

Fig. 288

- |                    |                             |
|--------------------|-----------------------------|
| ① Point gap        | ③ Voltage adjusting screw   |
| ② Upper contact    | ④ Lock nut                  |
| ⑤ Armature         | ⑥ Coil                      |
| ⑦ Core gap         | ⑧ Point gap adjusting screw |
| ⑧ Yoke gap         | ⑨ Core gap adjusting screw  |
| ⑨ Spring           | ⑩ Contact set               |
| ⑩ Yoke             | ⑪ Lower contact             |
| ⑪ Adjusting spring |                             |



Fig. 290 ① Regulator

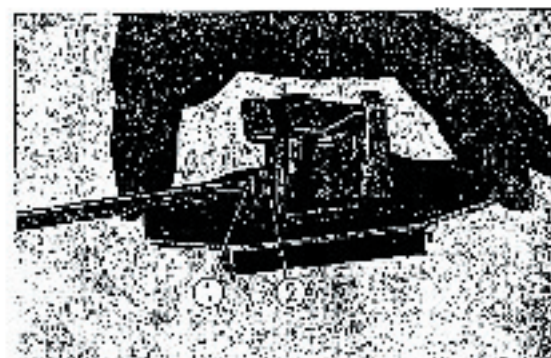


Fig. 291 ① Voltage adjusting screw  
② Lock nut

### Regulator

The regulator is a dual contact type. It maintains a constant voltage by placing the resistance circuit into the field coil circuit when the generating voltage rises to a certain value, and cutting the resistance circuit out when the voltage drops below a set limit.

#### A. Disassembly

1. Disconnect the leads at the connectors and loosen the two 6mm regulator mounting bolts.
2. Loosen the two screws and remove the regulator cover.

#### B. Inspection and Adjustment

##### Regulating voltage adjustment

1. To adjust for low charge current or low battery voltage, loosen the lock nut on the voltage adjusting screw and turn the adjusting screw clockwise. When the regulator is set too high, turn the adjusting screw counterclockwise.
2. Upon completing the adjustment, recheck regulator performance after installation.

##### Core gap adjustment

Measure the core gap with a feeler gauge. If it requires adjustment, loosen the core gap adjusting screw and move the point body up or down.

Standard core gap value:

0.6~1.0 mm (0.02~0.40 in.)

##### Point gap adjustment

Measure the point gap with a feeler gauge. If it requires adjustment, loosen the point gap adjusting screw and move the lower point up or down. Standard point gap value:

0.2 mm (0.008 in.)

Note: If the points are pitted or fouled, polish with a #500~#600 emery paper.

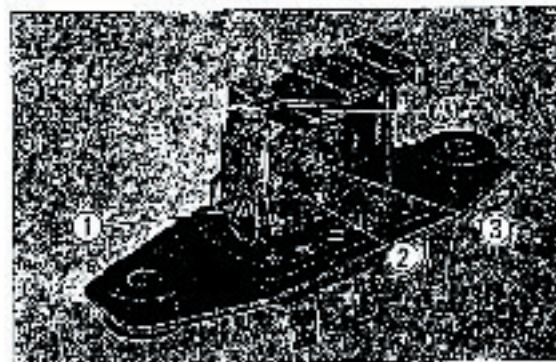


Fig. 292 ① Core gap  
② Point gap  
③ Core gap adjusting screw  
④ Point gap adjusting screw  
⑤ Lower point



## Silicon Rectifier

### Inspection

The condition of the silicon rectifier is tested by disconnecting the electrical connections and testing the rectifying function in both the normal and reverse directions. Continuity in the normal direction indicates good condition. Continuity in both directions indicates a defective rectifier.

#### Note:

1. Do not use a megger for the test as the high voltage will damage the silicon diodes.
2. Observe the polarity of the battery. Connecting the battery terminals in reverse will shorten the battery life as well as cause a large current to flow through the electrical system, causing damage to the silicon rectifier and destroying the wire harness.
3. Do not operate the generator at a high RPM with the "P" terminal (red/white cord from the magnetic switch) of the silicon rectifier disconnected. The high voltage generated may damage the silicon rectifier.
4. When charging the battery mounted on the motorcycle from an external source with a high charge rate such as a "quick charge", the silicon rectifier wiring should be disconnected at the coupler to prevent damage.

