

#### 4. STARTING SYSTEM

The starting motor is located on the upper crankcase. It is of a drip- and dust-proof type.

The torque developed by the motor is transmitted through reduction gears, driven gear, and overrunning clutch to the primary shaft.

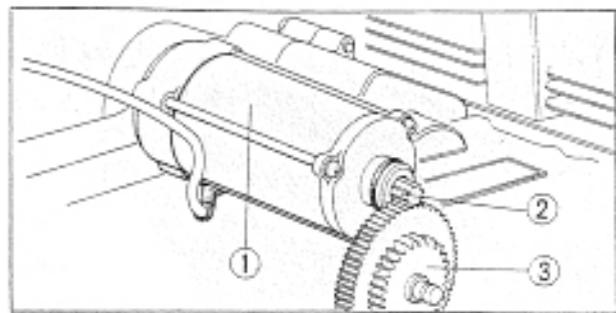


Fig. 5-22 ① Starting motor  
② Starting motor shaft gear  
③ Starting motor reduction gear

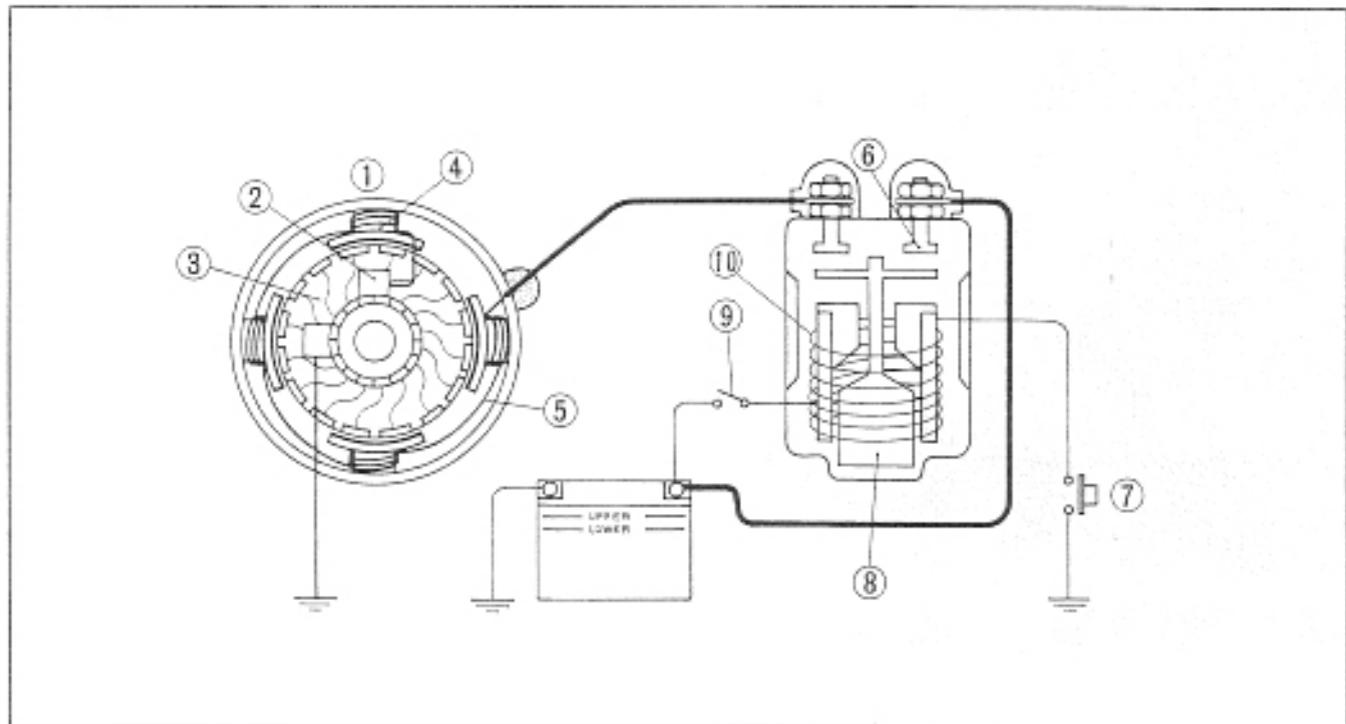


Fig. 5-23

- |                  |                   |                  |
|------------------|-------------------|------------------|
| ① Starting motor | ④ Poles           | ⑦ Starter switch |
| ② Brushes        | ⑤ Field coil      | ⑧ Plunger        |
| ③ Armature       | ⑥ Magnetic switch | ⑩ Main switch    |

#### Starting motor

##### Specifications and characteristics

Rated output voltage : 12V

Rated output : 0.6kW

Rated operating time : 30sec., (continuous)

	On-load	No-load	When locked
Voltage (V)	11	8	5
Amperage (A)	35	120	250
Torque (kg-cm) (lb-ft)	--	0.11 (0.795)	0.26 (1.880)
Speed (rpm)	1,100-22,000	3,200	--

