

FOREWORD

The SUZUKI GS250T has been developed as a companion motorcycle to the GS models. It features highly advanced design concepts including a forged one piece crankshaft assembly, a full-transistorized ignition system and a new highly efficient combustion system (TSCC). The GS250T provides excellent performance, precise control and handling plus outstanding riding comfort.

This service manual has been produced primarily for experienced SUZUKI mechanics. Apprentice and do-it-yourself mechanics will also find this manual to be an extremely useful repair guide. This manual contains the most up-to-date information at the time of publication. The rights are reserved to update or make corrections to this manual at any time.

IMPORTANT

All GS model SUZUKI motorcycles that were manufactured after January 1, 1978 are subject to Environmental Protection Agency emission regulations. These regulations set specific standards for exhaust emission output levels as well as particular servicing requirements. This manual includes specific information required to properly inspect and service the GS250T in accordance with all EPA regulations. It is strongly recommended that the chapter on Emission Control, Periodic Servicing and Carburetion be thoroughly reviewed before any type of service work is performed.

Further information concerning the EPA emission regulations and U.S. SUZUKI'S emission control program can be found in the U.S. SUZUKI EMISSION CONTROL PROGRAM MANUAL/SERVICE BULLETIN.

SUZUKI MOTOR CO., LTD.

*Service Department
Overseas Operations Division*

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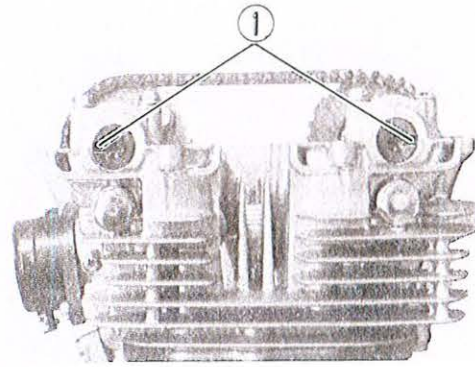
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Crank angle					
F_1 = inertia force F_3 = extra centrifugal force					
$F_1 + F_3 = F_2$, resultant centrifugal force					

Since the resultant centrifugal force embodies the extra centrifugal force and inertia force at every crank angle, it is obvious that canceling off the resultant force cancels off the two component forces. This canceling is accomplished indirectly in the GS250T by providing a separate unbalanced shaft – the COUNTERBALANCER.

Material	Part	Page	Part	Page
 <p>THREAD LOCK SUPER "1361A" 99104-32020</p>	<ul style="list-style-type: none"> • Gearshift cam retainer screw • Cam sprocket allen bolt • Cam chain guide screw • Starter clutch allen bolt • Counter balancer gear setting bolt 	<p>3-61 3-31 3-34 3-48 3-45</p>		
 <p>THREAD LOCK SUPER "1363A" 99104-32030</p>	<ul style="list-style-type: none"> • Gearshift arm stopper 	<p>3-44</p>		
 <p>THREAD LOCK cement 99000-32040</p>	<ul style="list-style-type: none"> • Carburetor set screw • Camshaft end cap screw • Engine sprocket spacer inner surface • Clutch spring bolt • Front fork damper rod bolt 	<p>4-15 3-75 3-8, 3-52 3-63 7-33</p>		
 <p>THREAD LOCK "1363C" 99104-32050</p>	<ul style="list-style-type: none"> • Generator stator securing screw • Generator lead wire guide screw • Gearshift cam stopper bolt • Countershaft bearing retainer screw • Engine oil pump fitting screw 	<p>3-48 3-48 3-60 3-60 3-49, 3-62</p>	<ul style="list-style-type: none"> • Starter motor securing bolt • Gearshift fork shaft stopper screw 	<p>3-59 3-54</p>
 <p>THREAD LOCK SUPER "1332B" 99104-32090</p>	<ul style="list-style-type: none"> • Generator rotor bolt 	<p>3-59</p>		

- Turn crankshaft by 360° (one rotation) to bring the "T" mark on "R"-side advance governor and notches ① to the position as shown.
- Read clearance at the valves ② (Ex. of "L"-cylinder) and adjust the clearance if necessary.



SPARK PLUG

Clean and Adjust Every 3,000 miles and,
(5,000 km)
Replace Every 6,000 miles (10,000 km)

The plug gap is adjusted to 0.6 – 0.7 mm (0.024 – 0.028 in). The gap is correctly adjusted using a thickness gauge (special tool). When carbon is deposited on the spark plug, remove the carbon with a spark plug cleaning machine or carefully using tool with a pointed end. If electrodes are extremely worn or burnt, replace the plug. Also replace the plug if it has a broken insulator, damaged thread, etc.

09930-13210	Socket wrench
09930-14530	Universal joint
09914-24510	T handle
09900-20803	Thickness gauge

NGK D9EA or NIPPON DENSO X27ES-U listed in the table should be used as the standard plug. However, the heat range of the plug should be selected to meet the requirements of speed, actual load, fuel, etc. If the plugs need to be replaced, it is recommended that the standard plugs listed in the table be selected. Remove the plugs and inspect the insulators. Proper heat range would be indicated if both insulators were light brown in color. If they are blackened by carbon, they should be replaced by a hot type NGK D8EA or NIPPON DENSO X24ES-U.

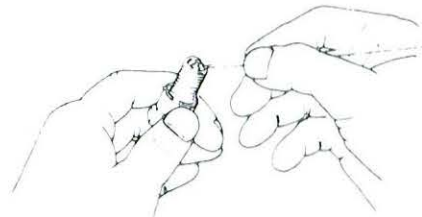
NOTE:

To check the spark plugs, first make sure that the fuel tank contains unleaded gasoline, and if both are sooty with carbon, replace them altogether.

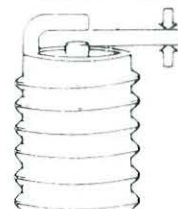
CAUTION:

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.

NGK	NIPPON DENSO	REMARKS
D8EA	X27ES-U	If the standard plug is apt to get wet, replace with this plug. Hot type.
D9EA	X27ES-U	Standard



Gap 0.6 -- 0.7 mm
(0.024 -- 0.028 in)



CHASSIS BOLTS AND NUTS

600, 3 000, 6 000, 9 500 miles
1 000, 5 000, 10 000, 15 000 km

The bolts and nuts listed hereunder are important safety parts. They must be retightened, as necessary, to the specified torque with a torque wrench. (Refer to page 2-17 for the position of the following bolts and nuts on the motorcycle.)

ITEM	lb-ft	kg-m
1 Front axle nut	26.0 – 37.5	3.6 – 5.2
2 Front axle holder nut	11.0 – 18.0	1.5 – 2.5
3 Disc plate bolt	11.0 – 18.0	1.5 – 2.5
4 Caliper bolt	18.0 – 29.0	2.5 – 4.0
5 Caliper axle bolt	11.0 – 14.5	1.5 – 2.0
6 Front fork lower clamp bolt	18.0 – 29.0	2.5 – 4.0
7 Front fork upper clamp bolt	14.5 – 21.5	2.0 – 3.0
8 Steering stem nut	29.0 – 36.0	4.0 – 5.0
9 Steering stem clamp bolt	11.0 – 18.0	1.5 – 2.5
10 Steering stem head bolt	26.0 – 37.5	3.6 – 5.2
11 Handlebars clamp bolt	8.5 – 14.5	1.2 – 2.0
12 Master cylinder clamp bolt	3.5 – 6.0	0.5 – 0.8
13 Brake pedal arm bolt	7.0 – 11.0	1.0 – 1.5
14 Swinging arm pivot nut	36.0 – 42.0	5.0 – 5.8
15 Rear torque link nut	14.5 – 21.5	2.0 – 3.0
16 Rear shock absorber fitting nut	14.5 – 21.5	2.0 – 3.0
17 Rear axle nut	36.0 – 58.0	5.0 – 8.0
18 Rear brake cam lever bolt	3.5 – 6.0	0.5 – 0.8
19 Spoke nipple	3.0 – 3.5	0.4 – 0.5

ENGINE REINSTALLATION

Reinstall the engine in the reverse order of engine removal.

- Temporarily fasten the three engine mounting brackets before inserting the engine mounting bolts.
- Coat thread lock cement lightly to the inner surface of the engine sprocket spacer.

99000-32040	Thread lock cement
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- The engine sprocket and drive chain should be installed on the drive shaft, together, at the same time.

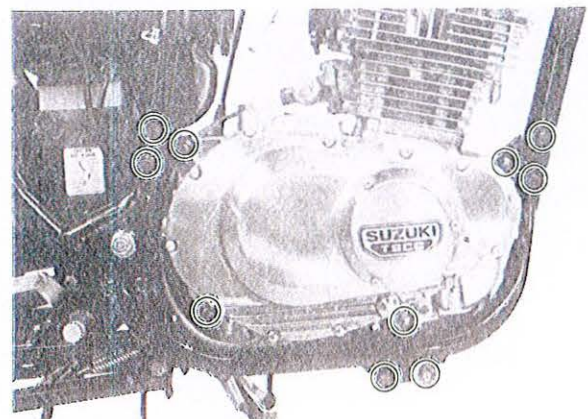
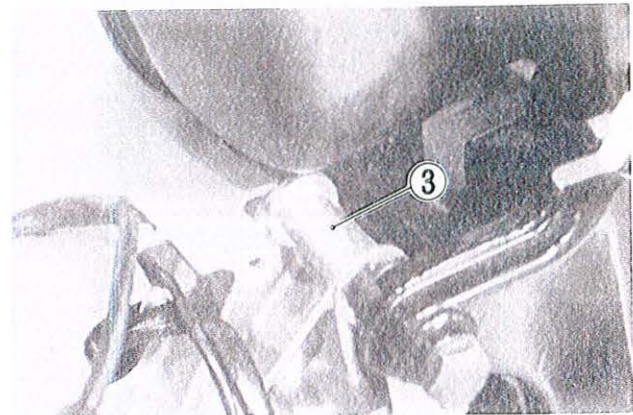
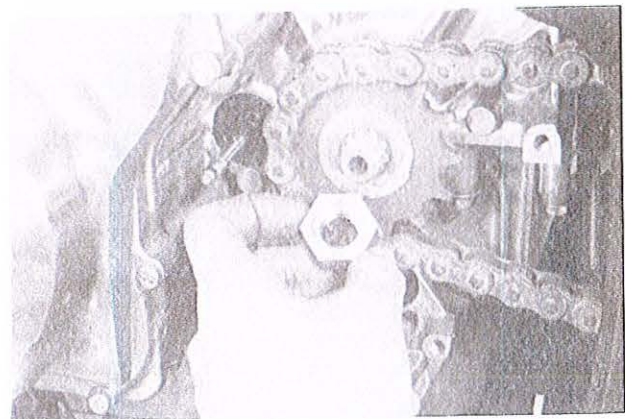
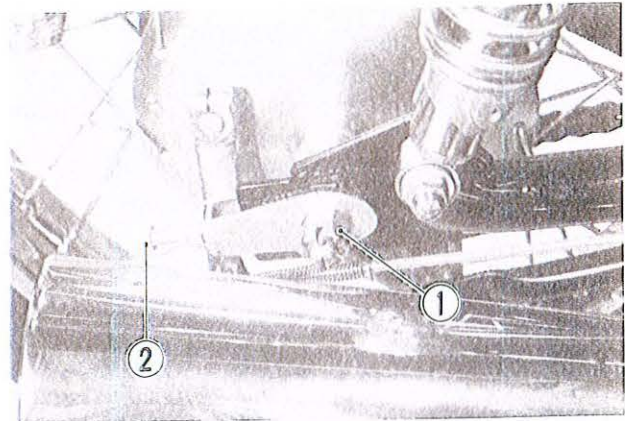
If it is difficult to install the engine sprocket, remove the rear axle cotter pin and loosen the axle nut 1, and chain adjuster bolt 2 to push the wheel forward and give the drive chain some play.

