

- Check spark plug for burnt condition. If abnormal, replace the plug as indicated below.

NGK	Nippon Denso	Remarks
BP 2HA	WBFP-UJL	If the standard plug is apt to get wet, re- place with this plug.
BP 4HA	W14FP-UJL	Standard
BP 5HA	W16FP-UJL	If the standard plug is apt to overheat, re- place with this plug.

- Tighten the spark plug in the cylinder head with the specified torque.

Spark plug tightening torque	2.5 – 3.0 kg-m (18.0 – 21.5 lb-ft)
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STEERING STEM

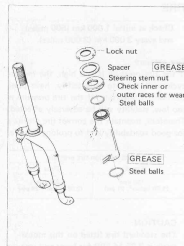
Check at initial 1 000 km (600 miles)
and every 3 000 km (2 000 miles)

Steering should be adjusted properly for smooth manipulation of handlebars and safe running. Too stiff steering prevents smooth manipulation of handlebars and too loose steering will cause the handlebars to vibrate. Check to see that there is no play in the front fork fitting.

If any play can be found, adjust the steering as follows:

- Support the motorcycle body and jack up the front wheel.
- Loosen the steering stem nut securing nut (A). Tighten the steering stem nut (B) using the special tool so that the front fork moves smoothly.

Steering stem nut wrench	09940-10122
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If any play is still found, inspect the following items and replace the affected parts, if necessary.

- Wear of the inner and outer races
- Wear or damage of steel balls
- Number of steel balls (upper 26 pcs lower 25 pcs)
- Distortion of steering stem



TIRE

Check at initial 1 000 km (600 miles) and every 3 000 km (2 000 miles)

Tire pressure

If the tire pressure is too high, the motorcycle will tend to ride stiffly, have poor traction. Conversely, if the tire pressure is too low, stability will be adversely affected. Therefore, maintain the correct tire pressure for good roadability and to prolong tire life.

Cold inflation tire pressure	
Front	Rear
150 kPa (11.90 kg/cm ² , 21 psi)	200 kPa (12.90 kg/cm ² , 28 psi)

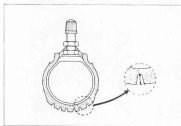
CAUTION:

The standard tire fitted on this motorcycle is 2.25-14 4PR for front and rear. The use of a tire other than the standard may cause handling instability. It is highly recommended to use a SUZUKI Genuine Tire.

Tire tread condition

Operating the motorcycle with the excessively worn tires will decrease riding stability and consequently invite a dangerous situation. It is highly recommended to replace the tire when the remaining depth of tire tread reaches the following specifications.

FRONT and REAR	1.6 mm (0.06 in)
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TRANSMISSION OIL

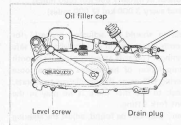
Change at initial 1 000 km (600 miles) and every 3 000 km (2 000 miles)

After a long period of use, the transmission oil qualities will deteriorate and quicken the wear of sliding and interlocking surfaces. Replace the transmission oil periodically following the procedure below.

- Start the engine to warm up the oil, this will facilitate draining of oil.
- Unscrew the oil filler cap and drain plug, and drain the oil completely.
- Tighten the drain plug.
- Supply a good quality SAE 20W/40 multi-grade motor oil.

Capacity	500 ml (0.50 US qt)
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- Check the oil level with the oil level screw.

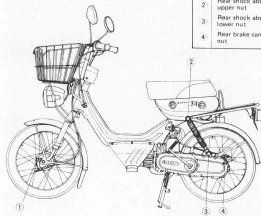


CHASSIS BOLTS AND NUTS

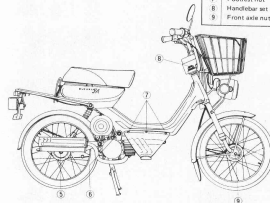
Retighten at initial 1 000 km (600 miles) and every 3 000 km (2 000 miles)

These bolts and nuts listed below are important safety parts. They must be retightened, as necessary, to the specified torque with a torque wrench.

