SUZUKI

RG125

SERVICE MANUAL

99500-11132-01E

FOREWORD

The SUZUKI RG125 has been developed as a new generation motorcycle. It is packed with highly advanced design concepts including a liquid cooling system, a C.D. Ignition system, and a exhaust valve system. Combined with precise control and easy handling the RG125 provides excellent performance and outstanding riding comfort.

This service manual has been produced primarily for experienced mechanics whose job is to inspect, adjust, repair and service SUZUKI motorcycles. Apprentice mechanics and do-it-yourself mechanics, will also find this manual an extremely useful guide.

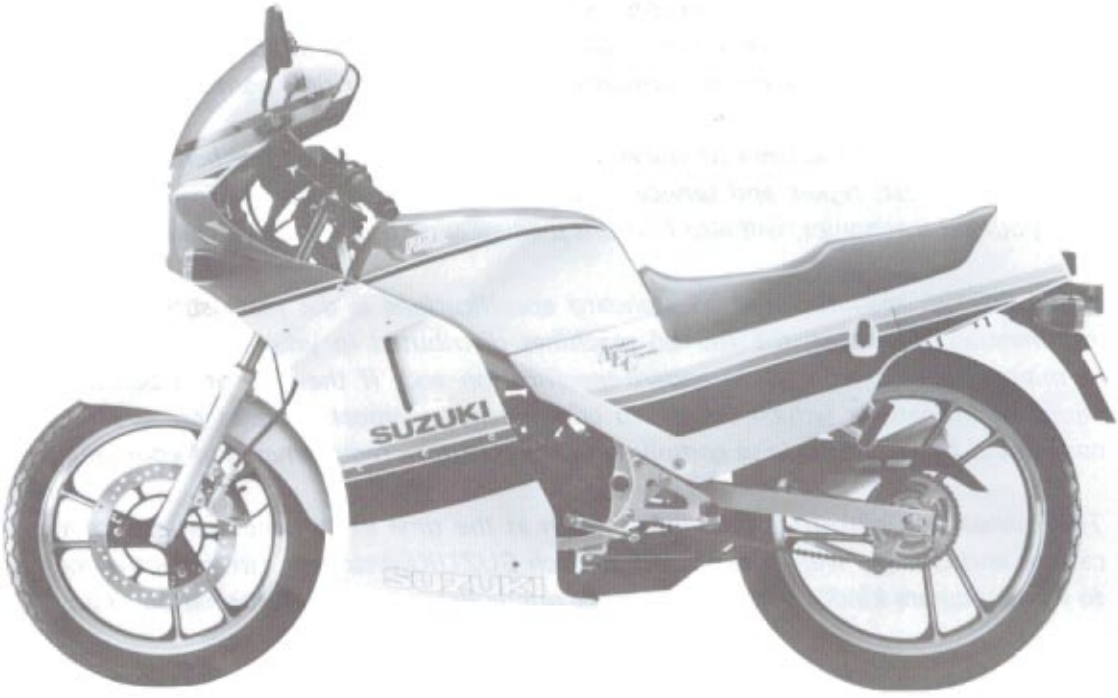
Model RG125 manufactured to standard specifications is the main subject matter of this manual. However, the RG125 machines distributed in your country might differ in minor respects from the standard-specification and, if they do, it is because some minor modifications (which are of no consequence in most cases as far as servicing is concerned) had to be made to comply with the statutory requirements of your country.

This manual contains up-to-date information at the time of its issue. Latermade modifications and changes will be explained to each SUZUKI distributor in respective markets, to whom you are kindly requested to make query about updated information, if any.

SUZUKI MOTOR CORPORATION

Motorcycle Technical Service Department

VIEW OF SUZUKI RG125



LEFT SIDE

RIGHT SIDE

GROUP INDEX

GENERAL INFORMATION

1

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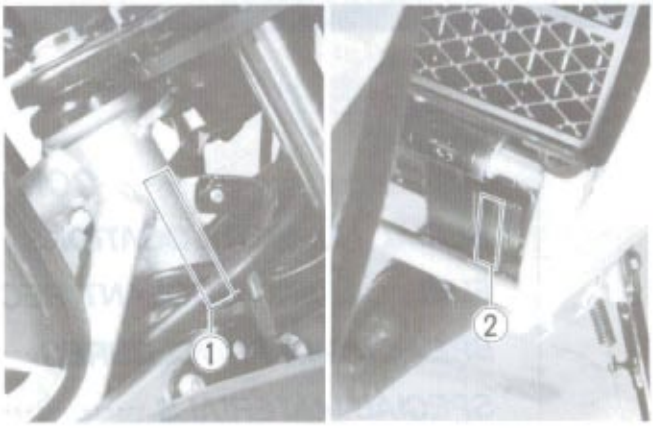
SERIAL NUMBER LOCATIONS

The frame serial number or V.I.N. (Vehicle Identification Number) ① is stamped on the steering head pipe. The engine serial number ② is located on the front of the crankcase. These numbers are required especially for registering the machine and ordering spare parts.



FUEL, OIL AND COOLANT RECOMMENDATION

FUEL

Gasoline used should be graded 85 – 95 octane in Research Method and should be an unleaded or low-lead type where they are available.

ENGINE OIL

Use SUZUKI "CCI" oil or SUZUKI CCI Super oil. They are formulated to give best engine performance with least carbon deposits, least preignition, maximum spark plug life and best lubrication. If they are not available, a good quality TWO-STROKE OIL (non-diluent type) should be used.

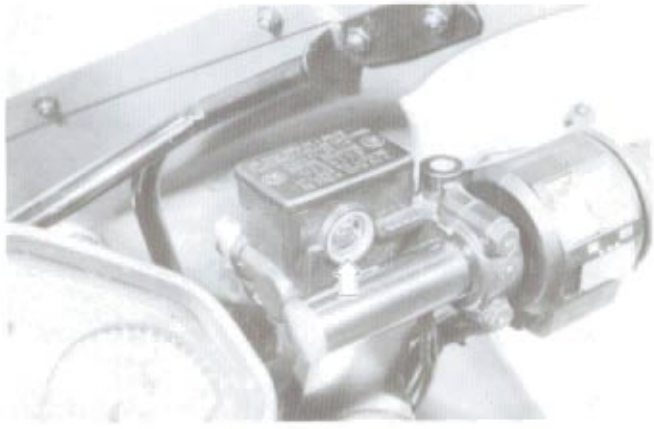
TRANSMISSION OIL

Use a good quality SAE 20W/40 multi-grade motor oil.

BRAKE FLUID

Specification and classification	DOT3, DOT4 or SAE J1703

99000-23021	SUZUKI BRAKE FLUID



FRONT FORK OIL

Use fork oil # 15.

99000-99044-15G	SUZUKI Fork oil # 15

COOLANT

Use an anti-freeze/coolant compatible with an aluminum radiator, mixed with distilled water only.

WATER FOR MIXING

Use distilled water only. Water other than distilled water can corrode and clog the aluminum radiator.

ANTI-FREEZE & SUMMER COOLANT

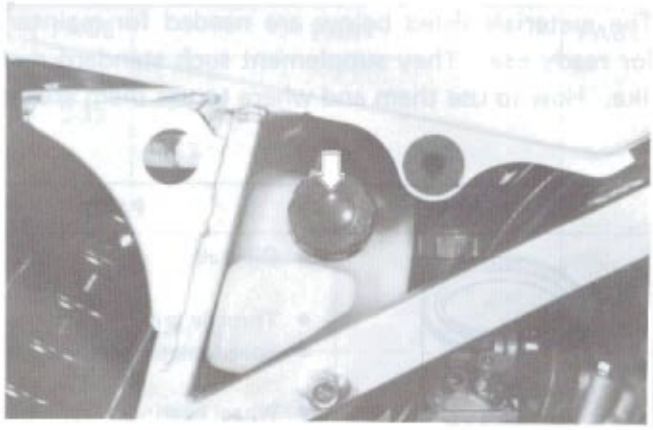
The coolant performs as corrosion and rust inhibitor as well as anti-freeze. Therefore, the coolant should be used at all times even though the atmospheric temperature in your area does not go down to freezing point.

SUZUKI recommends the use of SUZUKI GOLDEN CRUISER 1 200 anti-freeze/coolant.
If this is not available, use an equivalent which is compatible with an aluminum radiator.

REQUIRED AMOUNT OF WATER/COOLANT

Coolant capacity (total): 1 020 ml

For coolant mixture information, refer to cooling system section, page 4-2.



CAUTION:
Mixing of anti-freeze/coolant should not exceed 60%. Mixing beyond it would reduce its efficiency. If the anti-freeze/coolant mixing ratio is below 50%, the rust inhibiting performance is greatly reduced. Be sure to mix the solution at 50%, even though the atmospheric temperature does not go down to freezing point.
Every new unit contains Bar's leak.

99000-24120	SUZUKI GOLDEN CRUISER 1200

BREAKING-IN PROCEDURES

During manufacture only the best possible materials are used and all machined parts are finished to a very high standard but it is still necessary to allow the moving parts to "BREAK-IN" before subjecting the engine to maximum stresses. The future performance and reliability of the engine depends on the care and restraint exercised during its early life. The general rules are as follows:

- Keep the these breaking-in engine speed limits:

Initial 800 km (500 miles)	Below 4 000 r/min
Up to 1 600 km (1 000 miles)	Below 6 000 r/min
Over 1 600 km (1 000 miles)	Below 9 000 r/min

- Upon reaching an odometer reading of 800 km you can subject the motorcycle to full throttle operation.
- Do not maintain constant engine speed for an extended time period during any portion of the break-in. Try to vary the throttle position.

SPECIAL MATERIALS

The materials listed below are needed for maintenance work on the RG125, and should be kept on hand for ready use. They supplement such standard materials as cleaning fluids, lubricants, emery cloth and the like. How to use them and where to use them are described in the text of this manual.

MATERIAL	PART	PAGE	PART	PAGE
 SUZUKI SUPER GREASE "A" 99000-25010	• Oil seals • Throttle grip • Speedometer gearbox • Wheel bearings • Steering stem upper and lower races	3-26 3-34 2-2 2-2 7-7 2-2 7-6 7-31 2-2 7-25	• Rear brake camshaft • Swingarm spacer, oil seal and dust seal	2-2 7-32 2-2 7-36
 SUZUKI BOND NO. 1207B 99000-31140	• Mating surface of left and right crankcases • Mechanical seal • Temperature gauge	3-34 4-9 4-11		
 THREAD LOCK CEMENT 99000-32040	• Front fork damper rod bolt	7-19		
 THREAD LOCK "1342" 99000-32050	• Crankshaft oil seal • Magneto stator • Cam guide retainer screw • Pawl lifter retainer screw	3-26 3-38 6-2 3-34 3-34		
 THREAD LOCK SUPER "1322" 99000-32110	• Magneto nut • Handlebar set bolt	3-38 7-26		

MATERIAL	PART	PAGE	PART	PAGE
 THREAD LOCK SUPER "1333B" 99000-32020	• 2nd drive gear • Kick starter stopper bolt • Front footrest bracket bolt	3-29 3-33		
 THREAD LOCK SUPER "1360" 99000-32130	• Front brake disc plate bolt	7-7		
 SUZUKI BRAKE FLUID 99000-23021 (0.5L)	• Brake fluid	2-14		
 SUZUKI GOLDEN CRUISER 1200 99000-24120 (2L)	• Coolant	2-12		
 SUZUKI FORK OIL #15 99000-99044-15G	• Front fork	7-20		
SUZUKI BAR'S LEAK 99000-24240	• Radiator	4-2		

PRECAUTIONS AND GENERAL INSTRUCTIONS

Observe the following items without fail when disassembling and reassembling motorcycles.

- Do not run engine indoors with little or no ventilation.
- Be sure to replace packings, gaskets, circlips, O-rings and cotter pins with new ones.

CAUTION:
Never reuse a circlip after a circlip has been removed from a shaft, it should be discarded and a new circlip must be installed.
When installing a new circlip, care must be taken not to expand the end gap larger than required to slip the circlip over the shaft.
After installing a circlip, always insure that it is completely seated in its groove and securely fitted.

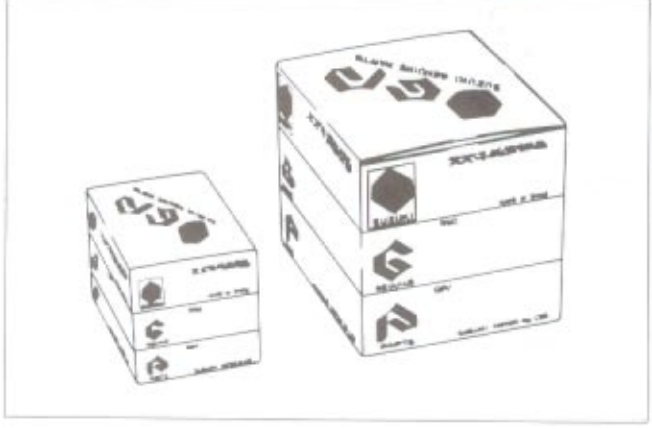
- Tighten cylinder head and case bolts and nuts beginning with larger diameter and ending with smaller diameter, and from inside to out-side diagonally, to the specified tightening torque.
- Use special tools where specified.
- Use genuine parts and recommended oils.
- When 2 or more persons work together, pay attention to the safety of each other.
- After the reassembly, check parts for tightness and operation.
- Treat gasoline, which is extremely flammable and highly explosive, with greatest care. Never use gasoline as cleaning solvent.

Warning, Caution and Note are included in this manual occasionally, describing the following contents.

WARNING ..... When personal safety of the rider is involved, disregard of the information could result in injury.
CAUTION ..... For the protection of the motorcycle, the instruction or rule must be strictly adhered to.
NOTE ..... Advice calculated to facilitate the use of the motorcycle is given under this heading.

USE OF GENUINE SUZUKI PARTS

To replace any part of the machine use a genuine SUZUKI replacement part. Imitation parts or parts supplied from any other source than SUZUKI, if used to replace SUZUKI parts can reduce the machine's performance and, even worse, could induce costly mechanical troubles.



SPECIFICATIONS

DIMENSIONS AND DRY MASS

Overall length	2 030 mm
Overall width	655 mm
Overall height	1 165 mm
Wheelbase	1 310 mm
Ground clearance	165 mm
Seat height	730 mm
Dry mass	96 kg

ENGINE

Type	Two-stroke, water-cooled
Intake system	Piston and reed valve
Number of cylinders	1
Bore	54.0 mm
Stroke	54.0 mm
Piston displacement	123 cm^3
Corrected compression ratio	7.4 : 1
Carburetor	MIKUNI VM28SS, Single
Air cleaner	Polyurethane foam element
Starter system	Primary kick
Lubrication system	SUZUKI "CCI"

TRANSMISSION

Clutch		Wet multi-plate type
Transmission		6-speed constant mesh
Gearshift pattern		1-down, 5-up
Primary reduction		3.350 (67/20)
Final reduction		2.800 (42/15)
		2.866 (43/15) ... E-30
Gear ratios,	Low	2.750 (33/12)
	2nd	1.857 (26/14)
	3rd	1.368 (26/19)
	4th	1.095 (23/21)
	5th	0.956 (22/23)
	Top	0.840 (21/25)
Drive chain		D.I.D. 428 VC.1, TAKASAGO RK428HO, 128 links

CHASSIS

Front suspension	Telescopic, coil spring, oil dampened
Rear suspension	Swingarm, coil spring, oil dampened
Steering angle	30° (right & left)
Caster	63°30'
Trail	85 mm
Turning radius	3.0 m
Front brake	Disc brake
Rear brake	Internal expanding
Front tire size	80/100-16 45P
Rear tire size	90/90-18 51P
Front fork stroke	130 mm
Rear wheel travel	110 mm

ELECTRICAL

Ignition type	SUZUKI "PEI"
Ignition timing	22° B.T.D.C. at 4 000 r/min
Spark plug	NGK B8ES or NIPPON DENSO W24ES ... E-04 NGK BR8ES or NIPPON DENSO W24ESR ... E-02 NGK B9ES or W27ES ... E-24, 30 NGK BR9ES or W27ESR ... E-15, 17, 18, 21
Battery	12V 14.4 kC (4 Ah)/10 HR
Fuse	15A

CAPACITIES

Fuel tank including reserve	13.0 L
reserve	1.7 L
Engine oil tank	1.2 L
Front fork oil (each leg.)	149 ml
Transmission oil	900 ml
Coolant	1 020 ml

These specifications are subject to change without notice.

SPECIFICATION AND DESTINATION

E-02: For U.K.
E-04: For France
E-15: For Finland
E-17: For Sweden
E-18: For Switzerland
E-21: For Belgium
E-24: For Australia
E-30: For Singapore

PERIODIC MAINTENANCE AND TUNE-UP PROCEDURES

CONTENTS

PERIODIC MAINTENANCE SCHEDULE

The chart below lists the recommended intervals for all the required periodic service work necessary to keep the motorcycle operating at peak performance and economy. Traveling distances are expressed in terms of kilometers or miles.

NOTE:
More frequent servicing may be performed on motorcycles that are used under severe conditions.