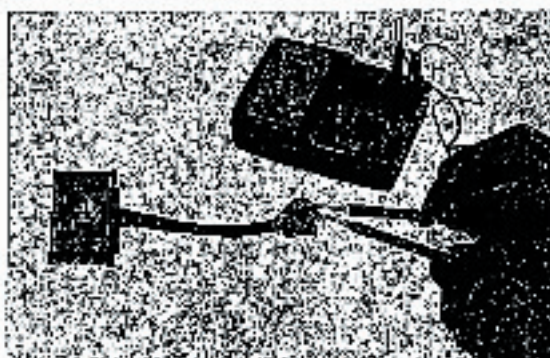


Fig. 293 Silicon rectifier inspection

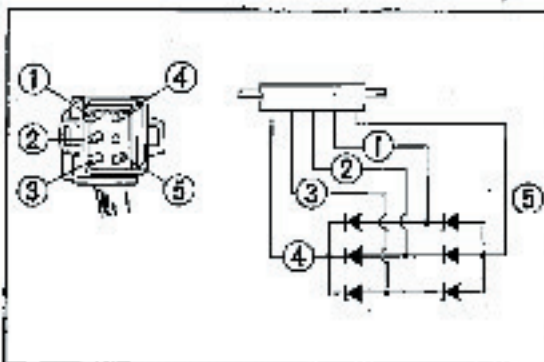


Fig. 294 (1) (2) (3) Yellow  
 (4) Yellow/White  
 (5) Green

#### 4. STARTING SYSTEM

The starter is a device which converts the electrical energy of the battery to the mechanical energy to start the engine. The starting circuit consists of a push button switch mounted on the right side of the handlebar which, when the starter button is pressed, energizes the starter magnetic switch and closes the starter circuit contacts. This permits approximately 120A of current to flow from the battery to the starting motor, which then rotates the engine to perform the starting.

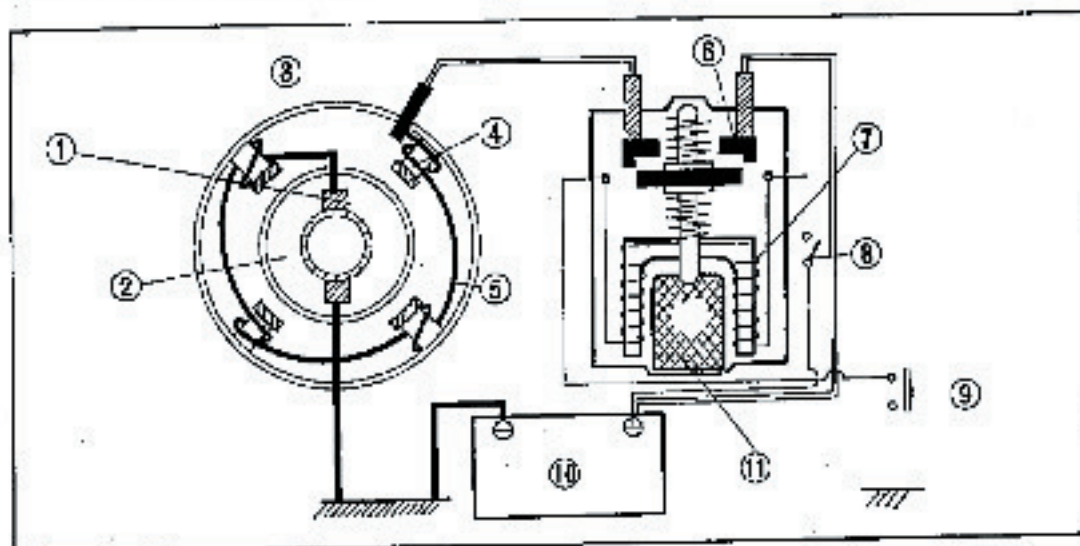


Fig. 295 Starting Circuit

- |                  |                           |                  |
|------------------|---------------------------|------------------|
| ① Brush          | ⑥ Field coil              | ⑨ Starter button |
| ② Armature       | ⑦ Starter magnetic switch | ⑩ Battery        |
| ③ Starting motor | ⑧ Electromagnet           | ⑪ Plunger        |
| ④ Pole           | ⑤ Ignition switch         |                  |