No.	Description	Q'ty	kgm	lb-ft
1	Front brake cam lever nut	1	0.3 - 0.6	2.0 - 4.5
2	Rear shock absorber upper nut	1	2.0 - 3.0	14.5 - 21.5
3	Rear shock absorber lower nut	1	2.0 - 3.0	14.5 - 21.5
4	Rear brake cam lever nut	1	0.3 - 0.6	2.0 - 4.5



No.	Description	Q'ty	kgm	lb-ft
5	Rear axle nut	1	3.6 - 5.2	26.5 - 37.5
6	Engine moving nut	1	2.5 - 4.0	18.5 - 28.5
7	Fan nut	6	0.4 - 0.7	3.0 - 5.0
8	Handbrake set nut	1	9.5 - 12.0	68.5 - 86.5
9	Front axle nut	1	2.7 - 4.2	20.0 - 31.0



SERVICING PROCEDURE

CONTENTS

ENGINE REMOVAL/INSTALLATION	3- 2
CYLINDER HEAD, CYLINDER, PISTON	3- 3
KICK STARTER, LEFT COVER	3- 5
POWER TRANSMISSION	3- 6
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CRANKSHAFT	3-10
CARBURETOR	3-12
FLYWHEEL MAGNETO	3-13
CHASSIS ELECTRICAL	3-16
SWITCHES	3-20
STEERING	3-22
FRONT SUSPENSION	3-23
WHEELS AND BRAKES	3-24

ENGINE REMOVAL/INSTALLATION

Upper side

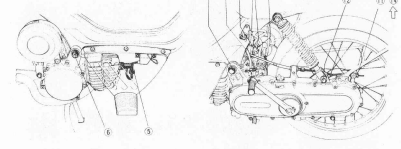
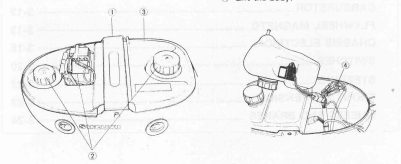
- 1 Remove the support bracket.
- 2 Remove the engine oil tank cap, fuel tank cap and battery.
- 3 Remove the frame upper cover.
- 4 Remove the magneto lead wire.


Right side


- 5 Remove the spark plug cap.
- 6 Loosen the engine mounting nut.

Left side

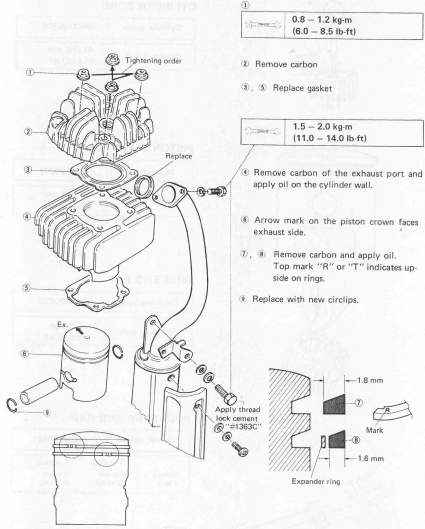
- 7 Remove the fuel line and the vacuum line with the fuel cock set to ON.
- 8 Remove the oil pump cover and oil hose.
- 9 Remove the carburetor top cover.
- 10 Remove the carburetor choke cable from the carburetor side.
- 11 Remove the rear brake cable.
- 12 Loosen and remove the rear shock absorber lower bolt.
- 13 Pull out the engine mounting bolt.
- 14 Lift the body.



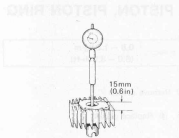
6		2.5 - 4.0 kg-m (18.5 - 28.5 lb-ft)
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13		2.0 - 3.0 kg-m (14.5 - 21.5 lb-ft)
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CYLINDER HEAD, CYLINDER, PISTON, PISTON RING

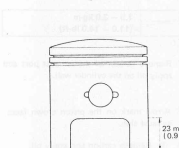


34. SERVICING PROCEDURE



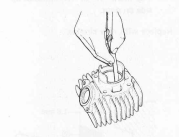
CYLINDER BORE

Cylinder gauge	09900-20508
Service Limit	41.065 mm (1.6167 in)



PISTON DIAMETER

Micrometer	09900-20202
Service Limit	40.880 mm (1.6094 in)



RING END GAP

Thickness gauge	09900-20803
Service Limit	0.75 mm (0.030 in)



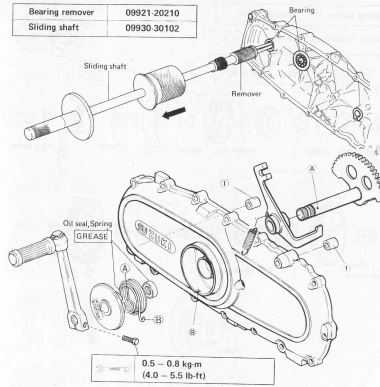
RING FREE END GAP

Vernier caliper	09900-20101
	R marked T marked
Service Limit	3.6 mm 4.0 mm (0.14 in) (0.16 in)

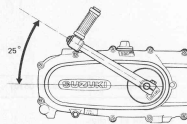
NOTE:
Replace the piston rings as a set.