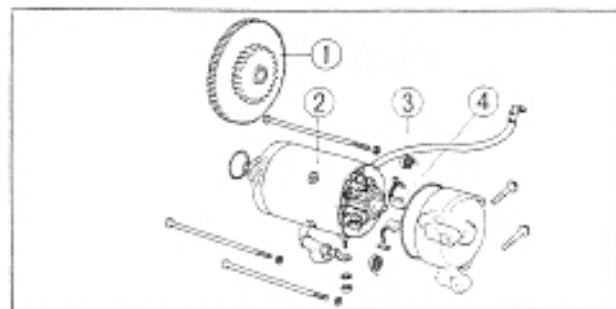


Fig. 5-24 ① Starting motor reduction gear  
② Starting motor  
③ Brush spring  
④ Brush

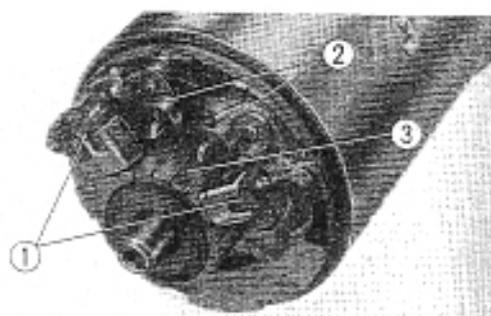


Fig. 5-25 ① Carbon brushes ② Brush springs ③ Commutator

### Inspection

#### 1. Checking carbon brushes

Check the brushes and springs for condition. Brushes which are excessively worn and not seating properly on commutator and weakened brush spring may cause the starting motor inoperative. Replace the brush or spring if out of the specifications below.

	Standard value	Repair limit
Carbon brush length, mm (in.)	12~13 (0.47~0.51)	5.5 (0.22) max.
Brush spring tension, kg (lbs)	0.5~0.6 (1.1~1.3)	0.4 (0.8) max.

#### 2. Cleaning commutator

Check the commutator surface for condition. Polish the surface with a fine emery cloth if dirty, and thoroughly wipe it clean before reassembly.

#### 3. Checking field coil for continuity

Check for continuity between the brushes connected to the field coil and starting motor cable. If there is no continuity, it is an indication that the field coil has an open circuit.

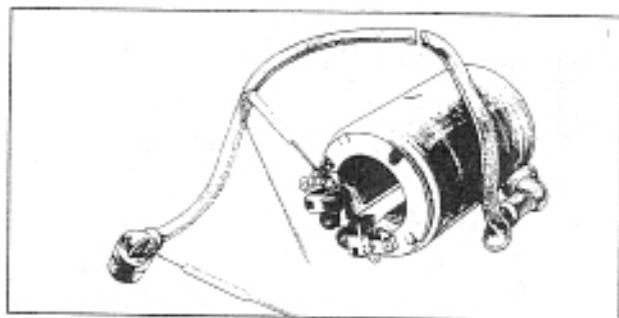


Fig. 5-26 Checking field coil for continuity

#### 4. Checking armature coil for continuity

The armature coil with a short-circuit will result in a failure of the starting motor to operate properly. Check for continuity between the commutator surface and core. If there is any continuity, the stator coil is grounded.

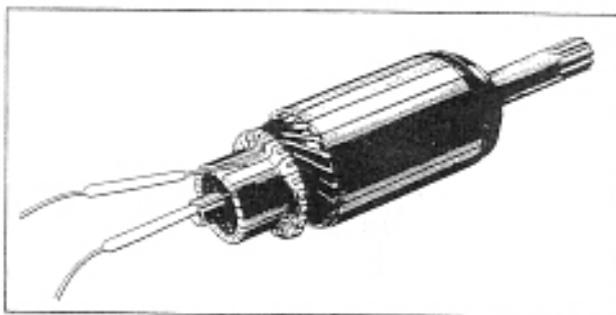


Fig. 5-27 Checking armature coil for continuity

### Starting magnetic switch

The starting motor draws a large amount of current of approx. 100A when cranking the engine.

This is why a large-capacity electromagnetic switch which is electrically remote-controlled by a separate switch (starter switch) is used.

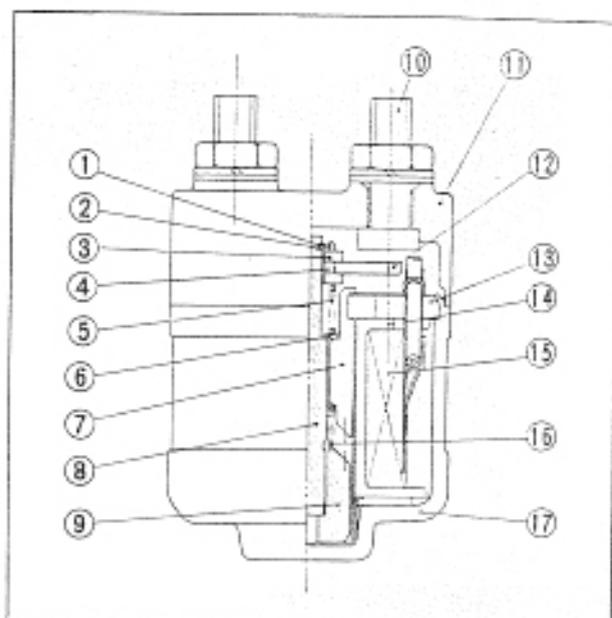


Fig. 5-28

① Stopper	⑩ Contact bolt
② Stopper holder	⑪ Case
③ Washer	⑫ Contact plate
④ Roller A	⑬ Yoke
⑤ Contact spring	⑭ Coil bobbin
⑥ Flat washer	⑮ Coil complete
⑦ Plunger holder	⑯ Return spring
⑧ Plunger shaft	⑰ Body
⑨ Plunger	