When replacing the engine sprocket nut, stepped side should be faced inside.

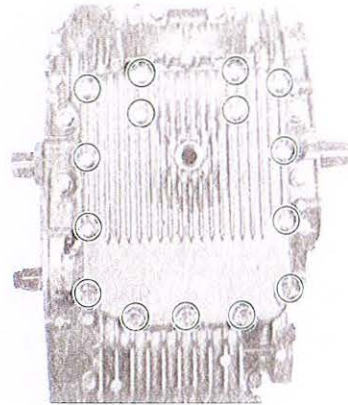
- After inserting the engine mounting bolts, tighten engine mounting bracket bolts and engine mounting bolts. Insert all four long bolts from the left side and insert the rear upper bolt through the spacer 3 on the left side of the engine.

Tightening torque for engine mounting bolts

	lb-ft	kg-m
10 mm Dia.	25.5	3.5
8 mm Dia.	18.0	2.5



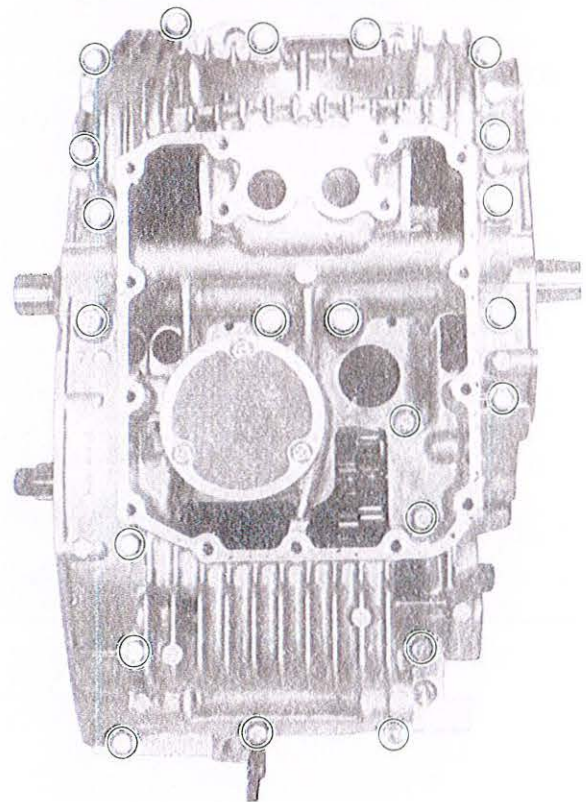
- Turn engine upside down and remove oil pan.



- Remove crankcase tightening bolts.

NOTE:

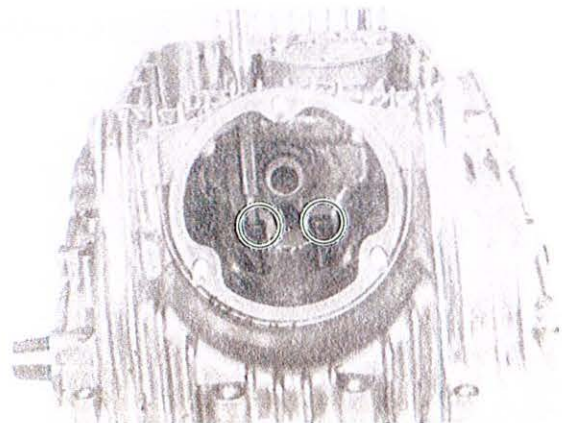
At this moment, it is not necessary to remove the oil sump filter.

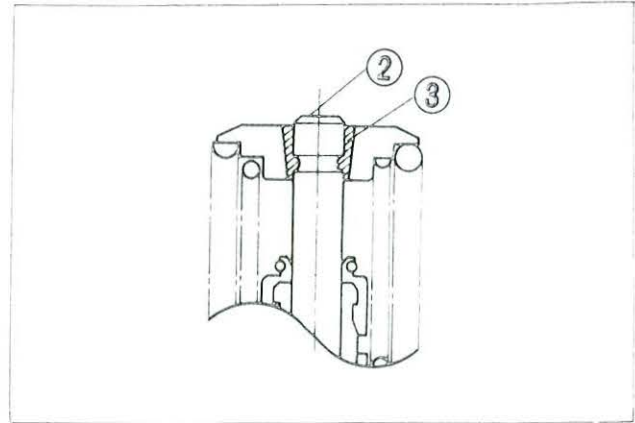


- Using special tool, remove two allen bolts.

09914-25811

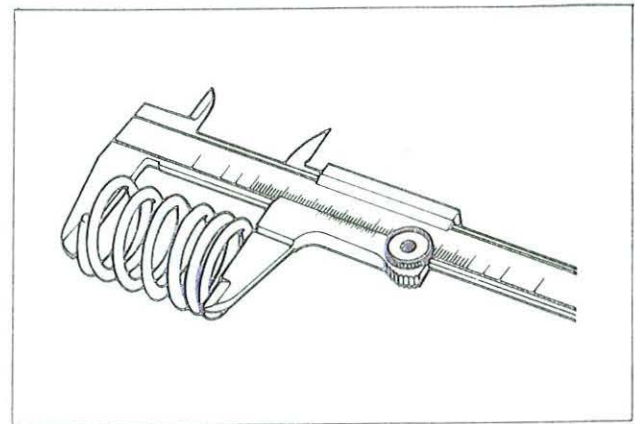
6 mm T type hexagon wrench





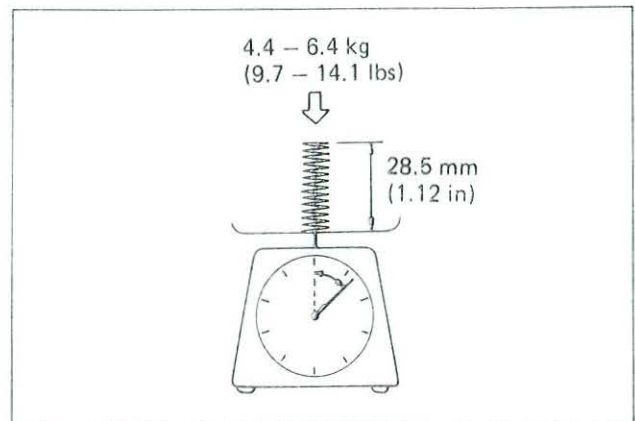
VALVE SPRINGS

- The force of the two coil springs keeps the valve seats tight. Weakened springs result in reduced engine power output, and often account for the chattering noise coming from the valve mechanism.
- Check the springs for strength by measuring their free lengths and also the force required to compress them. If the limit indicated is exceeded by the free length reading or if the measured force does not fall within the range specified, replace with a SUZUKI spring.



CAUTION:

Replace both of the valve springs, inner and outer, at a time, if any one of these is found to be beyond the limit.



Valve spring free length

Spring	Service Limit
INNER	31.9 mm (1.26 in)
OUTER	35.5 mm (1.40 in)

Valve spring tension

Spring	Standard
INNER	4.4 – 6.4 kg/28.5 mm (9.7 – 14.1 lbs/1.12 in)
OUTER	6.5 – 8.9 kg/32.0 mm (14.3 – 19.6 lbs/1.26 in)

Using a micrometer, measure the piston pin outside diameter at three positions.

Piston pin O.D.

Service Limit	15.980 mm (0.6291 in)
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09900-22401	Small bore gauge (10 – 18 mm)
09900-20201	Micrometer (0 – 25 mm)



CONNECTING ROD SMALL END BORE I.D.

Using a small bore gauge, measure the connecting rod small end diameter.

Connecting rod small end bore I.D.

Service Limit	16.040 mm (0.6315 in)
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- If the difference between the connecting rod small end bore inside diameter and the piston pin outside diameter exceeds the abovementioned limit, replace both connecting rod and piston pin.

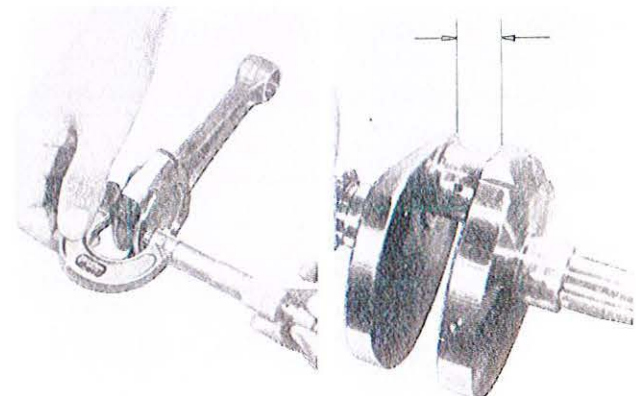
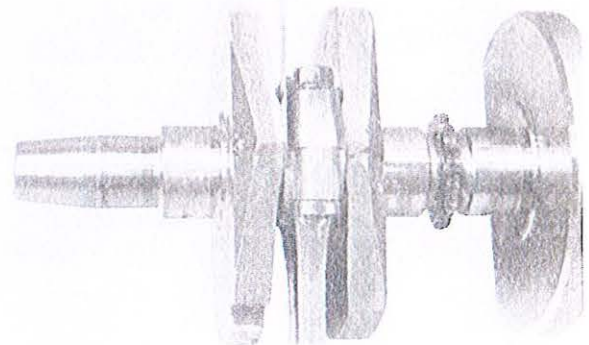
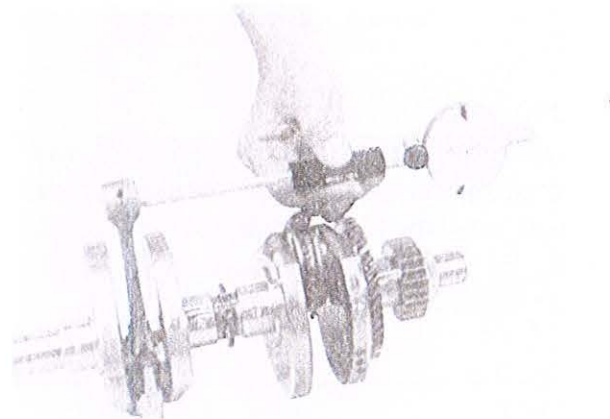
CONNECTING ROD BIG END THRUST CLEARANCE

Check the connecting rod thrust clearance by using thickness gauge. If the clearance exceeds the limit, replace connecting rod or crankshaft.

Service Limit	0.3 mm (0.012 in)
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	Standard
Big end width	19.95 – 20.00 mm (0.785 – 0.787 in)
Crank pin width	20.10 – 20.15 mm (0.791 – 0.793 in)

09900-20803	Thickness gauge
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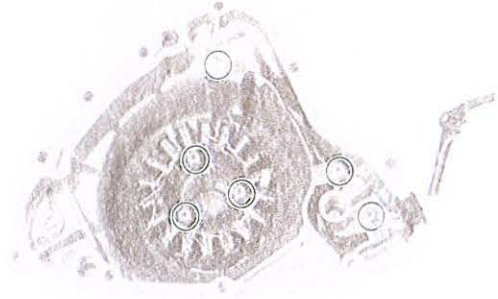
REASSEMBLY

- Apply THREAD LOCK "1363C" (99104-32050) to the stator set and lead wire guide screws.

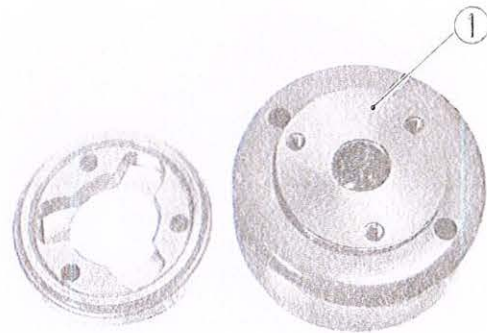
NOTE:

Wipe off oil and grease on screw completely and then apply the screw lock.