PERIODIC MAINTENANCE CHART

Interval / Item						
	km	1 000	6 000	12 000	18 000	24 000
	miles	600	4 000	7 500	11 000	15 000
	months	2	12	24	36	48
Battery (Specific gravity of electrolyte)		–	I	I	I	I
Engine bolts and nuts		T	T	T	T	T
Cylinder head, cylinder and muffler		–	C	C	C	C
Air cleaner		Clean every 3 000 km				
Spark plug		I	R	R	R	R
Carburetor		I	I	I	I	I
Oil pump		I	I	I	I	I
Fuel lines		I	I	I	I	I
		Replace every 4 years				
Clutch		I	I	I	I	I
Transmission oil		R	–	R	–	R
Radiator hoses		I	–	I	–	I
		Replace every 4 years				
Coolant		Change every 2 years				
Drive chain		I	I	I	I	I
		Clean and lubricate every 1 000 km				
Brakes		I	I	I	I	I
Brake hose		I	I	I	I	I
		Replace every 4 years				
Brake fluid		Replace every 2 years				
Tires		I	I	I	I	I
Steering		I	I	I	I	I
Front fork and rear suspension		–	–	I	–	I
Bolts and nuts		T	T	T	T	T

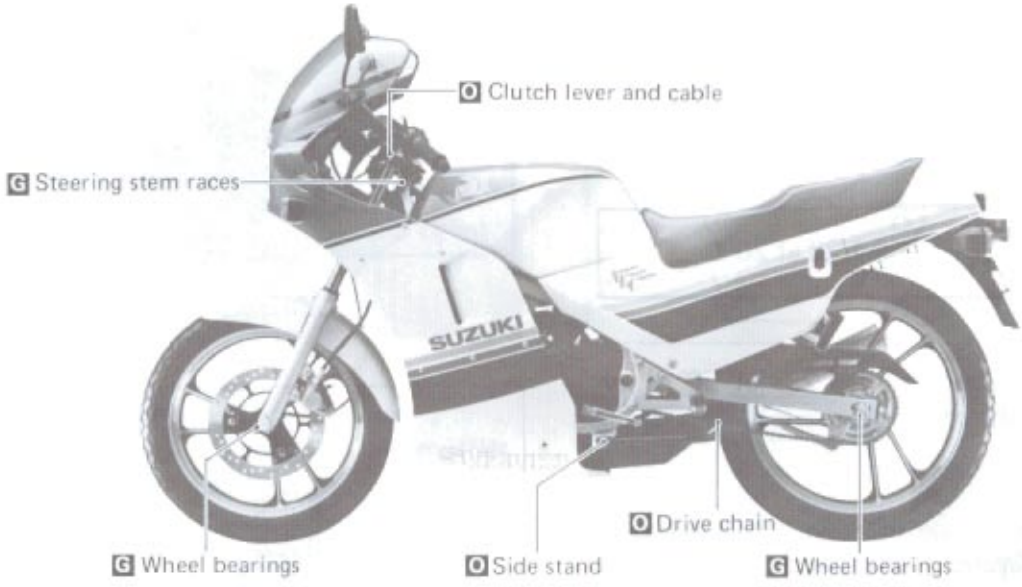
NOTE: C = Clean, I = Inspect, R = Replace, T = Tighten

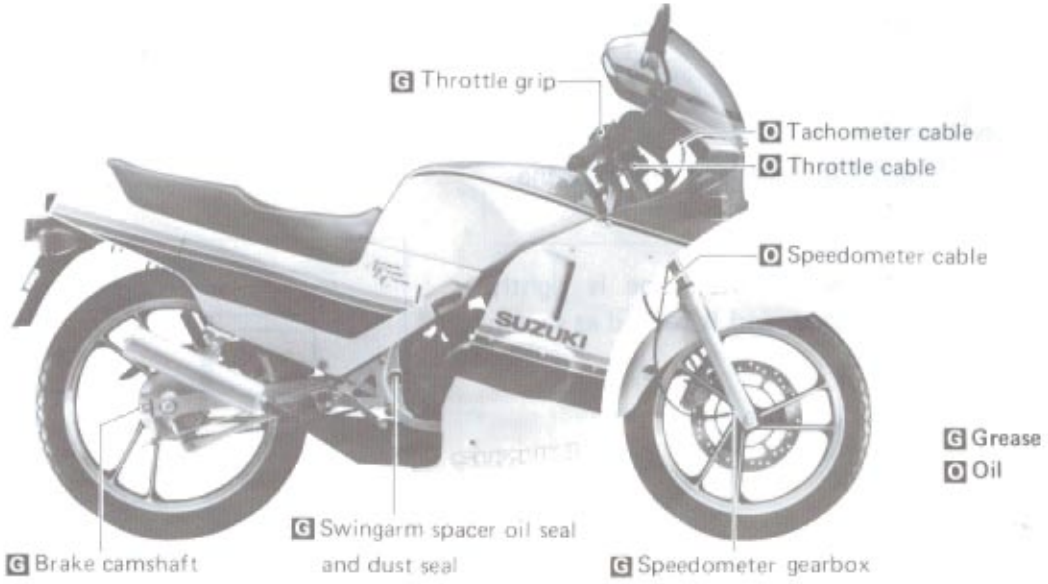
LUBRICATION POINTS

Proper lubrication is important for smooth operation and long life of each working part of the motorcycle. The major lubrication points are indicated below.

NOTE:
* Lubricate exposed parts which are subject to rust with either motor oil or grease whenever the motorcycle has been operated under wet or rainy conditions.
* Before lubricating each part, clean off any rusty spots and wipe off any grease, oil dirt or grime.

WARNING:
Be careful not to apply too much grease to the brake camshaft. If grease gets on the lining, brake slippage will result.





MAINTENANCE PROCEDURES

This section describes the service procedures for each section of Periodic Maintenance.

BATTERY

Inspect Every 6 000 km (12 months)

- Remove the right frame cover.
- Disconnect the ⊖ lead wire and then ⊕ lead wire from the battery.
- Remove the band and take off the battery.
- Check level and specific gravity of electrolyte. Add distilled water, if necessary, to keep the surface of electrolyte above the MIN. level line ① and below MAX. level line ②.
  For checking specific gravity, use a hydrometer to determine the charged condition.

09900-28403	Hydrometer

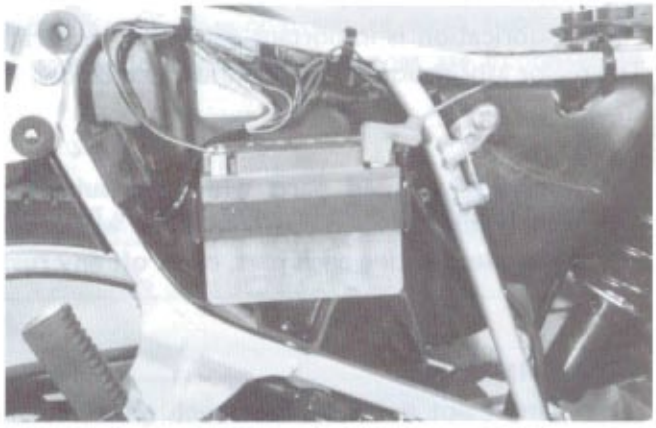
Standard specific gravity	1.28 at 20°C

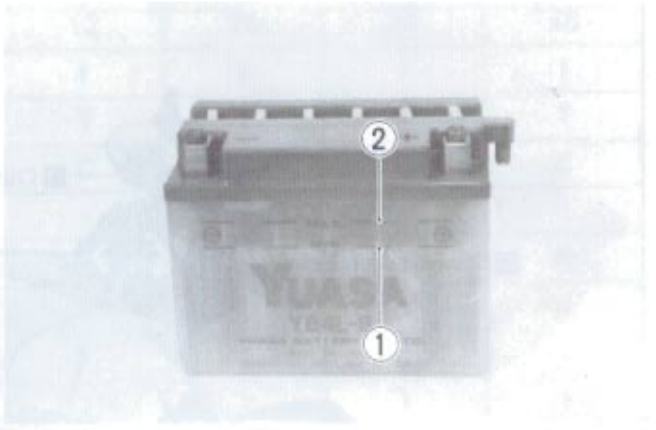
A specific gravity reading of 1.22 (at 20°C) or under means that the battery needs recharging.

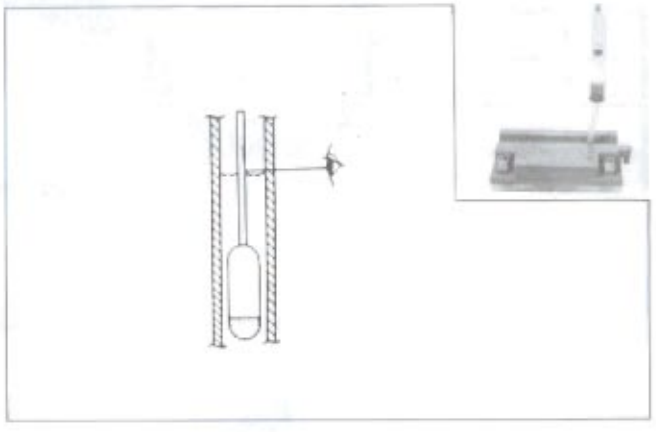
CAUTION:
Do not charge the battery while connected to the motorcycle. Charging the battery while connected into the circuit may damage the regulator/rectifier or other components.

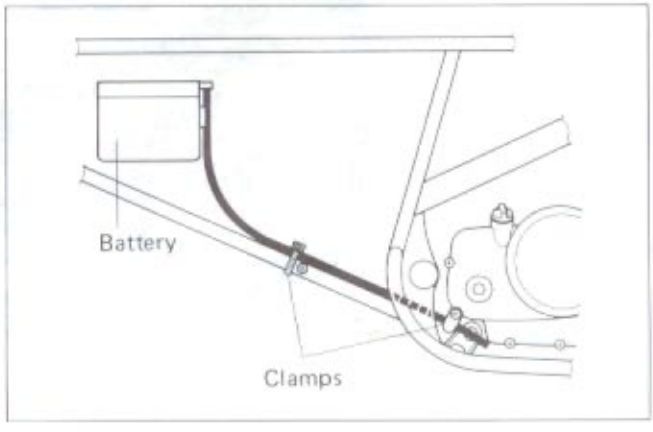
WARNING:
When installing the battery lead wires, fix the ⊕ lead first and ⊖ lead last.

- Make sure that the breather pipe is tightly secured and undamaged, and is routed as shown in the figure.









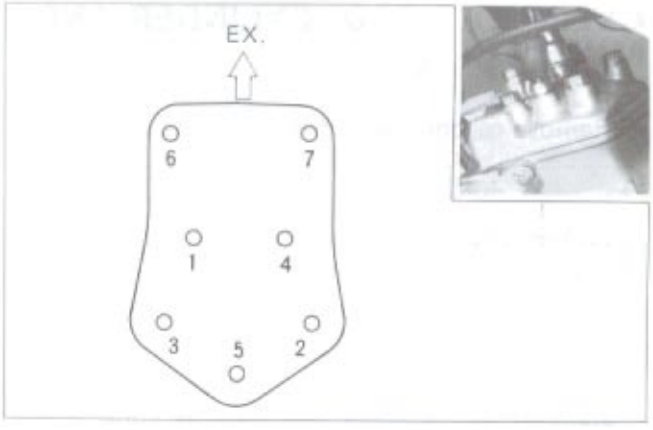
ENGINE BOLTS AND NUTS

Tighten Initial 1 000 km (2 months) and Every 6 000 km (12 months)

CYLINDER HEAD NUTS

- Retighten the cylinder head nuts to the specified torque according to the tightening order.

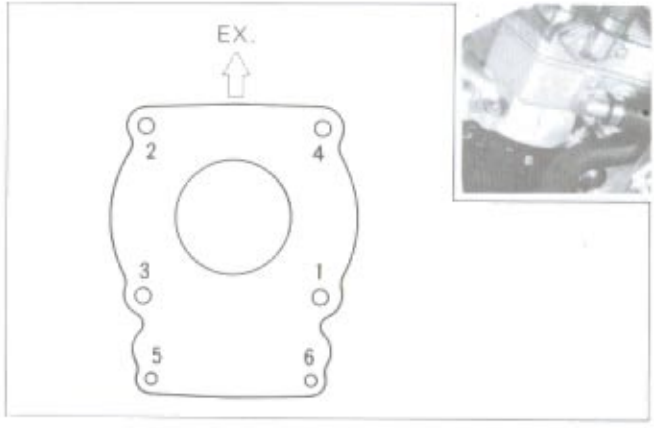
Tightening torque	26 – 30 N·m (2.6 – 3.0 kg-m)



CYLINDER NUTS

- Retighten the cylinder nuts to the specified torque according to the tightening order.

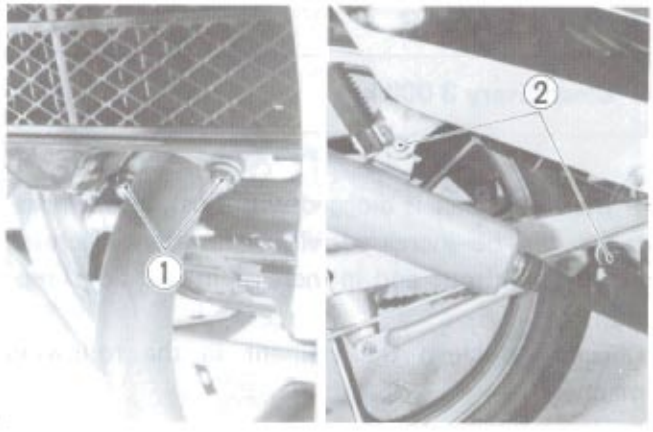
Tightening torque	6 mm	8 – 12 N·m (0.8 – 1.2 kg-m)
	8 mm	21 – 25 N·m (2.1 – 2.5 kg-m)



EXHAUST PIPE CLAMP NUTS

- Tighten the exhaust pipe clamp nuts and muffler mounting bolts to the specification.

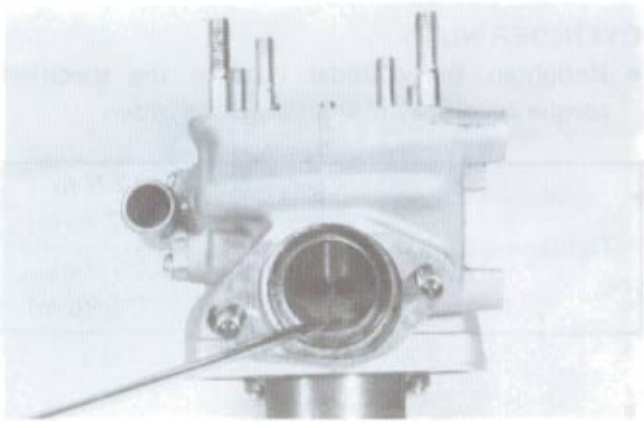
Tightening torque	①	23 – 29 N·m (2.3 – 2.9 kg-m)
	②	18 – 2.8 N·m (1.8 – 2.8 kg-m)



CYLINDER HEAD, CYLINDER AND MUFFLER

Remove carbon Every 6 000 km (12 months)

- Carbon deposits in the combustion chamber of the cylinder head and at the piston crown will raise the compression ratio and may cause pre-ignition or overheating.
- Carbon deposited at the exhaust port of the cylinder will prevent the flow of exhaust gas, reducing the output. Remove carbon deposits periodically.



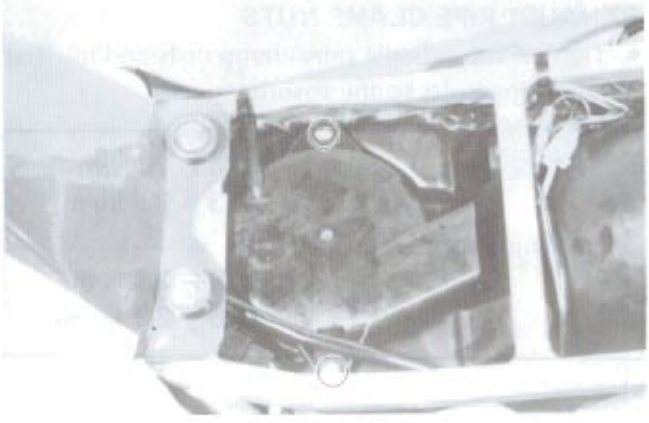
AIR CLEANER

Clean Every 3 000 km

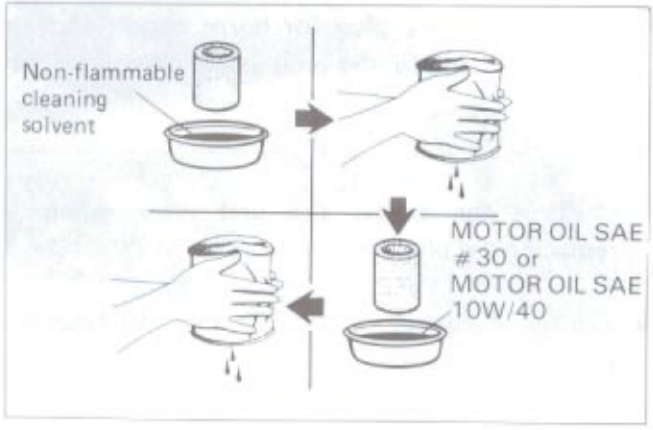
If the air cleaner is clogged with dust, intake resistance will be increased with a resultant decrease in power output and in increase in fuel consumption.

Check and clean the element in the following manner.

- Remove the seat.
- Remove the screws and take out the air cleaner case cover with element.
- Separate the polyurethane foam element from the element frame.



- Fill a washing pan of a proper size with non-flammable cleaning solvent. Immerse the element in the cleaning solvent and wash it clean.
- Squeeze the cleaning solvent out of the washed element by pressing it between the palms of both hands: do not twist or wring the element or it will develop tears.
- Immerse the element in motor oil and squeeze the oil out of the element leaving it slightly wet with oil.
- Fit the cleaner element to frame properly.

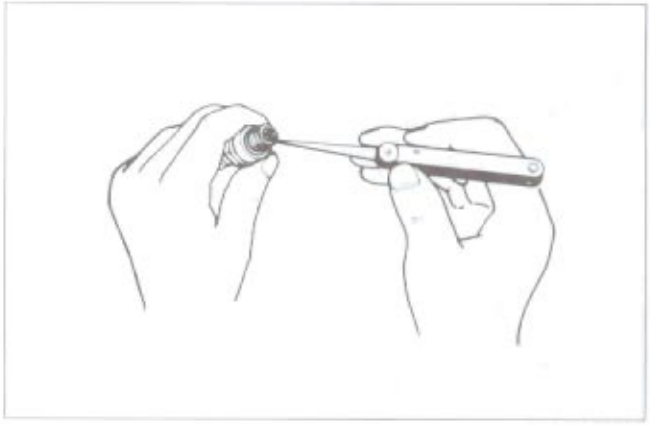


CAUTION:
* **Before and during the cleaning operation, inspect the element for tears. A torn element must be replaced.**
* **Be sure to position the element snugly and correctly, so that no incoming air will bypass it. Remember, rapid wear of piston rings and cylinder bore is often caused by a defective or poorly fitted element.**

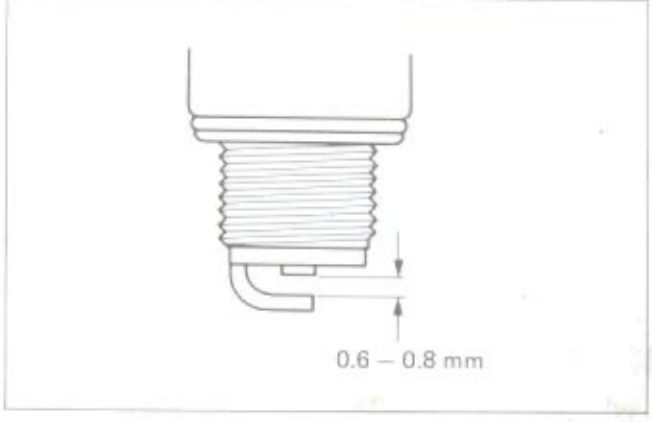
SPARK PLUG

Inspect Initial 1 000 km (2 months) and Replace Every 6 000 km (12 months)

Neglecting the spark plug eventually leads to difficult starting and poor performance. If the spark plug is used for a long period, the electrode gradually burns away and carbon builds up along the inside part. In accordance with the Periodic Inspection Chart, the spark plug should be inspected or replaced.