### Inspection

#### 1. Checking primary coil for continuity

If there is no continuity, the primary coil has an open-circuit. The coil is in good condition when a clicking sound is heard by applying a 12V battery across the two leads of the coil.

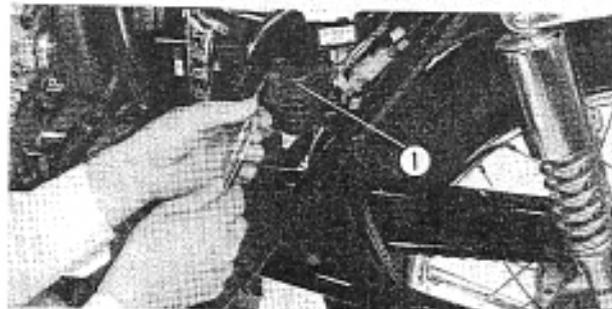


Fig. 5-29 ① Starting magnetic switch

#### 2. After a long period of use, the contact points of the magnetic switch will become pitted or burnt due to a large amount of current, and, in the worst cases, the current will not flow due to increased resistance.

Check for continuity across the two leads of the primary coil by connecting a 12V battery with the switch turned on. If there is no continuity, it is an indication that the starting magnetic switch is at fault.

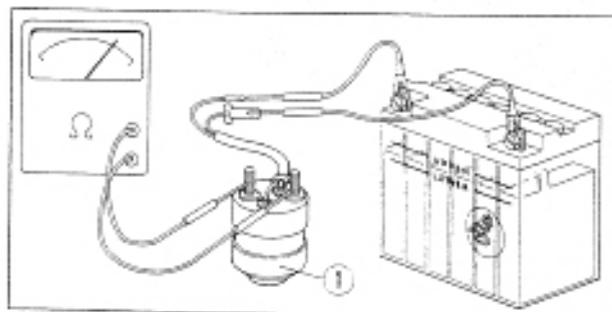


Fig. 5-30 ① Starting magnetic switch

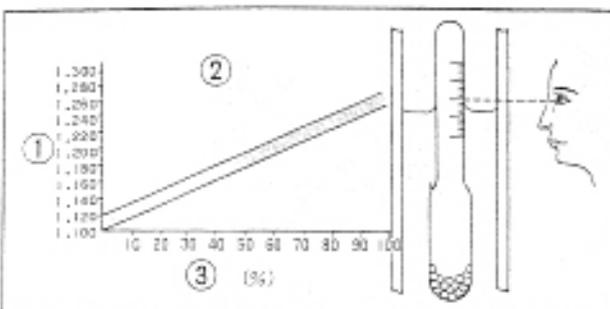


Fig. 5-31 ① Specific gravity  
② Relation between specific gravity and residual charge  
③ Residual charge

## Battery

### Specifications

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

Measuring specific gravity of electrolyte.

Using a hydrometer, measure the specific gravity of the electrolyte in each cell. When the reading taken is below 1.200 at 20°C or 68°F, recharge the battery. When reading the hydrometer, hold the gauge barrel vertically as shown.

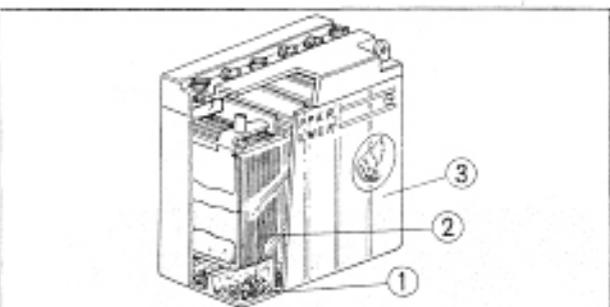


Fig. 5-32 ① Sediment  
② Plates  
③ Battery case

### Inspection

1. Check each battery cell for correct electrolyte level semi-monthly or monthly. If the level is low, add distilled water up to the upper level.
2. When the electrolyte decreases rapidly, check the charging system.
3. Periodically check each cell for correct specific gravity. After adding distilled water, charge the battery by operating the engine, and then check the specific gravity.
4. Check the battery terminals for corrosion. Check for separated battery paste and for sulfation. These defects are the symptoms of a run-down battery. Periodical inspection is always necessary, especially the battery is kept in storage for an extended period of time.

