation to rotate them by hand.

If there is anything unusual, remove the bearing with a bearing puller.

09913-60910: Bearing puller (40–60 mm)

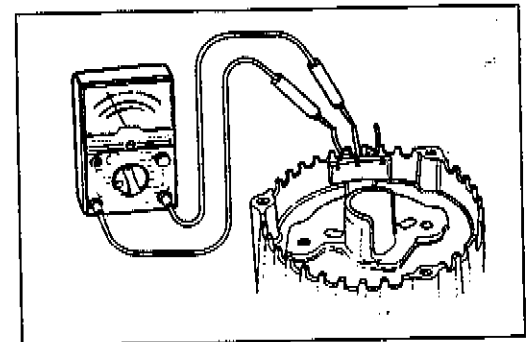
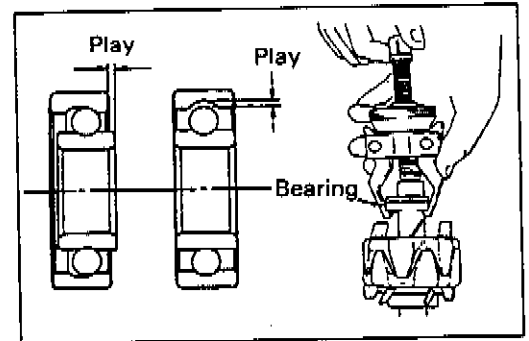
CAUTION:

The removed bearing should be replaced with a new one.

STATOR COIL CONTINUITY CHECK

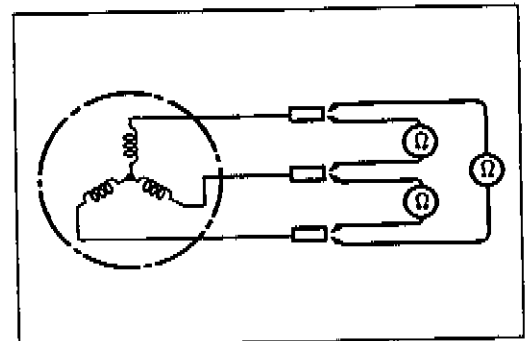
Check the continuity between the lead wires of the stator with a pocket tester.

If there is no continuity, replace the stator.
Also check that the stator core is insulated.



09900-25002: Pocket tester

Tester knob indication: X 1Ω range



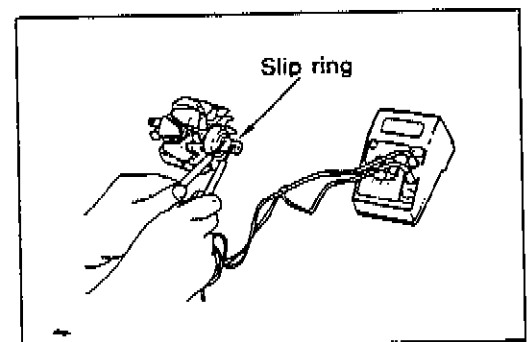
ROTOR COIL CONTINUITY CHECK

Check the continuity between the two slip rings of the rotor with a pocket tester.

If there is no continuity, replace the rotor.
Also check that the rotor is insulated.

09900-25002: Pocket tester

Tester knob indication: x 1Ω range



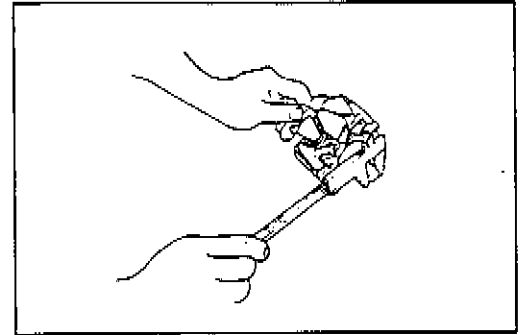
6-5 ELECTRICAL SYSTEM

SLIP RING

If the slip ring surface is dirty, polish it with #400 fine emery paper to protect the charging performance. After polishing, wipe the slip ring with a clean dry cloth.

09900-20102: Vernier calipers (200 mm)

Slip ring O.D.	Service Limit
	14.0 mm (0.55 in)

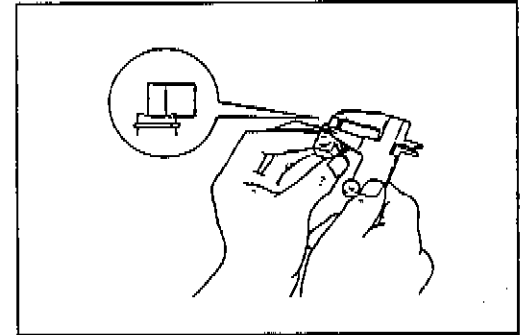


CARBON BRUSH

Measure the length of the brushes as shown. If it exceeds the service limit, replace them with new ones.

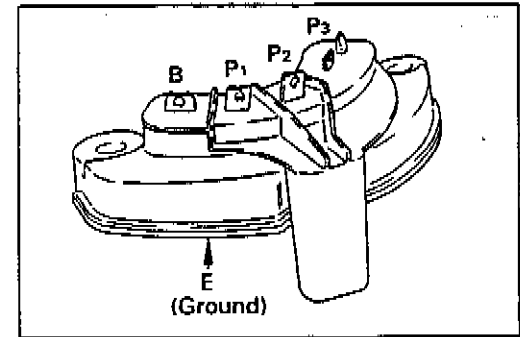
09900-20102: Vernier calipers (200 mm)

Brush length	Service Limit
	4.5 mm (0.18 in)



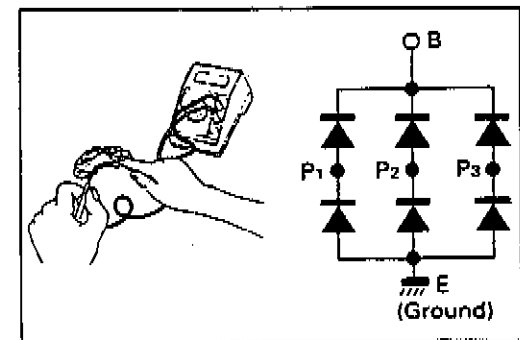
RECTIFIER

Check the continuity between terminals and ground. Put one tester lead to terminal "B" and the other lead to ground or other terminals; then swap the two leads. Of the two tester indications, one should be continuity, and the other should be infinity (non continuity). If not, replace the rectifier assembly.



09900-25002: Pocket tester

Tester knob indication: X 1Ω range



IC REGULATOR

Use a variable DC power source, switch, bulb and pocket tester, check the IC regulator, which requires two steps described below:

First check:

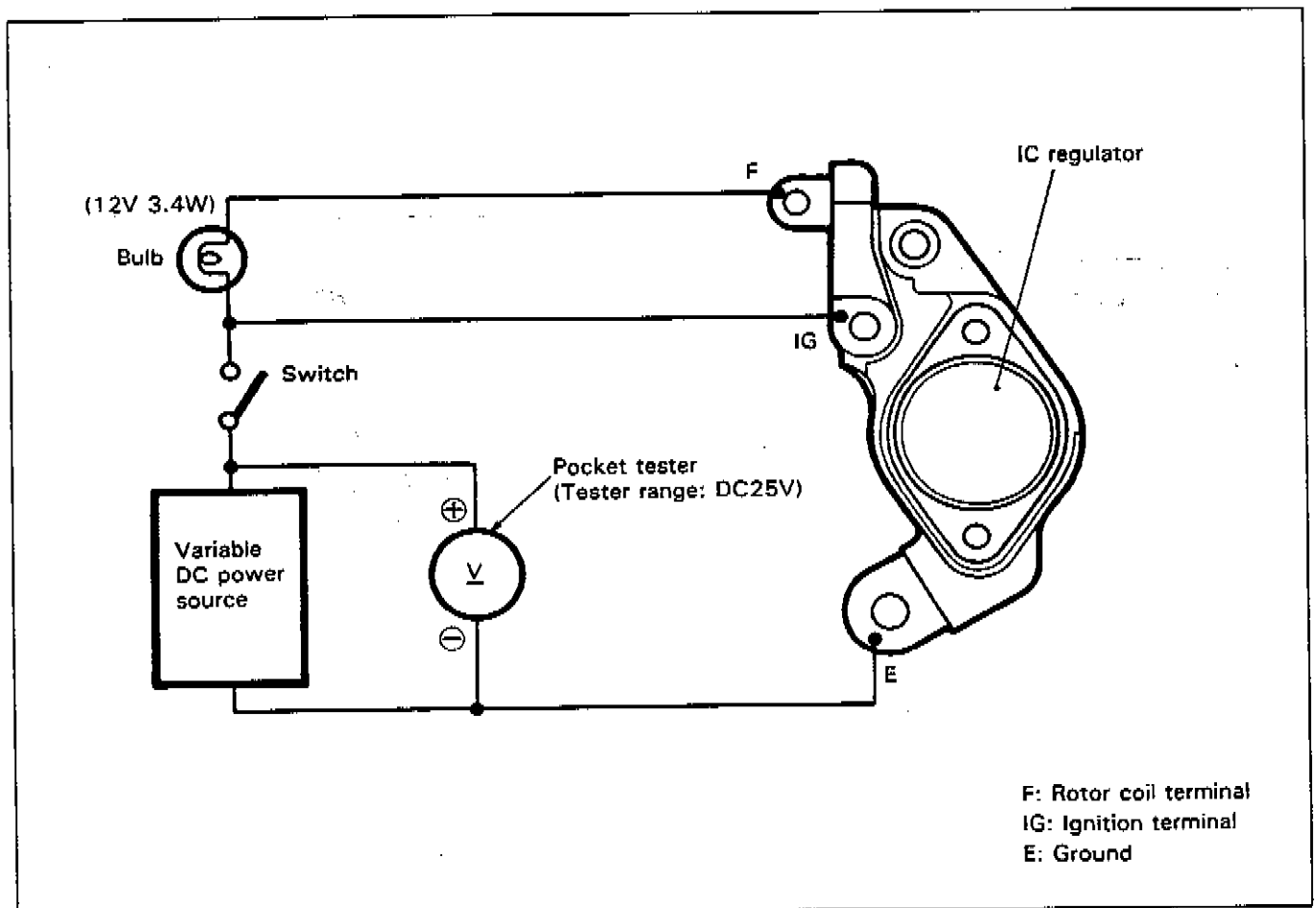
Set the variable DC power source to 12V and turn the switch to the ON position. If the bulb does not light, replace the IC regulator. If the bulb is lighting ON, this IC regulator has passed the first check.

Second check:

Under the above condition, set the variable DC power source to 14.5V, if the bulb goes out, the IC regulator is in good condition. If the bulb remains lit, replace the IC regulator.

09900-25002: Pocket tester

Tester knob indication: DC25V



6-7 ELECTRICAL SYSTEM

REASSEMBLY AND REMOUNTING

Reassemble and remount the generator in the reverse order of disassembly and removal. Pay attention to the following points:

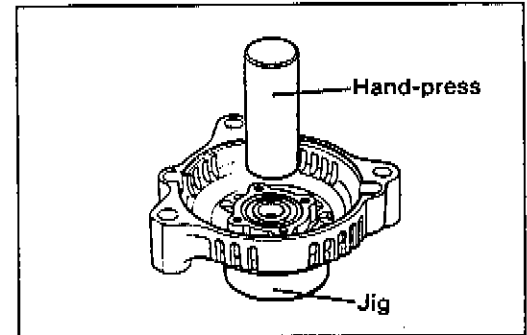
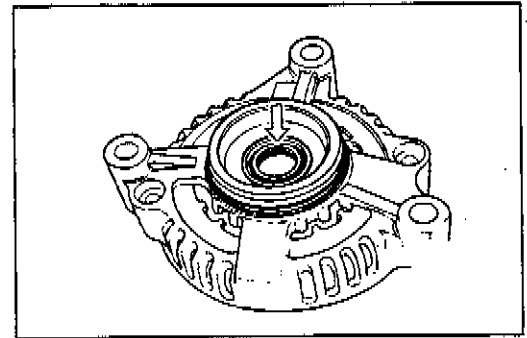
- Apply grease to the lip of the oil seal.

99000-25030: SUZUKI SUPER GREASE "A"

CAUTION:

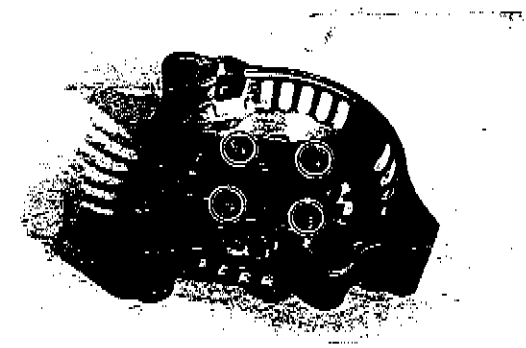
The removed oil seal should be replaced with a new one.

- Install the bearing by using a hand-press as shown.