- Mount the lead wire clamp as shown in the photo.



- Locate the shim 1 to the proper position.

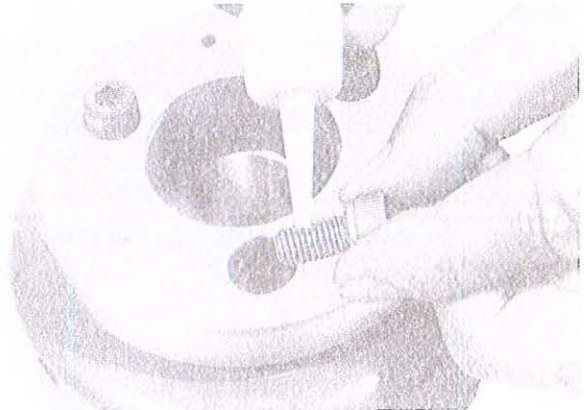


- Apply thread lock super to allen bolts and tighten with specified torque.

99104-32020	Thread lock super "1361A"
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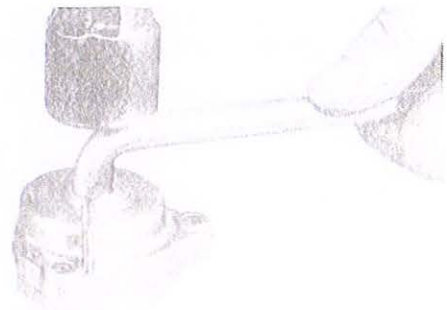
09914-25811	T-type allen wrench (6mm)
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Tightening torque	1.5 – 2.0 kg-m (11.0 – 14.5 lb-ft)
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OIL PUMP

- Remove one screw fastening oil pump body and extract two positioning pins from the oil pump case.



- When securing the lower crankcase, tighten the 8-mm bolts and the 6-mm bolts in the ascending order of numbers assigned to these bolts, tightening each bolt a little at a time to equalize the pressure. Tighten all the securing bolts to the specified torque values.

Item	Initial tightening	Final tightening
① - ⑧	1.3 kg-m (9.5 lb-ft)	2.0 - 2.4 kg-m (14.5 - 17.5 lb-ft)
⑨ - ⑫	0.6 kg-m (4.5 lb-ft)	0.9 - 1.3 kg-m (6.5 - 9.5 lb-ft)
The other 6mm bolt	0.6 kg-m (4.5 lb-ft)	1.0 kg-m (7.0 lb-ft)
The other 8mm bolt	1.3 kg-m (9.5 lb-ft)	2.0 kg-m (14.5 lb-ft)

09914-25811	6mm T-type hexagon wrench
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NOTE:
Place the engine ground wire to the position **A** shown.

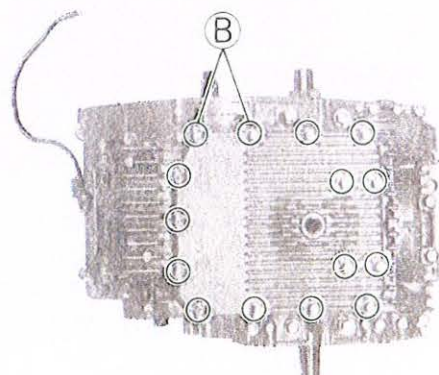
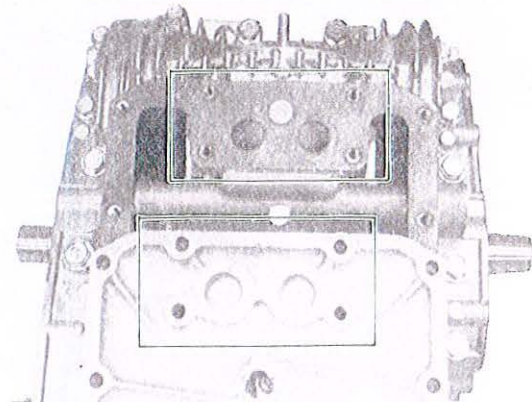
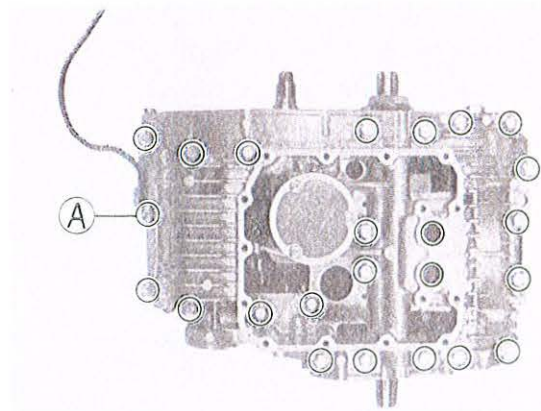
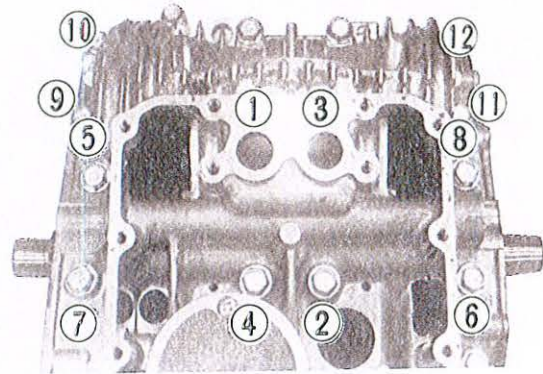
- Fix oil sump filter with three screws.
- Apply Suzuki Bond No. 1215 thinly to the respective portion as shown.

99104-31110	SUZUKI Bond No. 1215
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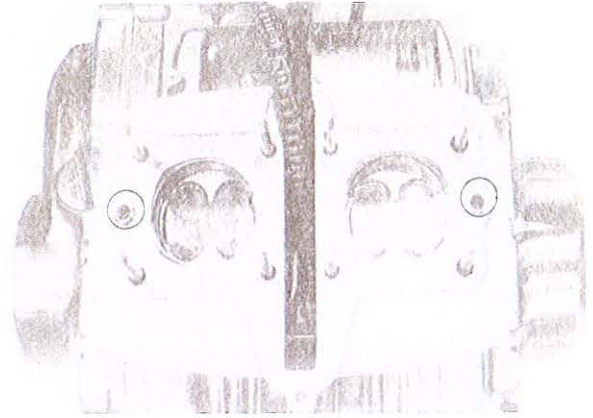
- Locate oil pan and tighten 15 6-mm bolts with specified torque.

Tightening torque	1.0 kg-m (7.0 lb-ft)
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NOTE:
Place the two clamps for signal generator and oil pressure switch lead wires to the proper positions **B** as shown.



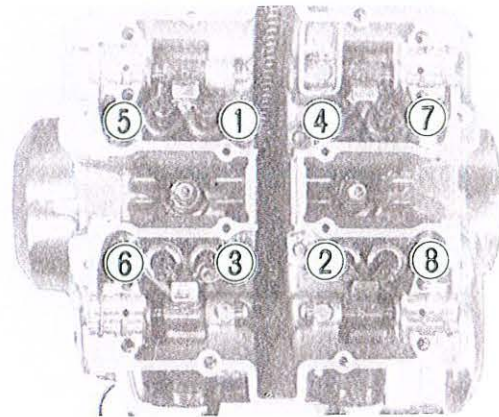
- Be sure to replace cylinder head gasket with new one to prevent gas leakage.
- Fix two positioning pins properly.



- Install eight crown nuts (1) and copper washers (2) to tighten cylinder head.

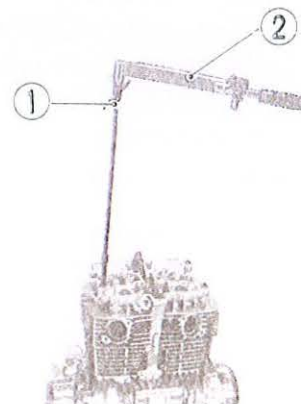


- With the head snugly seated on the cylinder block, secure it by tightening the 8 nuts sequentially in the ascending order of numbers. Tighten each nut just a little at a time and shift the wrench in the indicated order to reach the same final torque value specified.

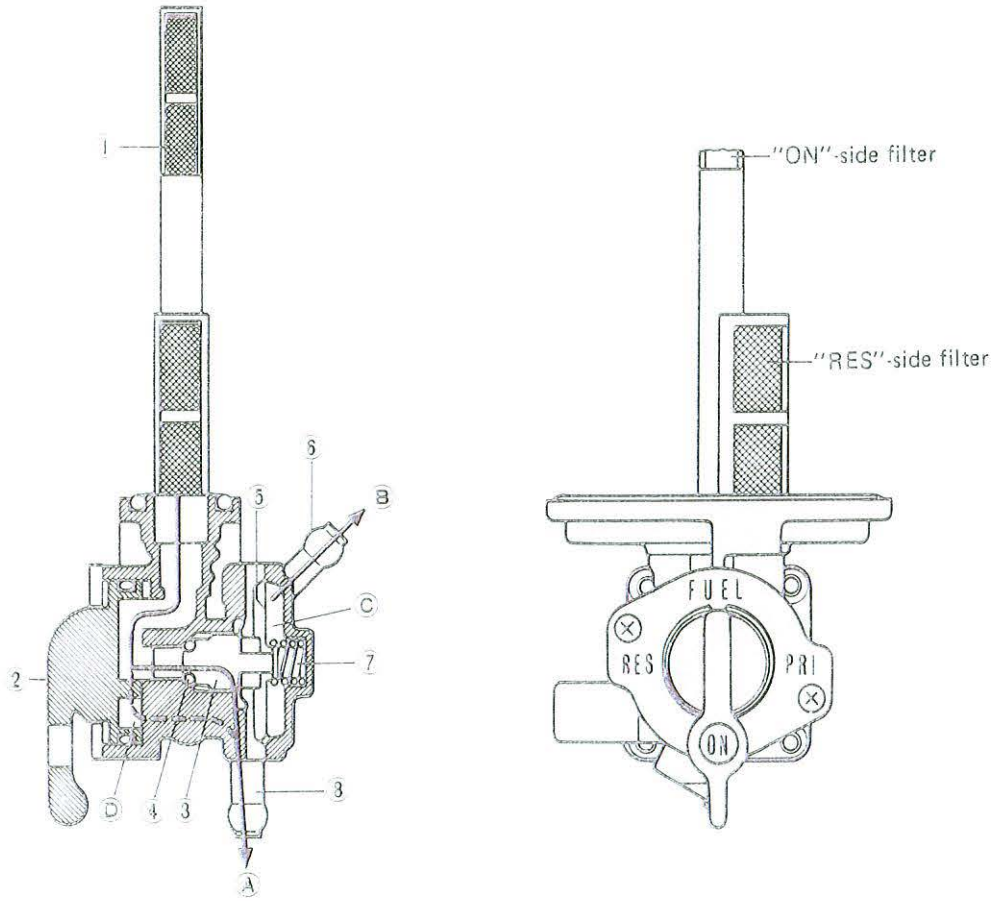


Cylinder head nut tightening torque	2.2 – 2.8 kg-m (16.0 – 20.0 lb-ft)
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NOTE:
Use the wrench (special tool) (1) and a torque wrench (2) to tighten cylinder head nuts, as shown.