- Carbon deposits on the spark plug will prevent good sparking and cause misfiring. Clean the deposits off periodically.
- If the center electrode is fairly worn down, the plug should be replaced. If scheduled, the plug gap sets to the proper gap.



09900-20804	Thickness gauge

Spark plug gap	0.6 – 0.8 mm

- Check the spark plug for burnt condition. If abnormal, replace the plug as indicated at right table.

NOTE:
Confirm the thread size and reach when replacing the plug.

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

Spark plug tightening torque	25 – 30 N·m (2.5 – 3.0 kg-m)

NOTE:
"R" type spark plug is installed for some specifications. "R" type spark plug has a resistor located at the center electrode to prevent radio noise.

For U.K.

NGK	NIPPON DENSO	REMARKS
BR7ES	W22ESR	If the standard plug is apt to get wet, replace with this plug.
BR8ES	W24ESR	**Standard**
BR9ES	W27ESR	If the standard plug is apt to overheat, replace with this plug.

For France

NGK	NIPPON DENSO	REMARKS
B7ES	W22ES	If the standard plug is apt to get wet, replace with this plug.
B8ES	W24ES	**Standard**
B9ES	W27ES	If the standard plug is apt to overheat, replace with this plug.

For Belgium, Finland, Sweden and Switzerland

NGK	NIPPON DENSO	REMARKS
BR8ES	W24ESR	If the standard plug is apt to get wet, replace with this plug
BR9ES	W27ESR	**Standard**

For Australia and Singapore

NGK	NIPPON DENSO	REMARKS
B8ES	W24ES	If the standard plug is apt to get wet, replace with this plug.
B9ES	W27ES	**Standard**

CARBURETOR

Inspect Initial 1 000 km (2 months) and Every 6 000 km (12 months)

ADJUSTING THROTTLE CABLE

- Loosen lock nut ①.
- Adjust the cable play Ⓐ to 0.5 – 1.0 mm by turning the adjuster ②.
- After adjust play, tighten the lock nut ①.

CAUTION:
This adjustment could affect the oil pump control cable play, so readjust the oil pump control cable play if necessary.

Cable play Ⓐ	0.5 – 1.0 mm

IDLE R/MIN ADJUSTMENT

- Adjust the throttle cable play.
- Start the engine and allow it to warm up.

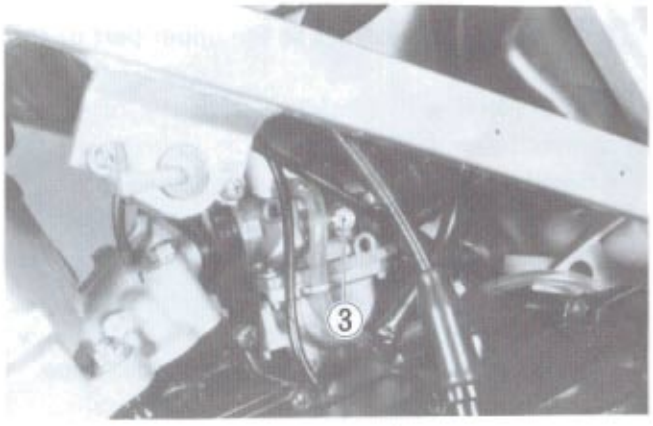
NOTE:
A warm engine means an engine which has been run averaging 50 km/h in top gear for 9 minutes.

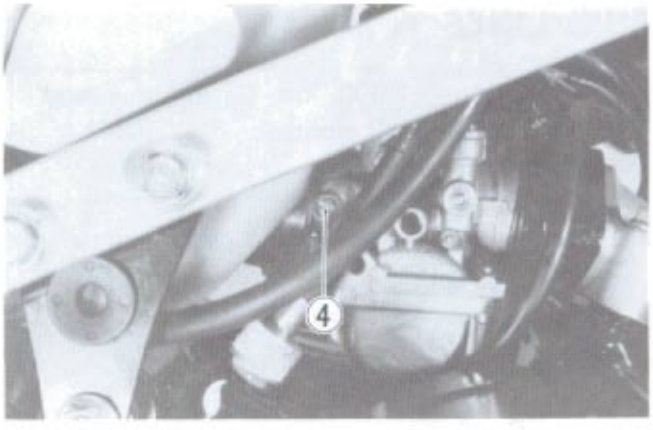
- Turn the throttle valve stop screw ③ so that engine idles at 1 400 r/min.
- Turn the pilot air screw ④ in or out around 1/4 turn from the original setting (3/4 turn out).
- The engine r/min will increase or decrease in accordance with the turning of the pilot air screw.
- Set this screw in a position that allows the engine to idle at the highest r/min.
- Turn the throttle valve stop screw again and adjust the idle r/min at 1 250 – 1 550 r/min.

Engine idle r/min	1 400 ± 150 r/min

OVERHAUL AND CLEANING

- Wash the carburetor and component parts in cleaning solvent after disassembly.
- Before reassembly, inspect the float level and needle valve. Adjust and replace parts when necessary. (See papge 5-6).
- Then blow compressed air through all jets and passages to make sure they are not clogged. Do not use wire, etc. to clean them, as this can damage the parts.



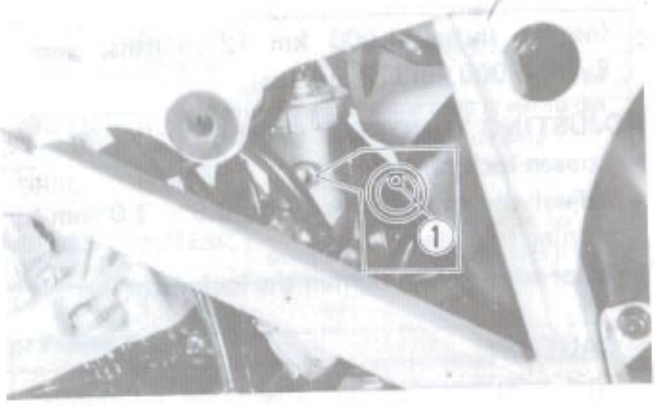


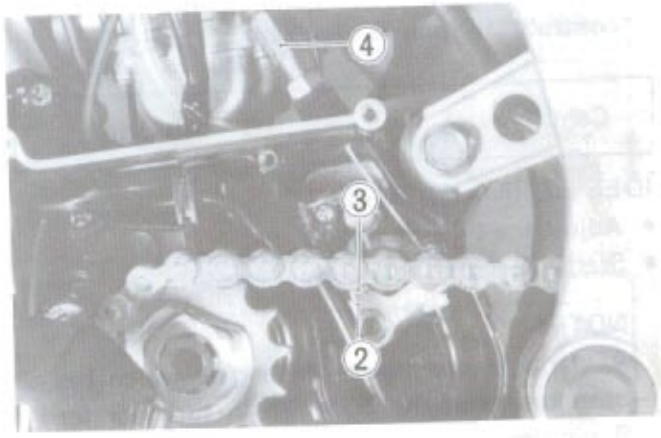
OIL PUMP

Inspect Initial 1 000 km (2 months) and Every 6 000 km (12 months)

The engine oil is fed by the oil pump to the engine. The amount of oil fed to it is regulated by engine speed and the oil pump control lever which is controlled by the amount of throttle opening.
Check the oil pump in the following manner to confirm correct operation for all throttle valve opening position.

- Remove the oil pump cover.
- Turn the throttle grip until the dent mark ① on the throttle valve comes to the upper part of the hole.
- Check whether the mark ② on the oil pump control lever is aligned with the index mark ③ when the throttle valve is positioned as above.
- If the marks are not aligned, adjust by means of the cable adjuster ④ to align them.



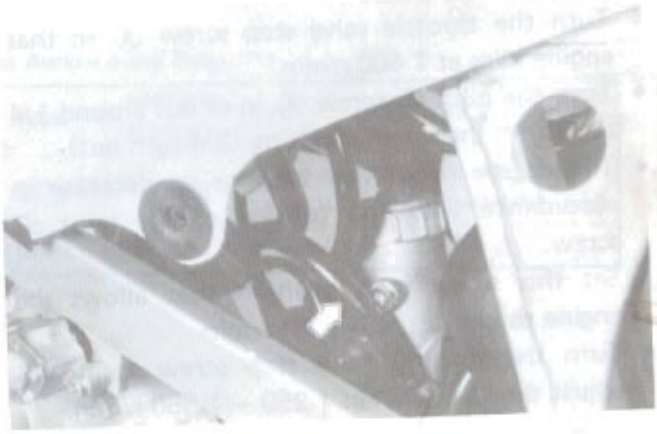


CAUTION:
Oil pump cable adjustment must be done after throttle cable adjustment.

FUEL LINES

Inspect Initial 1 000 km (2 months) and Every 6 000 km (12 months)
Replace Every 4 years

- Inspect the fuel lines and connections for damage and fuel leakage.
- If any defects are found, the fuel line must be replaced.



CLUTCH

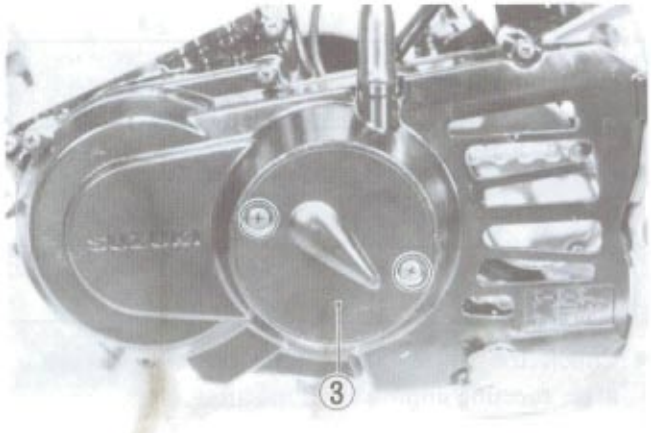
Inspect Initial 1 000 km (2 months) and Every 6 000 km (12 months)

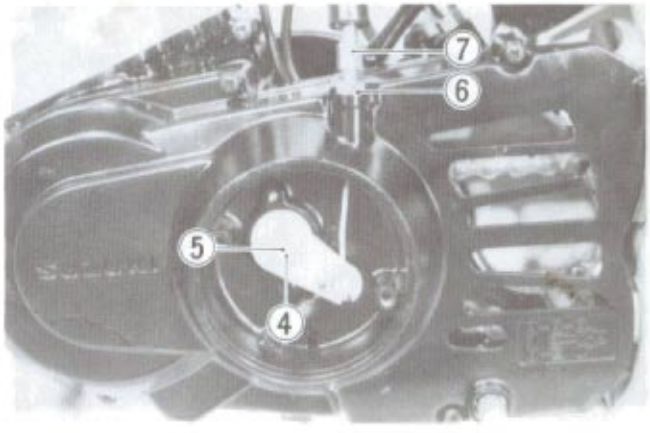
Clutch play should be 4 mm as measured at the clutch lever holder before the clutch begins to disengage. If the play in the clutch is incorrect, adjust it in the following way:

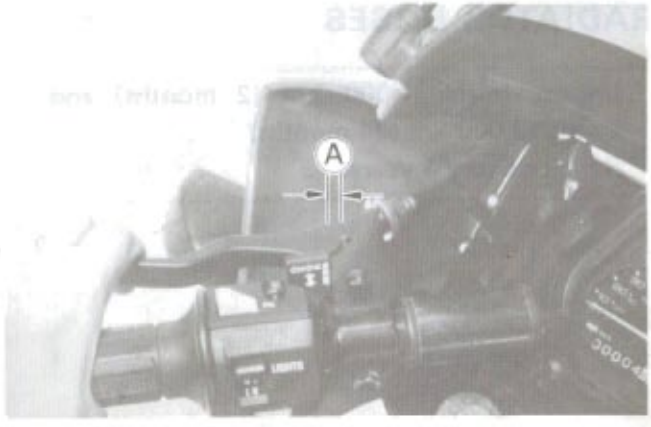
- Loosen the lock nut ① and screw the adjuster ② on the clutch lever holder all the way in.
- Remove the clutch release cover ③ from the clutch cover.
- Loosen the lock nut ④ and back the adjusting screw ⑤ out two or three rotation.
- Slowly turn the adjusting screw ⑤ in until it begins to meet high resistance to turn. From this position, back it out 1/4 rotation and secure the lock nut ④.
- Loosen the lock nut ⑥ and turn the cable adjuster ⑦ to acquire the specified play Ⓐ.

Clutch cable play	4 mm

- Tighten the lock nuts ① and ⑥.
  The clutch cable should be lubricated with a light weight oil whenever it is adjusted.







TRANSMISSION OIL

Change Initial 1 000 km (2 months) and Every 12 000 km (24 months)

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

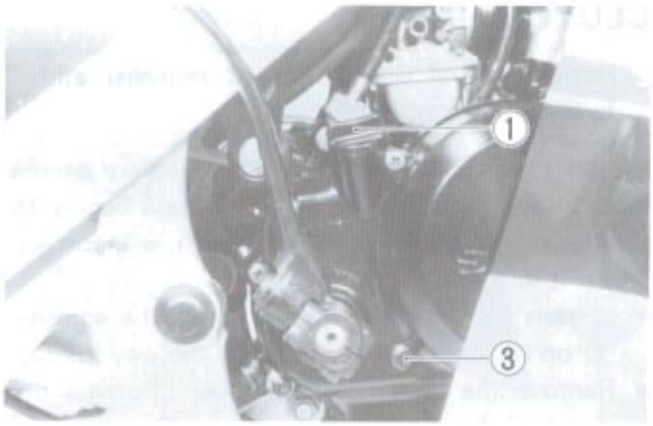
- Start the engine to warm up the oil, this will facilitate draining of oil. Shut off the engine.
- Unscrew the oil filler cap ① and drain plug ②, and drain the oil completely.
- Tighten the drain plug.

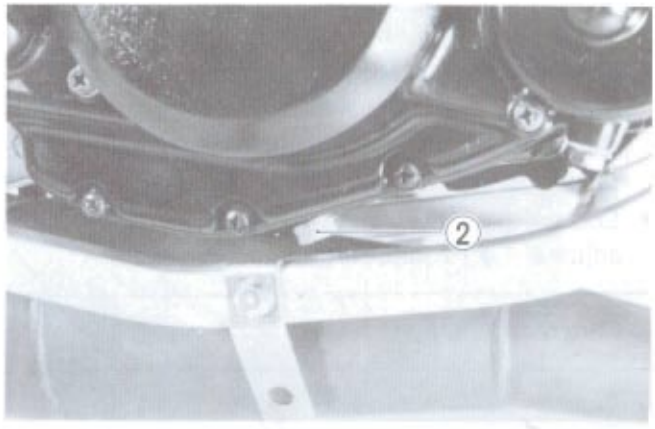
Tightening torque	20 – 25 N·m (2.0 – 2.5 kg-m)

- Supply a good quality SAE 20W/40 multi-grade motor oil.

Capacity	900 ml

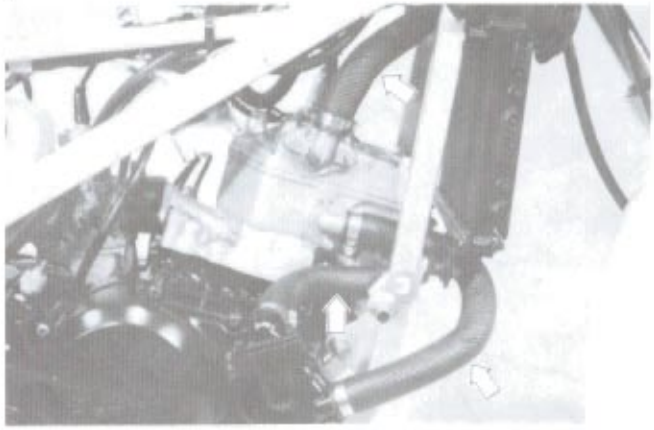
- Check the oil level with the oil level screw ③ after running engine for 3 minutes.





RADIATOR HOSES

Inspect Initial 1 000 km (2 months) and Every 12 000 km (24 months)
Replace Every 4 years.



COOLANT

Change Every 2 years.

- Remove the radiator cap.

WARNING:
Do not open the radiator cap when the engine is hot, as you may be injured by escaping hot liquid or vapor.

- Loosen the water drain plug at the water pump cover and drain the cooling system thoroughly while holding the motorcycle upright.

WARNING:
Coolant may be harmful if swallowed or if it comes in contact with skin or eyes.
If coolant gets into the eyes or in contact with the skin, it should be flushed thoroughly with plenty of water. If swallowed, induce vomitting and call physician immediately.

- Disconnect the hose from the reservoir tank and drain the coolant in the reservoir tank.
- Connect the hose to the reservoir and replace the water drain plug.
- Fill the radiator up to the radiator inlet hole neck with the coolant.
- Close radiator cap securely.
- Fill the reservoir tank up to the "FULL" line with the coolant.

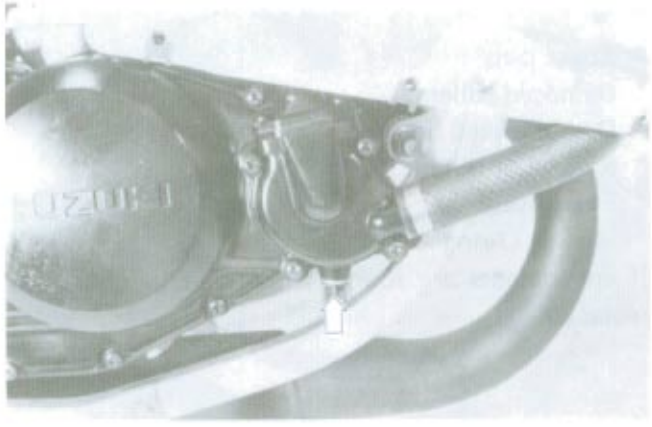
NOTE:
About 1 020 ml of coolant may be needed when the radiator and reservoir tank.

- After warming up and cooling down the engine, check the coolant level of the reservoir tank and install the coolant to the "FULL" line if the level is below the "FULL" line.

99000-24120	SUZUKI Golden cruiser 1200

- Add 1/5 pack of anti-leakage material (Bar's leak) in the coolant.

99000-24240	Bar's leak



DRIVE CHAIN

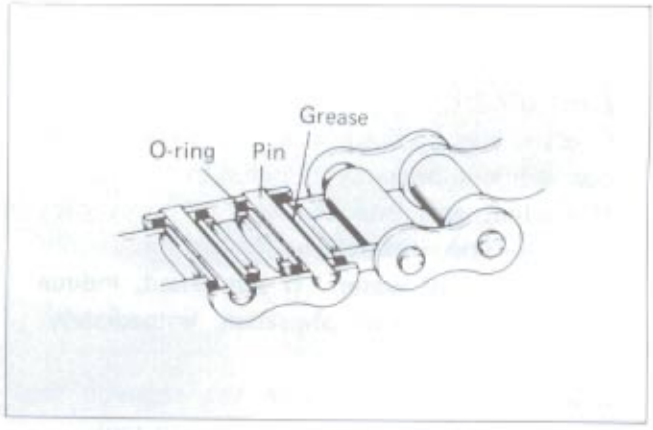
Inspect Initial 1 000 km (2 months) and Every 6 000 km (12 months) Clean and lubricate Every 1 000 km (2 months)

DRIVE CHAIN

Visually inspect the drive chain for the below-listed possible malconditions. (Lift the rear wheel and place a jack or block under the engine, and turn the rear wheel slowly by hand, with the transmission in NEUTRAL).