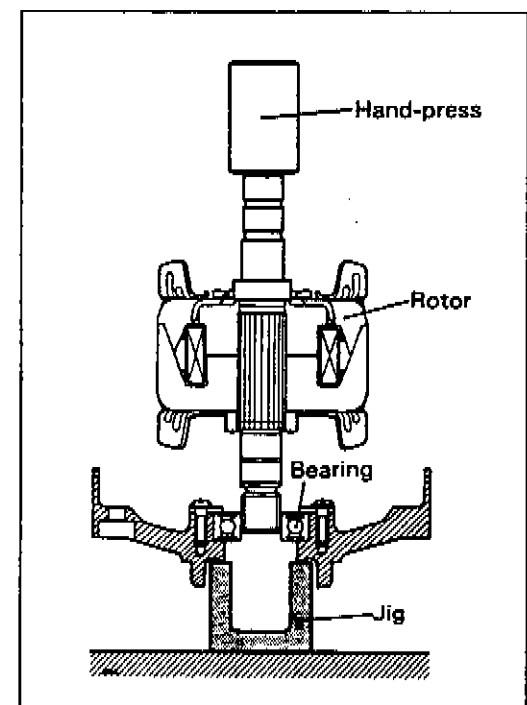
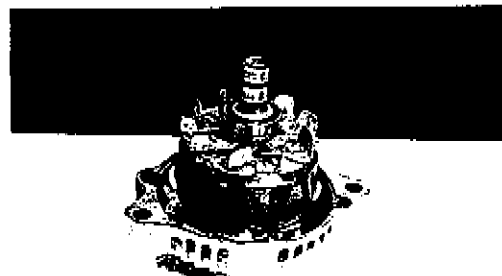


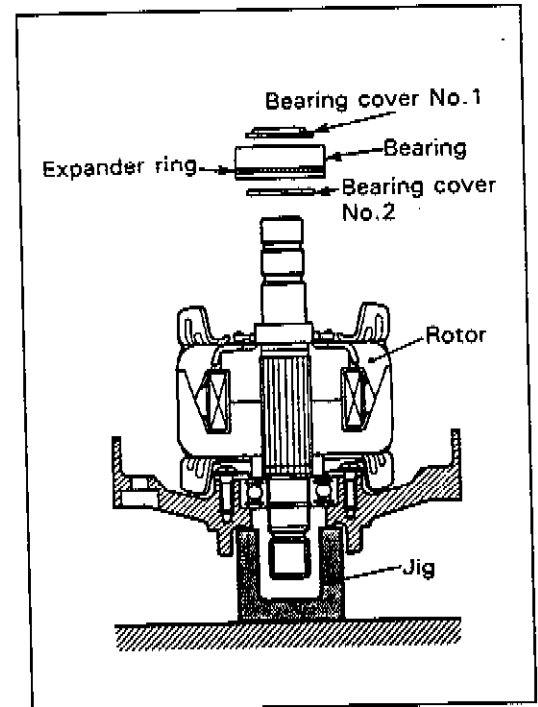
- Apply a small quantity of THREAD LOCK "1342" to the bearing retainer screws.

99000-32050: THREAD LOCK "1342"

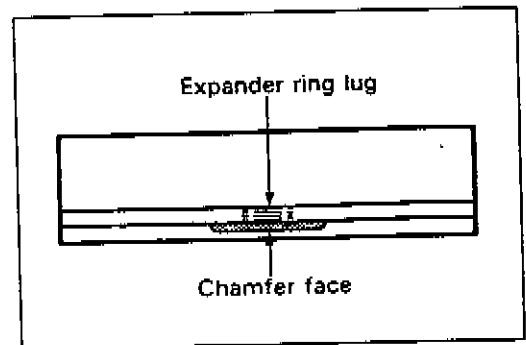


- Install the rotor and bearing by using a hand-press as shown.

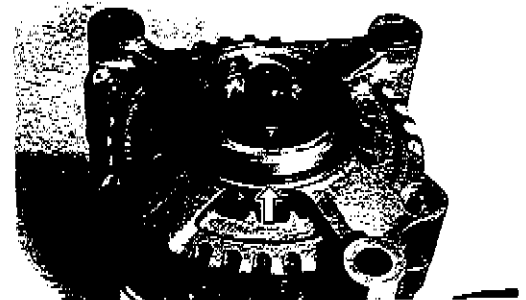


**NOTE:**

Before reinstalling the slip ring side bearing to generator end housing, turn the expander ring and align the expander ring lug with the center of chamfer face of bearing outer race.



- Fit a new O-ring to the generator end housing.

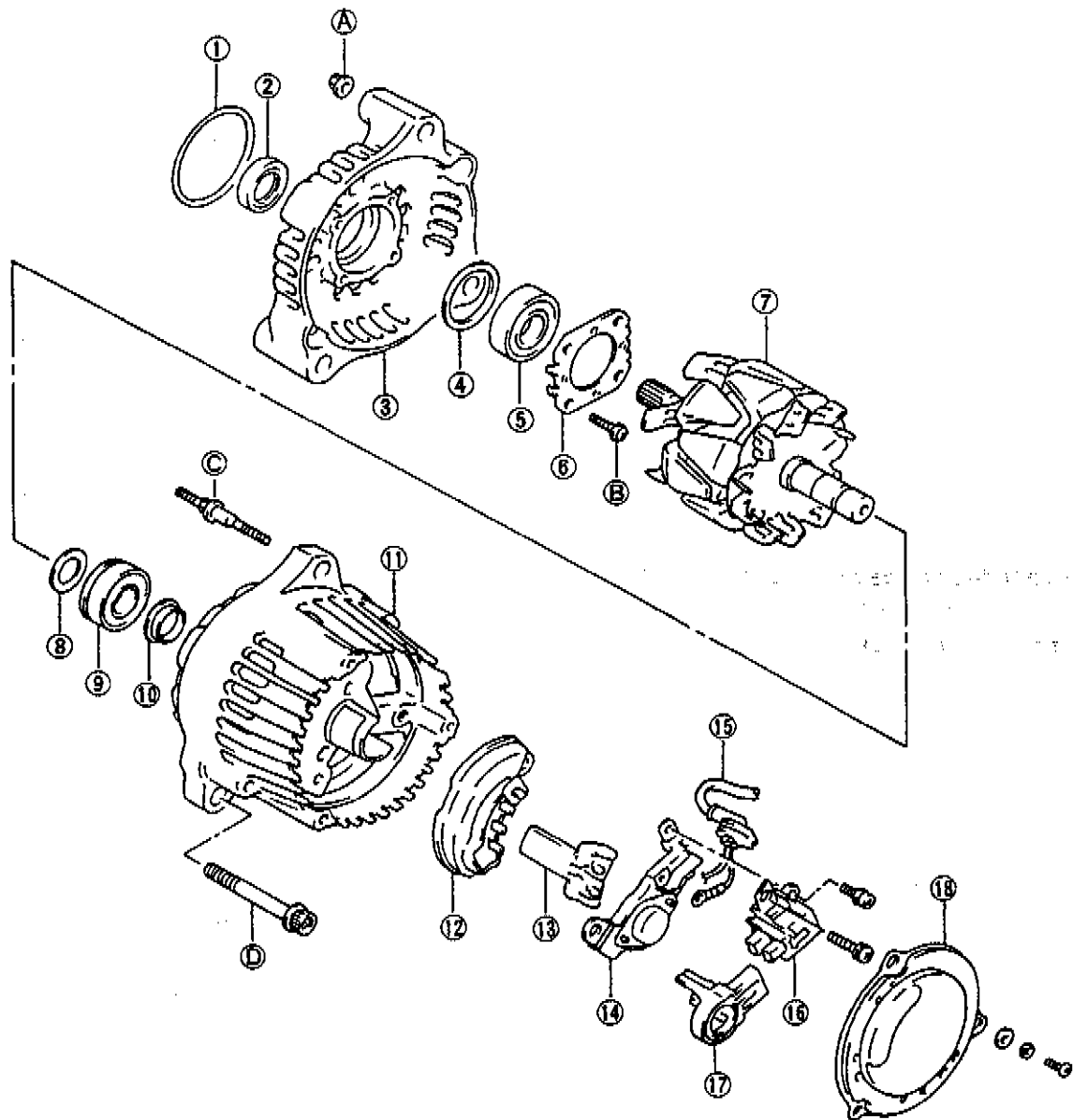


- Align the lug ① of the generator end cover with the groove ② of the lead wire grommet.



6-9 ELECTRICAL SYSTEM

REASSEMBLY INFORMATION



- | | |
|-------------------------|-----------------------|
| ① O-ring | ⑪ Generator housing |
| ② Oil seal | ⑫ Rectifier |
| ③ Generator end housing | ⑬ Rectifier cover |
| ④ Bearing seat | ⑭ IC regulator |
| ⑤ Bearing | ⑮ Generator lead wire |
| ⑥ Bearing retainer | ⑯ Brush holder |
| ⑦ Rotor | ⑰ Brush cover |
| ⑧ Bearing cover No. 2 | ⑱ Generator end cover |
| ⑨ Bearing | |
| ⑩ Bearing cover No. 1 | |

ITEM	Tightening torque		
	N·m	kg·m	lb·ft
A	3.7-5.5	0.37-0.55	2.6-4.0
B	2.2-3.3	0.22-0.33	1.5-2.5
C	3.7-5.5	0.37-0.55	2.6-4.0
D	21-29	2.1-2.9	15.0-21.0

IGNITION SYSTEM (DIGITAL IGNITOR)

DESCRIPTION

The fully transistorized ignition system consists of a signal generator, ignitor unit (including 8-BIT MICROCOMPUTER and CERAMIC 4MHZ VIBRATOR), ignition coils and spark plugs. The characteristic of the ignition timing is programmed and stored in the "ROM" (READ ONLY MEMORY) of the ignitor unit.

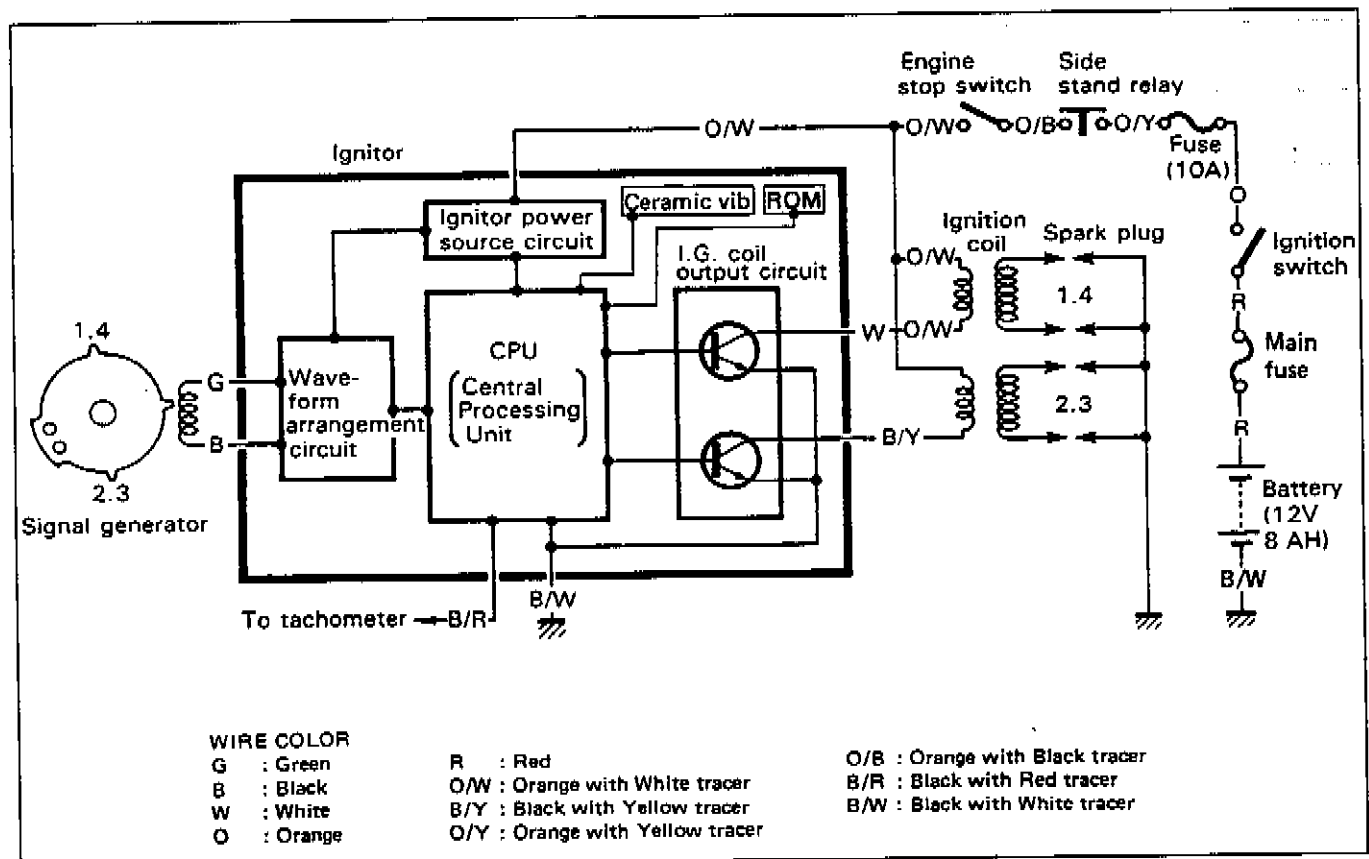
The signal generator comprises the rotor tip and pickup coil.

The signal generator is mounted at the right end of the crankshaft. The induced signal in the signal generator is sent to wave-form arrangement circuit, and CPU receives this signal and calculates the best ignition timing from the signal of ceramic vibrator and data stored in the ROM. The CPU outputs signal to the transistor of the I.G. coil output circuit which is connected to the primary windings of the ignition coil which is turned OFF and ON accordingly, thus it induces the secondary current on the ignition coil secondary windings and produce the spark between spark plug gaps.

Ignition cut-off circuit is incorporated in the ignitor unit to prevent over-running engine. If engine r/min. reaches 12 800 r/min., this circuit cuts off the ignition primary current for all spark plugs.

CAUTION:

Engine can run over 12 800 r/min. without load, even if the ignition cut-off circuit is effective, and it may cause engine damage. Do not run the engine without load over 12 800 r/min. at anytime.



6-11 ELECTRICAL SYSTEM

INSPECTION

IGNITION COIL (Checking with Electro Tester)

- Remove the seats, frame cover assembly and fuel tank. (Refer to pages 7-5 and 4-5.)
- Remove the ignition coils.

NOTE:

Make sure that the three-needle sparking distance of electro tester is set at 8 mm (0.3 in).