FUEL COCK

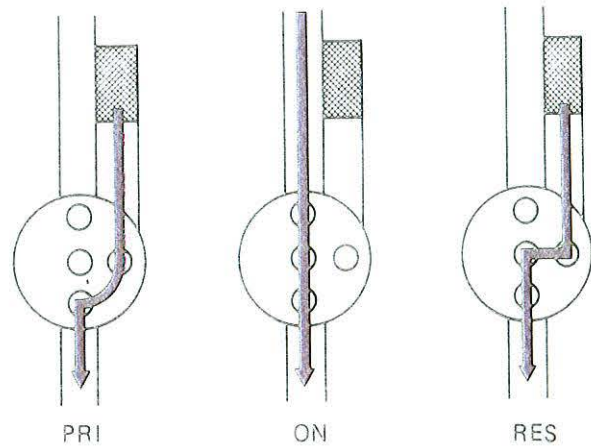


- | | | |
|---------------|---------------|---------------------|
| 1 Fuel filter | 5 Diaphragm | A Fuel flow |
| 2 Lever | 6 Vacuum hose | B Vacuum |
| 3 Fuel valve | 7 Spring | C Diaphragm chamber |
| 4 O-ring | 8 Fuel hose | D Chamber |

This fuel cock has provided three positions "ON", "RES" and "PRI".

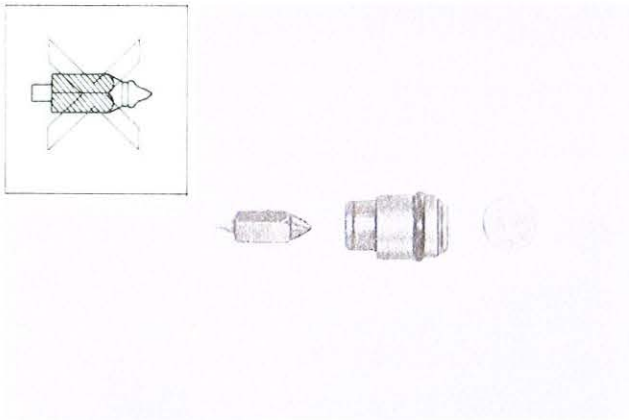
When the engine is not running with the lever in the ON or RES position, the valve is kept in the closed position by applying pressure utilizing a spring so that no fuel will flow to the carburetors. When the engine is engaged, a negative pressure is generated in the diaphragm chamber "C" through the vacuum (negative pressure) pipe which is connected to the carburetor, and builds up a negative pressure which is higher than the spring pressure so that the diaphragm is forced to open the valve and thus allow the fuel to flow to the carburetors.

When turning the lever to PRI position, fuel flows directly to the carburetor through RES side filter and chamber "D".



NEEDLE VALVE

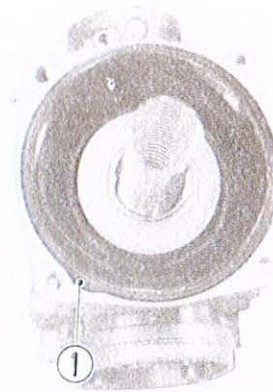
If foreign matter is caught between the valve seat and the needle, the gasoline will continue flowing and cause it to overflow. If the seat and needle are worn out beyond the permissible limits, similar trouble will occur. Conversely, if the needle sticks, the gasoline will not flow into the float chamber. Remove the carburetor, float chamber and floats, and clean the float chamber and float parts with gasoline. If the needle is worn as shown below, replace it together with a valve seat. Clean the fuel passage of the mixing chamber with compressed air.



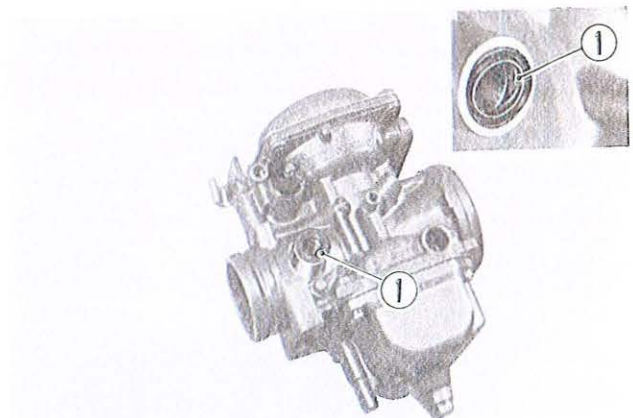
- Check following items for any damage or clogging.
- * Pilot jet
- * Main jet
- * Main air jet
- * Pilot air jet
- * Needle jet air bleeding hole
- * Float
- * Needle valve mesh
- * Diaphragm
- * Gasket
- * Throttle valve shaft oil seals
- * Drain plug O-ring
- * Pilot outlet and bypass holes

REASSEMBLY

- Place tongue 1 of diaphragm to carburetor body properly.



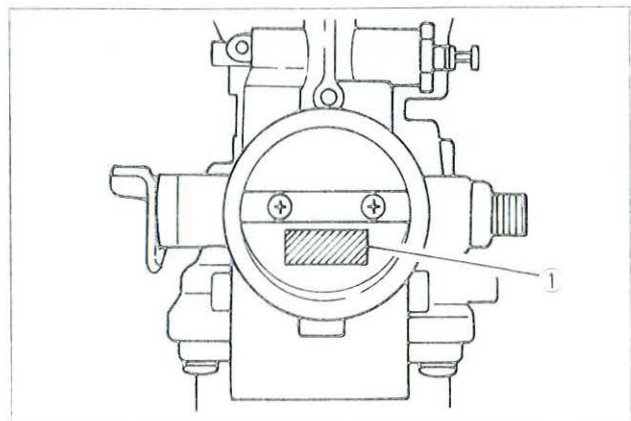
- When fitting throttle valve shaft oil seals, groove should be faced outside 1.



- While turning the throttle valve shaft, place the throttle valve in the groove so that the I.D. number 1 of the throttle valve faces down-side. Tighten the throttle valve securing screws with applying thread lock cement.

99000-32040

SUZUKI Thread lock cement



EMISSION CONTROL CARBURETOR COMPONENTS

GS250T motorcycles are equipped with precision, manufactured carburetors for emission level control. These carburetors require special mixture control components and other precision adjustments to function properly.

There are several carburetor mixture control components in each carburetor assembly. Three (3) of these components are machined to much closer tolerances than standard machined carburetor jets. These three (3) particular jets – MAIN JET, NEEDLE JET, PILOT JET – must not be replaced by standard jets. To aid in identifying these three (3) jets a different design of letter and number are used. If replacement of these close tolerance jets becomes necessary, be sure to replace them with the same type close tolerance jets marked as in the examples shown below.

The jet needle is also of special manufacture. Only one clip position is provided on the jet needle. If replacement becomes necessary the jet needle may only be replaced with an equivalent performing replacement component. Suzuki recommends that Genuine Suzuki Parts be utilized whenever possible for the best possible performance and durability.

Conventional Figures Used on Standard Tolerance Jet Components	1 2 3 4 5 6 7 8 9 0
Emission Type Figures Used on Close Tolerance Jet Components	1 2 3 4 5 6 7 8 9 0

The carburetor specification for the emission-controlled GS250T are as follows.

Carburetor I.D. No.	Main Jet	Needle Jet	Jet Needle	Pilot Jet	Pilot Screw
11420	#115	Left □-7 Right □-8	5CT40	#17.5	PRE-SET DO NOT ADJUST

The pilot screw is pre-set by the factory utilizing specialized testing and adjusting procedures. The pilot screw is not adjustable as the idle circuit is "sealed" after factory adjustment. Adjusting, interfering with, improper replacement, or resetting of any of the carburetor components may adversely affect carburetor performance and cause the motorcycle to exceed the exhaust emission level limits. If persons, who are unaware of these special carburetor servicing requirements tamper with the carburetors the Suzuki dealer should restore the carburetors to their original condition or if unable to effect repairs, contact the distributors representative for further technical information and assistance.

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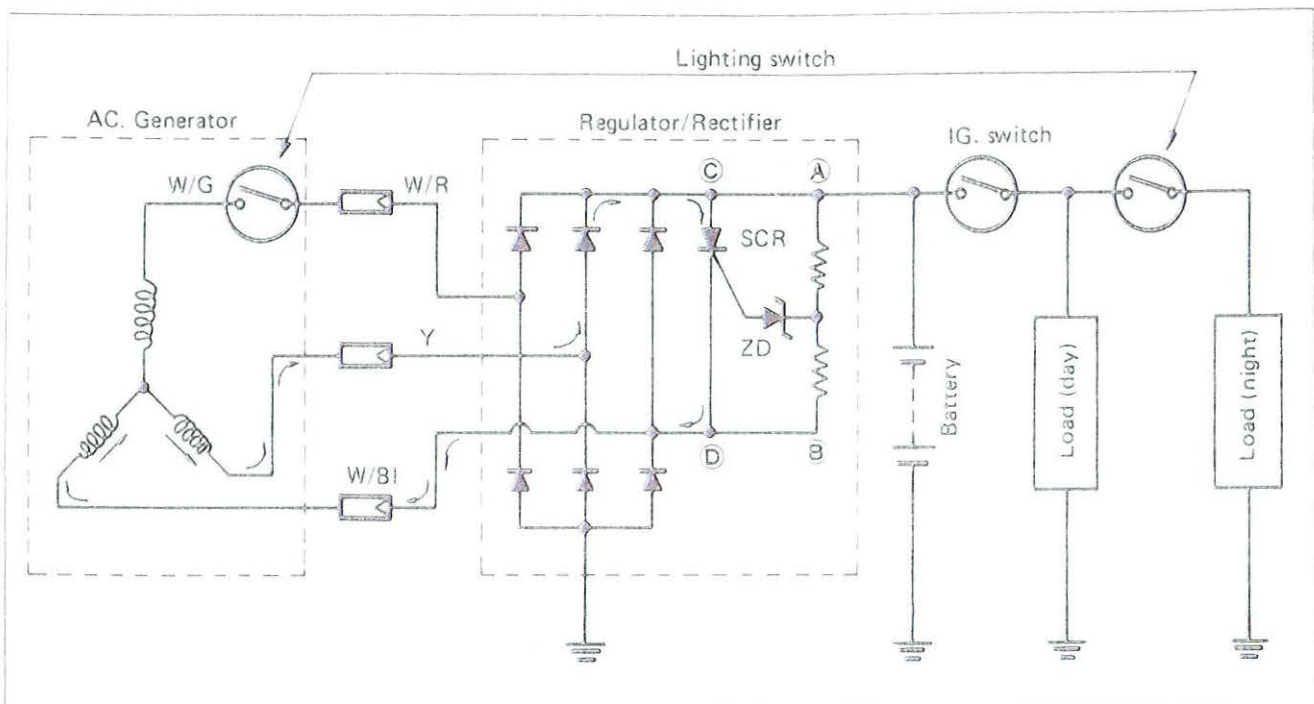
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When the engine r/min becomes higher, the generated voltage of AC generator also becomes higher and the voltage between points \bar{A} and \bar{B} of regulator becomes high accordingly, and when it reaches the adjusted voltage of regulator, ZD (Zener diode) sends signal to the gate of SCR (Thyristor). Then the SCR becomes conductive to the direction from point \bar{C} to point \bar{D} . Namely at the state of this, the current generated from the AC generator gets through SCR without charging the battery and returns to AC generator again. At the end of this state, since the AC current generated from AC generator flows into the point \bar{D} , reverse current tends to flow to SCR, then the circuit of SCR turns to OFF mode and begins to charge the battery again. Thus these repetitions maintain charging voltage to the battery constant and protect it from overcharging.