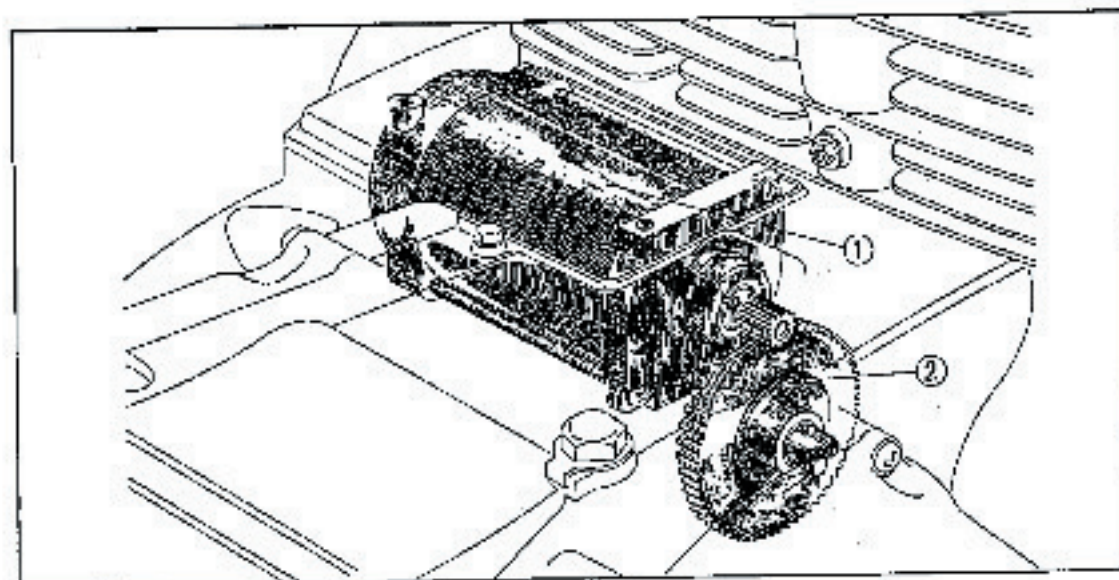


Fig. 296 Starting motor installation

- |                  |                          |
|------------------|--------------------------|
| ① Starting motor | ② Starter reduction gear |
|------------------|--------------------------|



### Starting Motor

The starting motor is mounted on the crankcase behind the cylinder and drives the crankshaft through the starting clutch.

#### Specifications

Rated voltage	12 V
Rated output	0.6 KW
Rated operation	Continuous for 30 seconds

	Without load	With load
Voltage	11 V	9.5 V
Amperage	35 A	120 A
Torque	---	0.19 kg-m (0.98 ft.-lb.)
Revolution	11000~ 20000 rpm	8200 rpm

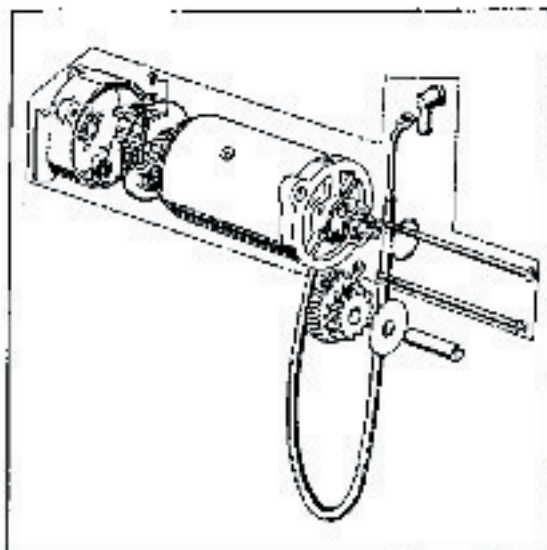


Fig. 297 Starting motor disassembly drawing

#### A. Disassembly

1. Disconnect the starting motor cable at the magnetic switch.
2. Remove the starting motor cover, left crankcase cover and loosen the two 6mm starting motor mounting bolts.
3. The starting motor can now be pulled out.
4. Loosen the two 6mm screws and remove the starting motor side cover.