- With the tester and jumper wire, test the ignition coil for sparking performance in accordance with the following two steps.

STEP ① : Connect the jumper wire to the spark plug cap and ignition coil ground.

STEP ② : Switch over the jumper wire to the other plug cap and ground.

If no sparking or orange color sparking occurs in the above conditions, it may be caused by defective coil.

09900-28106: Electro tester

Spark performance	Over 8 mm (0.3 in)
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IGNITION COIL (Checking with Pocket Tester)

- A SUZUKI pocket tester or an ohm meter may be used, instead of the electro tester. In either case, the ignition coil is to be checked for continuity in both primary and secondary windings. Exact ohmic readings are not necessary, but, if the windings are in sound condition, their continuity will be noted with these approximate ohmic values.

09900-25002: Pocket tester

Ignition coil resistance	
Primary	\oplus tap — \ominus tap 2.4 — 3.2 Ω Tester range: (X 1 Ω)
Secondary	Plug cap — Plug cap 30 — 40 k Ω Tester range: (X 1 k Ω)

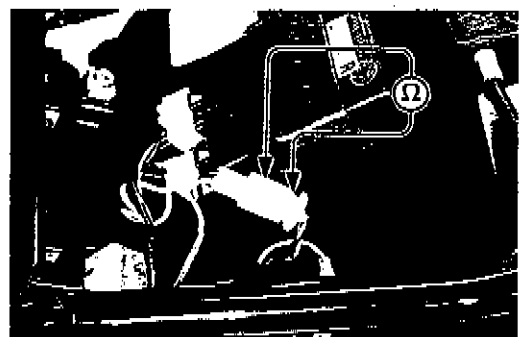
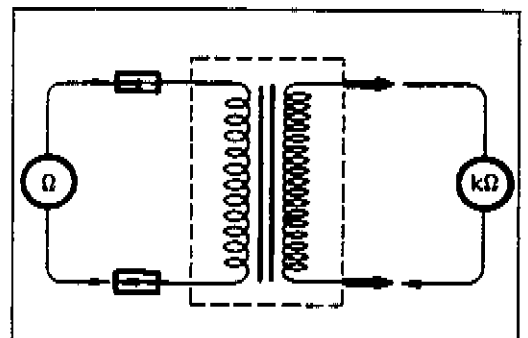
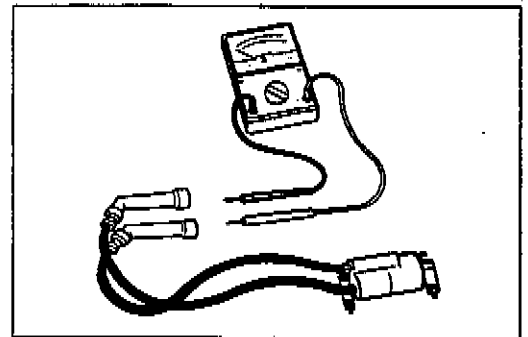
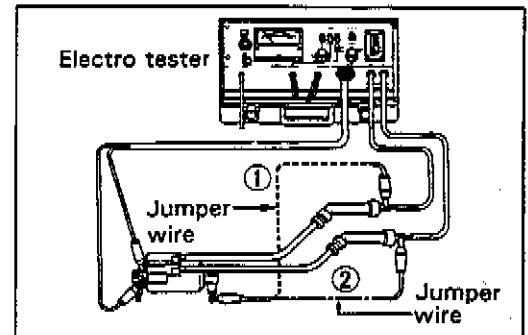
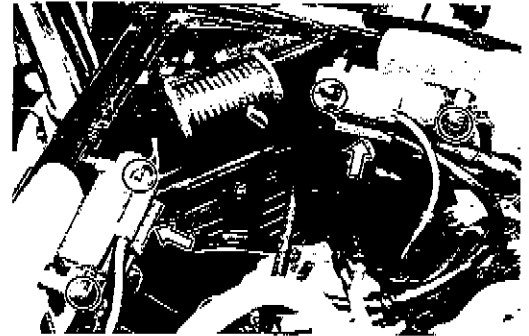
SIGNAL GENERATOR (Checking with Pocket Tester)

- Remove the front seat and disconnect the lead wires.
- Measure the resistance between lead wires. If the resistance is infinity or less than the specifications, the signal generator must be replaced.

09900-25002: Pocket tester

Signal coil resistance	Approx. 135 — 200 Ω (Black — Green)
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Tester knob indication: X 100 Ω range



SPARK PLUGS

- Remove the seats, frame cover assembly and fuel tank. (Refer to pages 7-5 and 4-5.)
- Remove all the spark plugs.

Carbon Deposit

Check to see the carbon deposit on the plug.
If the carbon is deposited, remove it with a spark plug cleaner machine or carefully using a tool with a pointed end.

Spark Plug Gap

Measure the plug gap with a thickness gauge if it is correct.
If not, adjust it to the following gap.

09900-20803: Thickness gauge

Spark plug gap	Standard
	0.7—0.8 mm (0.028—0.032 in)

Electrode's Condition

Check to see a worn or burnt condition of the electrode. If it is extremely worn or burnt, replace the plug. Also replace the plug if it has a broken insulator, damaged thread, etc.

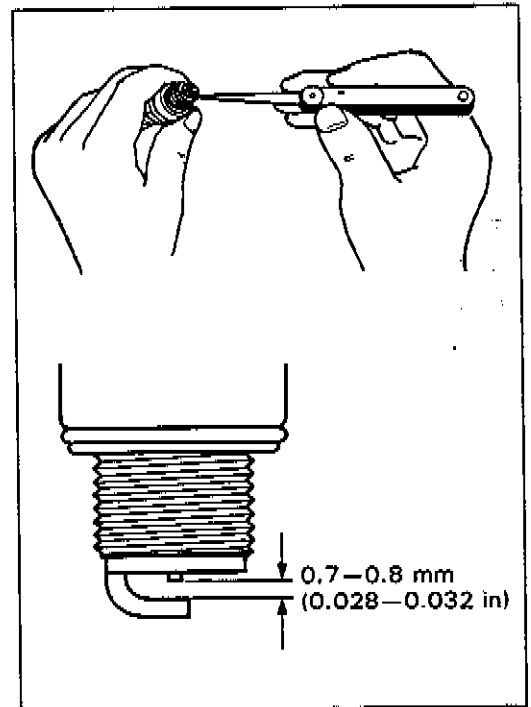
Heat Range

NGK CR9E should be used as the standard. However, the heat range of the spark plug should be selected to meet the requirements of speed, actual load, fuel and etc. Proper heat range would be indicated if all insulators were LIGHT BROWN in color. If they are baked white, they should be replaced with a cold type plug NGK CR10E or NIPPON-DENSO U31ESR-N.

	Standard	Cold type	Hot type
NGK	CR9E	CR10E	CR8E
NIPPONDENSO	U27ESR-N	U31ESR-N	U24ESR-N

CAUTION:

Confirm the thread size and reach when replacing the plug.
If the reach is too short, carbon will be deposited on the screw portion of the plug hole and engine damage may result.



6-13 ELECTRICAL SYSTEM

IGNITOR UNIT (Checking with Digital Ignitor Checker)

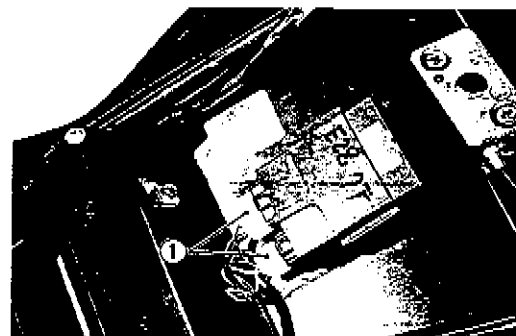
This section explains the checking procedure for the ignitor unit using Digital Ignitor Checker (special tool).

With this checker, the ignitor unit can be checked either on the machine or off the machine. The following explains the checking procedure on the machine.

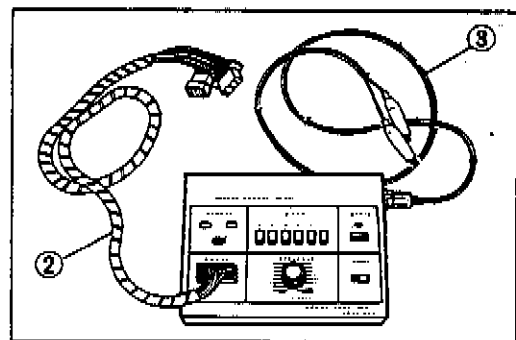
09931-94430: Digital ignitor checker

WIRING PROCEDURE:

- Remove the front seat.
- Disconnect two ignitor lead wire couplers ① at the ignitor unit.



- Prepare the ignitor checker lead wire "MODE 1" ② which comes supplied with the ignitor checker and connect its end to the ignitor unit and another end to the checker.
- Connect the power source leads ③ to the battery.



CAUTION:

- * Be sure that the **BLACK** lead is connected to the battery \ominus terminal and **RED** lead to the \oplus terminal.
- * Before connecting the power source leads, make sure that both "POWER" button and "START" switch are in "off" position (POWER button not depressed).

NOTE:

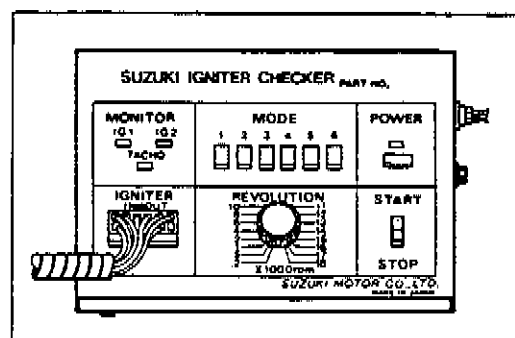
Be sure that the battery used is in fully-charged condition.

CHECK PROCEDURE:

With all the lead wires properly connected, check the ignitor unit in the following four steps.

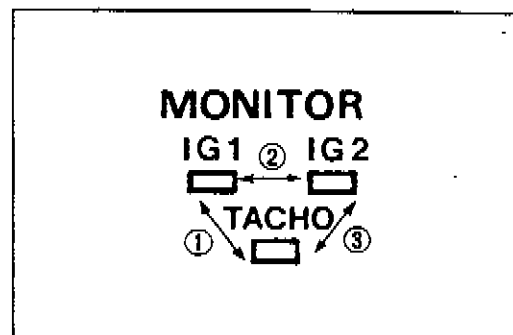
First Step:

Depress "MODE 1" button then "POWER" button. This time, "POWER" lamp should come on, if not, battery is undercharged.



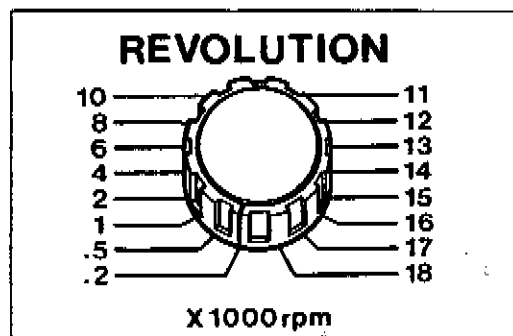
Second Step:

Set "REVOLUTION" dial pointer to ".2" position in which the checker produces the ignition primary current pulses simulating 200 r/min of engine revolution when "START" switch is turned on. With "START" switch is turned to ON position, check that three "MONITOR" lamps turn on and off in slow frequency in order of ①-②-③ or ①-③-② as illustrated.

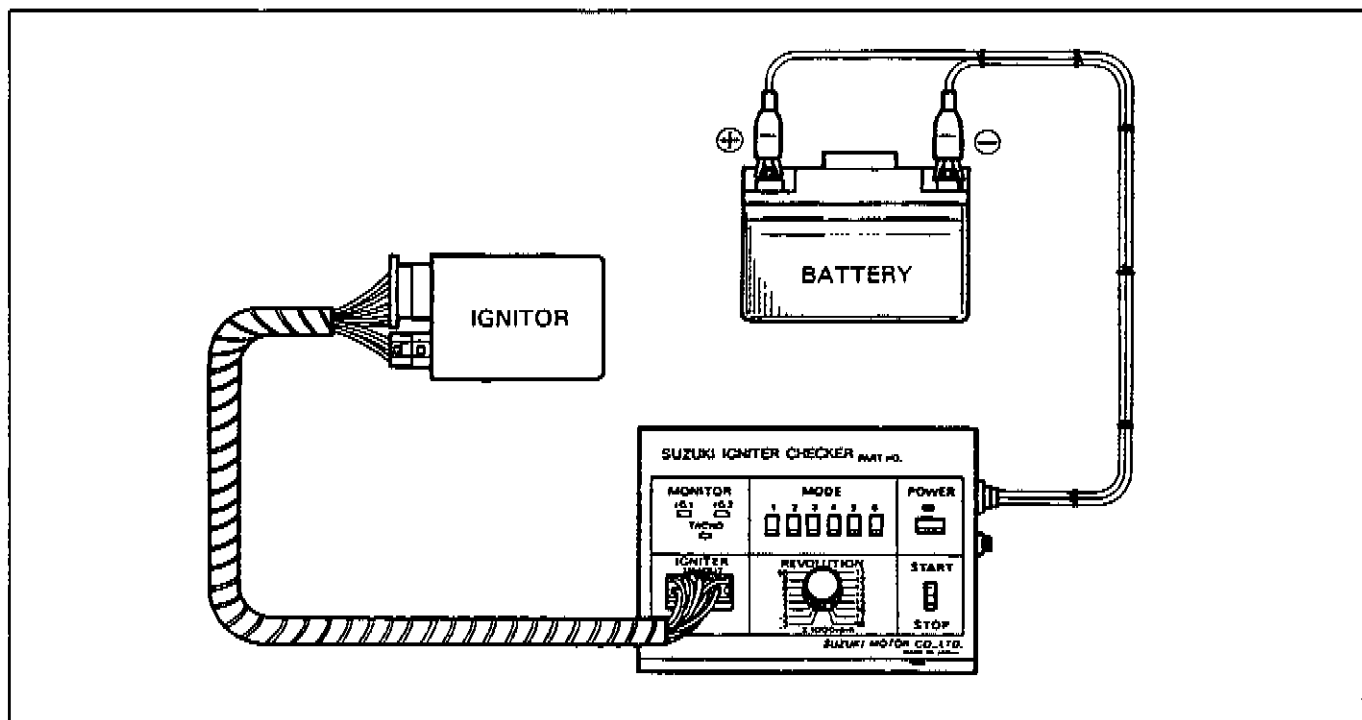
**Third Step:**

Turn "REVOLUTION" dial up gradually (assuming the engine gradually revved up) and check that the MONITOR lamp flash frequency as explained in the second step above increases. As the dial pointer passes beyond the graduation "4" (4 000 r/min), all the three lamps should show continuously lighted.