KICK STARTER, LEFT COVER

Bearing remover	09921-20210
Sliding shaft	09930-30102



- When installing the kick starter return spring, install ⑧ and then install ⑨.
- Apply Suzuki Super Grease A to the oil seal lip and the kick starter spring.
- Replace the gasket.
- Install two dowel pins ⑩.



AUTOMATIC CLUTCH INSPECTION

The FA50 is equipped with an automatic clutch. The engagement of the clutch is governed by engine RPMs and a centrifugal mechanism located in the clutch.

To insure proper performance and longevity of the clutch assemblies it is essential that the clutch engage smoothly and gradually. Two inspection checks must be performed to thoroughly check the operation of the drivetrain. Follow the procedures listed.

1. INITIAL ENGAGEMENT INSPECTION

- Warm the motorcycle up to normal operating temperature.
- Connect an electric tachometer to the engine.
- Seated on the motorcycle with the motorcycle on level ground, increase the engine RPMs slowly and note the RPM at which the motorcycle begins to move forward.

ENGAGEMENT RPM

STD	2 400 rpm
Tolerance	±200 rpm



2. CLUTCH "LOCK-UP" INSPECTION

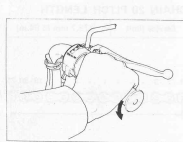
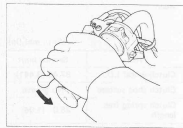
Perform this inspection to determine if the clutch is engaging fully and not slipping.

- Warm the engine to normal operating temperatures.
- Connect an electric tachometer to the engine.
- Apply the rear brake as firm as possible.
- Briefly open the throttle fully and note the maximum engine RPMs sustained during the test cycle.

CAUTION:
Do not apply full power for more than 10 seconds or damage to the clutch or engine may occur.

LOCK-UP RPM

STD	3 500 rpm
Tolerance	±300 rpm



38 SERVICING PROCEDURE

If the engine rpm does not coincide with the specified rpm range then disassemble the clutch.

- Clutch shoe — inspect the shoes visually for chips, cracking, uneven wear, burning and check the depth of the grooves on the shoes. If there is no groove at any part of the shoes, replace them as a set.
- Clutch springs — visually inspect the clutch springs for stretched coils or broken coils. Measure the free length of the springs with vernier calipers.

NOTE:
Clutch shoes or springs must be changed as a set and never individually.

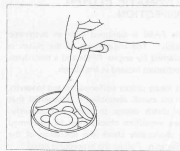
- Clutch wheel — inspect visually the condition of the inner clutch wheel surface for scoring, cracks, or uneven wear. Measure the inside diameter of the clutch wheel with inside calipers. Measure the diameter at several points to check for an out-of-round condition as well as normal wear.

Unit : mm (in)

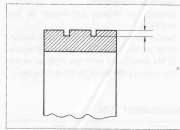
Item	Service limit
Clutch wheel I.D.	87.40 (3.441)
Clutch shoe surface	No groove
Clutch spring free length	28.0 (1.06)

CHAIN 20 PITCH LENGTH

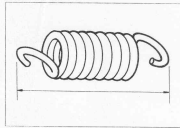
Service limit	173.7 mm (6.84 in)
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Measuring clutch wheel.



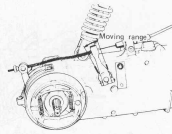
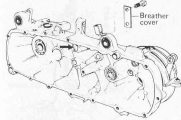
Inspecting clutch shoe groove.



Measuring clutch spring.

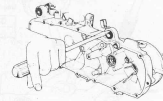
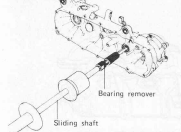
LEFT CRANK CASE

0.5 - 0.8 kg-m
(4.0 - 5.5 lb-ft)



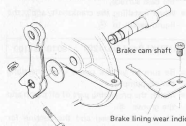
Push out as shown in the figure.

Pull out by using the bearing puller and sliding shaft.



NOTE:
Remove the rear brake shoe and slide out the cam to the right. Be sure to mark the cam lever position before removal.