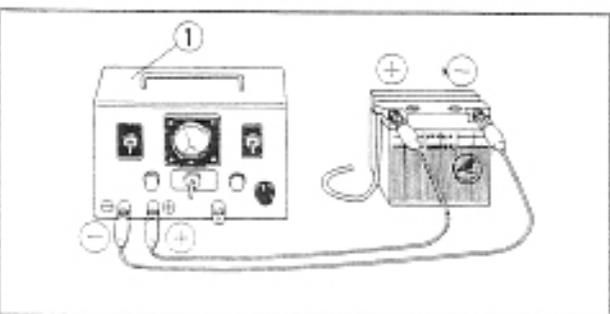


Fig. 5-33 ① Battery charger

### Charging battery

1. It is advisable that the battery be charged as slowly as possible since quick charging is the sure way of shortening the battery service life. Where the battery has to be charged quickly the charging current should be held to 2.0A maximum.
2. Hydrogen gas is produced during charging operation. Keep away from fire.
3. After charging, flush the battery clean and grease the terminals.

## 5. ELECTRICAL EQUIPMENTS

### Main switch

With the key in either ON or OFF, check the main switch for continuity. If there is continuity in the circuit (○—○), the switch is in good condition. If there is no continuity or if there is any continuity in other circuits shown below, the switch is at fault.

		BAT	IG	TL1	TL2
Cord color		Red	Black	Brown/white	Brown
Key Position	OFF				
	I	○—○	○—○	○—○	
	II	○—○			○—○

### Front stop switch

Put the tester probes on the terminals of the front stop switch cords (black, green/yellow). Operate the brake lever to check for continuity. The stop light should come on with the brake lever is moved 5~10 mm (0.2~0.4 in.) as measured at the tip of the lever.

#### NOTE:

Note that the lever play is 2~5 mm (0.08~0.2 in.) at the lever end.

### Rear stop switch

Put the tester probes on the terminals of the rear stop switch cords (green/yellow, black) to check for continuity. The rear stop light should come on when the rear brake pedal is depressed 20 mm (0.8 in.) as measured at the tip of the pedal. Adjust by means of the adjusting nut if necessary.

### Horn

Check for continuity between the horn cord terminals or check to make sure the horn sounds when it is connected to fully charged 12 V battery.

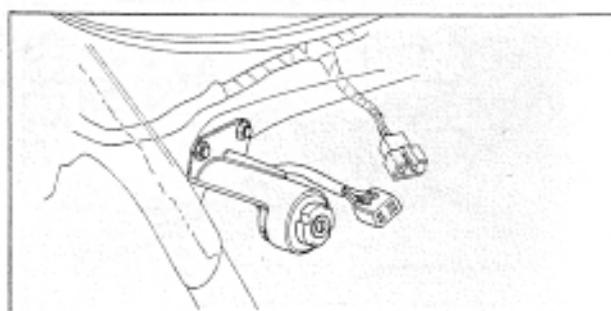


Fig. 5-34 Checking main switch

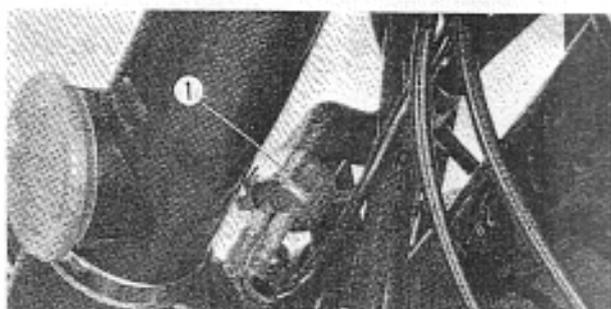


Fig. 5-35 ① Front stop switch



Fig. 5-36 ① Rear stop switch

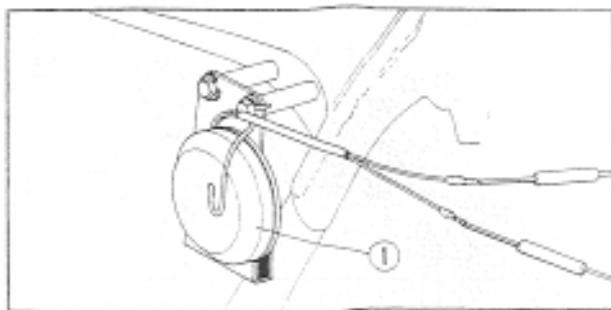


Fig. 5-37 ① Horn

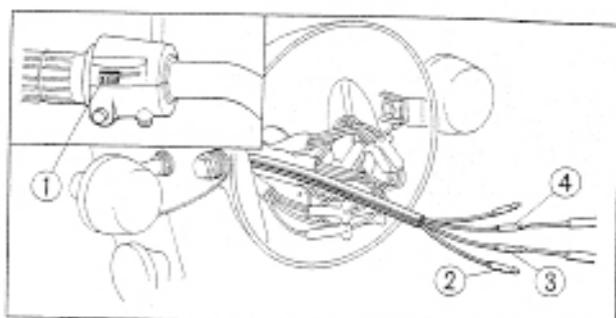


Fig. 5-38 ① Turn signal control switch  
② Light blue cord  
③ Gray cord  
④ Orange cord