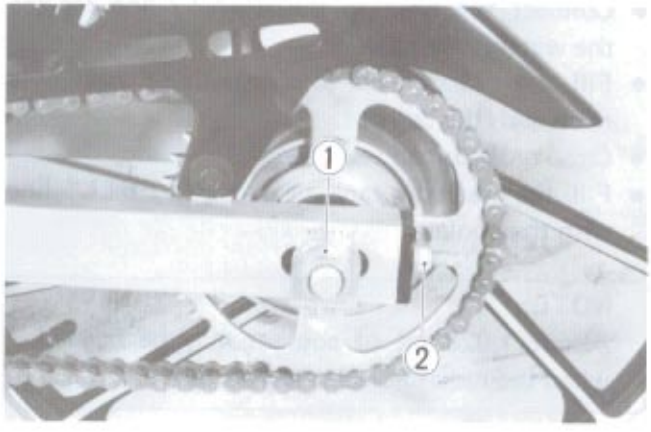
* Loose pins
* Damaged rollers
* Dry or rusted links
* Kinked or binding links
* Excessive wear
* Missing O-ring

If any defects are found, the drive chain must be replaced.

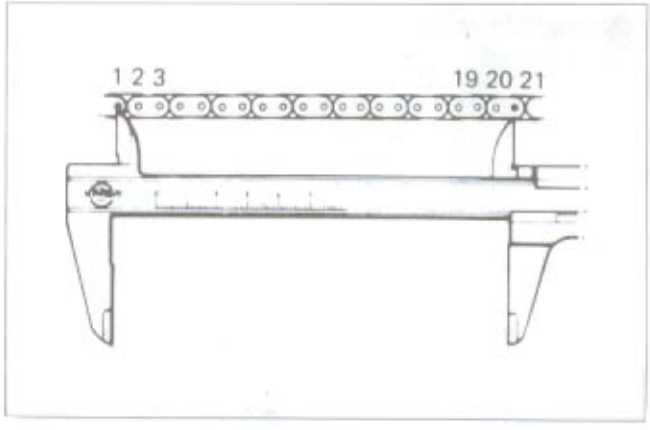


CHAIN WEAR

- Loosen the axle nut ①.
- Adjust the drive chain carefully by tightening the adjusting nut ②.
- Count out 21 pins on the chain and measure the distance between the two. If the distance exceeds 255.5 mm, the chain must be replaced.



	Service Limit
Drive chain 20-pitch length	255.5 mm



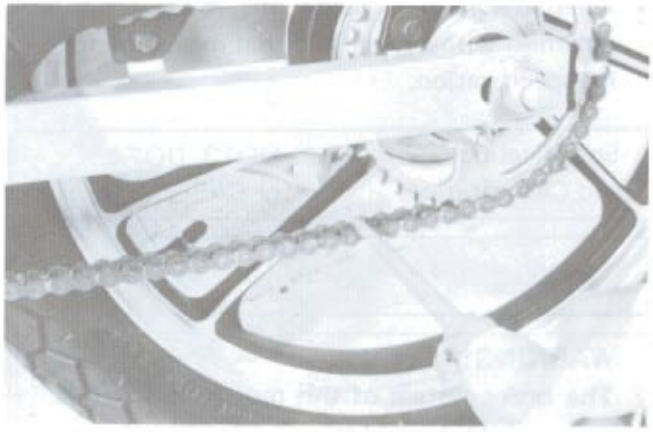
CLEANING AND LUBRICATING

- Wash the chain with kerosene. If the chain tends to rust quickly, the intervals must be shortened.

CAUTION:
Do not use trichlene, gasoline or any similar fluids: These fluids have too great a dissolving power for this chain and, what is more important, can spoil the O-rings (or seals) confining the grease in the bush-to-pin clearance. Remember, high durability comes from the presence of grease in that clearance.

- After washing and drying the chain, oil it with a heavy-weight motor oil.

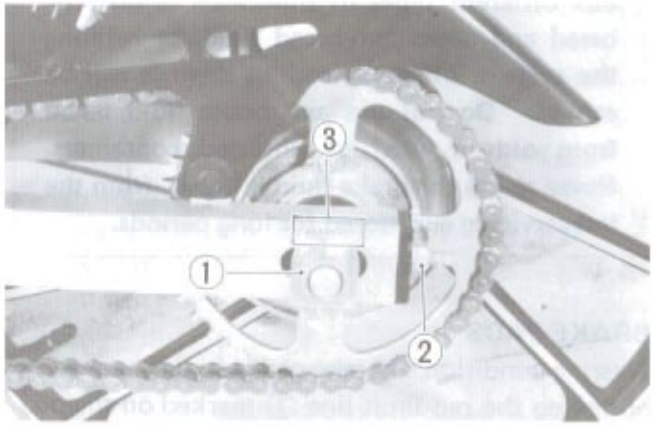
CAUTION:
Do not use any oil sold commercially as "drive chain oil". Such oil too can spoil the O-rings (or seals).

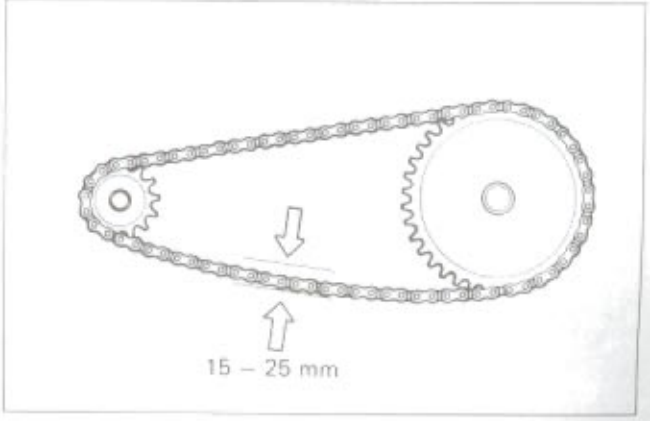


CHAIN SLACK

- Loosen the axle nut ①.
- Turn the adjusting nut ② until the chain has 15 – 25 mm of slack at the middle between engine and rear sprockets. The mark ③ on both chain adjusters must be at the same position on the scale to ensure that the front and rear wheels are correctly aligned.
- After adjusting the drive chain, tighten the axle nut ① securely.

Drive chain slack	15 – 25 mm





BRAKES

Inspect Initial 1 000 km (2 months) and Every 6 000 km (12 months) Replace brake hose Every 4 years. Change fluid Every 2 years

FRONT BRAKE

BRAKE FLUID LEVEL

- Support the motorcycle body in the up-right condition, and place the handlebar straight.
- Check the brake fluid level by observing the lower limit line on the brake fluid reservoir.
- When the level is below the lower limit line, replenish with brake fluid that meets the following specification.

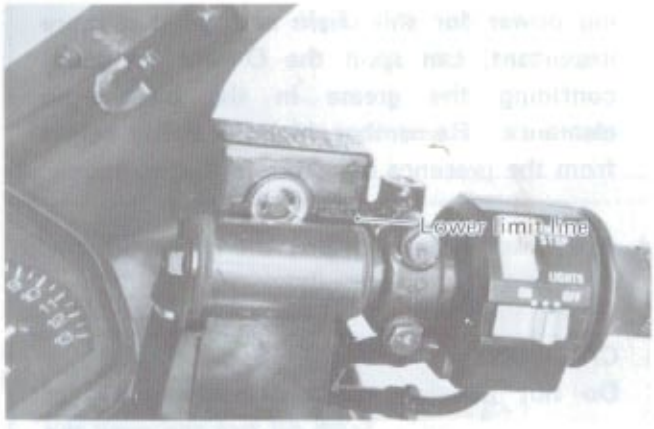
Specification and Classification	DOT3, DOT4 or SAE J1703

99000-23021	SUZUKI Brake fluid

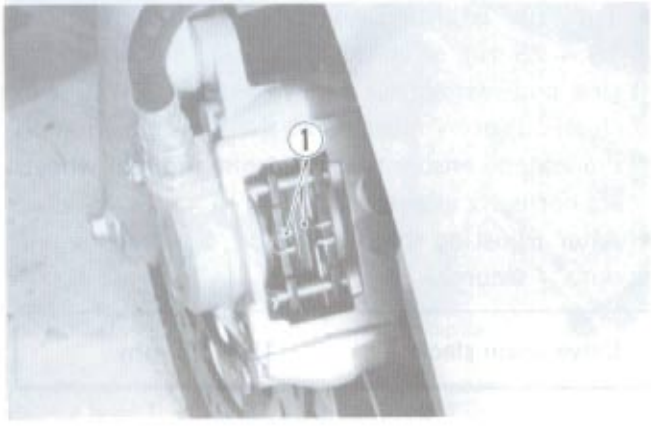
WARNING:
The brake system of this motorcycle is filled with a glycol-based brake fluid. Do not use or mix different types of fluid such as silicone-based and petroleum-based fluid for refilling the system, otherwise serious damage will be caused. Do not use any brake fluid taken from old or used or unsealed containers. Never re-use the brake fluid left over from the last servicing and stored for long periods.

BRAKE PADS

Wearing condition of brake pads can be checked by observing the red limit line ① marked on the pad. When the wear exceeds the limit line, replace the pads with new ones. (See page 7-10)



WARNING:
Brake fluid, if it leaks, will interfere with safe running and discolor painted surfaces.
Check the brake hose for cracks and hose joint for leakage before riding.



BLEEDING AIR FROM THE BRAKE FLUID CIRCUIT

Air trapped in the fluid circuit acts like a cushion to absorb a large proportion of the pressure developed by the master cylinder and thus interferes with the full braking performance of the disc brake. The presence of air is indicated by "sponginess" of the brake lever and also by lack of braking force. Considering the danger to which such trapped air exposes the machine and rider, it is essential that, after remounting the brake and restoring the brake system to the normal condition, the brake fluid circuit be purged of air in the following manner:

- Fill up the master cylinder reservoir to the upper end of the inspection window. Replace the reservoir cap to prevent entry of dirt.
- Attach a pipe to the caliper bleeder valve, and insert the free end of the pipe into a receptacle.

Bleeder valve tightening torque	6 – 9 N·m (0.6 – 0.9 kg-m)

- Squeeze and release the brake lever several times in rapid succession, and squeeze the lever fully without releasing it. Loosen the bleeder valve by turning it a quarter of a turn or so that the brake fluid runs into the receptacle; this will remove the tension of the brake lever causing it to touch the handlebar grip. Then, close the valve, pump and squeeze the lever, and open the valve. Repeat this process until the fluid flowing into the receptacle no longer contains air bubbles.

NOTE:
Replenish the brake fluid reservoir as necessary while bleeding air from the brake system. Make sure that there is always some fluid visible in the reservoir.

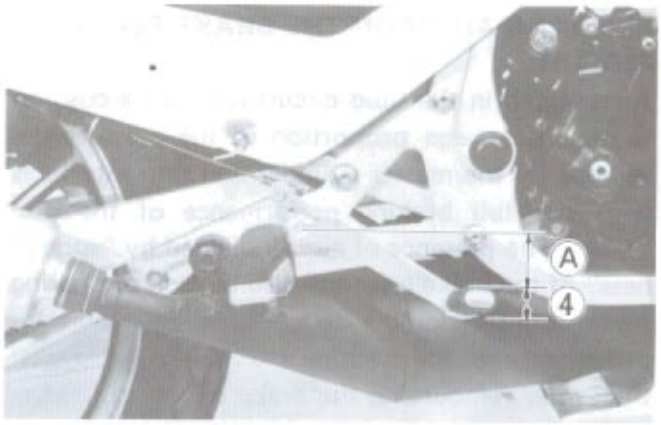
- Close the bleeder valve, and disconnect the pipe. Fill the reservoir above the lower limit line.

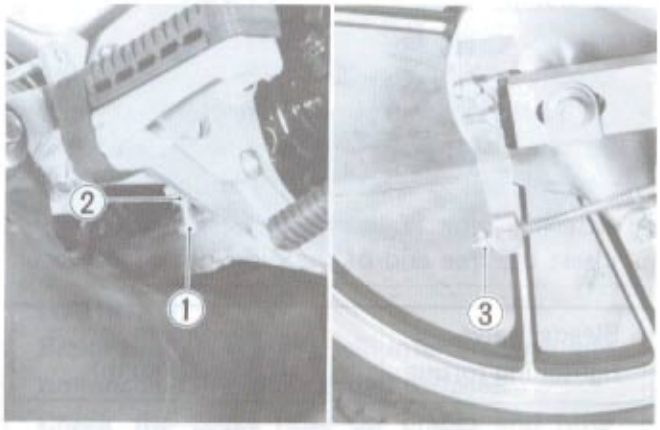
CAUTION:
Handle the brake fluid with care: the fluid reacts chemically with paint plastics, rubber materials, etc.

REAR BRAKE

- Bring the brake pedal to a position about 62.5 mm below the footrest. This is effected by turning the adjusting bolt ①. Be sure to tighten the lock nut ② good and hard after setting the bolt.
- By repositioning the adjusting nut ③ on the brake cable, set the pedal play to between 20 and 30 mm ④ as measured at pedal tip.

Brake pedal height Ⓐ	62.5 mm
Brake pedal play ④	20 – 30 mm

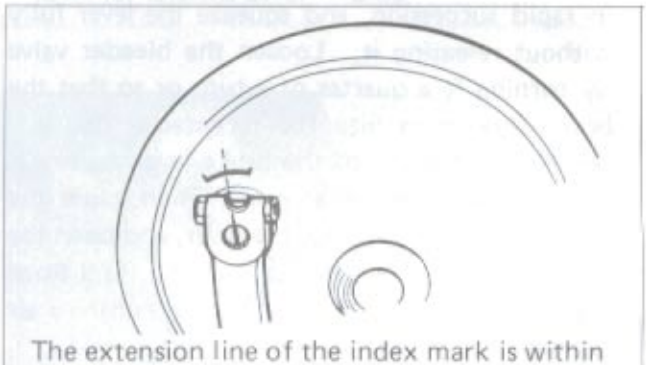




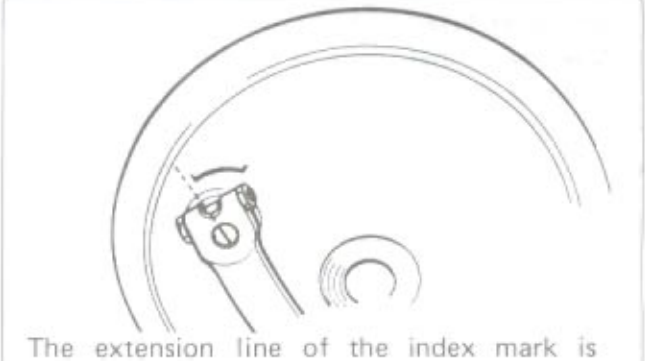
BRAKE LINING WEAR LIMIT

This motorcycle is equipped with brake lining wear limit indicator on the rear brake. As shown in the illustration at right, at the condition of normal lining wear, an extended line from the index mark on the brake camshaft should be within the range embossed on the brake panel with the brake on. To check wear of the brake lining, follow the steps below.

- First check if the brake system is properly adjusted.
- While operating the brake, check to see that the extension line from the index mark is within the range on the brake panel.
- If the extension line is outside the range as shown in the illustration at right, the brake shoe assembly should be replaced to ensure safe operation.



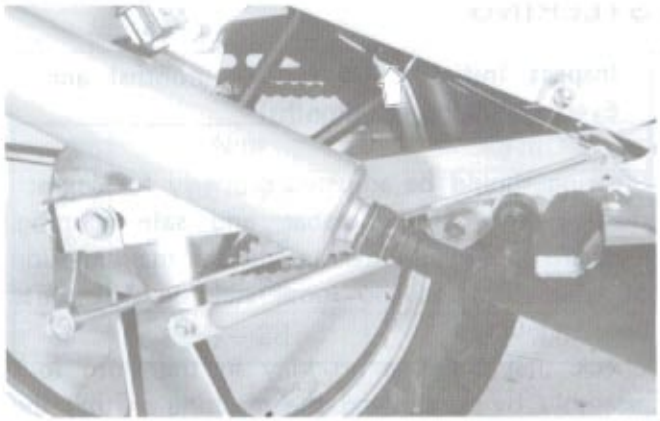
The extension line of the index mark is within the range.



The extension line of the index mark is outside of the range.

REAR BRAKE LIGHT SWITCH

Adjust brake light switch so that brake light will come on just before a pressure is felt when the brake pedal is depressed.



TIRES

Inspect Initial 1 000 km (2 months) and Every 6 000 km (12 months)

TIRE PRESSURE

If the tire pressure is too high or too low, steering will be adversely affected and tire wear increased. Therefore, maintain the correct tire pressure for good roadability or shorter tire life will result. Cold inflation tire pressure is as follows.

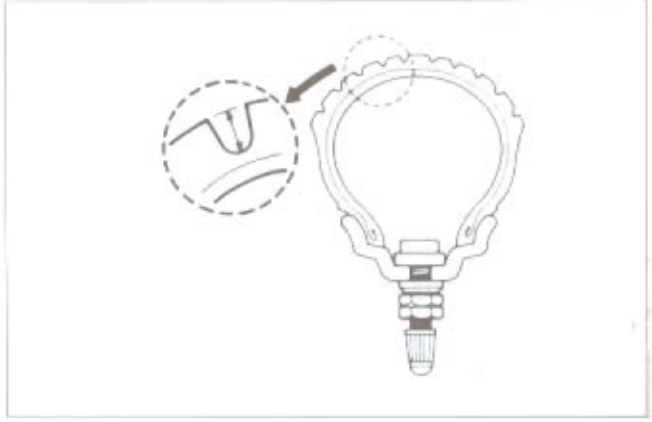
COLD INFLATION TIRE PRESSURE	SOLO RIDING		DUAL RIDING	
	kPa	kg/cm^2	kPa	kg/cm^2
FRONT	200	2.00	200	2.00
REAR	200	2.00	225	2.25

CAUTION:
The standard tire fitted on this motorcycle is 80/100-16 45P for front and 90/90-18 51P for rear. The use of a tire other than the standard may cause 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 reachs the following specifications.