When REVOLUTION dial pointer reaches between "12" and "13" (12 000-13 000 r/min), MONITOR "IG1" and "IG2" lamps should go off while "TACHO" lamp stays on. This is because the ignition "cut-off" provided in the RF600R ignition system functions at $12\ 800 \pm 100$ r/min. If the lamps go off at the graduation below "12", the engine can not perform properly and therefore the ignitor unit must be replaced.

**Fourth Step:**

Turn "START" switch to STOP position. If the "IG1" or "IG2", or both lamps remain light more than 5 seconds, the ignitor unit must be replaced.



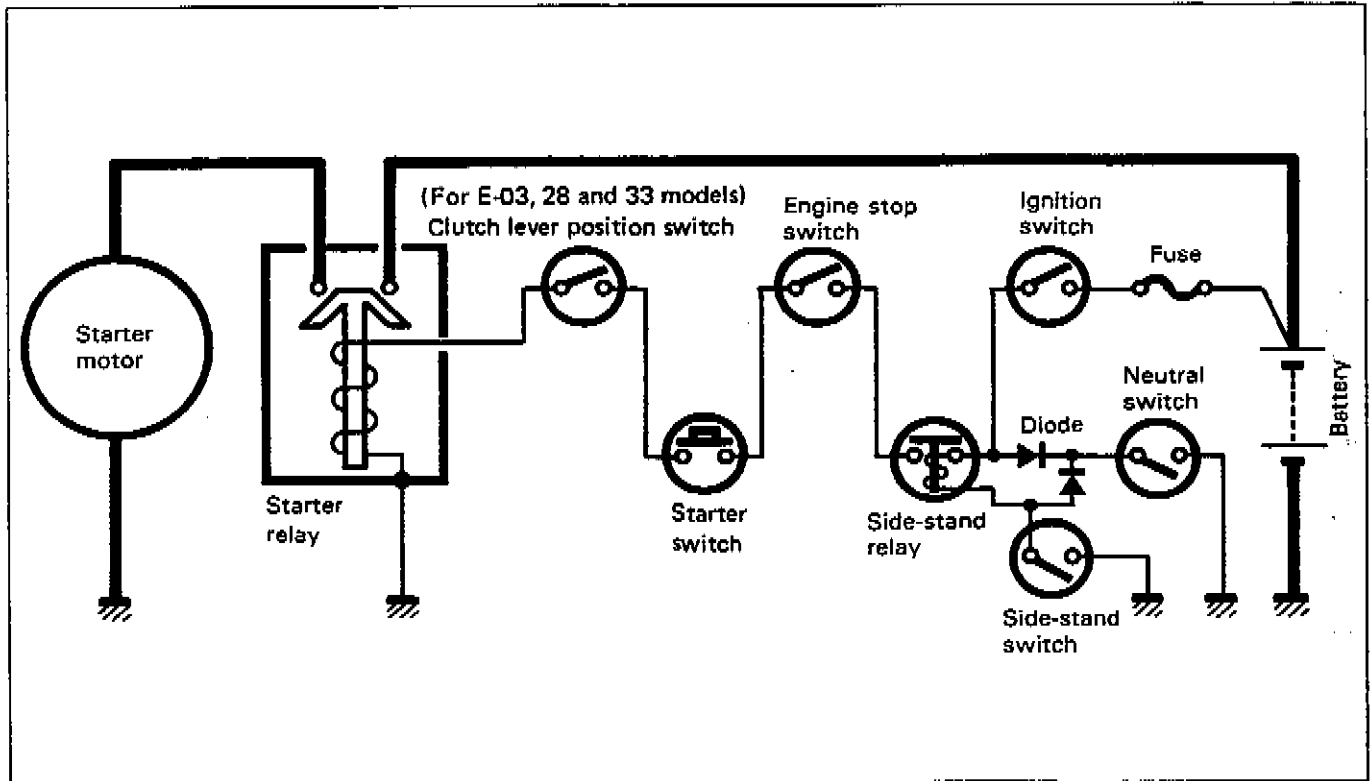
6-15 ELECTRICAL SYSTEM

STARTER SYSTEM

DESCRIPTION

The starter system is shown in the diagram below: namely, the starter motor, starter relay, side-stand relay, side-stand switch, neutral switch, clutch lever position switch, starter switch, engine stop switch, IG switch and battery.

Depressing the starter switch (on the right handlebar switch box) energizes the relay, causing the contact points to close which connects the starter motor to the battery. The motor draws about 80 amperes to start the engine.

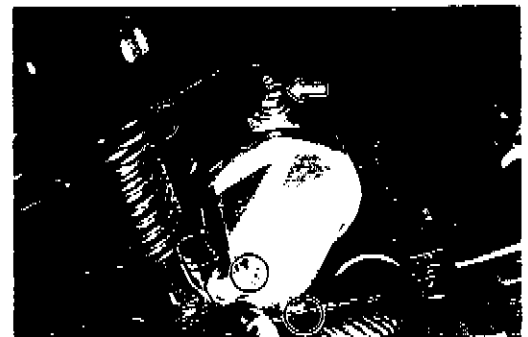


REMOVAL AND DISASSEMBLY

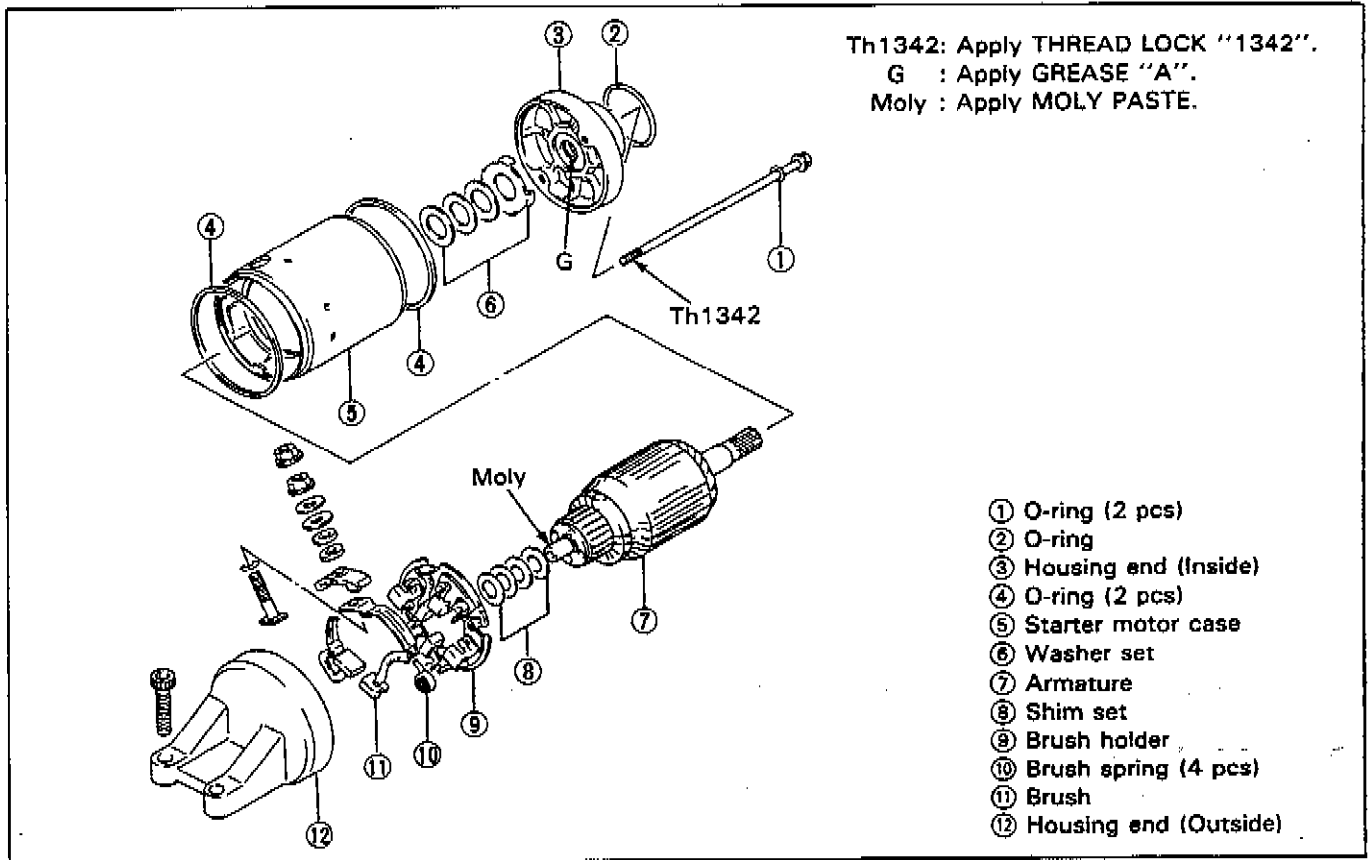
- Remove the lower cowling assembly. (Refer to page 7-2.)
- Disconnect the starter motor lead wire and remove the starter motor by removing the mounting bolts.

NOTE:

If it is difficult to remove the starter motor, remove the water hose mounting bolts to provide additional space.



- Disassemble the starter motor as shown in the illustration.



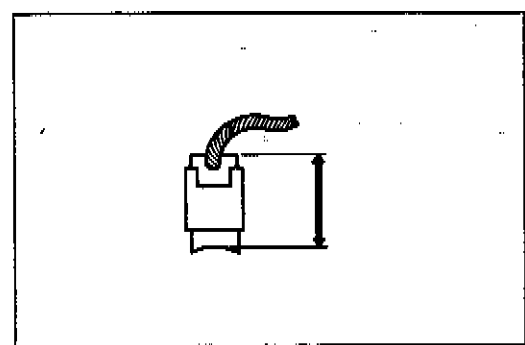
INSPECTION

CARBON BRUSH

When the brushes are worn, the motor will be unable to produce sufficient torque, and the engine will be difficult to turn over. To prevent this, periodically, measure the length of the brushes with a vernier calipers, replacing them when they are too short or chipping.

09900-20102: Vernier calipers (200 mm)

Brush length	Service Limit
	6 mm (0.2 in)



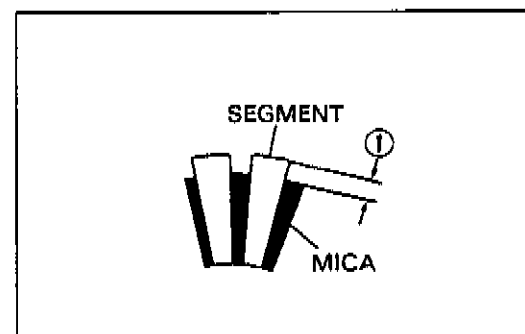
COMMUTATOR

If the commutator surface is dirty, starting performance decreases. Polish the commutator with #400 or similar fine emery paper when it is dirty. After polishing it, wipe the commutator with a clean dry cloth.

Measure the commutator under cut ① with a vernier calipers.

09900-20102: Vernier calipers (200 mm)

Commutator under-cut	Service Limit
	0.2 mm (0.008 in)

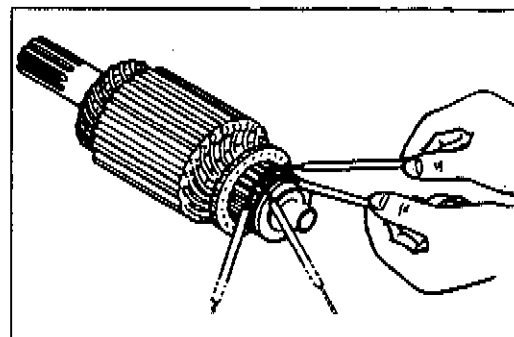


6-17 ELECTRICAL SYSTEM

ARMATURE COIL

Using a pocket tester, check the coil for open and ground by placing probe pins on each commutator segment and rotor core (to test for ground) and on any two segments at various places (to test for open), with the brushes lifted off the commutator surface.

If the coil is found to be open-circuited or grounded replace the armature. Continuous use of a defective armature will cause the starter motor to suddenly fail.



09900-25002: Pocket tester

Tester knob indication: X 1Ω range

OIL SEAL

Check the seal lip for damage or oil leakage. If any damage is found, replace it.

REASSEMBLY

O-RING

CAUTION:

Replace the O-rings with new ones to prevent oil leakage and moisture.

HOUSING END (Inside)

- Apply grease to the lip of oil seal. (Refer to page 6-16.)

99000-25030: SUZUKI SUPER GREASE "A"

HOUSING END (Outside)

- Apply a small quantity of SUZUKI MOLY PASTE to the armature end. (Refer to page 6-16.)