Fig. 298 ① Magnetic switch  
 ② Starting motor cable



Fig. 295 ① Starting motor  
 ② 6mm bolts

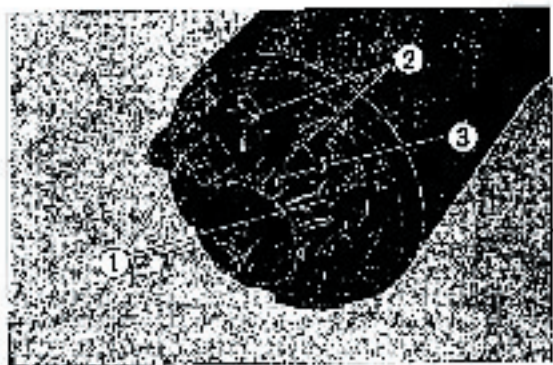


Fig. 800 ① Carbon brush  
② Springs  
③ Commutator

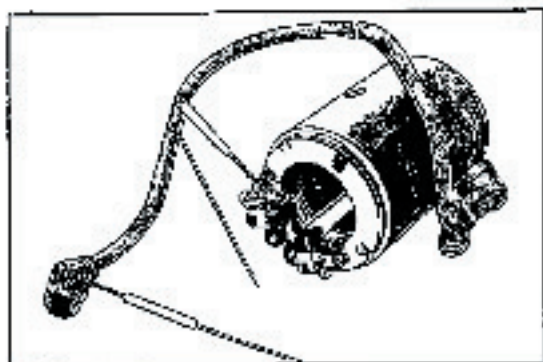


Fig. 801 Stator coil inspection

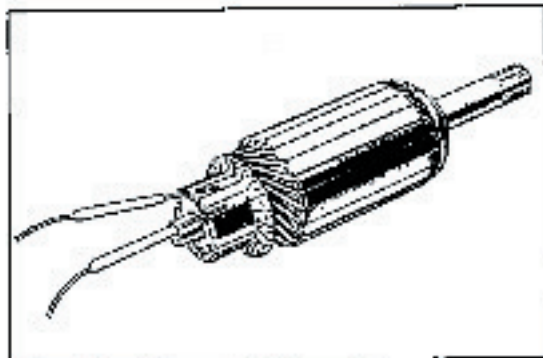


Fig. 802 Armature coil inspection

### B. Inspection

#### 1. Carbon brush inspection

Worn carbon brush, pitted or rough contact surface and weakened brush spring will cause starting difficulty, therefore, they should be replaced.

#### 2. Commutator cleaning

Dirty commutator will give poor starting motor performance.

The commutator surface should be polished with a fine grade emery paper and completely washed before reassembly.

#### 3. Stator coil inspection

Check continuity between the brush wired to the stator coil and the starting motor cable. Lack of continuity indicates an open stator coil and should be replaced.

#### 4. Armature coil inspection

A grounded armature coil will render the starting motor inoperative.

Perform a continuity test between the commutator and the core. A continuity condition indicates a grounded stator coil and should be replaced.



### Starter Magnetic Switch

The starting motor requires a current of approximately 100 A to operate. To minimize resistance, a large cable is used for wiring. A switch with heavy duty contacts is required. Sparking across the contacts will result, as well as resistance depending upon the contact pressure, when the contacts are opened suddenly to shut off the flow of large current. To cope with these conditions, a magnetic switch is used separately which is operated electrically by a small current through a push button starter switch.

### Inspection

1. Primary coil continuity test.  
If there is no continuity, the primary coil is open.
  - If a clicking noise is heard when a 12V battery is connected to the two leads of the coil, the primary coil is satisfactory.
2. After long use, the magnetic switch contacts will become pitted or burnt from the large current which flows across it, and gradually build up resistance which may prevent the current flow.  
Connect 12V to the primary coil leads of the magnetic switch. If there is no continuity across the switch contacts, the switch is defective.