### Turn signal control switch

Disconnect the cord of the turn signal control switch in the head light case. Check for continuity between the terminals of the gray cord and orange cord (left turn signal) and between those of the gray cord and light blue cord (right turn signal). The switch is in good condition if there is continuity in the circuits (○—○) shown below:

Knob Position	Cord color		
	Light blue	Gray	Orange
R	○—○	○—○	
OFF			
L		○—○	○—○

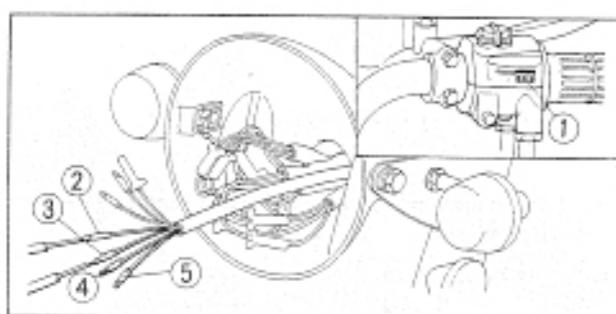


Fig. 5-39 ① Headlight control switch  
② Black cord ④ Brown, white cord  
③ Blue cord ⑤ White cord

### Head light control switch

Check for continuity between the respective terminals of the switch cords in the head light case.

The switch is in good condition if there is continuity in the circuits (○—○) with the switch selector knob set in each position.

Any continuity in other circuits shown below is the symptom of malfunction of the switch.

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

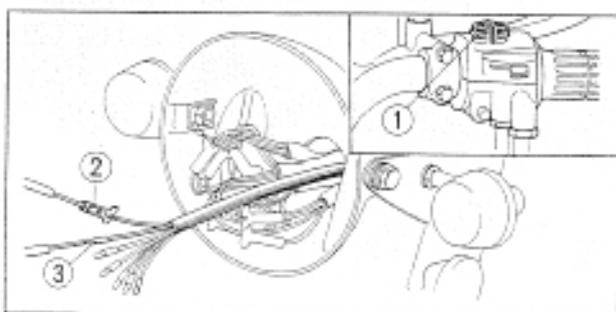


Fig. 5-40 ① Emergency switch  
② Black cord ③ White cord

### Emergency switch and starter switch

Check for continuity between the respective terminals of the switch cords in the head light case. The switch is normal if there is continuity as specified below (○—○) with the switch selector knob set in each position. Any continuity in other circuits shown below indicates malfunction of the switch.

#### Emergency switch

Cord color	Black	Black/white
RUN	○—○	○—○
OFF		

#### Starter switch

Cord color	Yellow/red	Body grounding
ON	○—○	○—○
OFF		

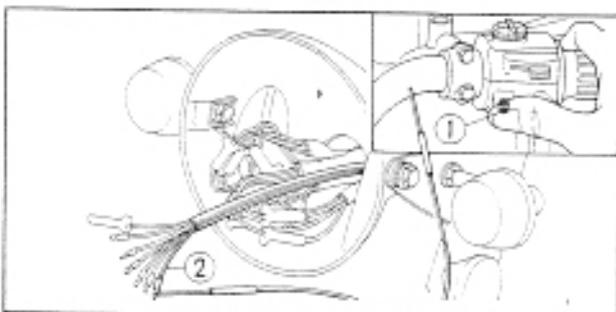


Fig. 5-41 ① Starter switch  
② Yellow, red cord

**Horn button**

Check for continuity making contact the tester lead probes respectively on the terminal of the light green cord in the head light case and on the handlebar with the horn button pushed. If there is continuity, the horn button is normal.

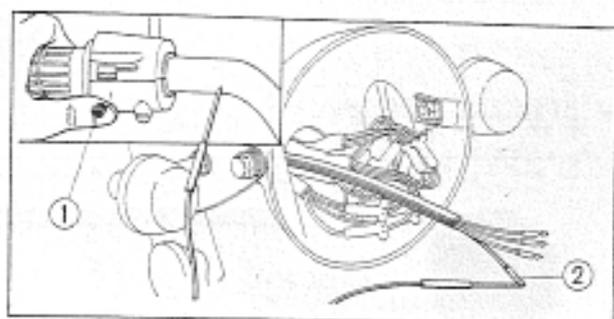


Fig. 5-42 ① Horn button  
② Light green cord

**Oil pressure control switch**

The oil pump supplies lubricating oil to the engine under a pressure of  $4.5 \text{ kg/cm}^2$  ( $64 \text{ lb/in}^2$ ). When the oil pressure drops below  $0.3 \text{ kg/cm}^2$  ( $4.3 \text{ lb/in}^2$ ), the oil pressure control switch operates and the warning lamp comes on, indicating the oil supply is insufficient. Check the oil pressure control switch located on the oil pump for continuity. The switch is normal if there is continuity. The oil pressure pilot lamp will come on when the main switch is turned on and should go out after the engine is started.