Service Limit (Front & Rear)	1.6 mm



STEERING

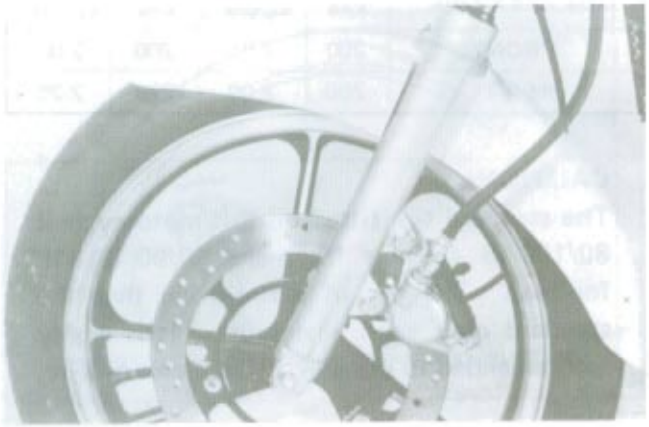
Inspect Initial 1 000 km (2 months) and Every 6 000 km (12 months)

Steering should be adjusted properly for smooth manipulation of handlebar and safe running. Too stiff steering prevents smooth manipulation of handlebar and too loose steering will cause poor stability.

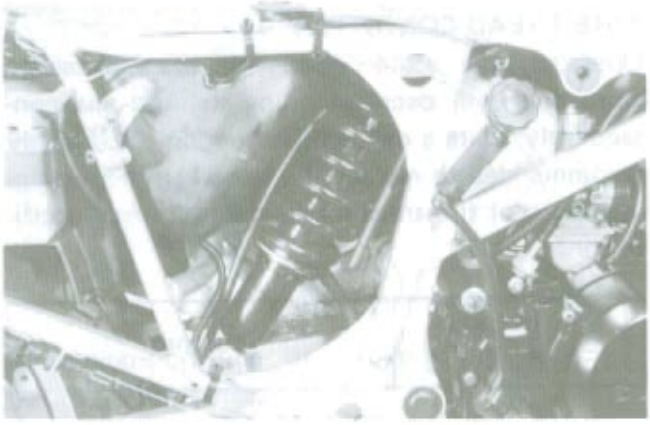
Check that there is no play in the front fork assembly by supporting the machine so that the front wheel is off the ground with wheel straight ahead, grasp lower fork tubes near the axle and pull forward. If play is found, perform steering nut adjustment as described in page 7-25 of this manual.

FRONT FORK AND REAR SUSPENSION

Inspect Every 12 000 km (24 months)



- Inspect the front fork for oil leakage, scoring and scratches on the outer surface of the inner tube and replace the defective parts, if necessary.
- Inspect the rear shock absorber for oil leakage and other damage and replace it, if necessary.



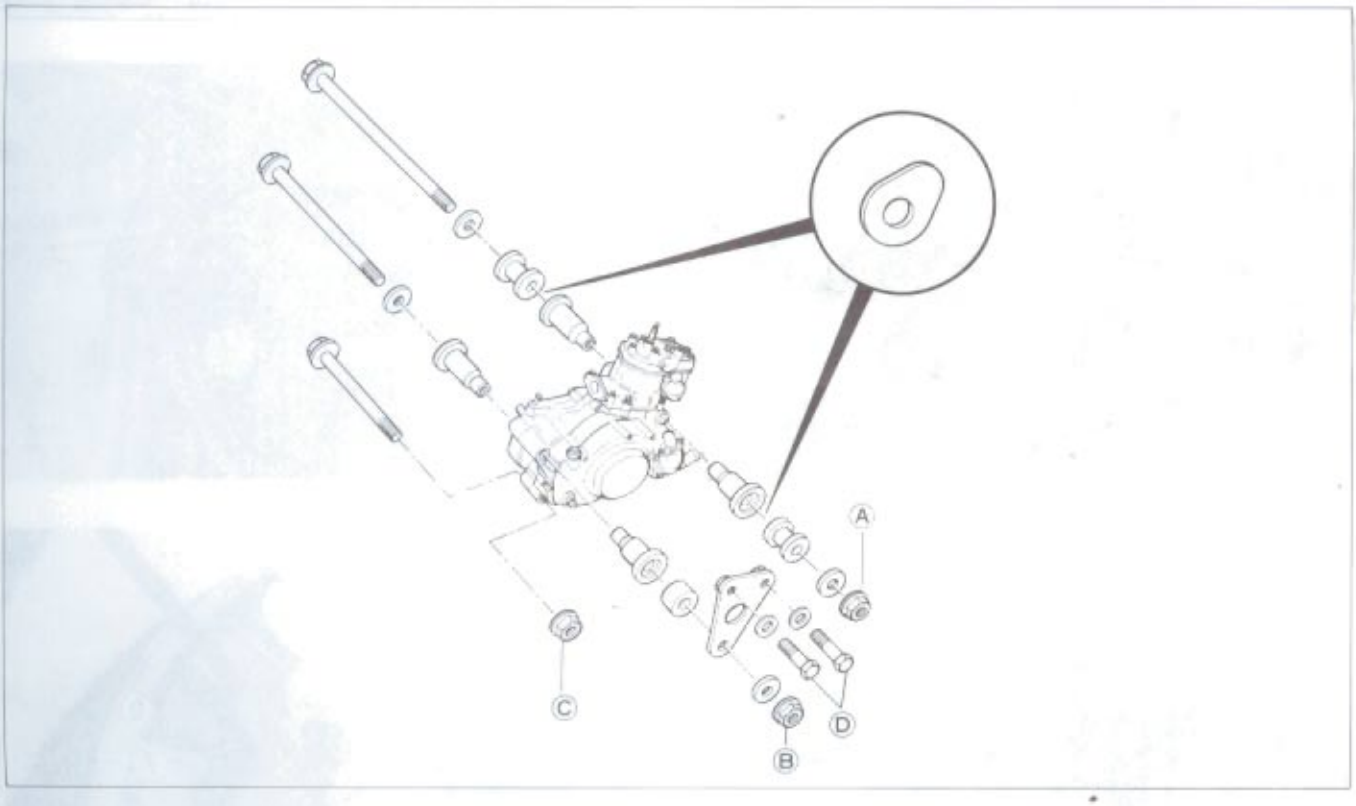
BOLTS AND NUTS

Tighten Initial 1 000 km (2 months) and Every 6 000 (12 months)

ENGINE MOUNTING NUTS

Tighten the engine mounting bolts and nuts to the specifications.

	N·m	kg-m
Ⓐ	60 – 72	6.0 – 7.2
Ⓑ	60 – 72	6.0 – 7.2
Ⓒ	70 – 88	7.0 – 8.8
Ⓓ	18 – 28	1.8 – 2.8

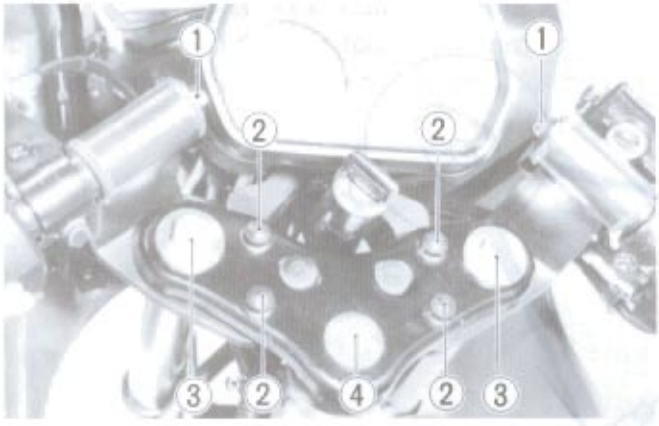


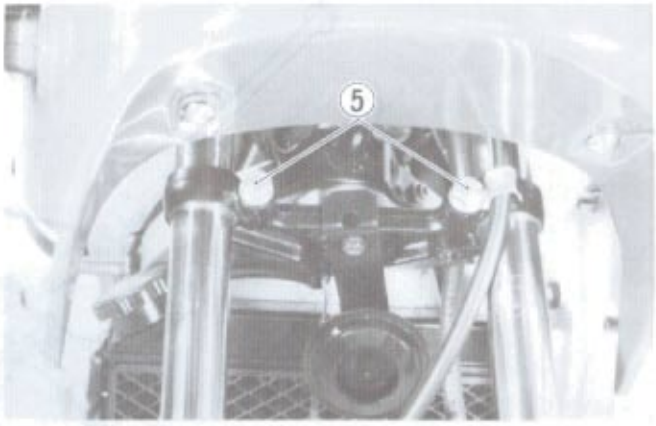
CHASSIS BOLTS AND NUTS

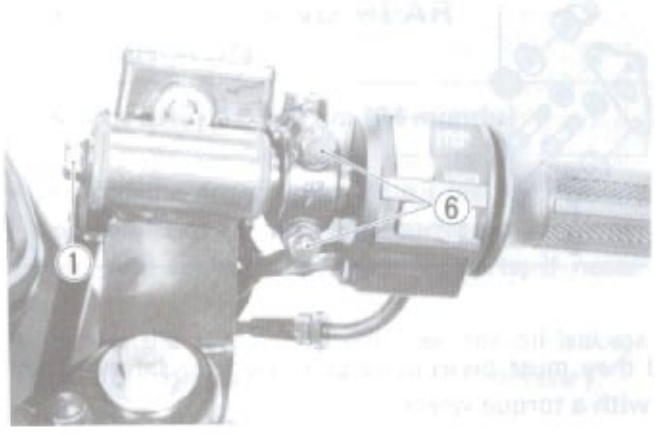
The bolts and nuts listed below are important parts, and they must be in good condition for safety. They must be retightened, as necessary, to the specified torque with a torque wrench.

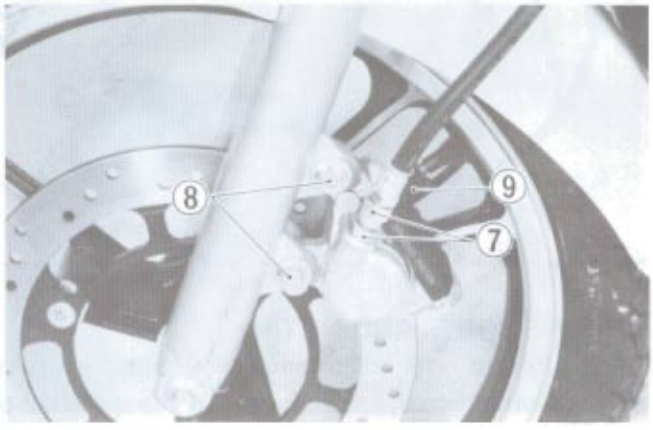
	ITEM	N·m	kg-m
①	Handlebar set bolt	15 – 25	1.5 – 2.5
②	Handlebar holder bolt	15 – 25	1.5 – 2.5
③	Front fork cap bolt	35 – 55	3.5 – 5.5
④	Steering stem head bolt	35 – 55	3.5 – 5.5
⑤	Front fork lower clamp bolt	20 – 30	2.0 – 3.0
⑥	Front brake master cylinder bolt	5 – 7	0.5 – 0.7
⑦	Front brake hose union bolt and nut	20 – 25	2.0 – 2.5
⑧	Front brake caliper mounting bolt	18 – 28	1.8 – 2.8

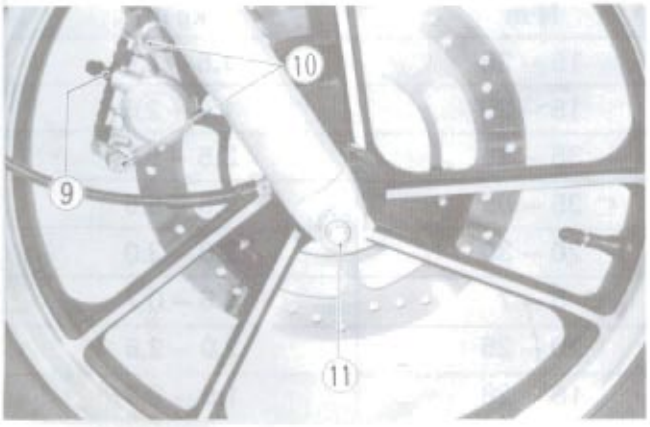
	ITEM	N·m	kg-m
⑨	Caliper air bleeder	6 – 9	0.6 – 0.9
⑩	Caliper housing bolt	18 – 23	1.8 – 2.3
⑪	Front axle nut	40 – 57	4.0 – 5.7
⑫	Swingarm pivot nut	100	10.0
⑬	Rear shock absorber nut (upper & lower)	40 – 60	4.0 – 6.0
⑭	Rear torque link nut	10 – 15	1.0 – 1.5
⑮	Rear brake cam lever nut	5 – 8	0.5 – 0.8
⑯	Rear axle nut	55 – 88	5.5 – 8.8

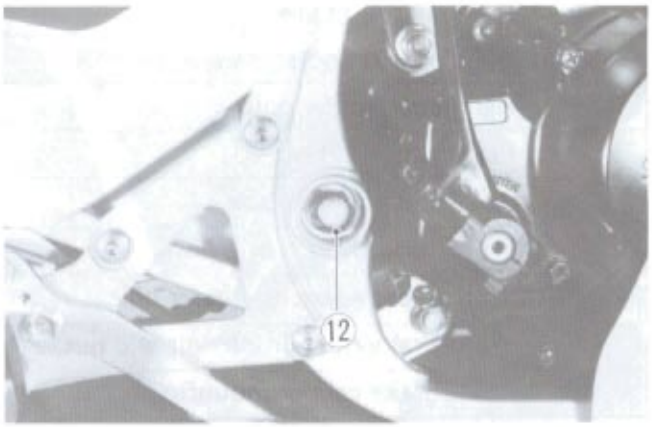


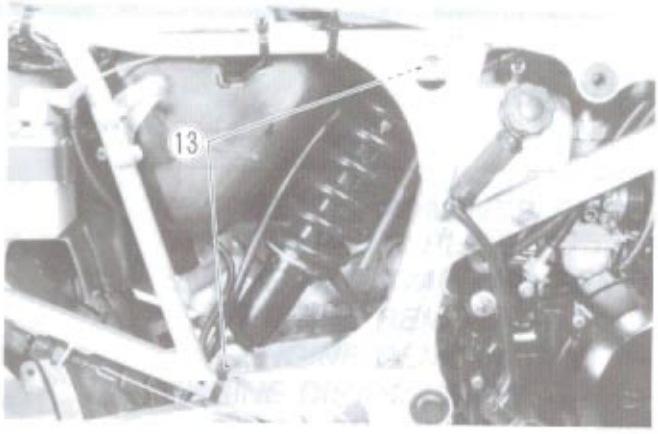


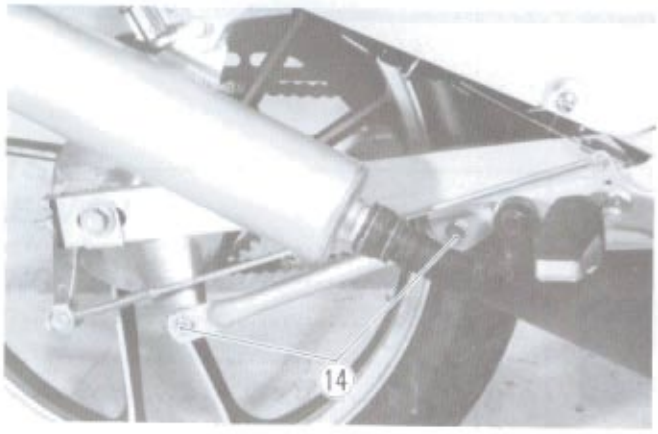


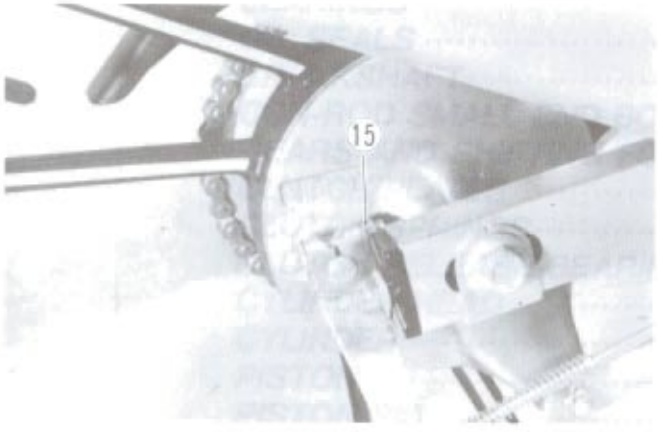







13


14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ENGINE

CONTENTS

ENGINE COMPONENTS REMOVABLE WITH THE ENGINE IN PLACE

The parts listed below can be removed and reinstalled without removing the engine from the frame.
Refer to the page listed in this section for removal instruction.

ENGINE LEFT SIDE

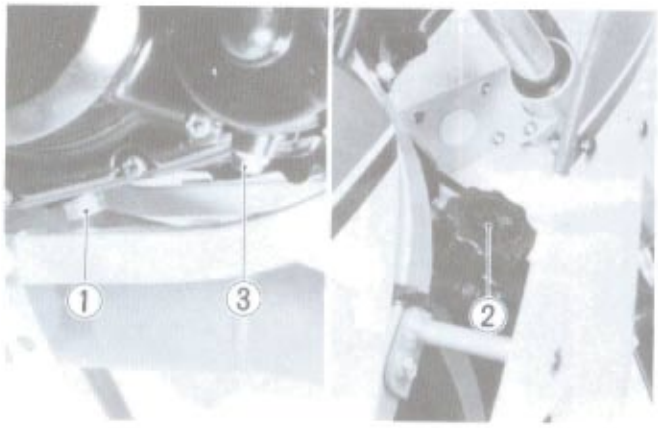
ENGINE CENTER

ENGINE RIGHT SIDE

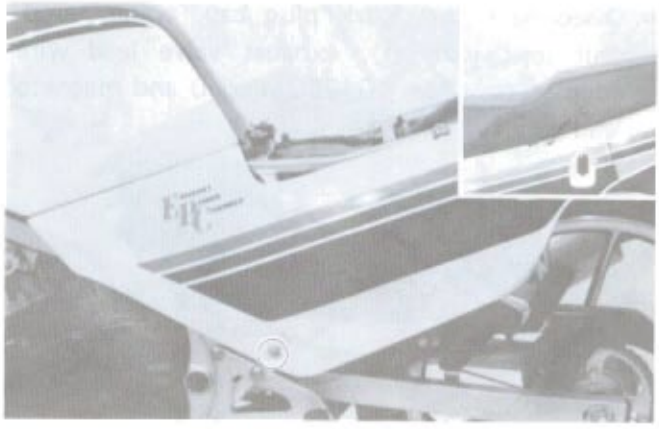
ENGINE REMOVAL AND REMOUNTING

ENGINE REMOVAL

Before taking the engine out of the frame, thoroughly clean the engine with a suitable cleaner. The procedure of engine removal is sequentially explained in the following steps.