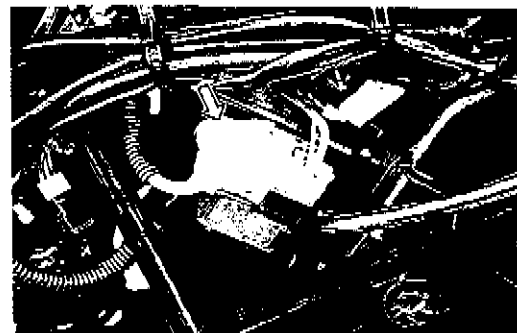
99000-25140: SUZUKI MOLY PASTE

- Apply a small quantity of THREAD LOCK "1342" to the starter motor housing screws. (Refer to page 6-16.)

99000-32050: THREAD LOCK "1342"

STARTER RELAY INSPECTION

- Remove the seats and frame cover assembly.
- Disconnect the starter motor lead wire and battery lead wire at the starter relay which is located behind the left frame cover.
- Disconnect the lead wire coupler from the starter relay.



- Apply 12 volts to ① and ② terminals, inspect the continuity between the terminals, positive and negative. If the starter relay is in sound condition, continuity is found.

09900-25002: Pocket tester

Tester knob indication: X 1 Ω range

CAUTION:

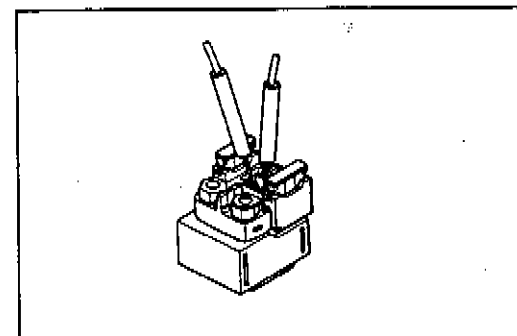
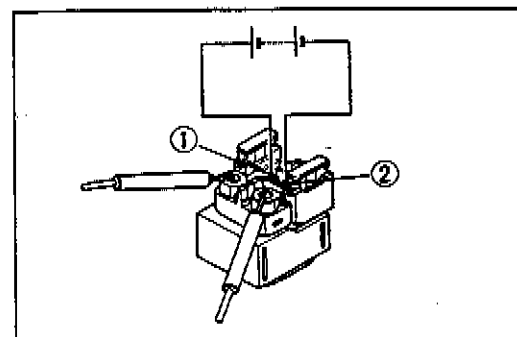
- * Do not apply a battery voltage more than 5 seconds to the starter relay as it may overheat and cause damage to the relay coil.

- Check the coil for "open", "ground" and ohmic resistance. The coil is in good condition if the resistance is as follows.

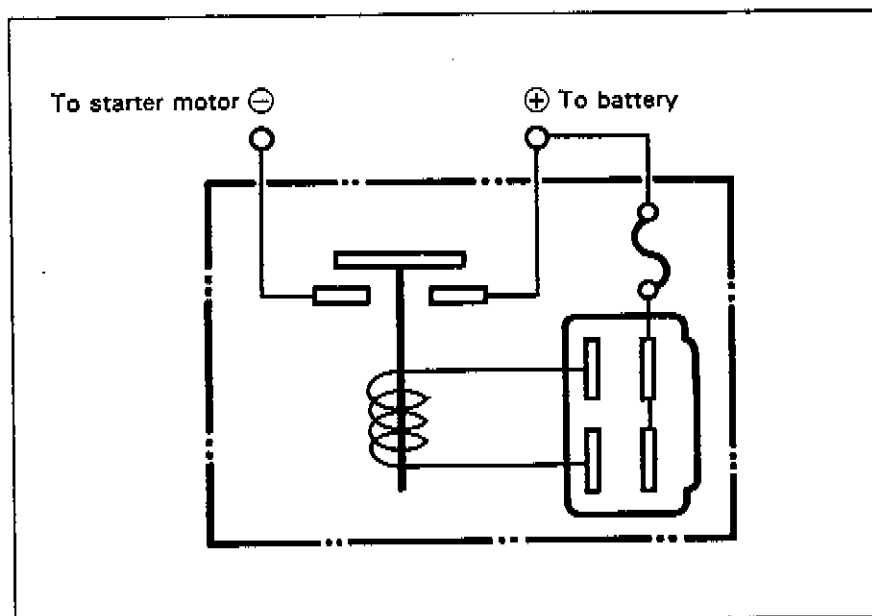
09900-25002: Pocket tester

Tester knob indication: X 1 Ω range

Starter relay resistance	Standard
	3–5 Ω



STARTER RELAY CIRCUIT DIAGRAM

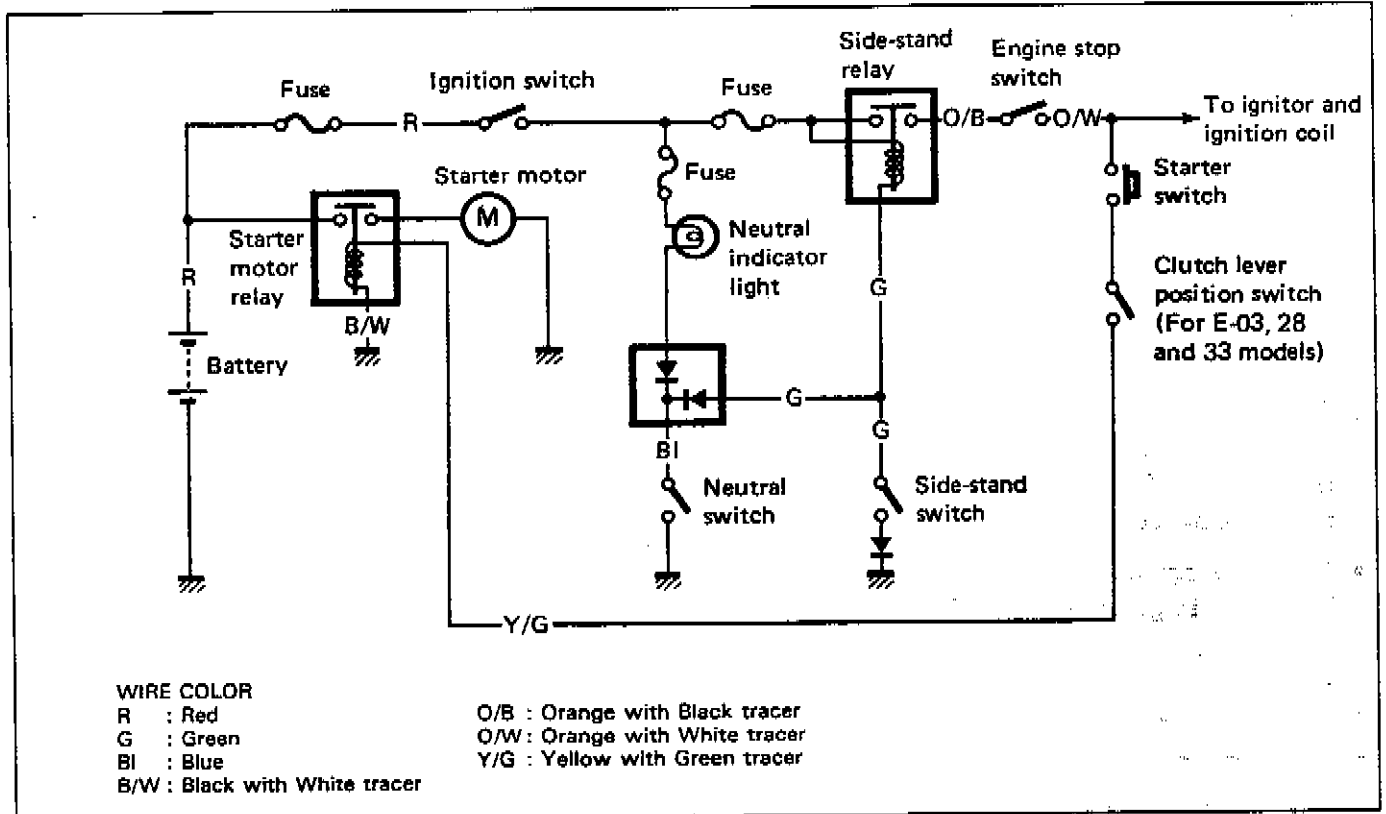


6-19 ELECTRICAL SYSTEM

SIDE-STAND/IGNITION INTERLOCK SYSTEM

DESCRIPTION

This side-stand/ignition interlock system is to prevent starting the motorcycle with the side-stand left down. The system is operated by an electric circuit provided between the battery and ignition coil.

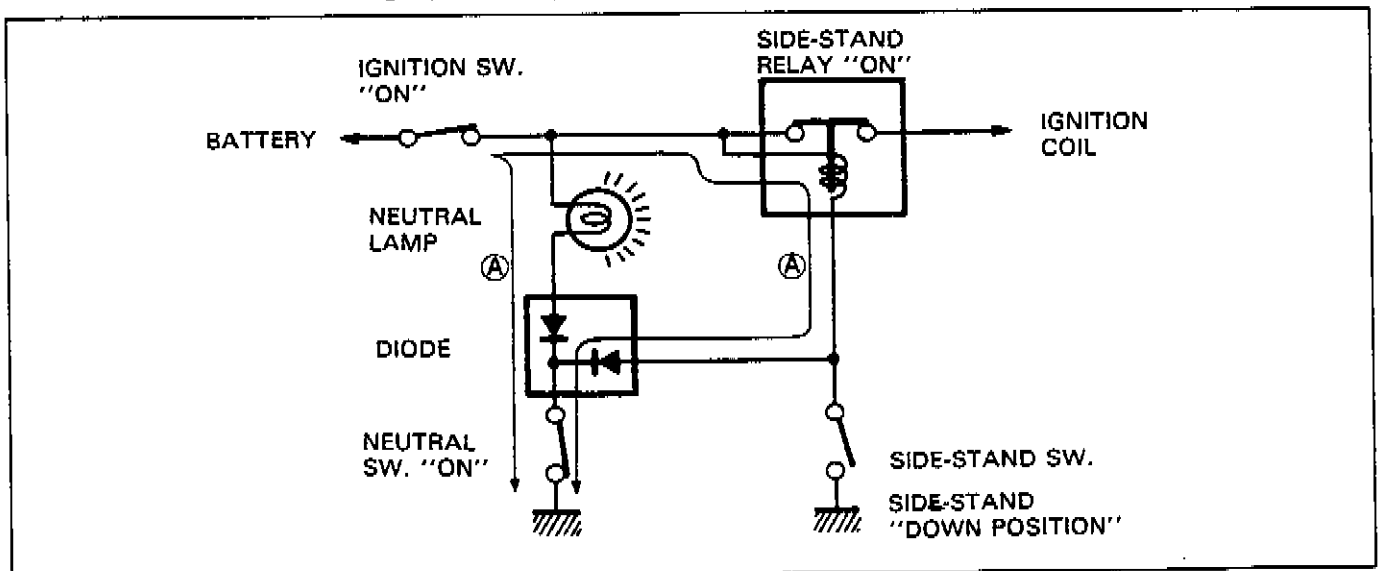


The circuit consists of relay, lamp, diode and switches and decides to live the ignition coil depending on the position of the TRANSMISSION and SIDE-STAND with the neutral and side-stand switches working mutually.

The ignition coil lives only in two situations as follows.

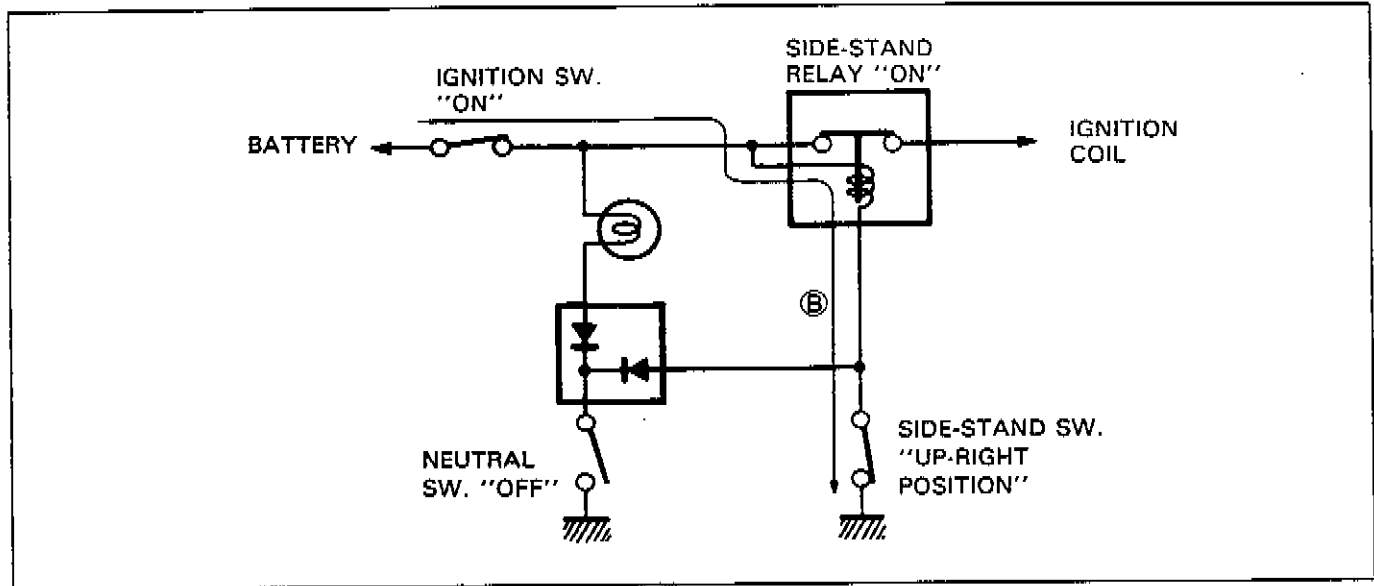
1. Transmission: "NEUTRAL (ON)" Side-stand: "DOWN (OFF)"

The current flow (A) turns "ON" the relay and the ignition coil lives even the side-stand is kept down. This is or warming up the engine.