If the pilot lamp remains on with the engine started, and the pressure control switch in good condition, the cause of trouble is suspected in the hydraulic system. Locate and correct the trouble with the engine stopped.



Fig. 5-43 ① Oil pressure control switch

**Neutral switch**

The neutral switch is located on the left side of the crankcase. With the transmission gears in neutral, the neutral switch is grounded and the neutral pilot lamp comes on.

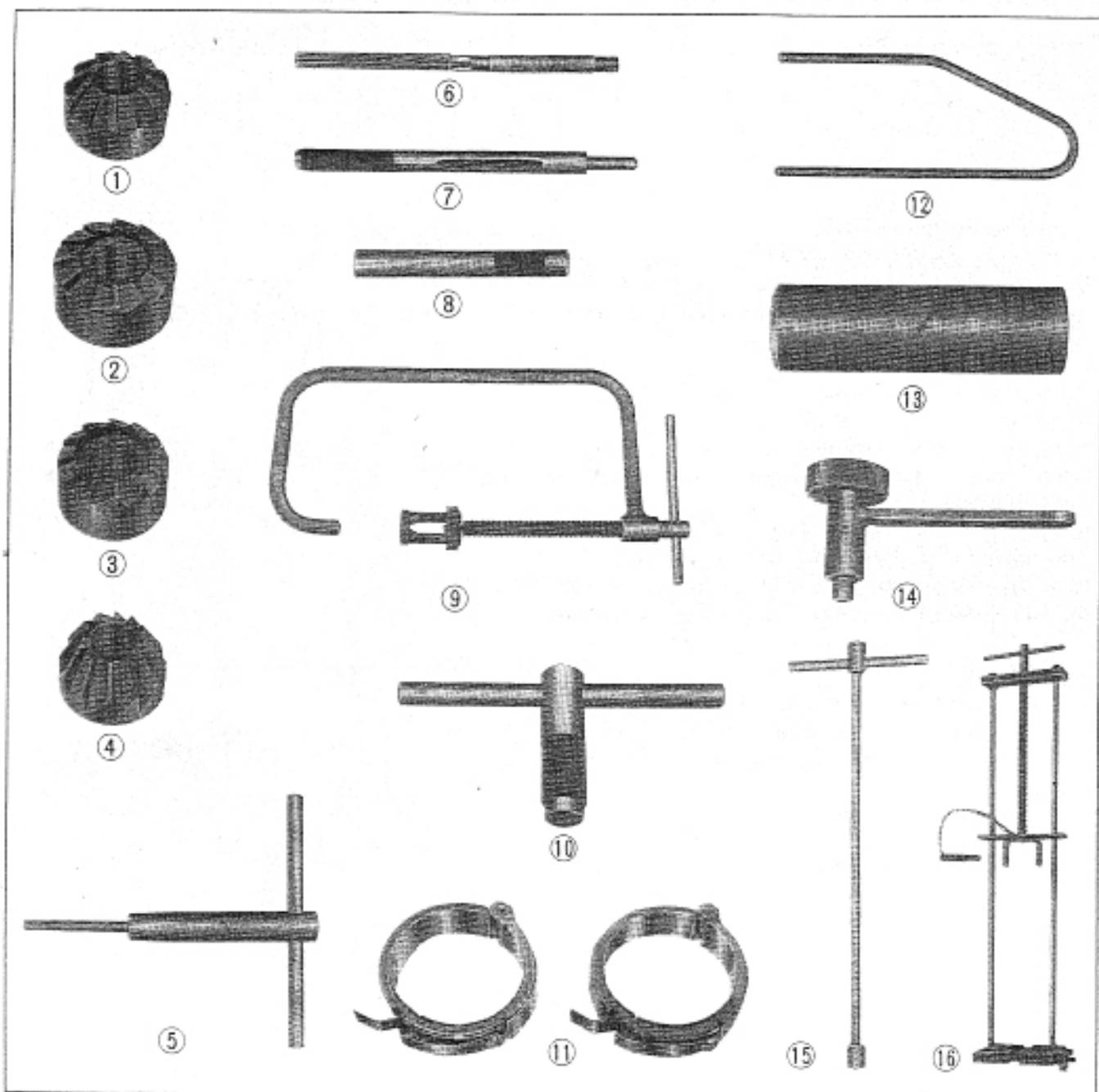
Place the transmission gears in neutral and remove the left crankcase cover. Check the neutral switch for continuity. The switch is normal if there is continuity.