0.3 - 0.6 kg-m
(2.0 - 4.5 lb-ft)



0.3 - 0.6 kg-m
(2.0 - 4.5 lb-ft)

CRANKSHAFT

- Check for damage and bent reeds. Be careful not to bend the reed valve stopper.

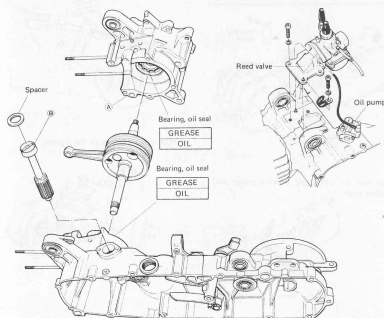


Fig. 10-10 Crankshaft assembly

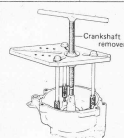
- Clean the inlet port mounting surface and the case surface.
- When installing the crankshaft, apply the liquid gasket to A .

SUZUKI Bond No. 1201 99104-31100

- Be sure to set the spacer when installing the oil pump.
- Match the projecting part of oil pump and the groove B .
- Check the oil seal and the bearing for damage or excessive clearance.
- Apply grease to the oil seal.
- Apply oil to the bearing.

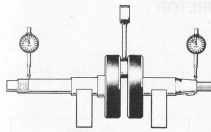
- Use a crankshaft remover to prevent damage to the crankshaft bearing and crankshaft.

Crankshaft remover 09920-13111



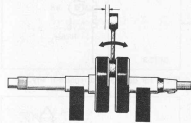
CRANKSHAFT DEFLECTION

Service limit	0.05 mm (0.002 in)
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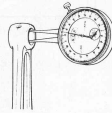
SMALL END DEFLECTION

Service limit	3.0 mm (0.12 in)
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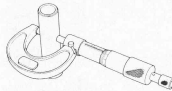
SMALL END BORE DIA.

Service limit	16.040 mm (0.6315 in)
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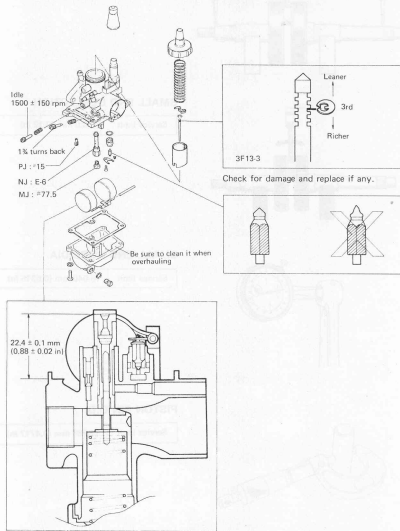
PISTON PIN O.D.

Service limit	11.980 mm (0.4717 in)
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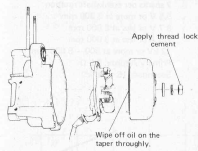


CARBURETOR

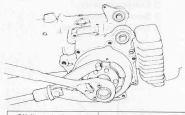
Clean each passage of air and fuel with an air gun.



FLYWHEEL MAGNETO

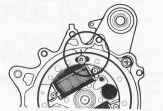


Flywheel holder 09930-40113



Sliding shaft 09930-30102
Attachment C 09930-30161

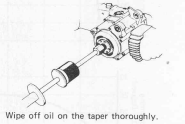
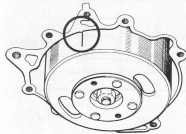
Wipe off oil on the taper thoroughly.
Fix the stator to align the scribed line with the center of the screw hole so that correct ignition timing is assured.



Timing advance Timing retard



Using a timing light, check whether the ignition timing is correct by running the engine at 4 000 rpm and noting that the marks are aligned properly.

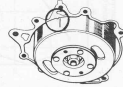


Wipe off oil on the taper thoroughly.

3.0 - 4.0 kg-m
(22.0 - 28.5 lb-ft)



Timing advance

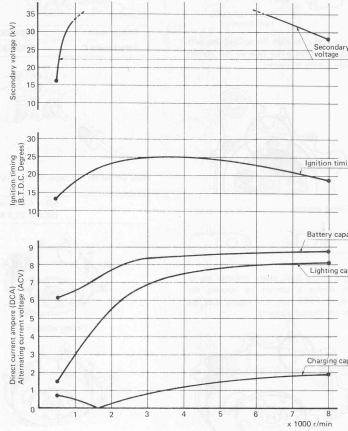


Timing retard

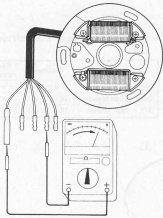
3.14 SERVICING PROCEDURE

Specifications

- Ignition method: 2 sparks per crankshaft rotation
- Light capacity: 5.5 V or more at 2 300 rpm
8.7 V or less at 8 000 rpm
- Charging capacity: 2.5 A or less at 8 000 rpm
- Secondary voltage: 12 kV or more at 500 – 8 000 rpm
- Ignition coil resistance: Primary Approx. 0.5 Ω
Secondary 16 ~ 18 kΩ