- Remove the lower cover (See page 7-1).
- Remove the filler cap and drain plug ①, and drain transmission oil.
- Remove the radiator cap ② and drain plug ③, and drain coolant.
- Remove the right and left side covers (See page 7-2).
- Remove the seat.
- Remove the right and left frame covers.

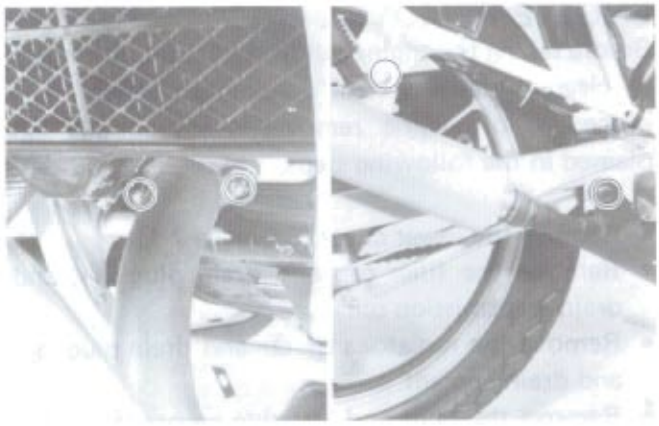


- Remove the fuel cock from the frame.
- Disconnect the fuel hose from the carburetor.
- Disconnect the engine oil hose from the oil tank.

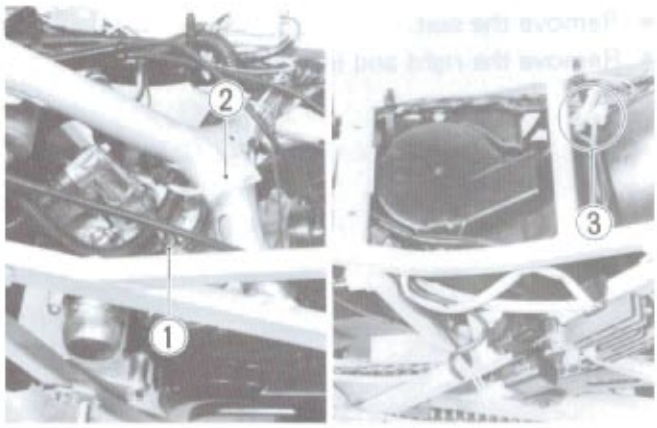
NOTE:
To prevent oil flow, plug the oil tank outlet.

- Remove the fuel tank with oil tank.

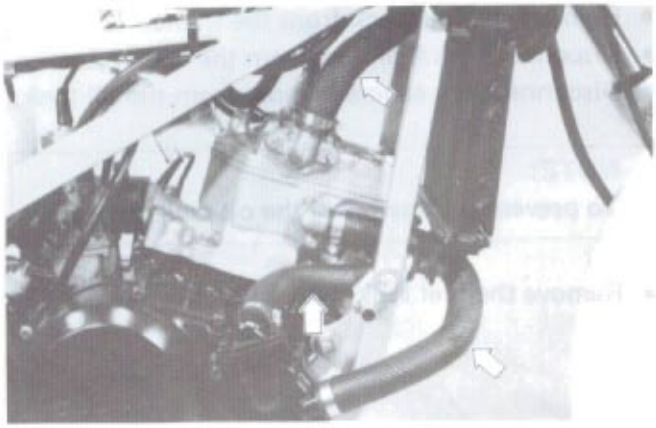
- Remove the muffler.



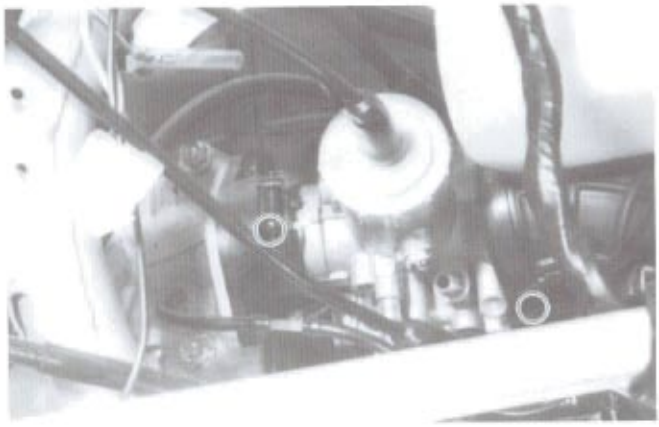
- Disconnect the spark plug cap, water temp. unit lead wire ①, exhaust valve lead wire coupler ② (For RG125C model) and magneto lead wire couplers ③.



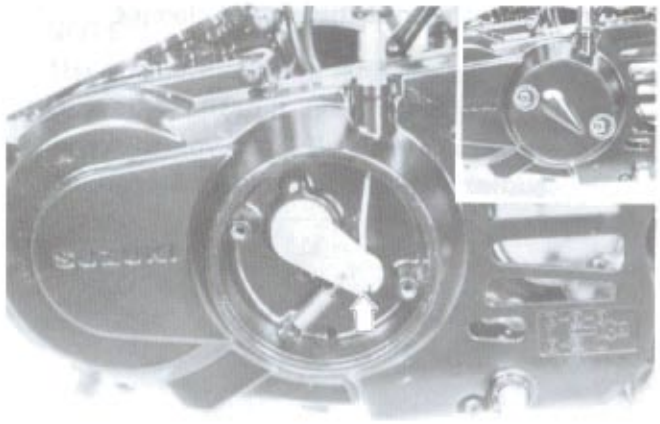
- Disconnect the radiator hoses.



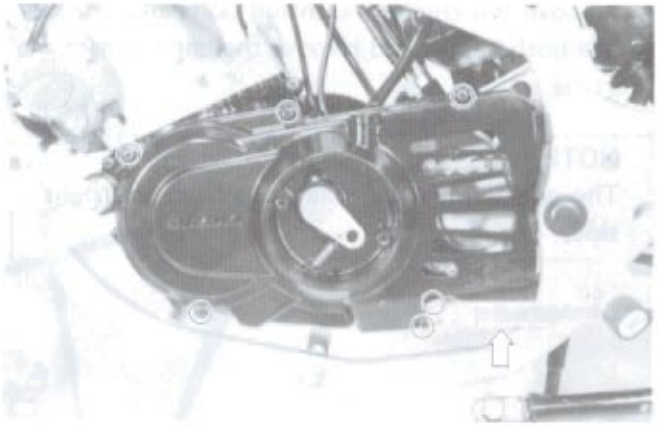
- Loosen the clamp screws and take off the carburetor.



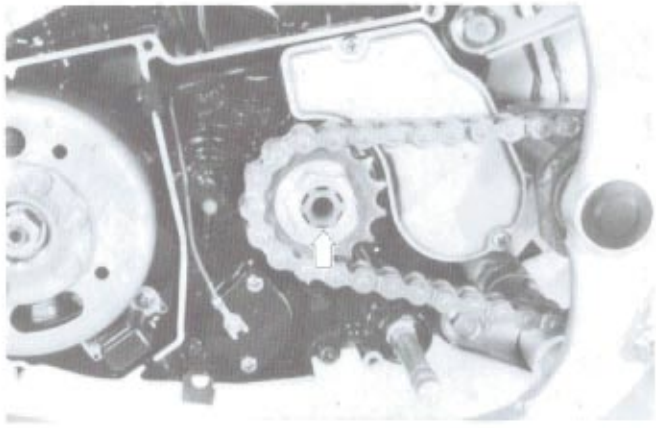
- Remove the clutch release cap.
- Take off the release arm piece from the inner cable and remove the clutch cable.



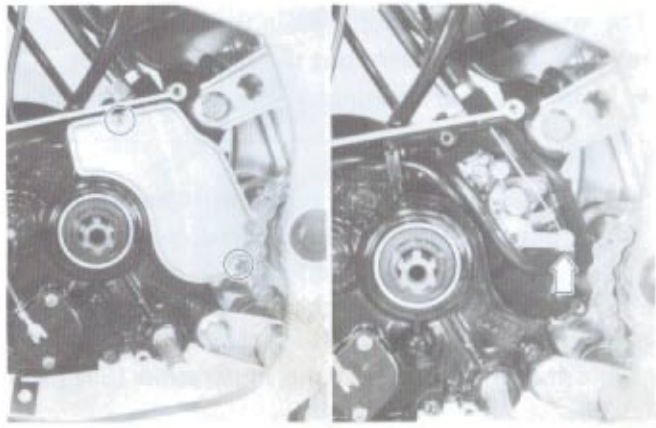
- Remove the gearshift lever.
- Remove the magneto cover.



- Flatten the lock washer and remove the engine sprocket nut.
- Loosen the rear sxle nut and chain adjuster nuts and push the rear wheel forward.
- Remove the engine sprocket and disengage the drive chain.



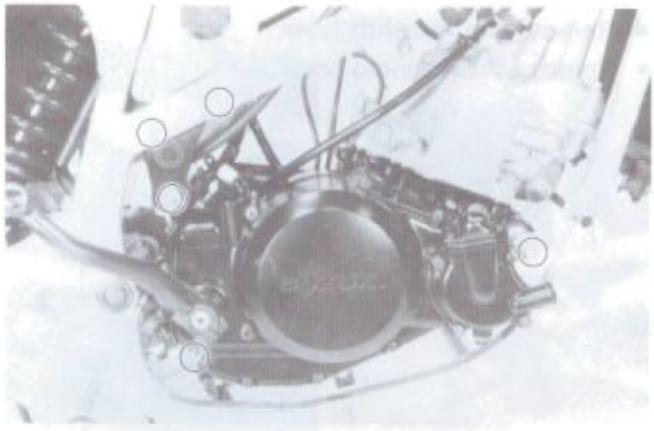
- Remove the oil pump cover.
- Disconnect the oil pump control cable from the lever.

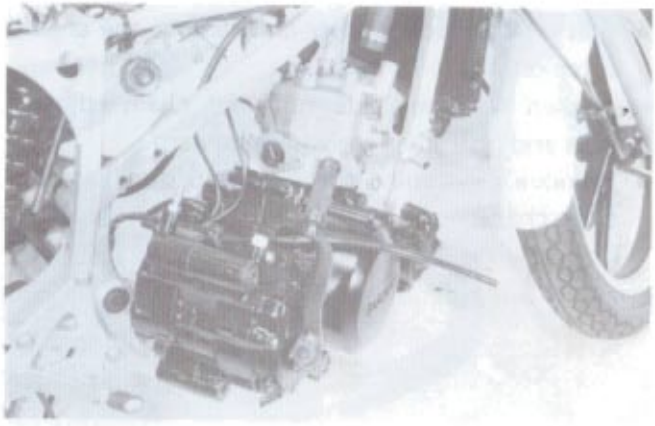


- Unlock the battery exhaust pipe clamp.

- Remove the engine mounting bolts and bracket.
- Use both hands, and remove the engine from the frame.

NOTE:
The engine must be taken out from the right side.





ENGINE REMOUNTING

The engine can be mounted in the reverse order of removal, and also carry out the following steps:

- Install the four bushings to the engine securely.

CAUTION:
There are two kinds of bushings. The marked ① on bushing for front as shown in the illustration (See page 3-6).

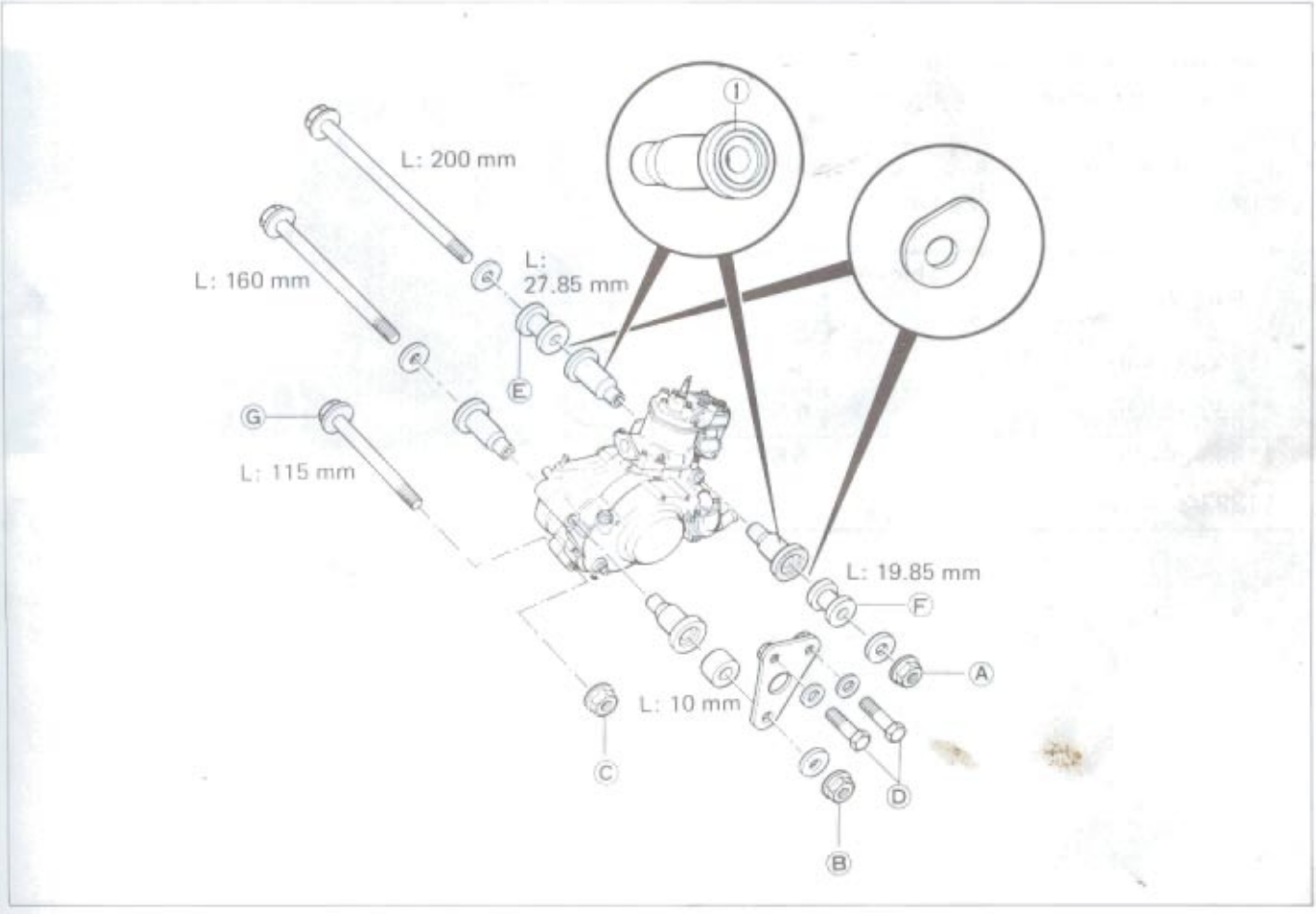
- Mount the engine with spacers Ⓔ and Ⓕ to the frame as shown in the illustration (See page 3-6).
- Insert the engine mounting bolt Ⓖ and tighten the nut Ⓒ to 70 – 88 N·m (7.0 – 8.8 kg-m).
- Check the clearance between the bushing and spacers Ⓔ / Ⓕ, if clearance is found to over 0.3 mm, insert the shims as following table.

Part No.	Shim thickness
09181-10012	0.3 mm
09181-10013	0.5 mm

Tightening torque for engine mounting bolts and nuts

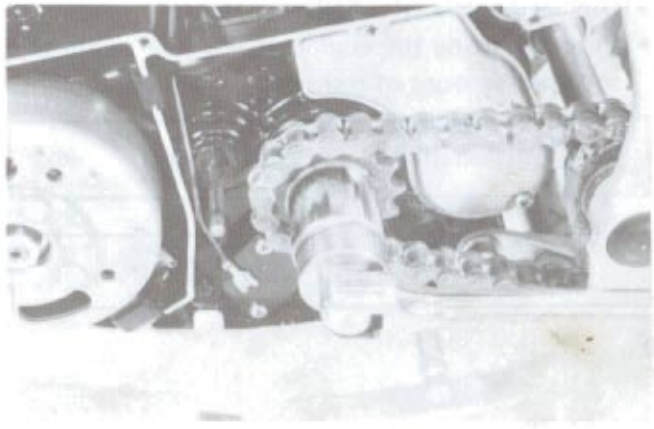
ITEM	N·m	kg-m
Ⓐ	60 – 72	6.0 – 7.2
Ⓑ	60 – 72	6.0 – 7.2
Ⓒ	70 – 88	7.0 – 8.8
Ⓓ	18 – 28	1.8 – 2.8

NOTE:
The engine mounting nuts are self-lock nuts. Once the nut has been removed, it is no longer of any use. Be sure to use new nuts and tighten them to the specified torque.



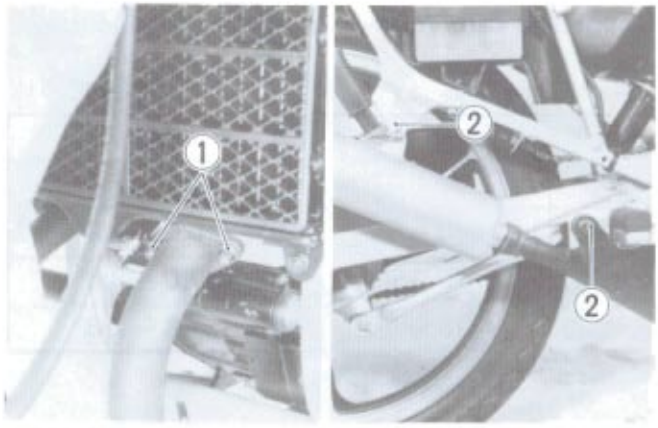
- Tighten the engine sprocket nut to the specification and bent the lock washer.

Tightening torque	80 – 100 N·m (8.0 – 10.0 kg-m)



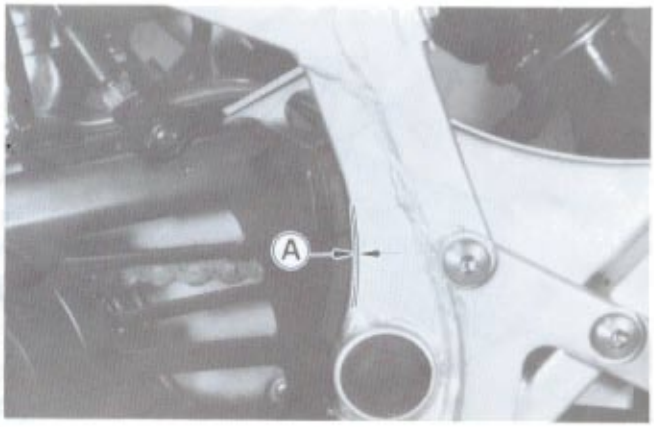
- Tighten the exhaust pipe clamp nuts ① and muffler mounting bolts ②.