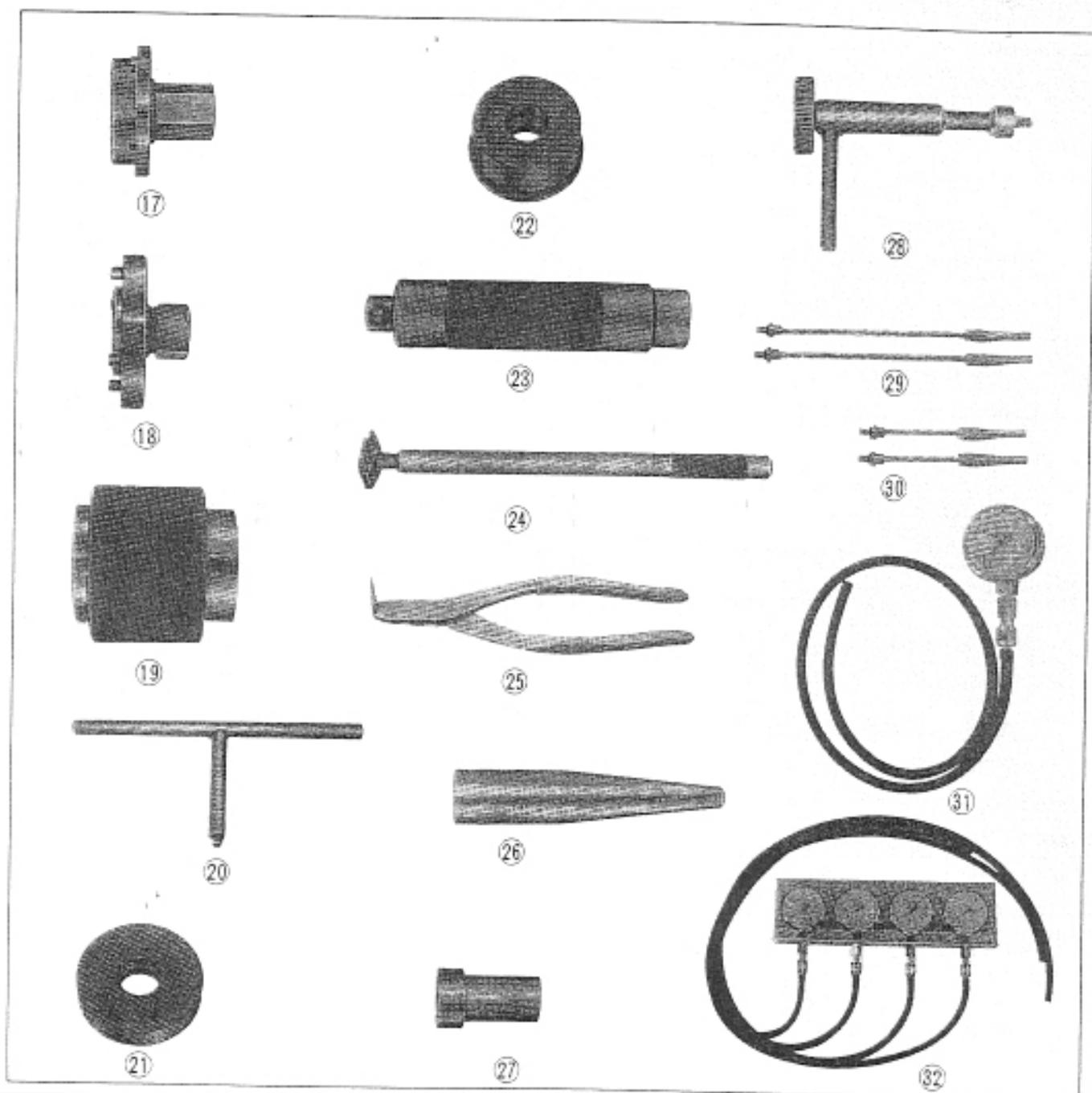
Fig. 5-44 ① Neutral switch

## VI. SERVICE DATA

## I. SPECIAL TOOLS



Ref. No.	Tool No.	Description	Ref. No.	Tool No.	Description
	07000-33300	CB 350 F Special tool set	⑧	07047-32901	Valve guide driver
	07000-33305	Valve seat cutter set (include No. 1-No. 8)	⑨	07031-32901	Valve lifter
①	07001-09802	Valve seat 90° cutter	⑩	07011-33301	Generator rotor puller
②	07003-09802	Intake valve seat flat cutter	⑪	07032-33301	Piston ring compressor (4 pcs)
③	07004-09802	Exhaust valve seat flat cutter	⑫	07033-33301	Piston base (4 pcs)
④	07006-09802	Valve seat interior cutter	⑬	07048-33305	Ball bearing attachment
⑤	07007-20001	Valve seat cutter holder	⑭	07081-00110	Tappet wrench set
⑥	07008-20002	Valve guide reamer	⑮	07078-32302	Box wrench 12 mm
⑦	07046-32901	Valve guide remover	⑯	07035-32901	Rear suspension service tool



Ref. No.	Tool No.	Description	Ref. No.	Tool No.	Description
Ⓐ	07088-32301	Front wheel retainer wrench	Ⓔ	07043-32305	Master piston slider
Ⓑ	07088-32901	Rear wheel retainer wrench		OPTION	
Ⓒ	07054-33301	Front fork oil seal driver	Ⓚ	07057-32302	Carburetor synchronization wrench
Ⓓ	07085-32301	Hollow set wrench 6 mm	Ⓛ	07068-30007	Vacuum gauge attachment A
Ⓔ	07048-33301	Bearing driver attachment	Ⓜ	07068-30012	Vacuum gauge attachment B
Ⓚ	07048-33310	Ball race driver attachment	Ⓨ	07064-30012	Vacuum gauge
Ⓛ	07048-61101	Driver handle	Ⓩ	07064-30001	Vacuum gauge set
Ⓜ	07048-33315	Ball race remover			
Ⓨ	07073-32301	Snap ring pliers			
Ⓩ	07043-32301	Piston cup guide			