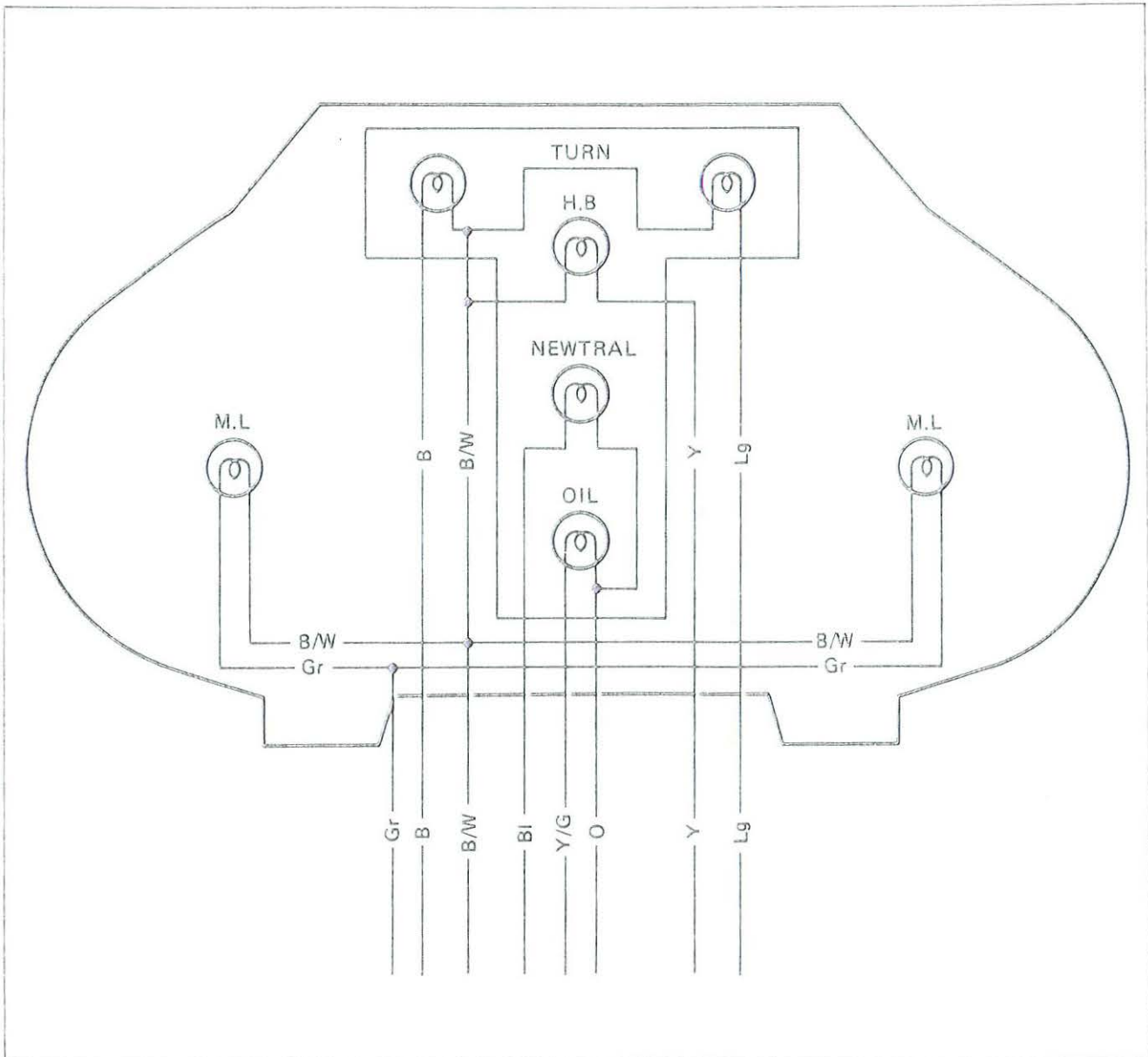
INSPECTION

Using pocket tester, check the continuity between lead wires in the following diagram.

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

09900-25002	Pocket tester
-------------	---------------

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



CHASSIS

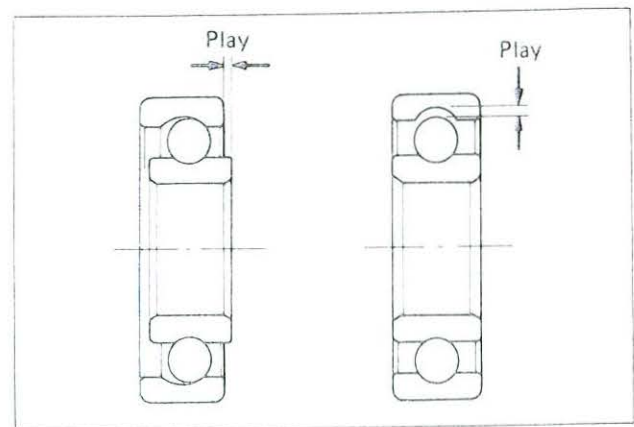
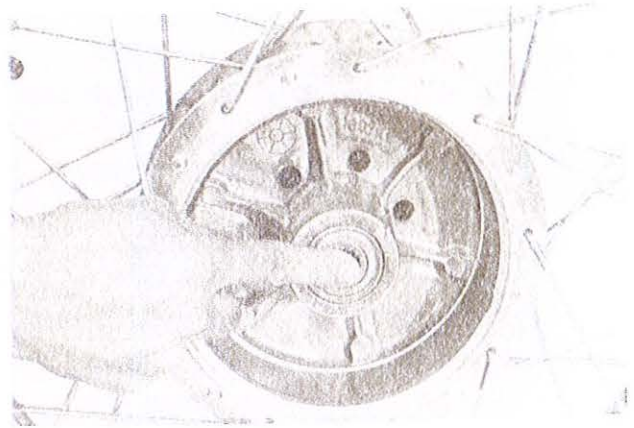
CONTENTS

<i>FRONT WHEEL</i>	7- 1
<i>REAR WHEEL</i>	7- 7
<i>FRONT BRAKE</i>	7-16
<i>REAR BRAKE</i>	7-26
<i>FRONT FORK</i>	7-29
<i>STEERING STEM</i>	7-35
<i>REAR SUSPENSION</i>	7-42

INSPECTION

WHEEL AND SPROCKET MOUNTING DRUM BEARINGS

Inspect the play of bearing inner race by hand while fixing it in the wheel hub or sprocket mounting drum. Rotate the inner race by hand to inspect for abnormal noise and a smooth rotation. Replace the bearing if there is something unusual.

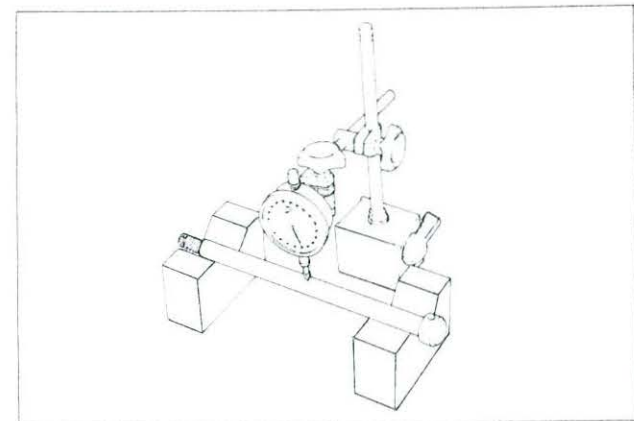


AXLE SHAFT

Using a dial gauge, check the axle shaft for runout and replace it if the runout exceeds the limit.

09900-20606	Dial gauge (1/100)
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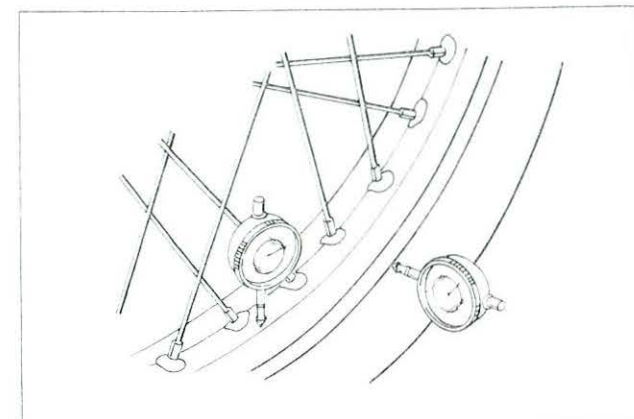
Service Limit	0.25 mm (0.01 in)
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WHEEL RIM

Make sure that the wheel rim runout checked as shown does not exceed the service limit. An excessive runout is usually due to worn or loose wheel bearings and can be reduced by replacing the bearings. If bearing replacement fails to reduce the runout, adjust the tension of the spokes, and, if this proves to be of no effect, replace the wheel rim.

Service Limit (Axial and Radial)	2.0 mm (0.08 in)
-------------------------------------	------------------

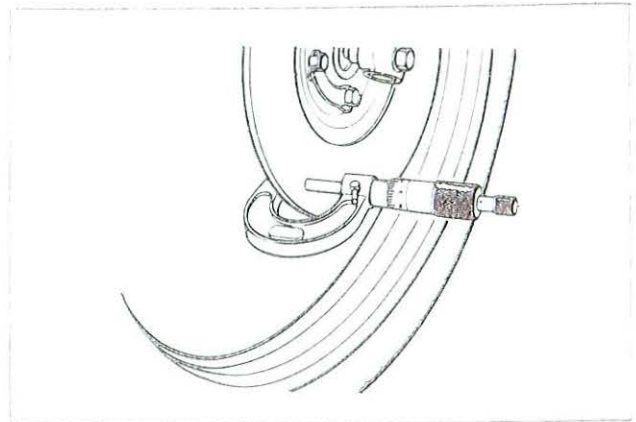


Inspect the rubber parts for damage and wear.



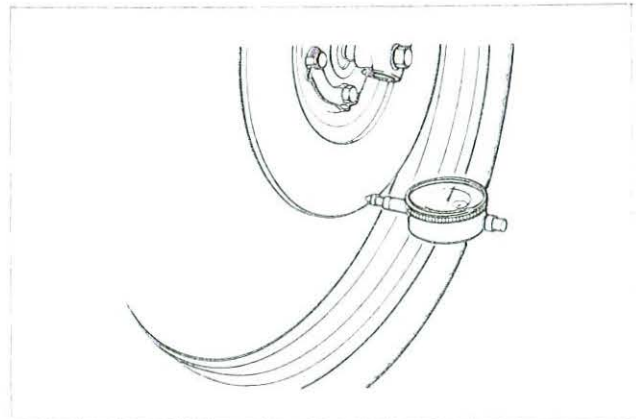
Using a micrometer check the disc for wear. Its thickness can be checked with disc and wheel in place. The service limit is specified for the thickness of the disc:

09900-20201	Micrometer (0 – 25 mm)
Service Limit	4.5 mm (0.18 in)