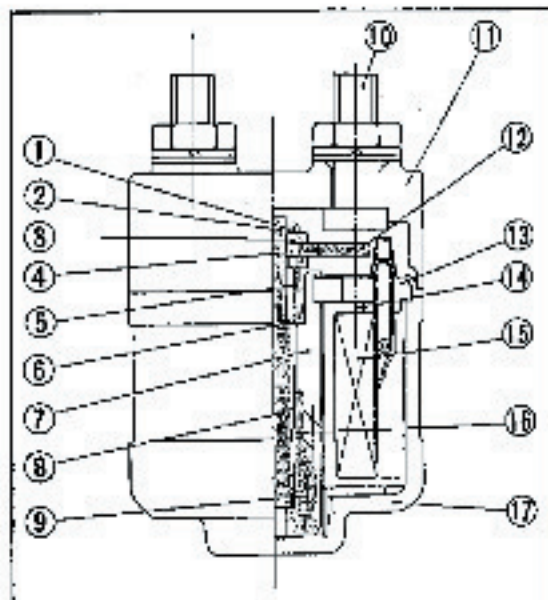


Fig. 300

- |                  |                 |
|------------------|-----------------|
| ① Stopper        | ⑭ Contact bolt  |
| ② Stopper holder | ⑮ Case          |
| ③ Washer         | ⑯ Contact plate |
| ④ Roller A       | ⑰ Yoke          |
| ⑤ Contact spring | ⑱ Coil bobbin   |
| ⑥ Flat washer    | ⑳ Coil complete |
| ⑦ Plunger holder | ㉑ Return spring |
| ⑧ Plunger shaft  | ㉒ Body          |
| ⑨ Plunger        |                 |

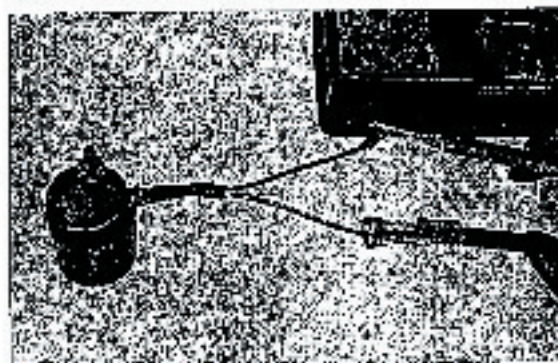


Fig. 304 Primary coil continuity test



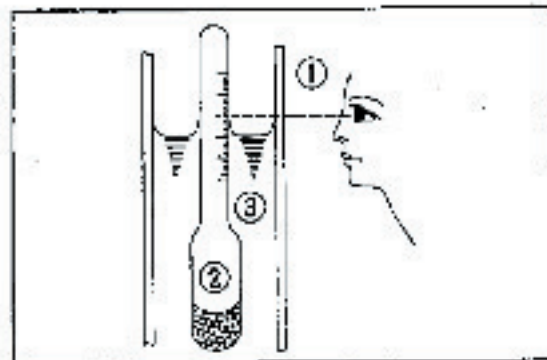


Fig. 306 ① Eye level. ② Electrolyte  
③ Hydrometer

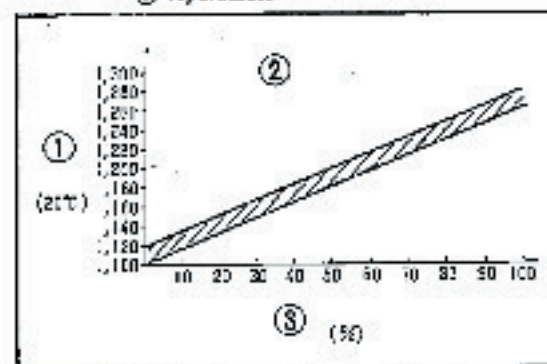


Fig. 306 ① Specific gravity  
② Relation between specific gravity  
③ Residual charge (%)