2. Side-stand: "UP-RIGHT (ON)"

The current flow **(B)** turns "ON" the relay and the ignition coil lives. The engine can be easily started at any transmission position.



INSPECTION

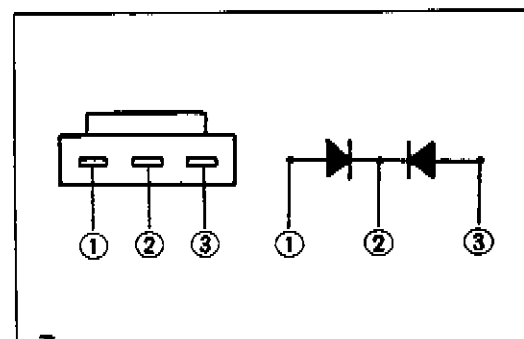
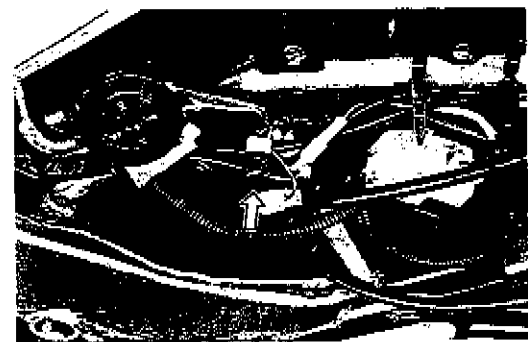
If the interlock system does not operate properly, check each component. If any abnormality is found, replace the component with a new one.

09900-25002: Pocket tester

Diode

The diode is located behind the left frame cover. The diode can pass current only in one direction.

- Check the continuity between ① and ②. If one way continuity the diode is in good condition.
- Also check the continuity between ② and ③ as required.

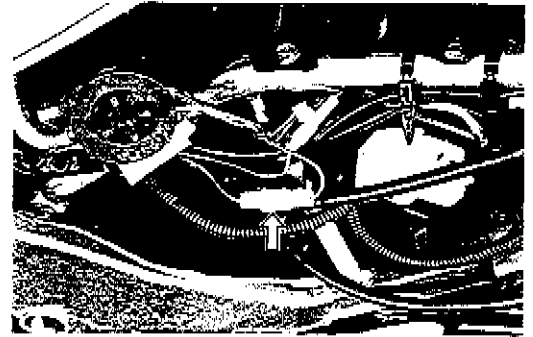


6-21 ELECTRICAL SYSTEM

Neutral switch

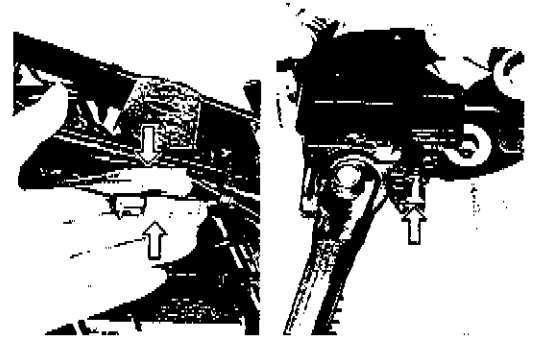
The neutral lead wire coupler is located behind the left frame cover.

- Remove the seats and frame cover assembly.
- Disconnect the neutral switch lead and check the continuity between Blue and Ground with the transmission in "NEUTRAL".



Side-stand switch

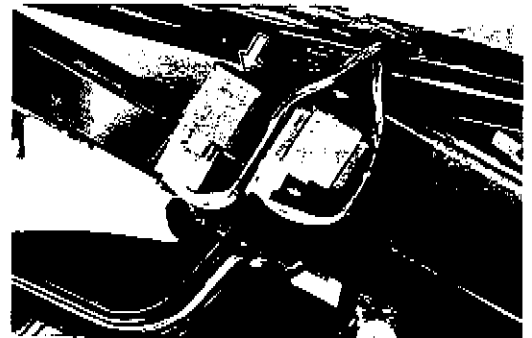
	Green	Black/White
ON (UP-right position)	○ ——— ○	○ ——— ○
OFF (Down position)		



Side-stand/ignition interlock relay

The side-stand/ignition interlock relay is located behind the right frame cover.

- Remove the seats and frame cover assembly.

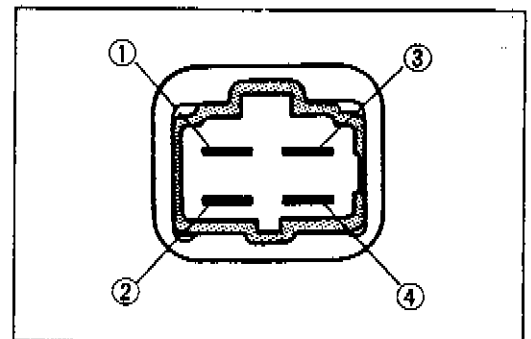


First, check the insulation between ① and ② terminals with pocket tester. Then apply 12 volts to ③ and ④ terminals, ⊕ to ③ and ⊖ to ④, and check the continuity between ① and ②.

If there is no continuity, replace it with a new one.

09900-25002: Pocket tester

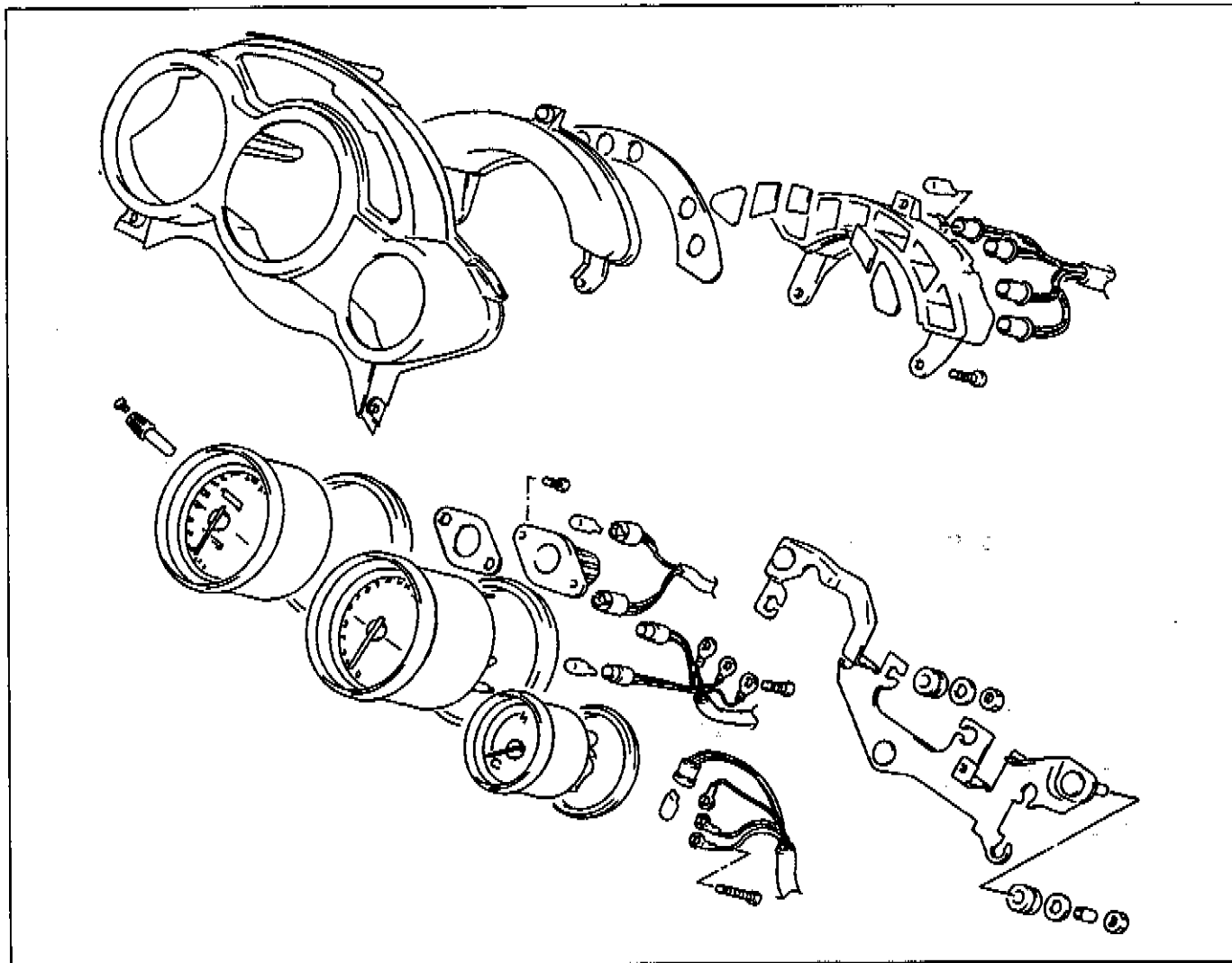
Tester knob indication: X 1Ω range



COMBINATION METER

REMOVAL AND DISASSEMBLY

- Remove the combination meter.
- Disassemble the combination meter as follows.



INSPECTION

Using the pocket tester, check the continuity between lead wires in the diagram on next page.

If the continuity measured is incorrect, replace the respective parts.

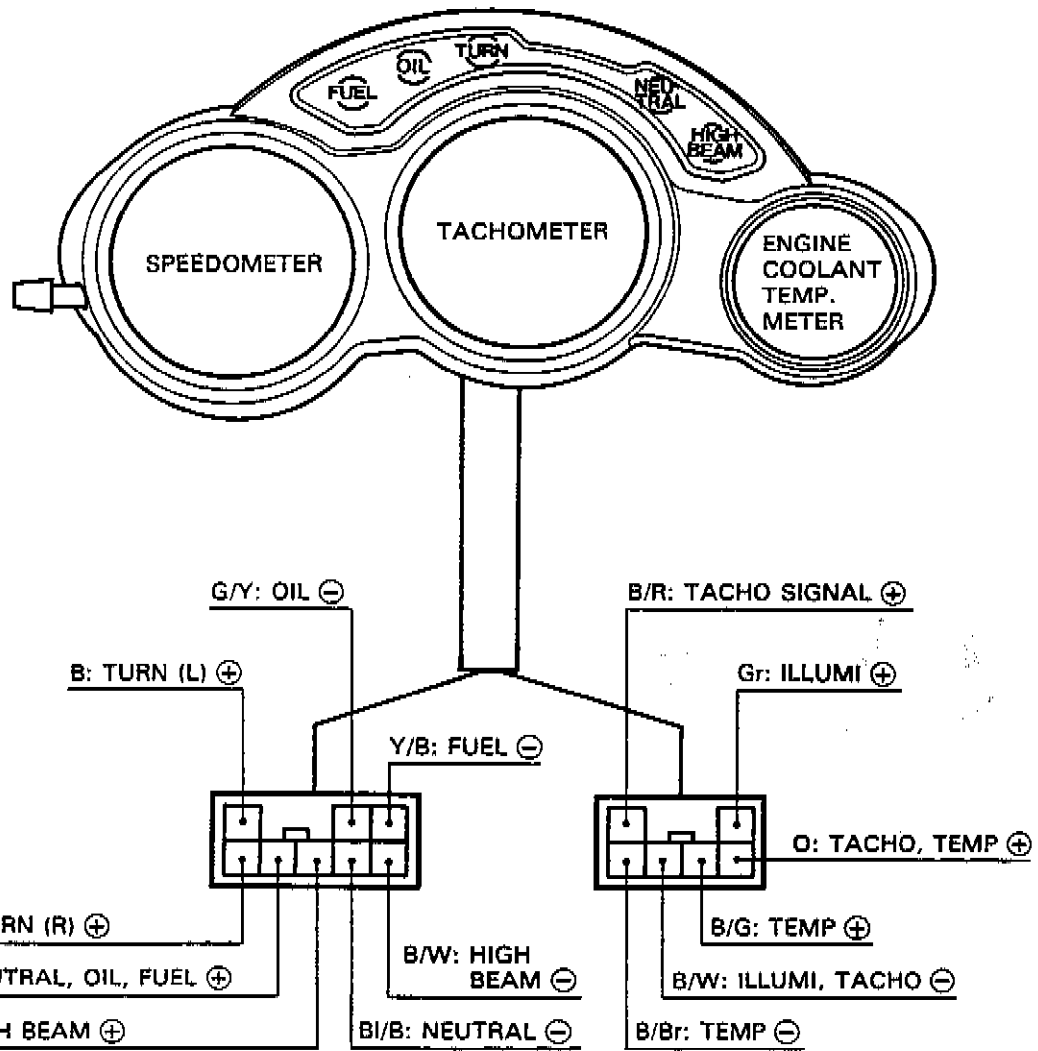
09900-25002: Pocket tester

Tester knob indication: X 1Ω range

NOTE:

When making this test, it is not necessary to remove the combination meter.

6-23 ELECTRICAL SYSTEM



ITEM	⊕ Probe of tester to:	⊖ Probe of tester to:
OIL	O	G/Y
TURN (L)	B	Lg
TACHO SIGNAL	B/R	B/W
HIGH BEAM	Y	B/W
TURN (R)	Lg	B
NEUTRAL	O	BI/B
ILLUMI	Gr	B/W
TEMP	O	B/Br
TEMP	O	B/G
TACHO	O	B/W
FUEL	O	Y/B

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

ENGINE COOLANT TEMPERATURE METER

INSPECTION

As the coil spring is installed on the needle shaft of the engine coolant temperature meter, the needle is forcibly back to the original position when ignition switch is turned OFF. To test the engine coolant temperature meter two different checks may be used. The first, and simplest test will tell if the meter is operating but will not indicate the meters accuracy throughout the range.

To perform this test, remove the service lid on the lower cowl and disconnect the B/G lead wire of the engine coolant temperature meter from the engine coolant temperature gauge. Connect a jumper wire between B/G wire coming from the main wiring harness and engine ground. With the ignition switch turned on, the engine coolant temperature meter should indicate "H".