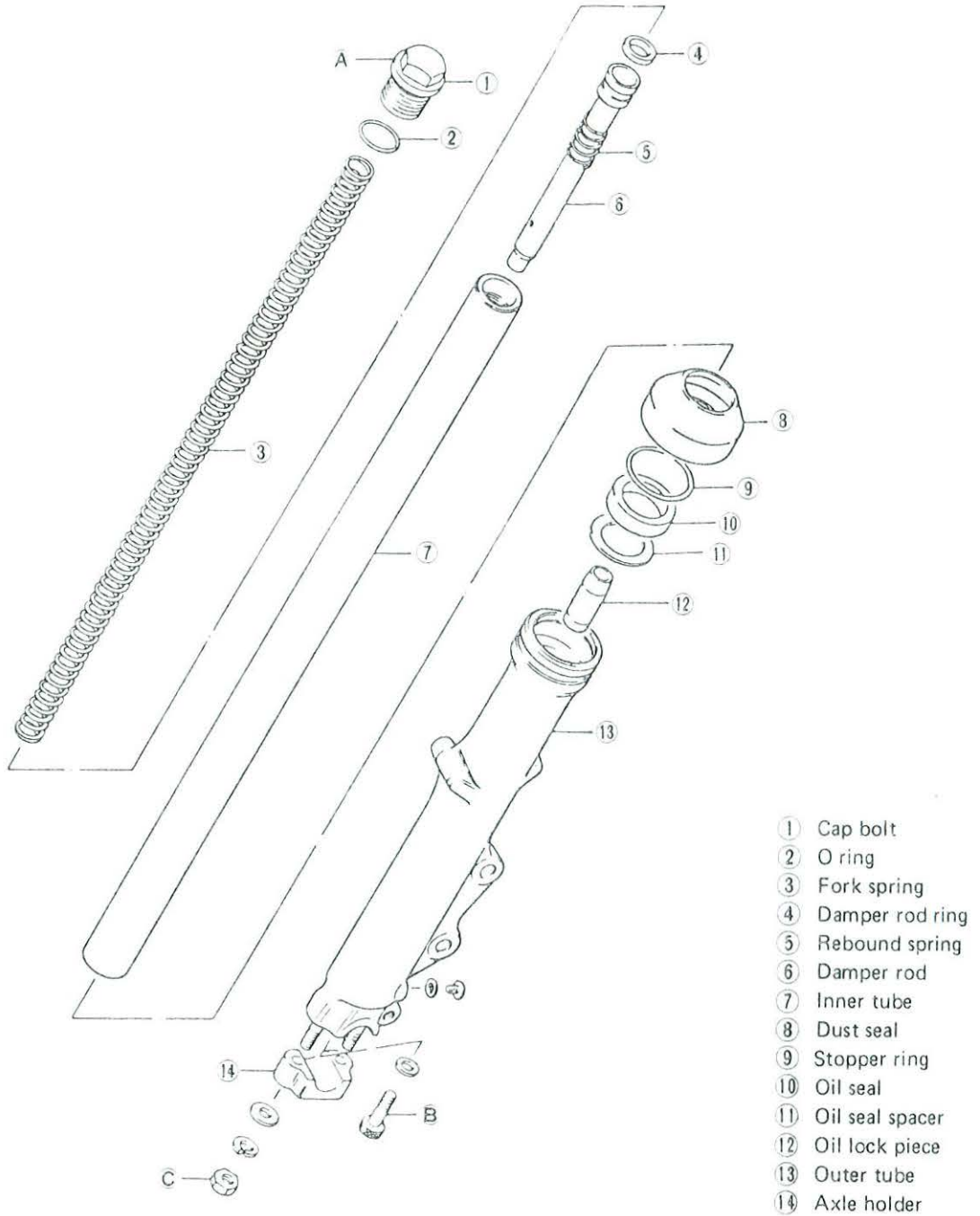


With the disc mounted on the wheel, check the disc for face runout with a dial gauge, as shown.

09900-20606	Dial gauge (1/100 mm)
Service Limit	0.30 mm (0.012 in)



DISASSEMBLY



- ① Cap bolt
- ② O ring
- ③ Fork spring
- ④ Damper rod ring
- ⑤ Rebound spring
- ⑥ Damper rod
- ⑦ Inner tube
- ⑧ Dust seal
- ⑨ Stopper ring
- ⑩ Oil seal
- ⑪ Oil seal spacer
- ⑫ Oil lock piece
- ⑬ Outer tube
- ⑭ Axle holder

Tightening torque		
	kg-m	lb-ft
A	1.5 - 3.0	11.0 - 21.5
B	1.5 - 2.5	11.0 - 18.0
C	1.5 - 2.5	11.0 - 18.0

REASSEMBLY

Reassemble and remount the steering stem in the reverse order of disassembly and removal and also carry out the following steps:

INNER RACES

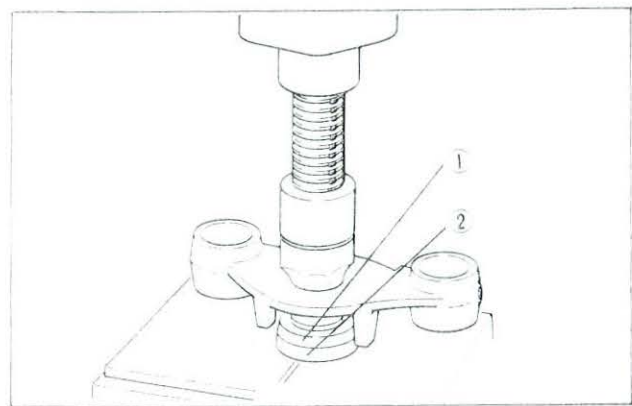
Press in the upper and lower inner races by using special tool.

09941-34511	Steering inner race installer
-------------	-------------------------------



OUTER RACES

Press in the lower bearing outer race.



1 Outer race 2 Drift

STEEL BALL

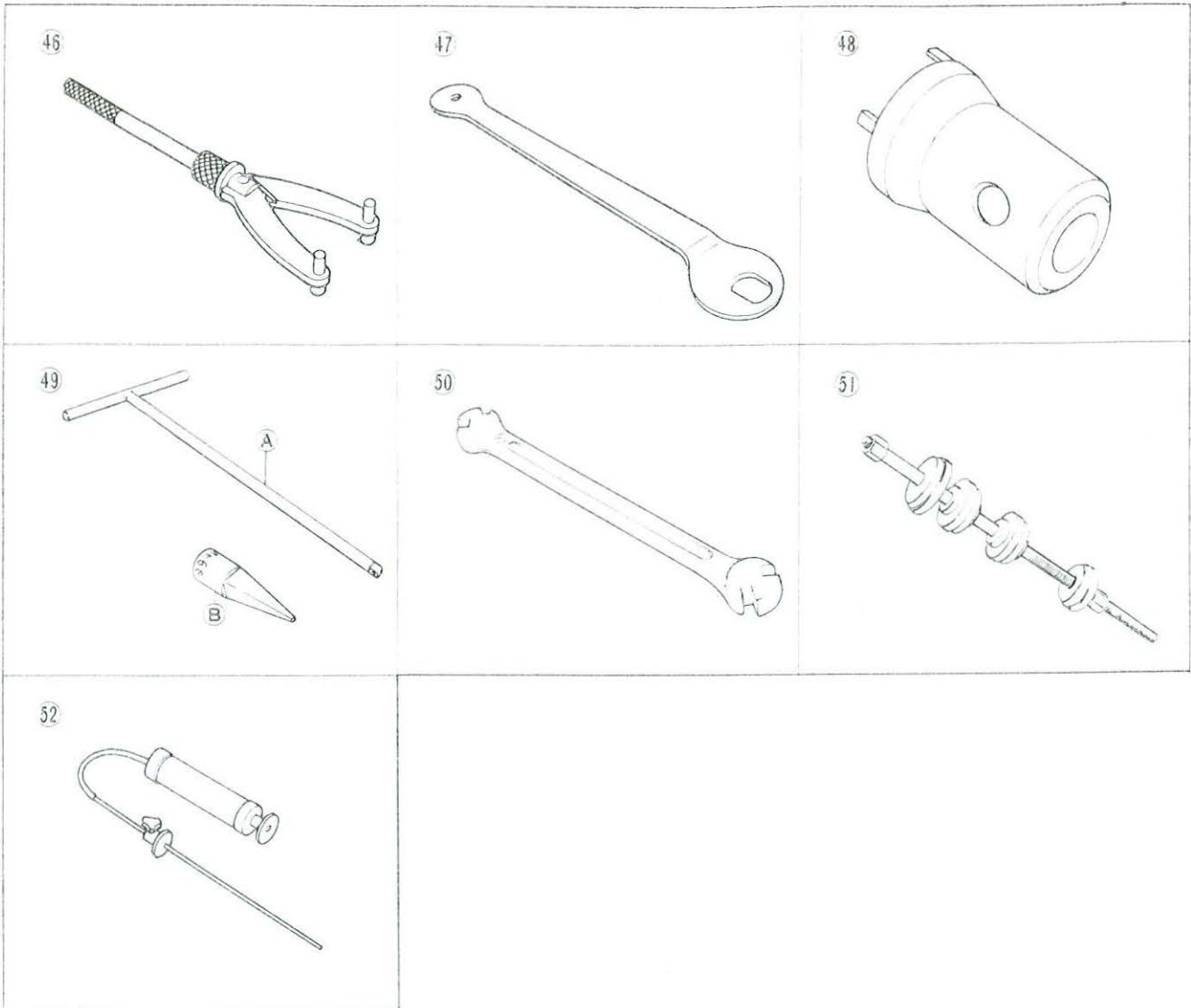
Apply grease when installing the upper and lower steel balls.

99000-25030	Suzuki super grease "A"
-------------	-------------------------

Number of balls	Upper	18
	Lower	18



Complaint	Symptom and possible causes	Remedy
Generator does charge, but charging rate is below the specification.	<ol style="list-style-type: none"> 1. Lead wires tend to get shorted or open-circuited or loosely connected at terminals. 2. Grounded or open-circuited stator coils of generator. 3. Defective regulator/rectifier. 4. Not enough electrolyte in the battery. 5. Defective cell plates in the battery. 	<p>Repair, or retighten.</p> <p>Replace.</p> <p>Replace. Add distilled water to the upper level. Replace the battery.</p>
Generator Overcharges.	<ol style="list-style-type: none"> 1. Internal short-circuit in the battery. 2. Resistor element in the regulator/rectifier damaged or defective. 3. Regulator/rectifier poorly grounded. 	<p>Replace the battery. Replace.</p> <p>Clean and tighten ground connection.</p>
Unstable charging	<ol style="list-style-type: none"> 1. Lead wire insulation frayed due to vibration, resulting in intermittent shorting. 2. Generator internally shorted. 3. Defective regulator/rectifier. 	<p>Repair or replace.</p> <p>Replace. Replace.</p>
Starter button is not effective.	<ol style="list-style-type: none"> 1. Battery run down. 2. Defective switch contacts. 3. Brushes not seating properly on commutator in starter motor. 4. Defective starter relay. 	<p>Recharge or replace. Replace. Repair or replace.</p> <p>Replace.</p>
Battery "sulfation"	<ol style="list-style-type: none"> 1. Charging rate too low or too high. (When not in use batteries should be recharged at least once a month to avoid sulfation.) 2. Battery electrolyte excessive or insufficient, or its specific gravity too high or too low. 3. The battery left unused for too long in cold climate. 	<p>Replace the battery.</p> <p>Keep the electrolyte up to the prescribed level, or adjust the S.G. by consulting the battery maker's directions. Replace the battery, if badly sulfated.</p>
Battery discharges too rapidly.	<ol style="list-style-type: none"> 1. Dirty container top and sides. 2. Impurities in the electrolyte or electrolyte S.G. is too high. 	<p>Clean. Change the electrolyte by consulting the battery maker's directions.</p>



ELECTRICAL

Unit: mm (in)

ITEM	SPECIFICATION		NOTE
Ignition timing	20° B.T.D.C. Below 1650 ± 100 r/min and 40° B.T.D.C. Above 3500 ± 100 r/min.		
Spark plug	Type	NGK: D9EA N. D.: X27ES-U	
	Gap	0.6 – 0.7 (0.024 – 0.028)	
Spark performance	Over 8 (0.3) at 1 atm		
Signal coil resistance	Approx.	60 – 80 Ω	B _r – B/W G/W – B/W
Ignition coil resistance	Primary	O/W – W or B/Y Approx. 3.5 – 4.5 Ω	
	Secondary	Plug cap – W or B/Y Approx. 23 – 25 kΩ	
Generator No-Load voltage	More than	75 V (AC) at 5000 r/min.	
Regulated voltage		14 – 15 V at 5000 r/min.	
Starter motor	Brush length	N. D. Limit: $\frac{9}{0.4}$	
	Commutator under cut	Limit: $\frac{0.2}{0.008}$	
Starter relay resistance	Approx.	3 – 4 Ω	
Battery	Type designation	YB10L-A2	
	Capacity	12V 43.2kC(12Ah)/10HR	
	Standard elec- trolyte S. G.	1.28 at 20°C (68°F)	
Fuse size	Main	15A	