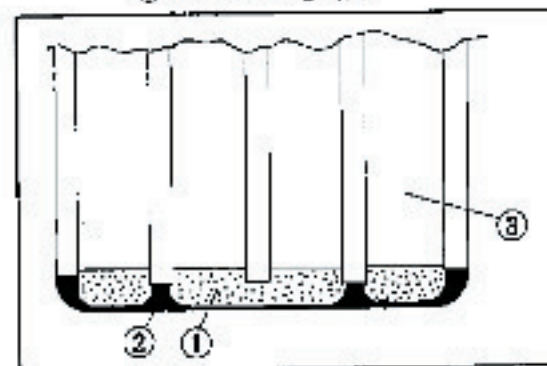


Fig. 307 ① Sediment. ② Plates  
③ Battery paste

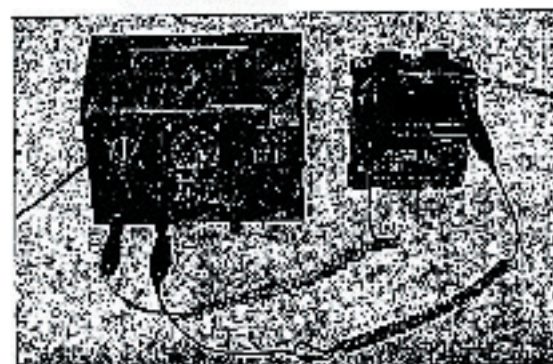


Fig. 308 Charger hookup

## Battery

### A. Specification

Type	12N 12A-4A-1
Voltage	12V
Capacity	12AH

### B. Specific gravity measurement

Battery electrolyte is measured with a bulb type hydrometer. When the specific gravity is below 1.200 (at 27°C), the battery should be recharged.

When making a reading, the hydrometer should be held vertical with the electrolyte liquid level, held at the eye level and the value on the floating scale read at the point where the liquid separates from the stem of the float.

### C. Inspection and replenishment

1. Electrolyte in each battery cell should be inspected every three months or 1,500 miles, and distilled water added to bring the level to the upper mark whenever the electrolyte level is below the level mark.
2. Whenever there is rapid lowering of the electrolyte level, the charging system should be inspected.
3. Periodically measure the specific gravity. After adding distilled water, allow the battery to be charged and the electrolyte sufficiently agitated before making the measurement.
4. Primary battery troubles are due to corrosion around the connectors and terminals causing poor contact, separation of the battery paste, and sulfation. A battery which is left in a discharged condition for a long period will have lead sulfate formed on the plates and recharging will not restore it to its original condition. Battery inspection should be performed periodically and thoroughly.

#### Note:

When sediment has formed at the bottom as shown in Fig. 307, the battery should be replaced.

### D. Battery charging

#### (Caution)

1. Refrain from charging the battery at a fast rate (quick charge) as it shortens battery life. When rapid charging is necessary, limit the charging rate to a maximum of 2.0A.
2. Hydrogen gas is generated during the charging process, therefore, keep fire away.
3. After battery charging is completed, wash the battery with water to remove spilled electrolyte. Apply grease to the terminals.

Date of Issue: July 20, 1977

© HONDA MOTOR CO., LTD., 1977



## 5. ELECTRICAL EQUIPMENT

### 1. Main switch inspection

With the switch in both the ON and OFF positions, check to see that the continuity conditions in the chart below are satisfied. The switch is defective if there is no continuity where specified, or if there is continuity where not specified.

		BAT	IG	TL <sub>L</sub>	TL <sub>R</sub>
Color of cords		Red	Black	Brown/white	Brown
Key position	OFF				
	1	○	○	○	○
	2	○			○

### 2. Front stop switch inspection

Apply tester lead probes to the terminals of the front stop switch cords (black, green/yellow), operate brake lever and check for continuity.

- Check the lever free play 2~5 mm (0.08~0.2 in.).

The stop light should come on when the brake lever travels beyond the lever free play.

### 3. Rear stop switch inspection

After connecting the stop switch spring, apply the tester lead probes to the switch terminals (green/yellow, black cords) and check for continuity. When the brake pedal is depressed 20 mm (0.8 in.) at the front end of the pedal, the stop light should come on at this point.