STATOR



Pocket tester 09900-25002

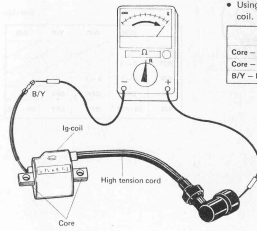
- Select the knob to RX "x 1".
- Make a following continuity test.

Unit : (Ω)

	B/W	W/R	Y/R	B/R
B/W				
W/R	0 - 1			
Y/R	0 - 1	0 - 1		
B/R	OFF	OFF	OFF	
R/B	90 - 110	OFF	OFF	90 - 110

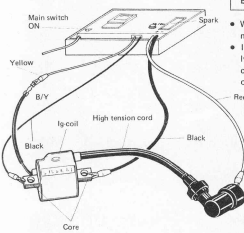
CHASSIS ELECTRICAL

IGNITION COIL



- Using the pocket tester check the ignition coil.

	Resistance	Knob position
Core - B/Y	0 - 1Ω	x 1Ω
Core - High tension	16 - 18 kΩ	x kΩ
B/Y - High tension	16 - 18 kΩ	x kΩ



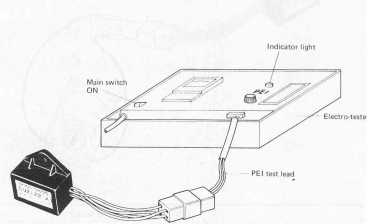
Electro-tester 09900-28106

- Wire as shown in the figure and turn the main switch to ON.
- If a bluish white spark occurs continuously for about ten minutes, it is in good condition. When a red spark or no spark is found, replace it.

PEI UNIT

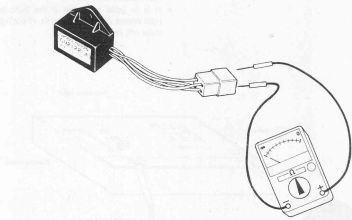
PEI test lead for FA50 09900-28607

- Wire as shown in the figure and turn the main switch to ON.
- It is in good condition if the indicator light comes on and remains lit. If the light stays off, replace it.



Part No.	Description	Quantity	Remarks
09900-28607	PEI test lead for FA50	1	
09900-28608	PEI test lead for FA50	1	
09900-28609	PEI test lead for FA50	1	
09900-28610	PEI test lead for FA50	1	
09900-28611	PEI test lead for FA50	1	
09900-28612	PEI test lead for FA50	1	
09900-28613	PEI test lead for FA50	1	
09900-28614	PEI test lead for FA50	1	
09900-28615	PEI test lead for FA50	1	
09900-28616	PEI test lead for FA50	1	
09900-28617	PEI test lead for FA50	1	
09900-28618	PEI test lead for FA50	1	
09900-28619	PEI test lead for FA50	1	
09900-28620	PEI test lead for FA50	1	
09900-28621	PEI test lead for FA50	1	
09900-28622	PEI test lead for FA50	1	
09900-28623	PEI test lead for FA50	1	
09900-28624	PEI test lead for FA50	1	
09900-28625	PEI test lead for FA50	1	
09900-28626	PEI test lead for FA50	1	
09900-28627	PEI test lead for FA50	1	
09900-28628	PEI test lead for FA50	1	
09900-28629	PEI test lead for FA50	1	
09900-28630	PEI test lead for FA50	1	
09900-28631	PEI test lead for FA50	1	
09900-28632	PEI test lead for FA50	1	
09900-28633	PEI test lead for FA50	1	
09900-28634	PEI test lead for FA50	1	
09900-28635	PEI test lead for FA50	1	
09900-28636	PEI test lead for FA50	1	
09900-28637	PEI test lead for FA50	1	
09900-28638	PEI test lead for FA50	1	
09900-28639	PEI test lead for FA50	1	
09900-28640	PEI test lead for FA50	1	
09900-28641	PEI test lead for FA50	1	
09900-28642	PEI test lead for FA50	1	
09900-28643	PEI test lead for FA50	1	
09900-28644	PEI test lead for FA50	1	
09900-28645	PEI test lead for FA50	1	
09900-28646	PEI test lead for FA50	1	
09900-28647	PEI test lead for FA50	1	
09900-28648	PEI test lead for FA50	1	
09900-28649	PEI test lead for FA50	1	
09900-28650	PEI test lead for FA50	1	