B/G: Black with Green tracer

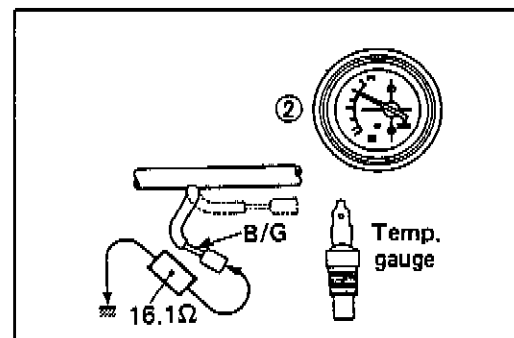
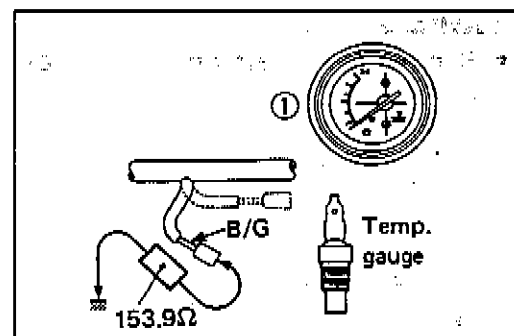
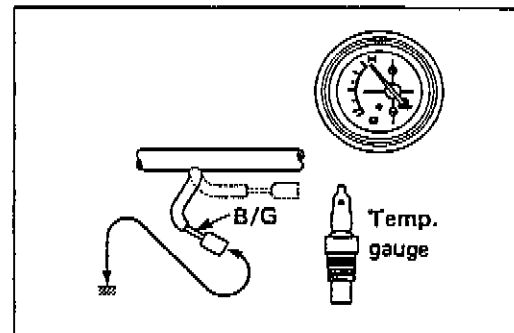
The second test will check the accuracy of the meter in the "H" and "C" positions.

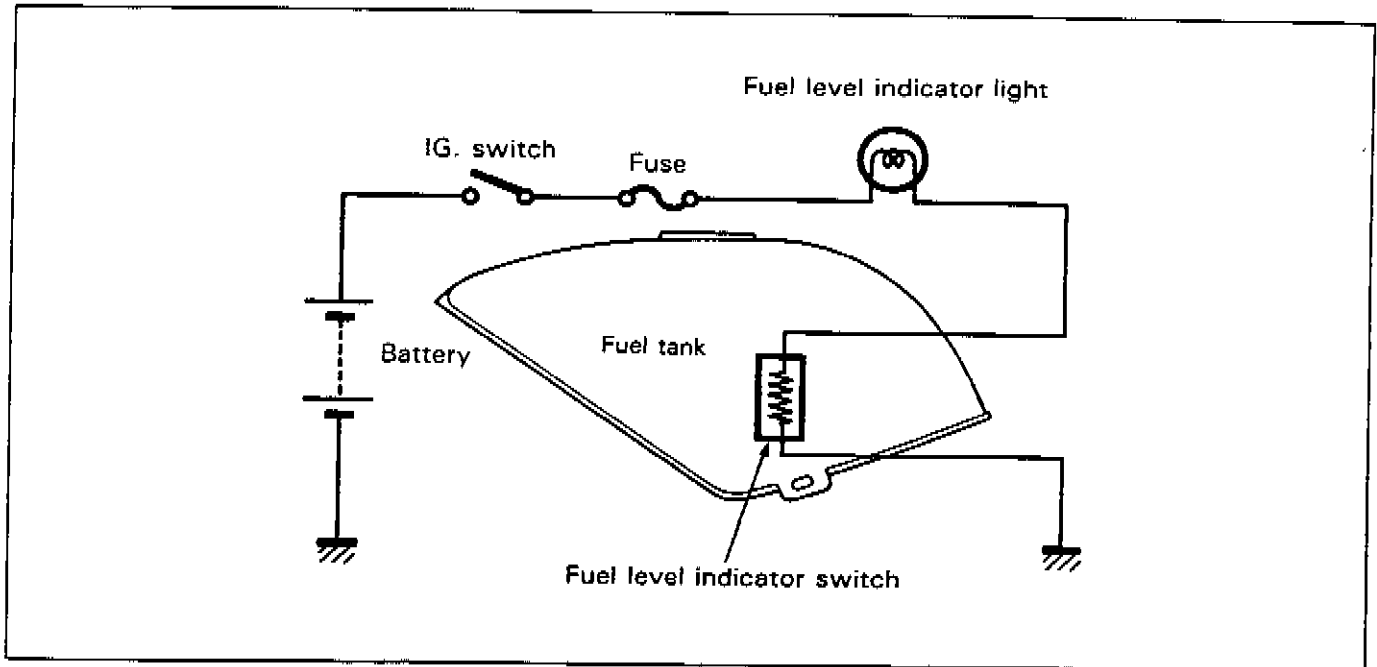
Connect a 153.9-ohm resistor between the B/G lead wire of the engine coolant temperature meter and engine ground. The engine coolant temperature meter is normal if its pointer indicates the ① position when the specified voltage is applied to the circuit and if its pointer indicates the ② position when the resistor is changed to 16.1 ohms. If either one or both indications are abnormal, replace the engine coolant temperature meter with a new one.

The relation between the position of the engine coolant temperature meter and resistance is shown in the following table.

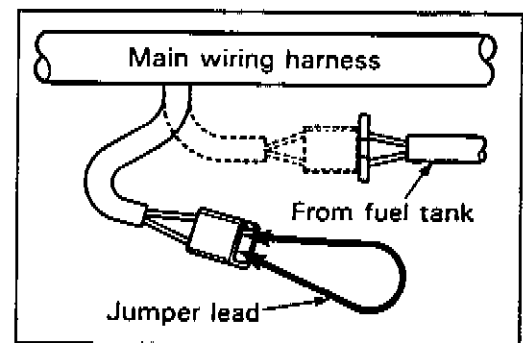
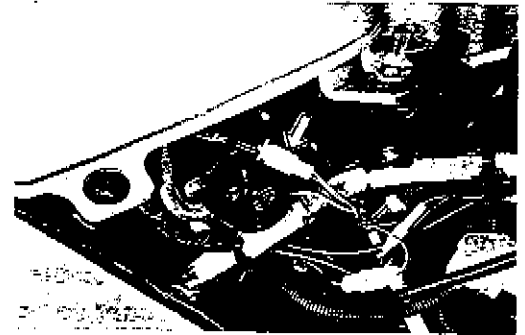
POSITION	RESISTANCE
①	153.9 Ω
②	16.1 Ω

For inspecting the engine coolant temperature gauge, refer to page 5-9.

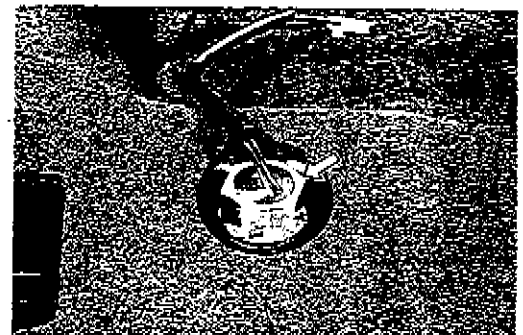


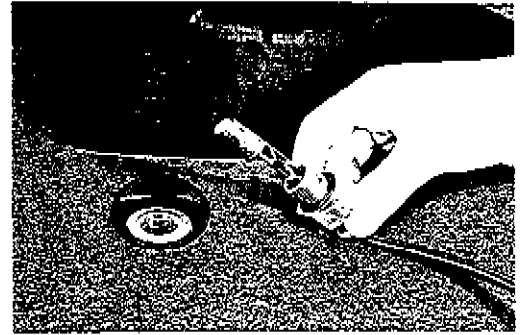
6-25 ELECTRICAL SYSTEM**FUEL LEVEL INDICATOR****INSPECTION**

- Remove the seats and frame cover assembly. (Refer to page 7-5.)
- With the engine has started, disconnect the two lead wires going into the fuel level indicator switch, connect the lead wires from the main wiring harness with a jumper lead and check whether the fuel level indicator light is ON. If a "LIGHT" is indicated, the circuit of fuel level indicator light is in good condition. If the fuel level indicator light does not light, replace the indicator bulb or repair the circuit connection. If the bulb is in good condition, the level indicator switch may be faulty, replace the indicator switch with a new one or inspect the fuel level indicator switch.

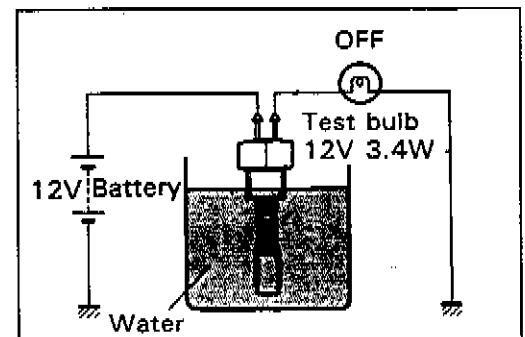
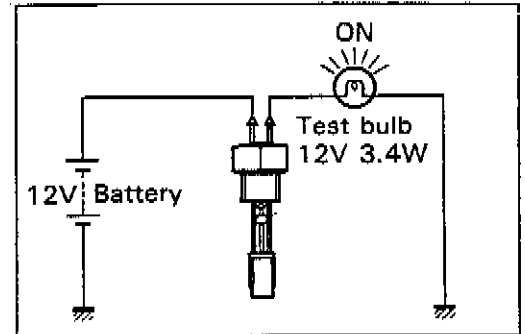


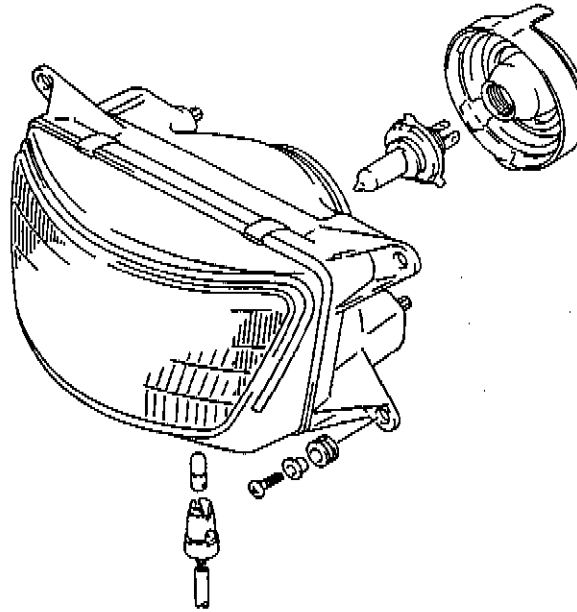
- Remove the fuel tank. (Refer to page 4-5.)
- Remove the fuel level indicator switch from the fuel tank.



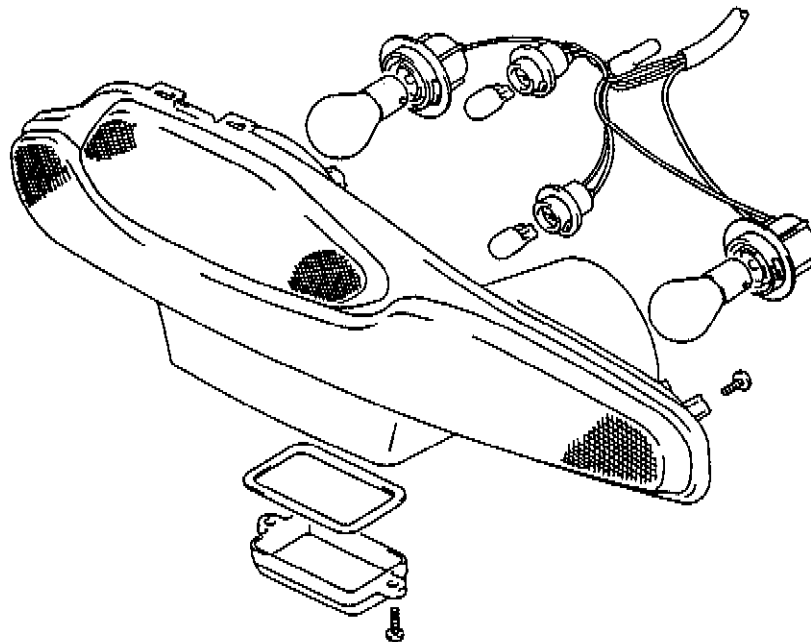


- Connect 12V battery to the fuel level indicator switch and ground through a 3.4W bulb. The bulb should light up after several seconds if the switch is in good condition.
- When the switch is immersed in water under the above condition, the bulb should go out. If the bulb remains lit, replace the fuel level indicator switch.