SPECIFICATIONS

DIMENSIONS AND DRY MASS

Overall length	*2020 mm (79.5 in)
Overall width	* 840 mm (33.1 in)
Overall height	*1100 mm (43.3 in)
Wheelbase	*1410 mm (55.5 in)
Ground clearance	140 mm (5.5 in)
Dry mass	* 159 kg (351 lbs)

ENGINE

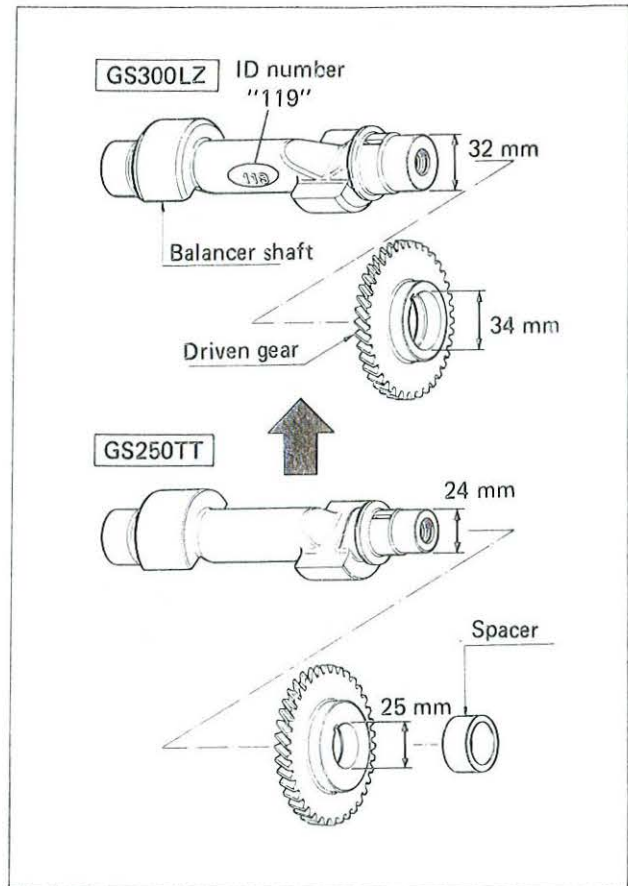
Type	Four-stroke, air-cooled, DOHC
Number of cylinders	2
Bore	*62.0 mm (2.44 in)
Stroke	*49.6 mm (1.95 in)
Piston displacement	*299 cm ³ (18.3 cu. in)
Compression ratio	*8.9 : 1
Carburetor	MIKUNI BS30SS, twin
Air cleaner	Polyurethane foam element
Starter system	Electric
Lubrication system	Wet sump

TRANSMISSION

Clutch	Wet multi-plate type
Transmission	*5-speed constant mesh
Gearshift pattern	*1-down, 4-up
Primary reduction	3.125 (75/24)
Final reduction	*2.800 (42/15)
Gear ratios, Low	2.500 (30/12)
2nd	1.625 (26/16)
3rd	1.210 (23/19)
4th	1.000 (21/21)
Top	0.863 (19/22)
Drive chain	*DAIDO DID520UB or TAKASAGO RK520SU, 108 links

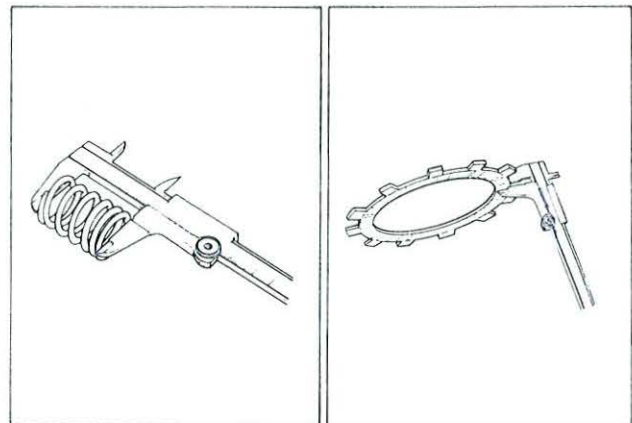
COUNTERBALANCER

- The dimensions of the counterbalancer shaft and the driven gear of the balancer were changed as shown in the illustration on the right. Together with this, the spacer was abolished, and the number "119" was marked on the counterbalancer shaft.



CLUTCH DRIVE PLATES, DRIVEN PLATES AND SPRINGS

- The transmission of GS300L is a 5-speed transmission on the basis of the transmission of GS250T. Together with this, the clutch drive and driven plates and the clutch spring were changed.



Unit: mm (in)

		GS300LZ	GS250TT
Drive plate		8 pieces	7 pieces
Driven plate		7 pieces	6 pieces
Drive plate thickness	STD	2.7 – 2.9 (0.10 – 0.11)	2.9 – 3.1 (0.11 – 0.12)
	Service Limit	2.4 (0.09)	2.6 (0.10)
Driven plate thickness	STD	1.20 ± 0.05 (0.047 ± 0.002)	1.60 ± 0.05 (0.063 ± 0.002)
Clutch spring free length	Service Limit	29.5 (1.16)	33.6 (1.32)

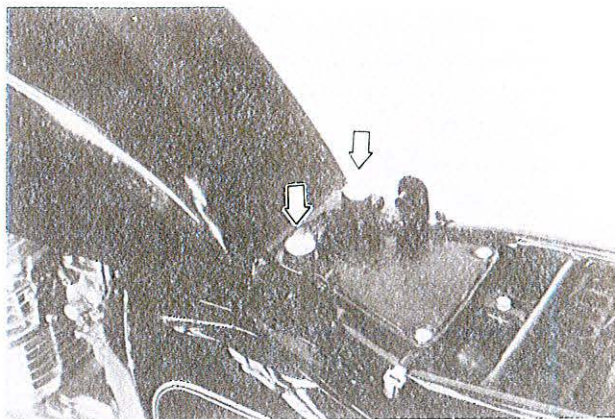
COMBINATION METER

REMOVAL

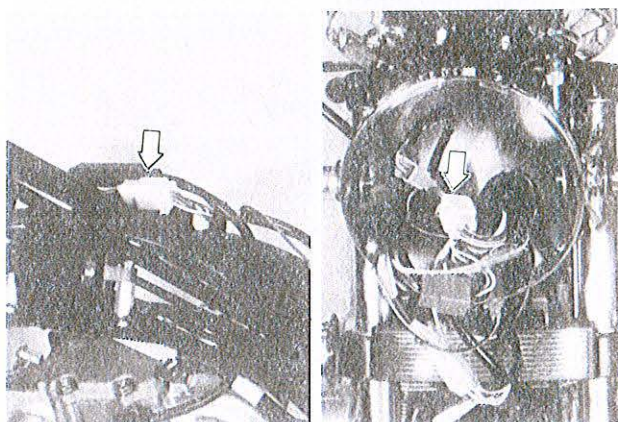
- Remove seat.
- Take off fuel tank.

NOTE:

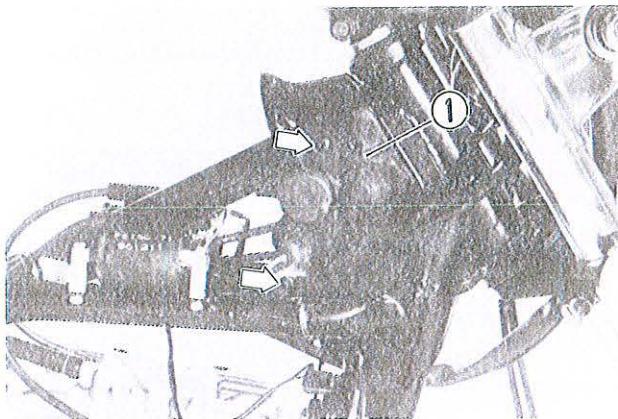
When taking off fuel tank, disconnect fuel hose and vacuum hose and turn the fuel cock lever to "ON" or "RES" position.



- Disconnect the couplers from combination meter.



- Remove frame head cover ①.



- Disconnect speedometer cable.



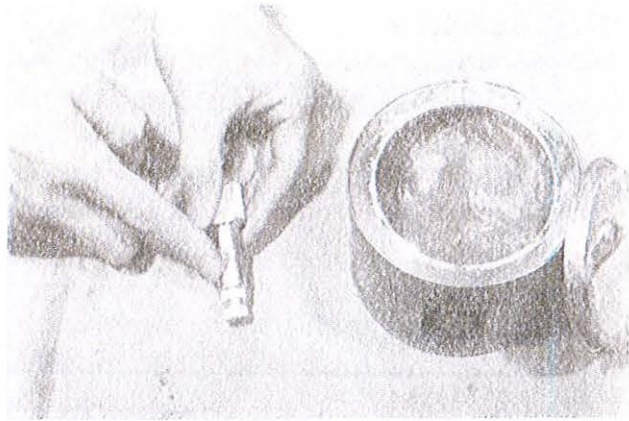
BRAKE CAMS

- Apply grease to the brake cams.

Suzuki super grease "A"	99000-25030
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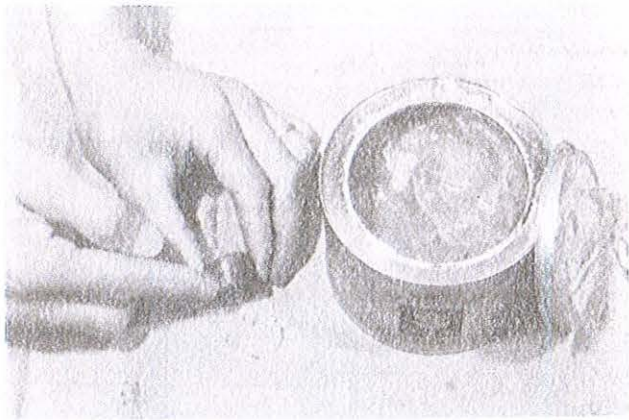
WARNING:

Be careful not to apply too much grease to the brake cam shafts. If grease gets on the linings, brake slippage will result.

**SPEEDOMETER GEAR**

- Apply grease to the speedometer drive gear.

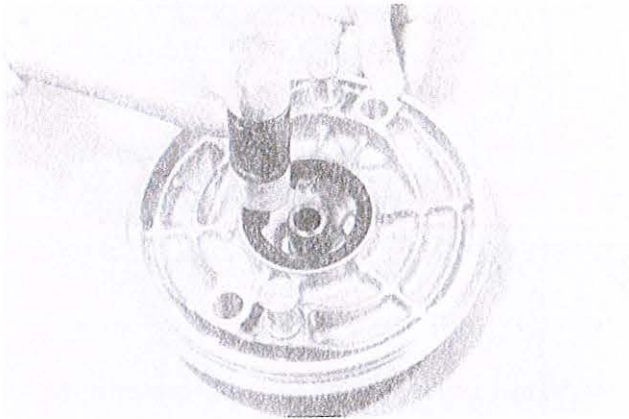
Suzuki super grease "A"	99000-25030
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**OIL SEAL**

- Apply grease to the oil seal before installing.

Suzuki super grease "A"	99000-25030
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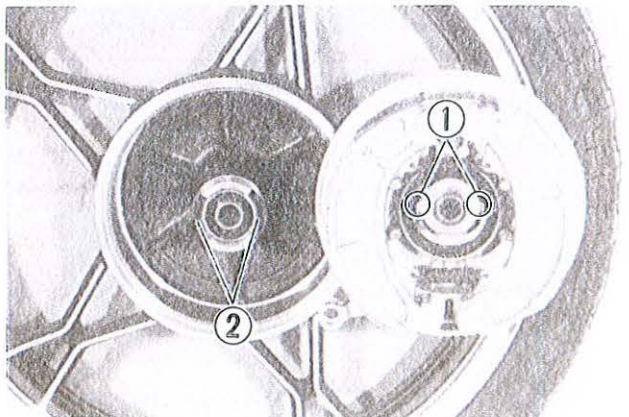
- Install the oil seal.