#### Adjustment

If the stop light is late in coming on, turn the adjuster nut clockwise, and if too early, turn counterclockwise.

### 4. Horn Inspection

- Check for continuity across the horn lead terminals.
- An alternate method is to connect the horn to a fully charged 12 V battery and check its operation.

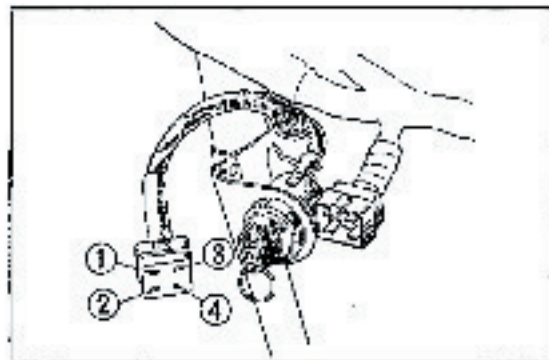


Fig. 308 ① Black ② Brown  
③ Brown/white ④ Red



Fig. 310 Front stop switch inspection  
① Front stop switch



Fig. 311 ① Rear stop switch adjuster nut



Fig. 312 Horn continuity test



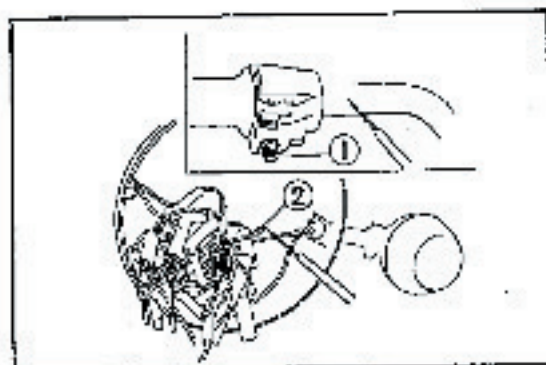


Fig. 313 ① Horn button  
② Light green cord

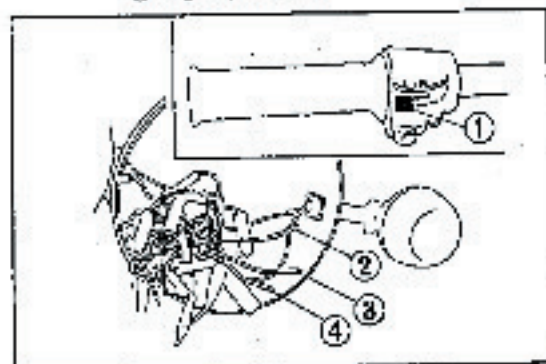


Fig. 314 ① Winker switch  
② Light blue cord  
③ Gray cord  
④ Orange cord

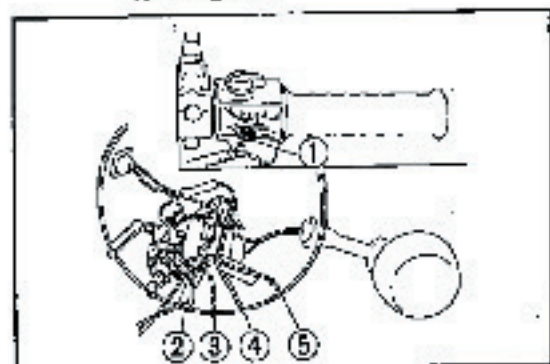


Fig. 315 ① Lighting switch  
② Black cord  
③ Blue cord  
④ Brown/white cord  
⑤ White cord

5. Horn button inspection

With the tester lead probes, contact the light green cord terminal within the headlight case and the handlebar, and then press the horn button to check for continuity. If continuity exists, the horn button is satisfactory.

6. Winker switch inspection.

Disconnect the winker switch wiring within the headlight case. Check continuity between the gray cord terminal and the orange cord terminal (left winker), and between the gray cord terminal and light blue cord terminal (right winker) of the winker switch. Continuity for the respective tests should exist according to the switch connections shown in the table below.