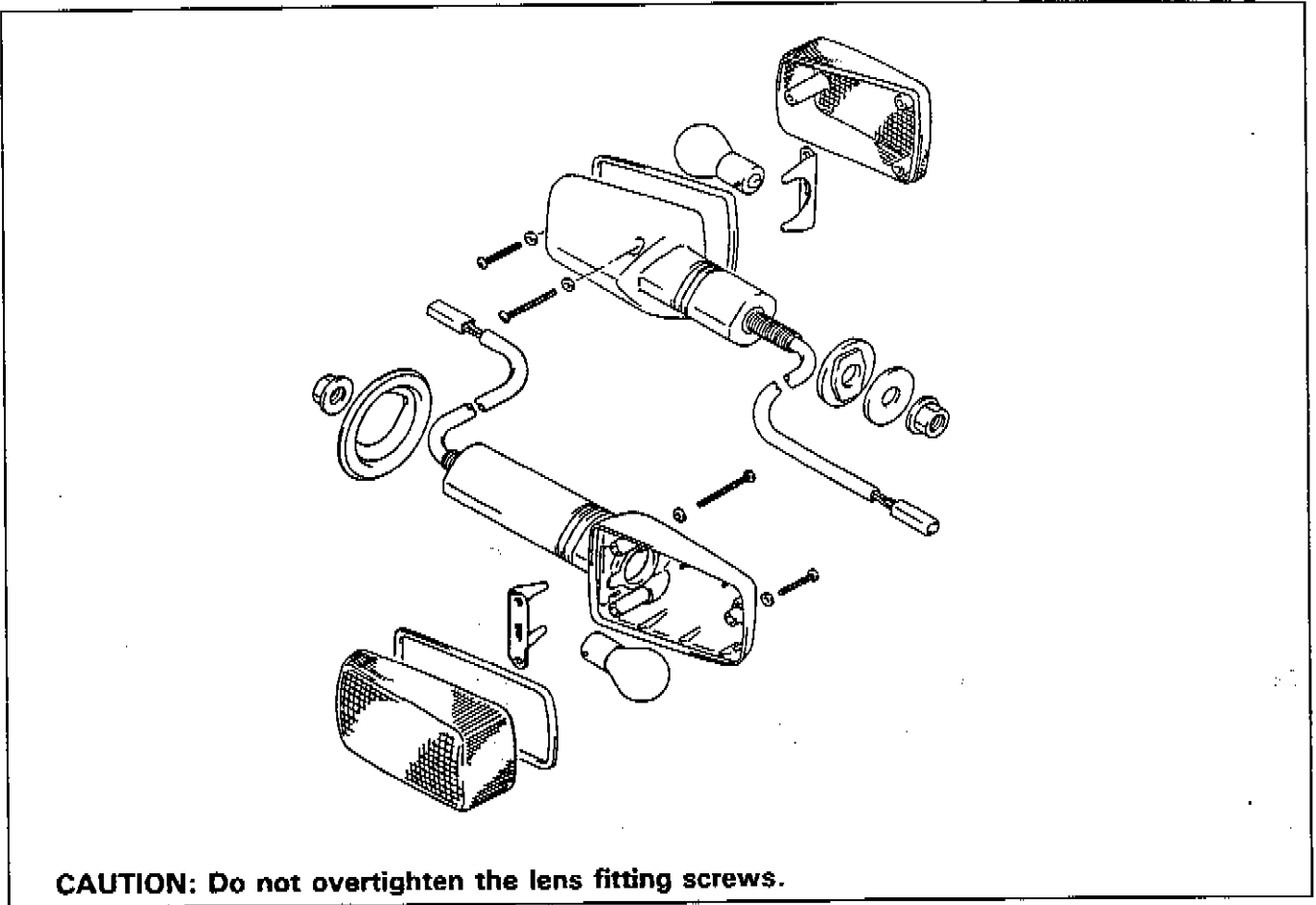


6-27 ELECTRICAL SYSTEM**LAMPS
HEADLIGHT****NOTE:**

Adjust the headlight, both vertical and horizontal, after reassembling.

TAIL/BRAKE LIGHT

TURN SIGNAL LIGHT



CAUTION: Do not overtighten the lens fitting screws.

SWITCHES

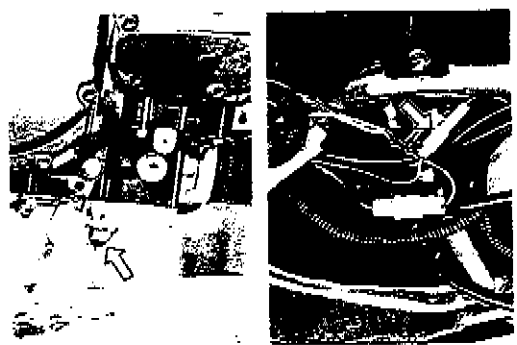
Inspect each switch for continuity with the pocket tester referring to the WIRING DIAGRAM. If any abnormality is found, replace the respective switch assemblies with new ones. (Refer to the chapter 8 for wiring diagram.)

09900-25002: Pocket tester
 Tester knob indication: X 1Ω range

OIL PRESSURE SWITCH

- Continuity, when engine is stopped.
- No continuity, when engine is running.

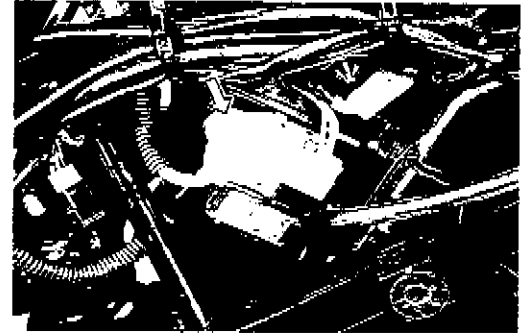
	Black or Green/Yellow	Ground
ON	○ — ○	○ — ○
OFF		



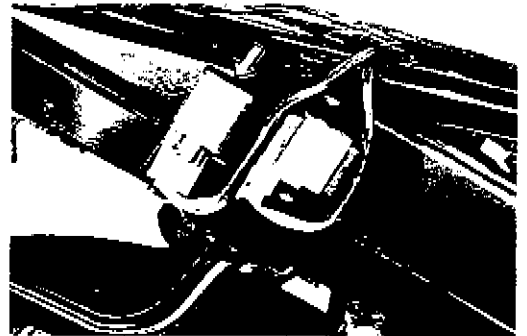
NOTE:
 Before inspecting the oil pressure switch, check if the engine oil level is enough.

6-29 ELECTRICAL SYSTEM**RELAY****STARTER RELAY**

The starter relay is located behind the left frame cover. (Refer to page 6-18 for details.)

**SIDE-STAND RELAY**

The side-stand relay is located behind the right frame cover. (Refer to page 6-21 for details.)

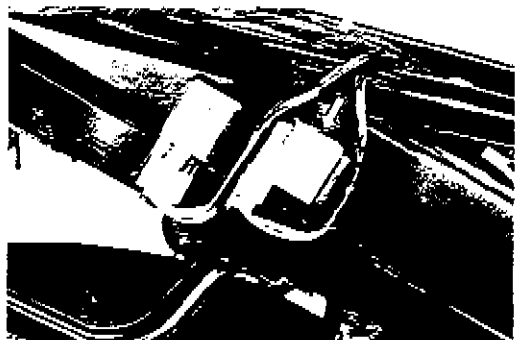
**TURN SIGNAL RELAY**

The turn signal relay is located behind the right frame cover. If the turn signal light does not light. Inspect the bulb or repair the circuit connection.

If the bulb and circuit connection checked are correct, the turn signal relay may be faulty, replace it with a new one.

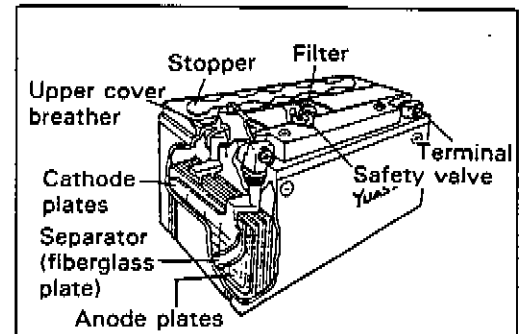
NOTE:

Be sure that the battery used is in fully-charged condition.



BATTERY SPECIFICATIONS

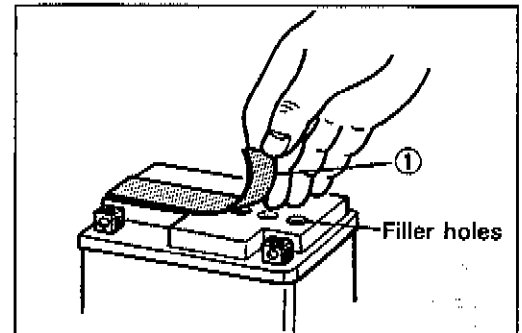
Type designation	YTX9-BS
Capacity	12V, 28.8 kC (8 Ah)/10HR
Standard electrolyte S.G.	1.320 at 20°C (68°F)



INITIAL CHARGING

Filling electrolyte

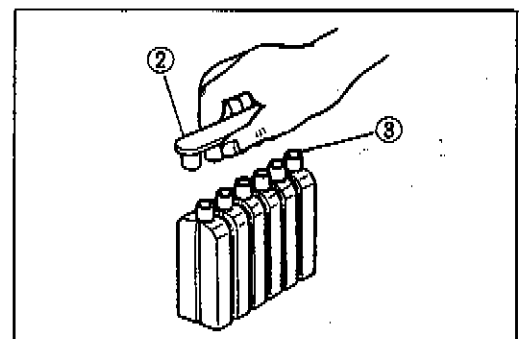
- Remove the aluminum tape ① sealing the battery electrolyte filler holes.



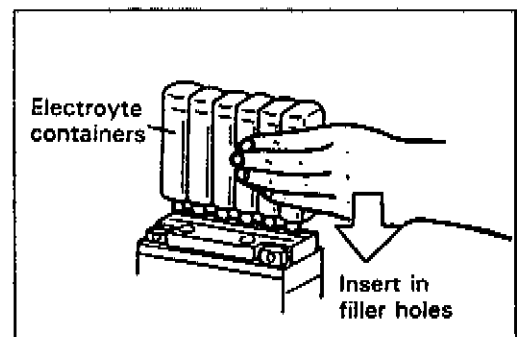
- Remove the caps ②.

NOTE:

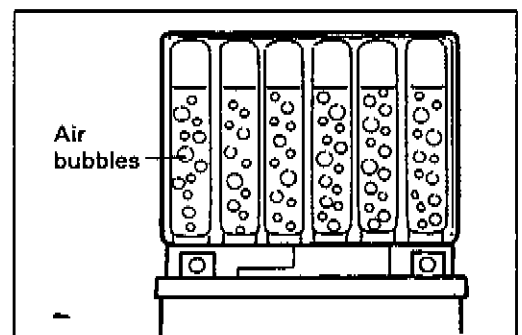
- After filling the electrolyte completely, use the removed cap ② as the sealed caps of battery-filler holes.
- Do not remove or pierce the sealed areas ③ of the electrolyte container.



- Insert the nozzles of the electrolyte container into the battery's electrolyte filler holes, holding the container firmly so that it does not fall. Take precaution not to allow any of the fluid to spill.



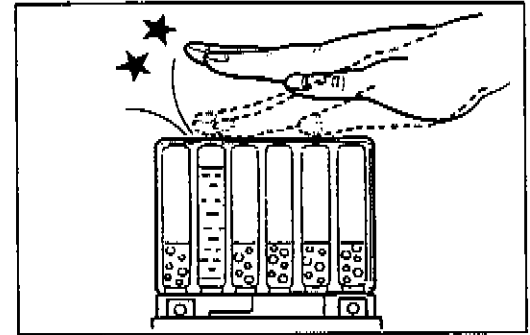
- Make sure air bubbles are coming up each electrolyte container, and leave in this position for about more than 20 minutes.



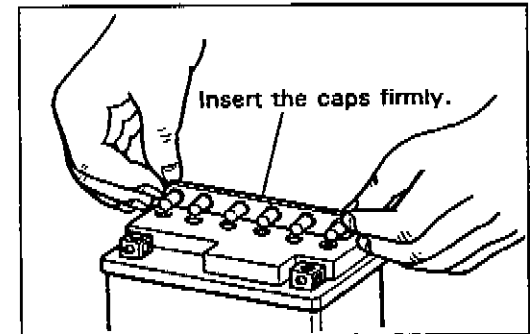
6-31 ELECTRICAL SYSTEM

NOTE:

If no air bubbles are coming up from a filler port, tap the bottom of the two or three times.
Never remove the container from the battery.

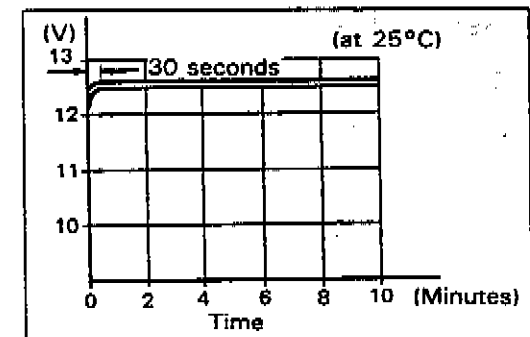


- After confirming that the electrolyte has entered the battery completely, remove the electrolyte containers from the battery. Wait for around 20 minutes.
- Insert the caps into the filler holes, pressing in firmly so that the top of the caps do not protrude above the upper surface of the battery's top cover.



CAUTION:

- * Never use anything except the specified battery.
- * Once install the caps to the battery; do not remove the caps.
- Using SUZUKI pocket tester, measure the battery voltage. The tester should indicate more than 12.5–12.6V (DC) as shown in the Fig. If the battery voltage is lower than the specification, charge the battery with a battery charger. (Refer to the recharging operation.)



NOTE:

Initial charging for a new battery is recommended if two years have elapsed since the date of manufacture.

SERVICING

Visually inspect the surface of the battery container. If any signs of cracking or electrolyte leakage from the sides of the battery have occurred, replace the battery with a new one. If the battery terminals are found to be coated with rust or an acidic white powdery substance, then this can be cleaned away with sandpaper.

RECHARGING OPERATION

- Using the pocket tester, check the battery voltage. If the voltage reading is less than the 12.0V (DC), recharge the battery with a battery charger.

CAUTION:

When recharging the battery, remove the battery from the motorcycle.

NOTE:

Do not remove the caps on the battery top while recharging.

Recharging time: 4A for one hour or 0.9A for 5 hours

CAUTION:

Be careful not to permit the charging current to exceed 4A at any time.

- After recharging, wait for more than 30 minutes and check the battery voltage with a pocket tester.
- If the battery voltage is less than the 12.5V, recharge the battery again.
- If battery voltage is still less than 12.5V, after recharging, replace the battery with a new one.
- When the motorcycle is not used for a long period, check the battery every 1 month to prevent the battery discharge.