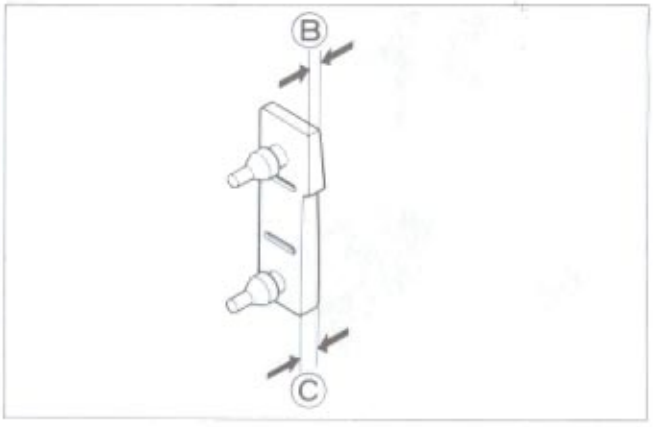
Tightening torque	①	23 – 29 N·m (2.3 – 2.9 kg-m)
	②	18 – 28 N·m (1.8 – 2.8 kg-m)



- After installing the magneto cover, check the clearance Ⓐ between the rubber cushion and the frame.
- If clearance Ⓐ is over 1 mm, replace the thicker cushion as following table.

Part No.	Thickness	
	Ⓑ	Ⓒ
11393-36A40	1.5	3.5
11393-36A10	2.5	4.5
11393-36A20	3.5	5.5
11393-36A30	4.5	6.5





TRANSMISSION OIL AND COOLANT

- Before starting the engine, make sure to fill the specified amount of transmission oil and coolant.

Transmission oil	900 ml

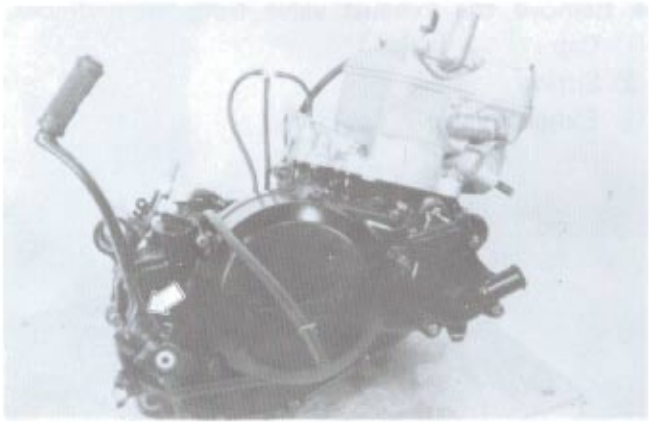
Coolant	1 020 ml

ADJUSTMENT

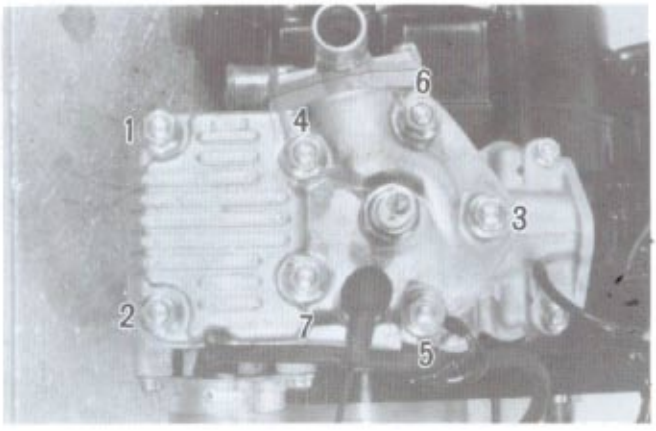
- After remounting the engine, route the wiring harness, hoses and cables properly (See pages 8-10 through 13). Adjust the following items to the specification.

ENGINE DISASSEMBLY

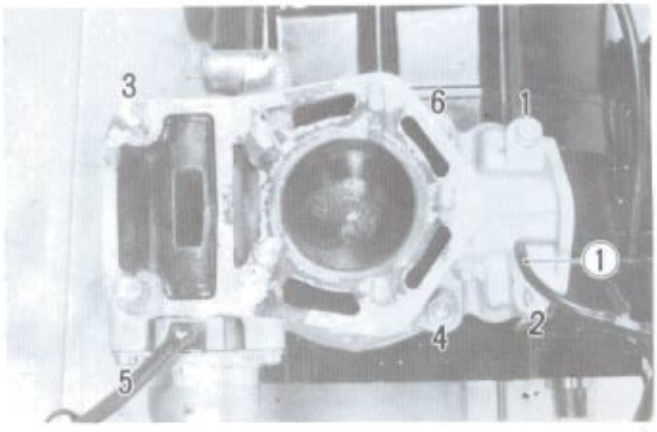
- Remove the kick starter lever.



- Loosen the cylinder head nuts in the order indicated in Fig. and remove the cylinder head.

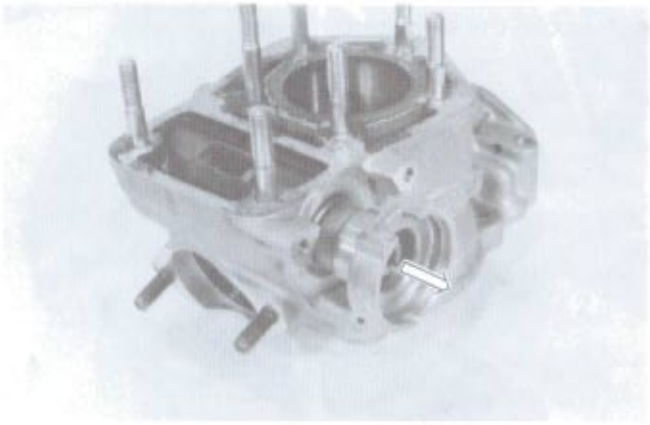


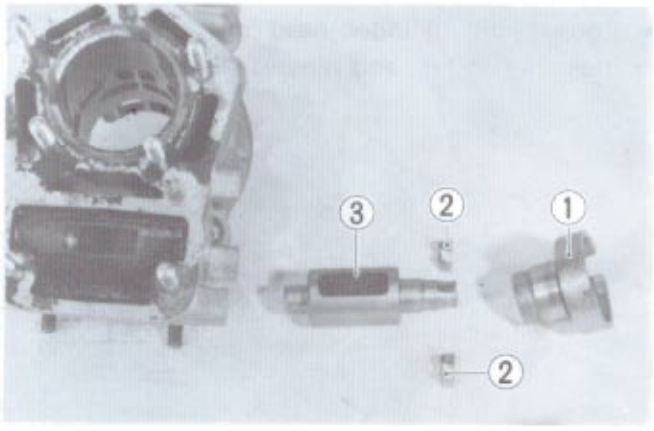
- Disconnect the CCI oil outlet hose ① from cylinder.
- Loosen the cylinder nuts in the order indicated in Fig. and remove the cylinder.



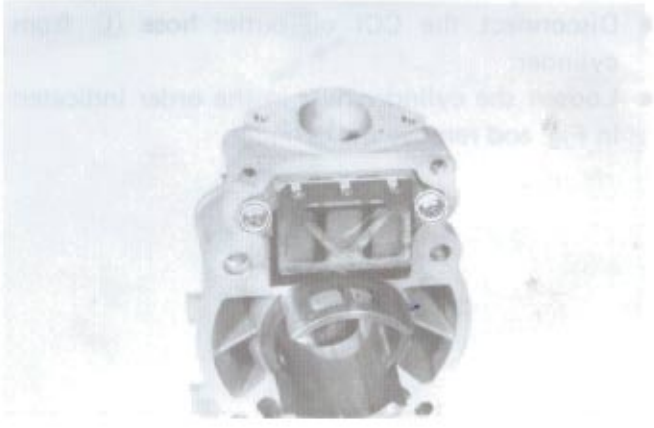
- Remove the exhaust valve solenoid.

- Remove the exhaust valve from the cylinder.
① Cap
② Spring
③ Exhaust valve





- Remove the reed valve.

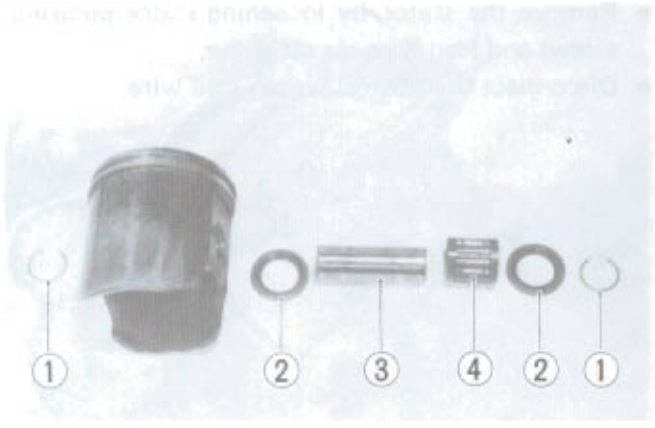


- Place a clean rag over the cylinder base to prevent piston pin circlip from dropping into the crankcase and then, remove the piston pin circlip with long-nose pliers.

- Draw out the piston pin by using the special tool and take off the piston.

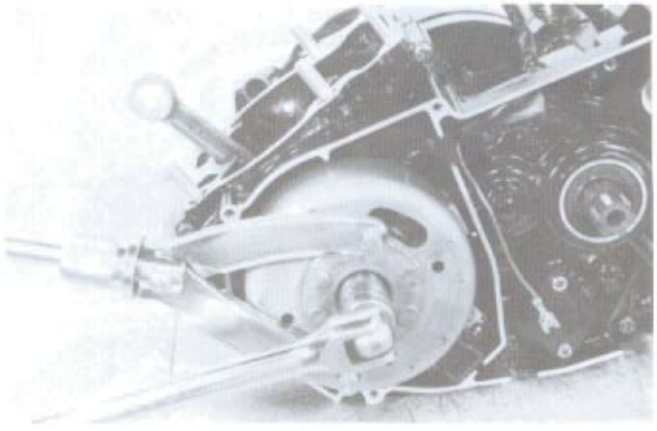
09910-34510	Piston pin puller

① Circlip
② Washer
③ Piston pin
④ Bearing



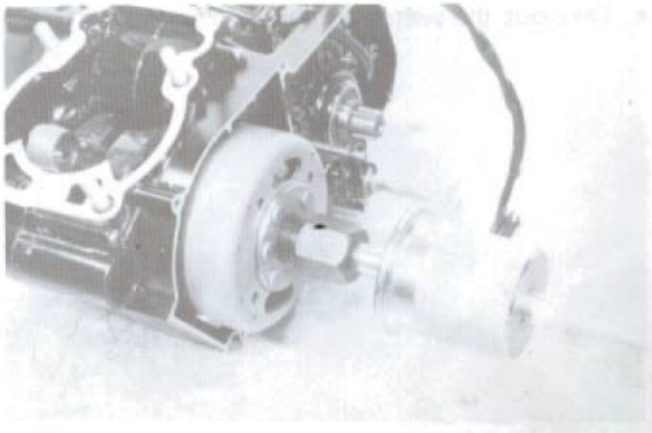
- Loosen the rotor nut by using the special tool.

09930-40113	Rotor holder



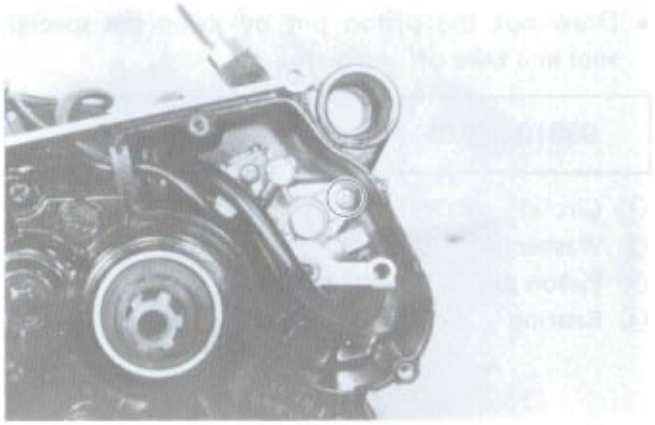
- Remove the rotor by using the special tools.

09930-30102	Rotor remover shaft
09930-30161	Attachment C

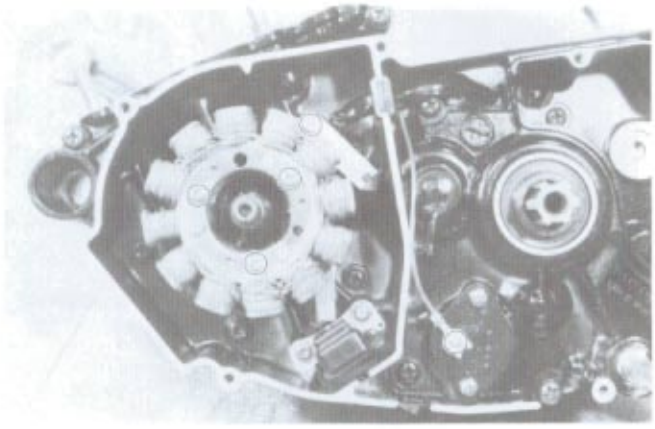


- Remove the key from the crankshaft.

- Remove the oil pump.



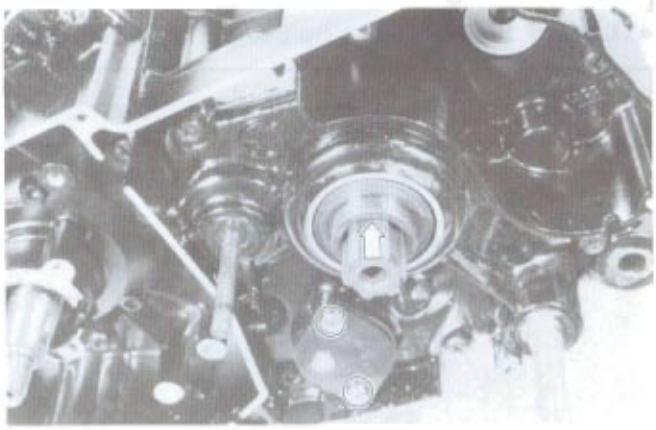
- Remove the stator by loosening stator securing screws and lead wire clamp screw.
- Disconnect the neutral switch lead wire.



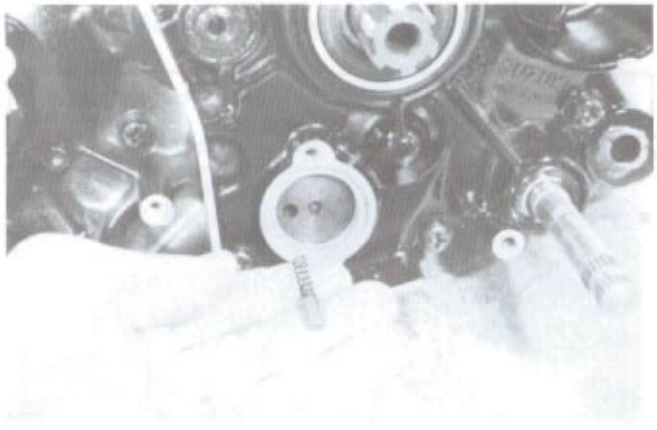
- Pull out the spacer and O-ring from the drive shaft.

CAUTION:
Do not reuse the removed O-ring.

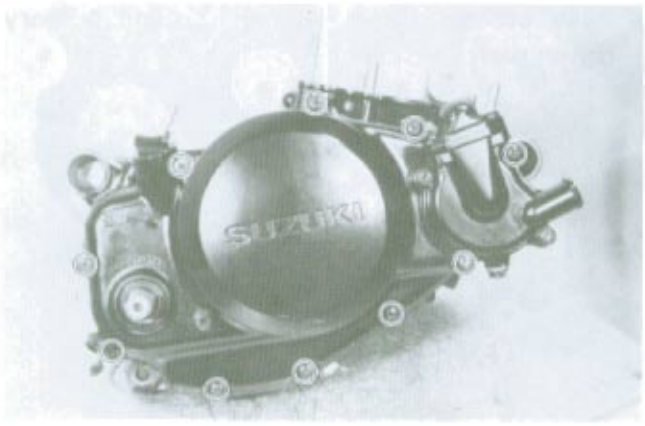
- Remove the neutral switch.



- Take out the switch contact and spring.



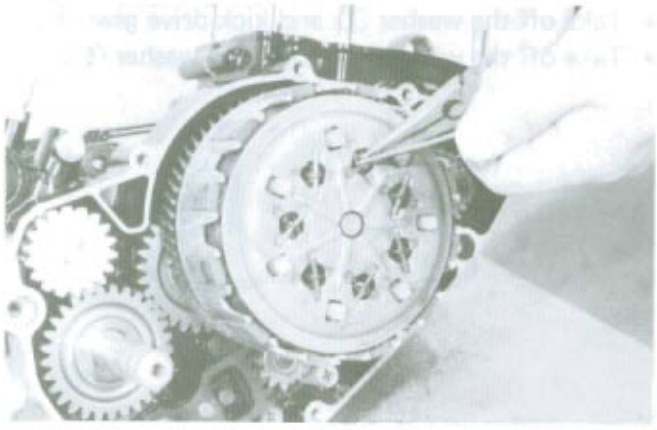
- Remove the clutch cover and gasket by removing ten screws.



- Using the special tool, take out the clutch spring pins and take off the clutch pressure plate.

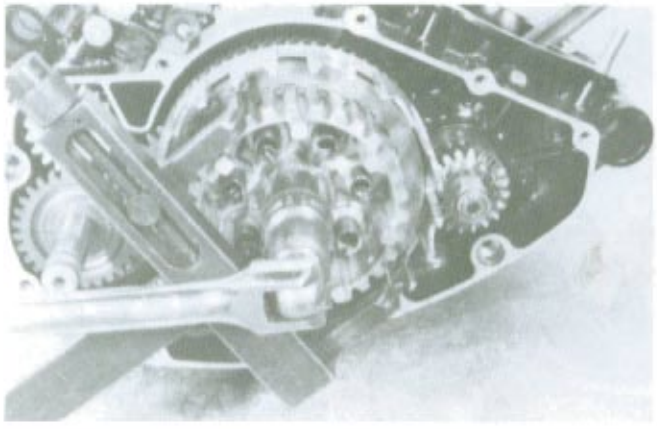
09920-20310	Spring hook

- Remove the clutch push piece, thrust bearing, drive plates, driven plates and push rod.