Knob	Blue cord	Gray cord	Orange cord
R	○—	○	
OFF (center)			
L		○—	○

7. Lighting switch inspection.

Using a tester inspect for broken wires and defective contact between the respective switch cords. Continuity between the different cords should exist in accordance with the switching position table shown below. If continuity exists where not indicated the switch is defective.

Cord color		IG	HB	TL	LB
		Black	Blue	Brown/white	White
ON	H	○—	○	○	
	P	○—		○	
	L	○—		○—	○
OFF					

8. Emergency switch and starter switch inspection.

Inspect for broken wires and defective contact between the respective switch cords. Continuity between the different cords should exist in accordance with the switching position table shown below. If continuity exists where not indicated, the switch is defective.

Emergency switch		
Cord color	Black	Black/white
ON	○	○
OFF		

Starter switch		
Cord color		Yellow/red
ON	○	○
OFF		

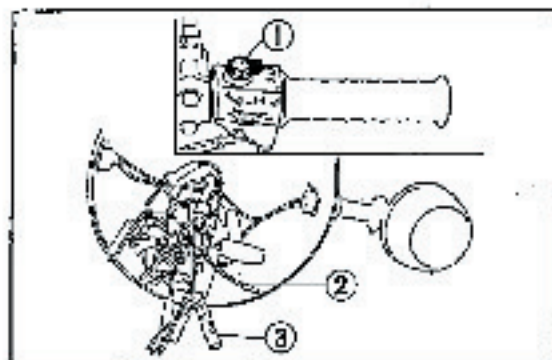


Fig. 818 ① Emergency switch ③ Black/white  
② Black

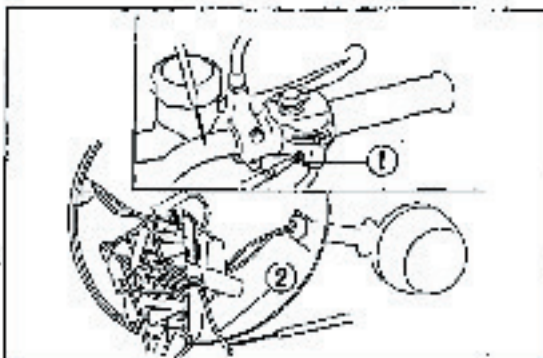


Fig. 817 ① Starter switch  
② Yellow/red

9. Oil pressure switch inspection

Lubricating oil is supplied under pressure of 4~6 kg/cm<sup>2</sup> (56.8~85.3 lbs/in.<sup>2</sup>) by the oil pump to various parts of the engine. When the oil pressure drops, the oil supply becomes low. The oil system is designed so that when the oil pressure drops below 0.5 kg/cm<sup>2</sup> (7 lbs/in.<sup>2</sup>), the oil pressure switch operates and the warning lamp comes on.

Without starting the engine and with the main switch on, check the oil pressure switch for continuity. If there is continuity, the switch is satisfactory. It is normal for the warning lamp to go out when the engine is started.

If the warning lamp does not go out after starting, and the pressure switch is satisfactory, the oil system should be inspected.



Fig. 818 ① Oil pressure switch



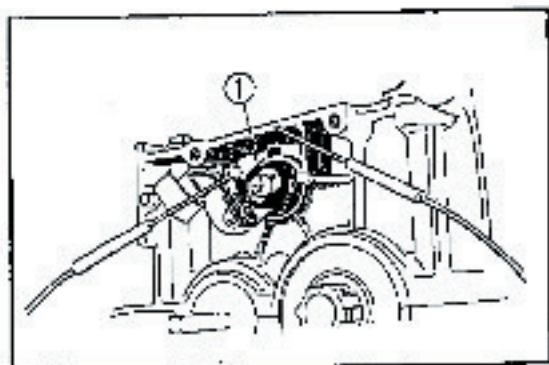


Fig. 310 Neutral switch inspection

① Neutral switch

### 10. Neutral switch inspection

The neutral switch is mounted on the left side of the upper crankcase. When the transmission is in neutral, the switch is grounded and the neutral pilot lamp comes on. Place the transmission in neutral, remove the left crankcase cover and check the continuity of the neutral switch. The switch is satisfactory if there is continuity.