PEI Inspection by Pocket Tester



		Positive (+) pointer to touch:			
		Black/Red	Red/Black	Black/White	Black/Yellow
Negative (-) pointer touch:	Black/Red	OFF	OFF	OFF	OFF
	Red/Black	2 - 4 k Ω	80 - 100 Ω	OFF	OFF
	Black/White	2 - 4 k Ω	5 - 7 Ω	OFF	OFF
	Black/Yellow	10 - 12 k Ω	2 - 4 k Ω	2 - 4 k Ω	OFF

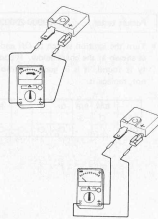
Test conditions

- The pocket tester's selector knob should be set at "X 1 Ω " or "X 1 k Ω " range referring to the chart.
- The two testing probes, (+) and (-), are to be placed on terminals of the PEI unit referring to the chart.
- The (+) probe or pointer is to be placed on one of the terminals listed in the top horizontal row, and the (-) probe or pointer on the corresponding terminal listed in the vertical column.

NOTE:

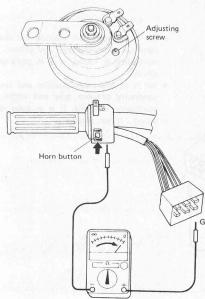
- Whether or not the PEI unit is in good condition can be determined easily by temporarily replacing it with a new one.

RECTIFIER



- If continuity is found in Ω range when connecting as shown in the figure and not found when (+) (-) probes are reversed, it is in good condition. If continuity is found in both cases or no continuity in either case, replace it.

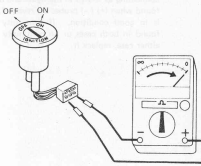
HORN



- If the sound volume is insufficient, turn the adjusting screw while connecting the horn directly to the battery till the maximum volume is found and set it there.
- After turning the adjusting screw, if no sound is heard or the sound volume is insufficient, replace it.
- Connect the lead wire in the headlight housing and the ground wire to the pocket tester, set knob range to R and press the horn button. If continuity is found, it is in good condition.

SWITCHES

IGNITION SWITCH

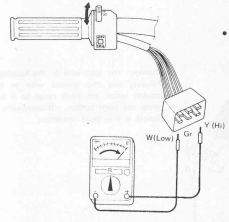


Pocket tester 09900-25002

- Turn the ignition switch to ON and OFF as shown in the chart below. If continuity is found, it is in good condition. If not, replace it.

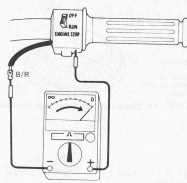
	B/W	B/R	Gr	Y	O	R
OFF	○	○				
ON			○	○	○	○

LEFT HANDLE SWITCH



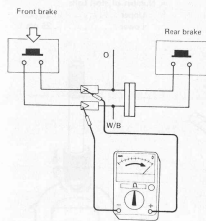
- Set it to high beam position and check continuity between gray and yellow. If continuity is found, it is in good condition.
- Set it to low beam position and check continuity between gray and white. If continuity is found, it is in good condition. If not, replace it.

ENGINE KILL SWITCH



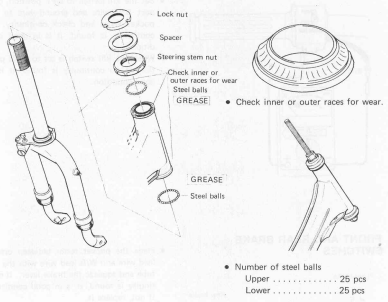
- Set the kill switch to OFF position, connect B/R wire and ground wire to the pocket tester and check continuity. If continuity is found, it is in good condition.
- When the kill switch is set to RUN position, if no continuity is found, it is in good condition.

FRONT AND REAR BRAKE SWITCHES



- Place the pocket tester between orange lead wire and W/B lead wire with the red tube and squeeze the brake lever. If continuity is found, it is in good condition. If not, replace it.

STEERING



- Number of steel balls
Upper 25 pcs
Lower 25 pcs