**BRAKE PANEL**

- Installing the brake panel, align groove ① on the wheel hub with the two drive pawls ② on speedometer gearbox.

CAUTION:

Adjust the front brake lever play after installation of the front wheel.



FORK OIL

- For the fork oil, be sure to use a fork oil whose viscosity rating meets specifications below.

Fork oil	Fork oil #15
----------	--------------

Capacity	153 ml (5.17 US oz)
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- Adjust the fork oil level with a special tool.

NOTE:
When adjusting oil level, remove the fork spring and compress the inner tube fully.

09943-74111	Fork oil level gauge
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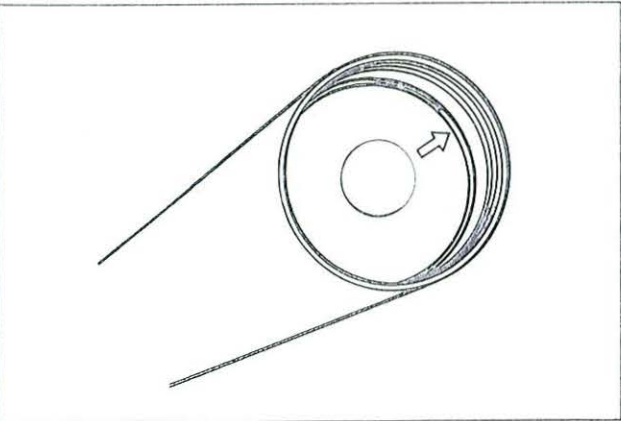
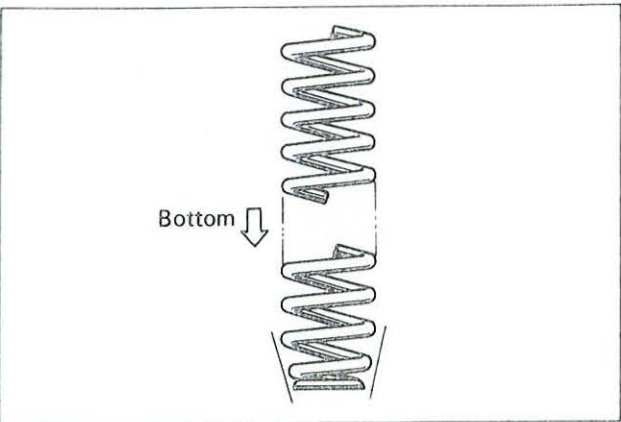
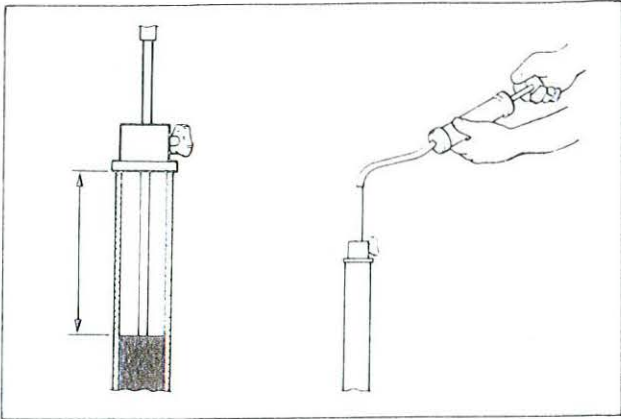
Oil level	186 mm (7.3 in)
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FORK SPRING

- When installing the fork spring, small diameter end should position in bottom.

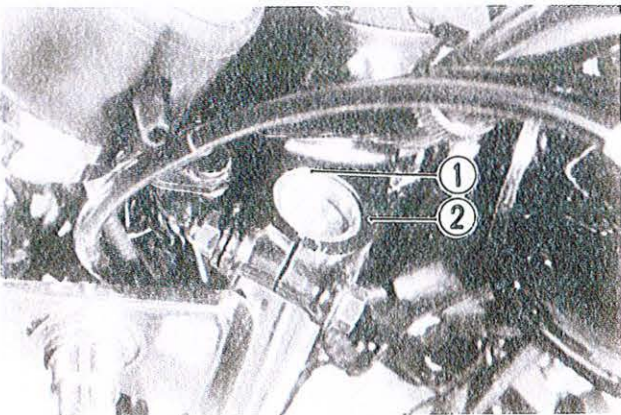
- To install a new stopper ring, it will be necessary to push the spring seat inward.

CAUTION :
* Always use a new stopper ring.
* After installing a stopper ring, always insure that it is completely seated in its groove and securely fitted.

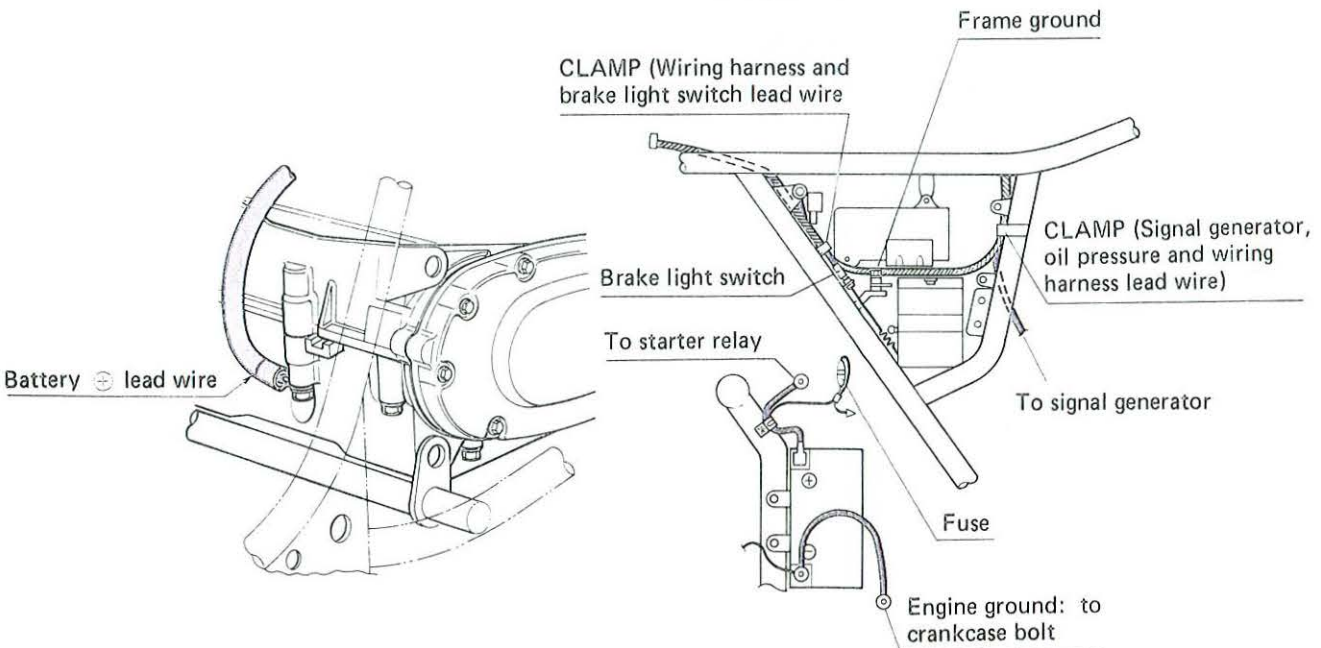
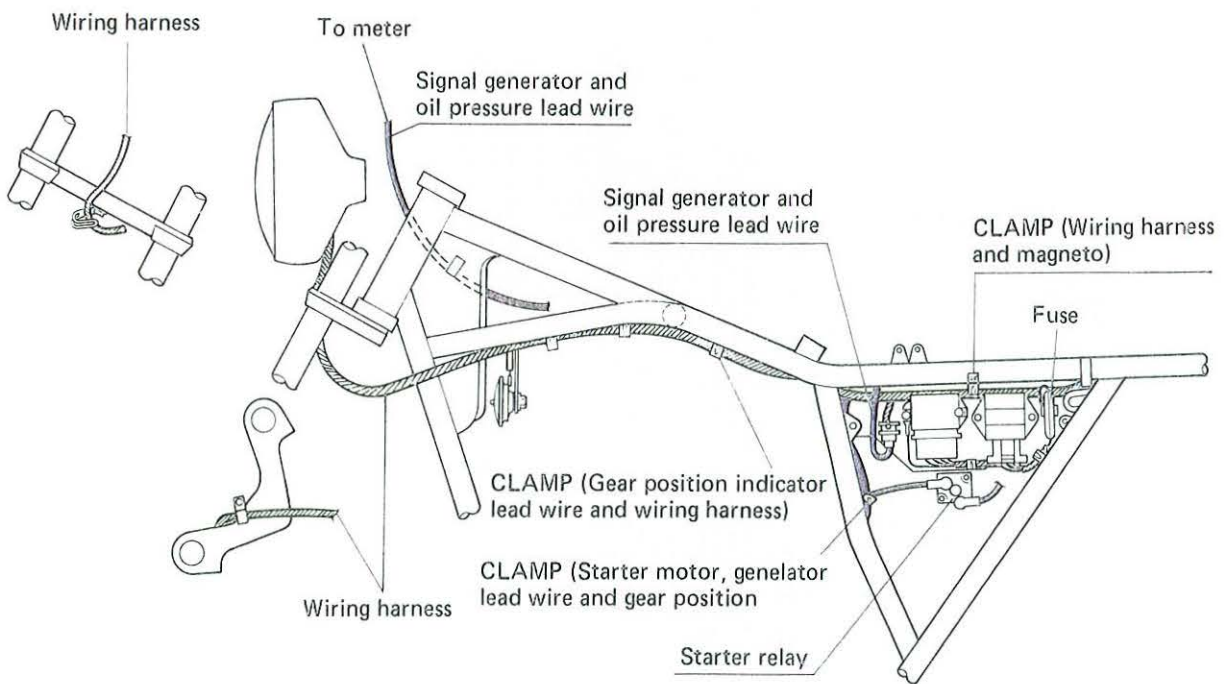
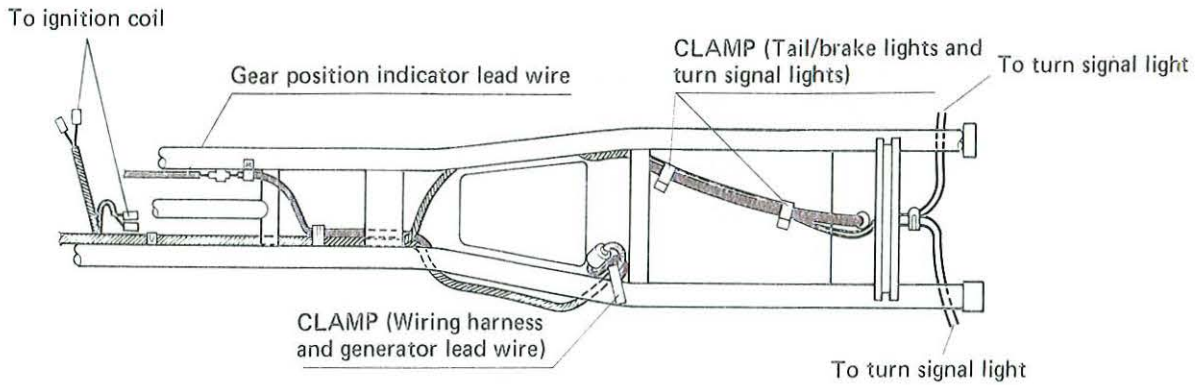


INNER TUBE

- When installing the front fork assembly, align the top ① of inner tube to the upper surface ② of the steering stem upper bracket.



WIRE AND CABLE ROUTING



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