## 2. MAINTENANCE SCHEDULE

MAINTENANCE SCHEDULE This maintenance schedule is based upon average riding conditions. Machines subjected to severe use, or ridden in unusually dusty areas, require more frequent servicing.	INITIAL SERVICE PERIOD 500 miles	REGULAR SERVICE PERIOD Perform at every indicated month or mileage interval, whichever occurs first.			
		1 month 500 miles	3 months 1,500 miles	6 months 3,000 miles	12 months 6,000 miles
Engine Oil—change.	●		○		
Oil Filter Element—replace.	●			○	
Oil Filter Screen—clean.					○
Spark Plug—clean and adjust gap.				○	
*Contact Points—check, and adjust gap.	●			○	
*Ignition Timing—check, and adjust if necessary.	●			○	
*Valve Tappet Clearance—check, and adjust if necessary.	●			○	
*Cam Chain Tension—adjust.	●			○	
Air Cleaner—clean.		(Clean more frequently if operated in dusty areas)		○	
Air Cleaner—replace.					○
Carburetors—check, and adjust if necessary.	●			○	
Throttle Operation—inspect cables, check, and adjust free play.	●			○	
Fuel Cock Filter Screen—clean.				○	
Fuel Lines—check.				○	
*Clutch—check operation, and adjust if necessary.	●			○	
Drive Chain—check, lubricate, and adjust if necessary.	●	○			
Brake Fluid Level—check, and add fluid if necessary.	●			○	
*Brake Shoes/Pads—inspect, and replace if worn.				○	
Brake Control Linkage—check linkage, and adjust free play if necessary.	●			○	
*Wheel Rims and Spokes—check. Tighten spokes and true wheels, if necessary.	●			○	
Tires—inspect and check air pressure.	●		○		
Front Fork Oil—drain and refill.	●				○
Front and Rear Suspension—check operation.	●			○	
Rear Fork Bushing—grease.				○	
*Steering Head Bearings—adjust.					○
Battery—check electrolyte level, and add water if necessary.	●		○		
Lighting Equipment—check and adjust if necessary.	●	○			
All Nuts, Bolts, and Fasteners—check security and tighten if necessary.	●	○			

Items marked \* should be serviced by an authorized Honda dealer, unless the owner has proper tools and is mechanically proficient. All other maintenance items are simple to perform and may be serviced by the owner.

## 3. TORQUE SPECIFICATIONS

## ENGINE

Tightening point	Thread dia. (mm)	Torque	
		kg-cm	lbs-ft
Crankcase and crankcase covers	6, P1.0	70-110	5.1-8.0
Cylinder head	8, P1.25	200 (Apply oil to the nuts before tightening)	14.5
Carburetor insulator-to-cylinder head	6, P1.0	70-110	5.1-8.0
Cam sprocket	7, P1.0	160-200	11.6-14.5
A-C generator rotor	10, P1.25	300-400	21.7-29.0
Primary drive gear	12, P1.25	300-400	21.7-29.0
Tappet adjusting nut	5, P0.5	70-110	5.1-8.0
Upper and lower crankcases	8, P1.25	220-260	15.2-18.9
Cylinder head cover	6, P1.0	70-110	5.1-8.0

## FRAME

Tightening point	Thread dia. (mm)	Torque	
		kg-cm	lbs-ft
Steering stem nut	24, P1.0	800-1,200	57.9-86.9
Fork top bridge to front forks	8, P1.25	180-230	13.1-16.7
Handlebar holder	8, P1.25	180-230	13.1-16.7
Front fork bottom bridge to front forks	8, P1.25	180-230	13.1-16.7
Spokes	—		
Front wheel	—	25-30	1.9-2.2
Rear wheel	—	20-25	1.5-1.9
Rear fork pivot bolt	14, P1.5	550-700	39.8-50.7
Front wheel axle nut	12, P1.5	450-550	32.6-39.8
Front fork axle holder	8, P1.25	180-230	13.1-16.7
Engine hanger bolt	10, P1.25	300-400	21.7-29.0
Rear wheel axle nut	16, P1.5	800-1,000	57.9-72.4
Final driven sprocket	10, P1.25	300-400	21.7-29.0
Brake arm	6, P1.0	80-100	5.9-7.3
Front and rear brake torque links	8, P1.25	180-230	13.1-16.7
Rear suspension	10, P1.25	300-400	21.7-29.0
Step bar	12, P1.25	450-550	32.6-39.8
Gear change pedal and kick arm	6, P1.0	80-100	5.9-7.3
Seat band	6, P1.0	80-100	5.9-7.3