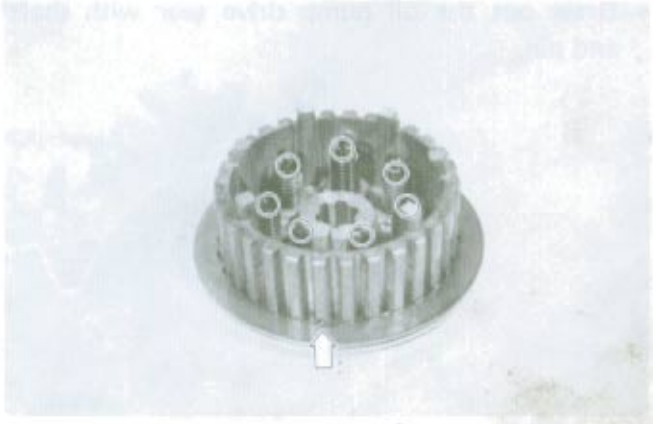
- Flatten the clutch sleeve hub washer, and remove the hub nut by using the special tool.

09920-53710	Clutch sleeve hub holder

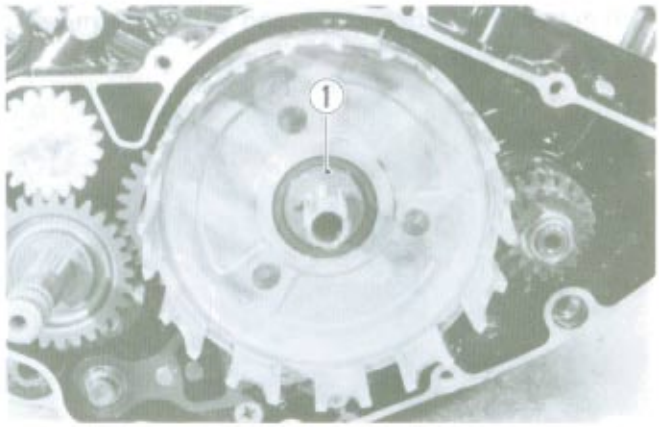


- Remove the clutch springs.
- Remove the stopper ring and take off the driven plate (thickness: 2.0 mm), wave washer and washer seat from the sleeve hub.

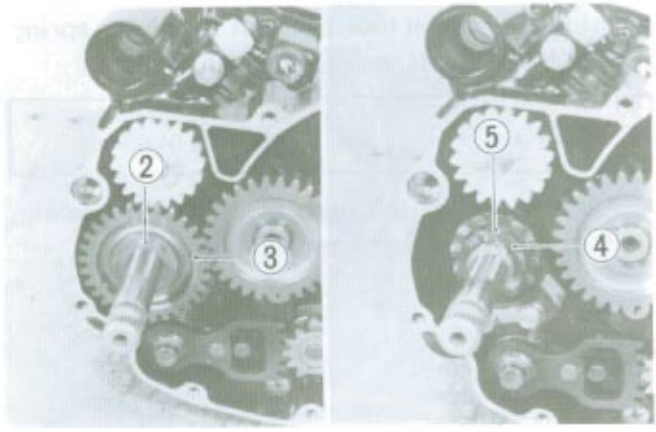
CAUTION:
Do not reuse the removed stopper ring.



- Take off the thrust washer ① and primary driven gear.

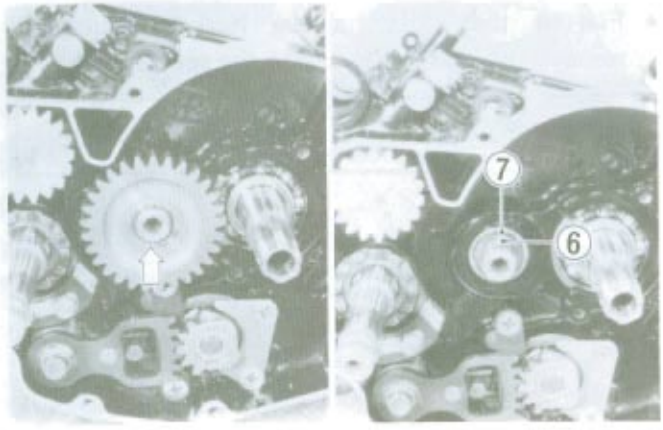


- Take off the washer ② and kick drive gear ③.
- Take off the wave washer ④ and washer ⑤.

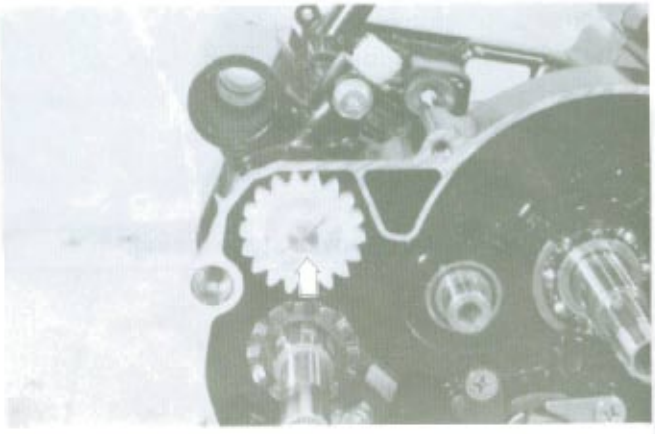


- Remove the circlip by using the special tool and take off the kick starter idle gear, washer ⑥ and wave washer ⑦.

09900-06107	Snap ring pliers (opening type)

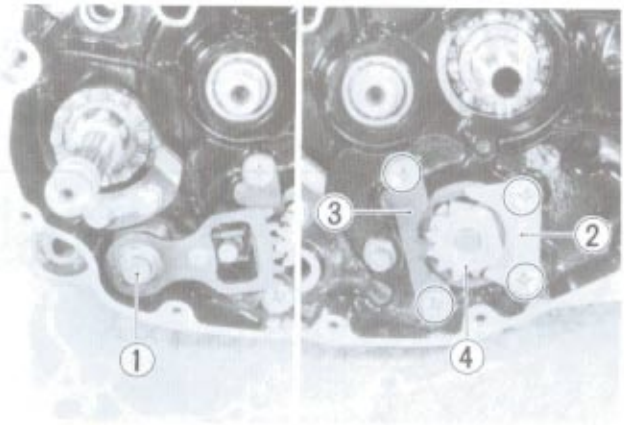


- Draw out the oil pump drive gear with shaft and pin.

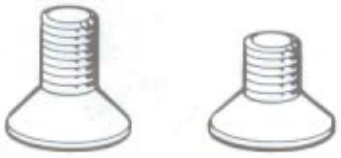


- Draw out the gearshift shaft ①.
- Remove the pawl lifter ② and cam guide ③ and take off the cam driven gear ④.

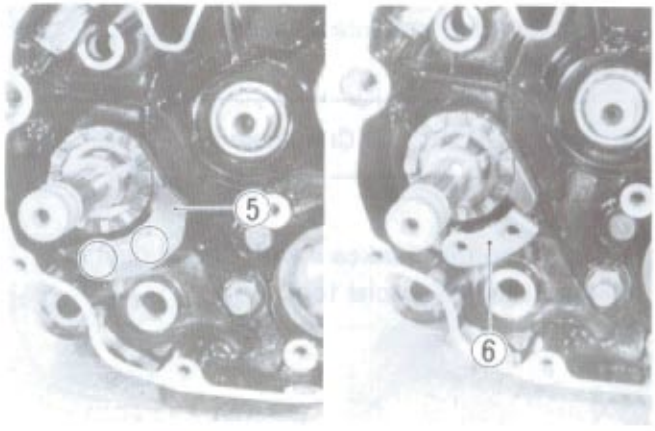
NOTE:
When removing the cam driven gear, do not lose gear shifting pawl, pin and spring.



NOTE:
Two kinds of screws are used. Longer screw is used for pawl lifter. Shorter screw is used for cam guide.



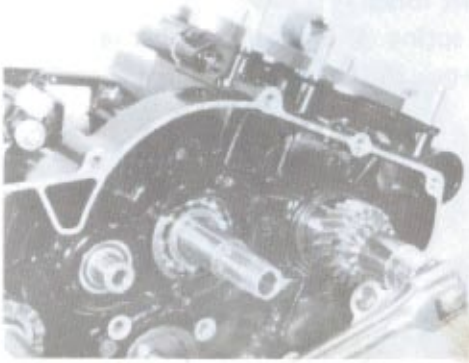
- Flatten the lock washer and remove the bolts and take off the kick starter guide ⑤ and stopper ⑥.



- Remove the nut by using the special tool and take off the water pump drive gear and primary drive gear.

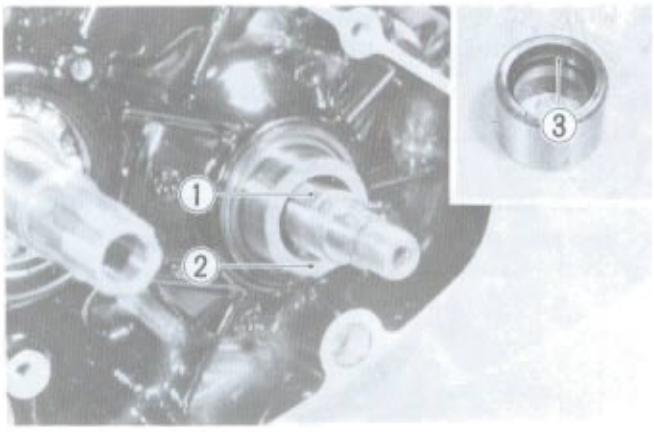
CAUTION:
This nut has left-hand threads.

09910-20115	Conrod stopper

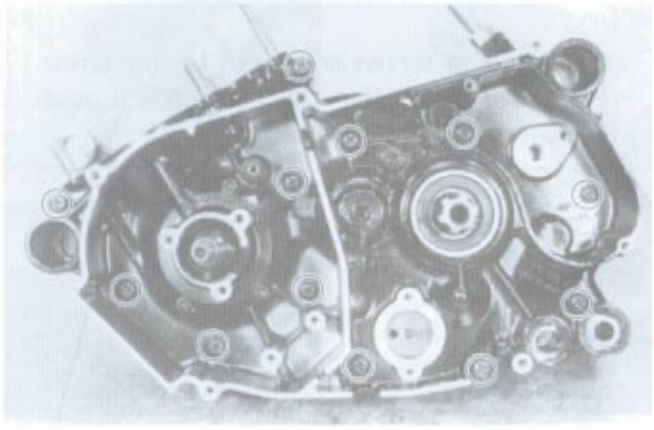


- Take off the key ① and spacer ② with O-ring.

CAUTION:
Do not reuse the removed O-ring ③.



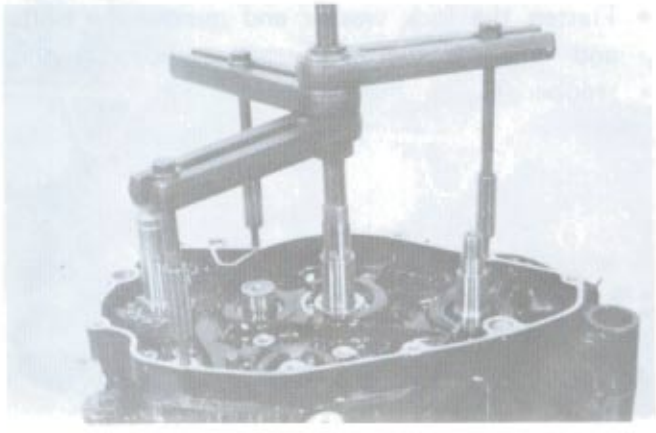
- Remove the crankcase securing screws.
  Make sure that all screws are removed.



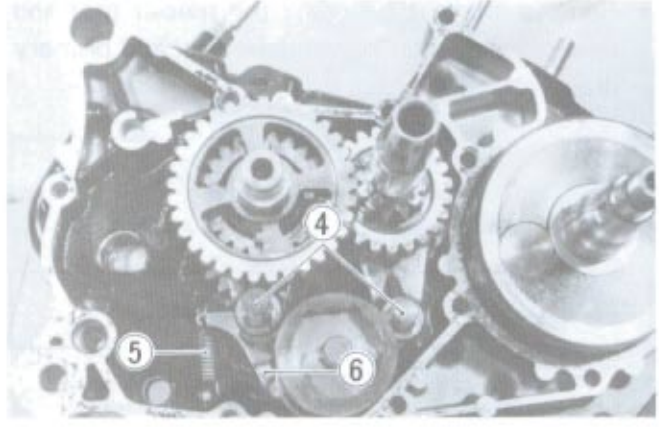
- Separate the crankcase halves by using the special tool.

09920-13120	Crankcase separating tool

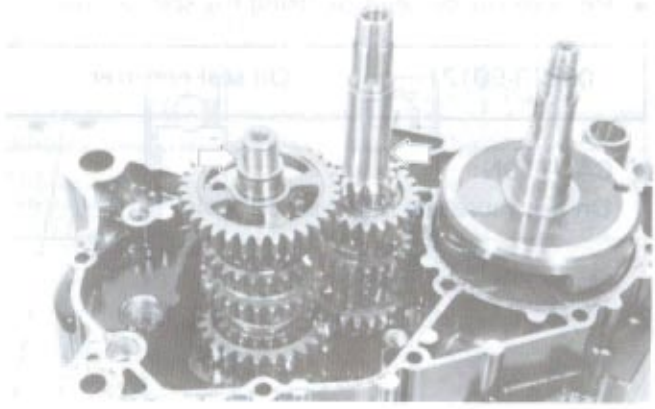
NOTE:
Lightly tap the crankcase with plastic hammer when using the special tool.



- Pull out the two gearshift fork shafts ④ and three gearshift forks.
- Remove the spring ⑤ and cam stopper ⑥.
- Take off the gearshift cam.

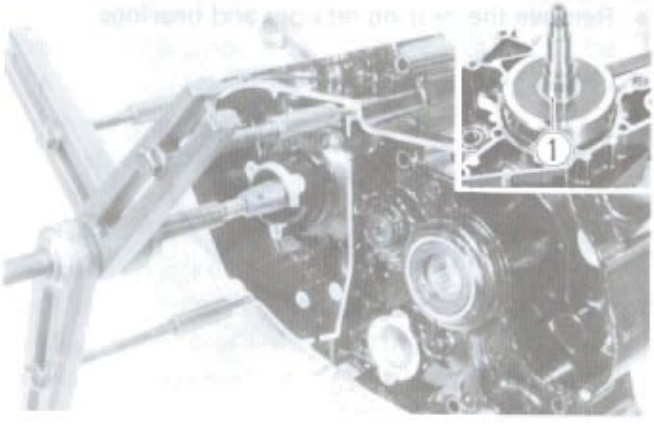


- Remove both countershaft and drive shaft together.

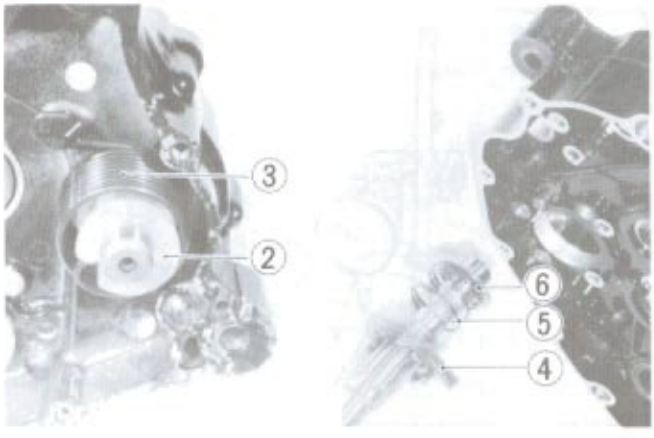


- Take off the shim ①.
- Remove the crankshaft assembly by using the special tool.

09920-13120	Crankshaft remover (Crankcase separating tool)



- Take off the spring guide ② and spring ③.
- Draw out the kick starter shaft with kick starter ④, spring ⑤ and plate ⑥.



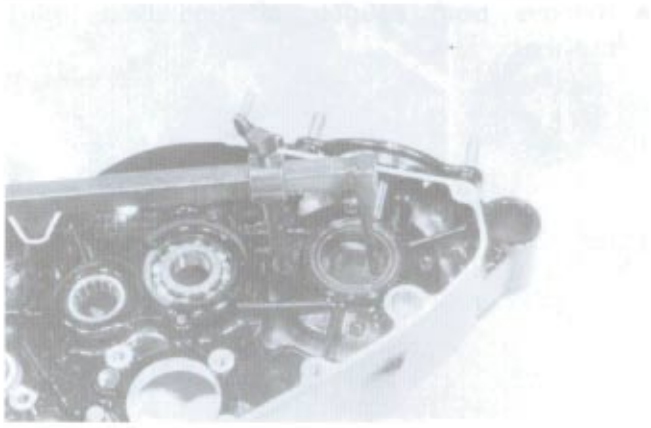
- Remove the bolt ⑦ and draw out the tachometer driven gear ⑧, washer ⑨, sleeve ⑩ and O-ring ⑪.

CAUTION:
Do not reuse the removed O-ring.

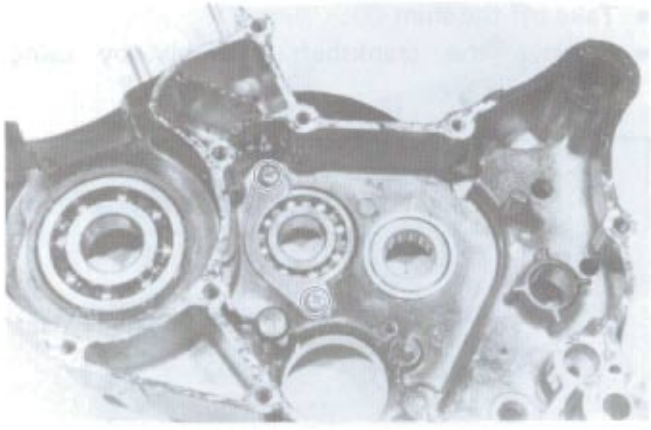
- Remove the oil seals by using the special tool.

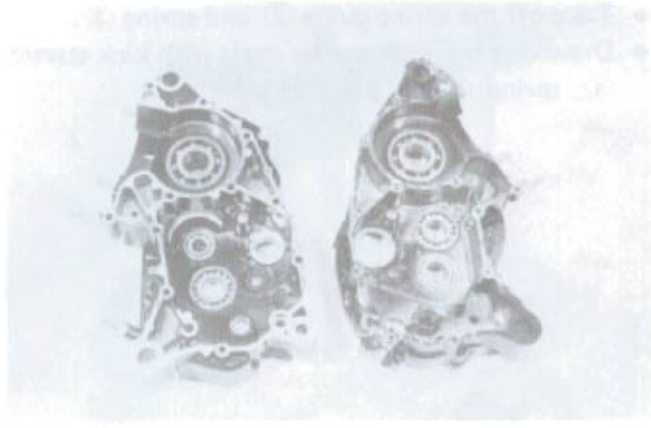
09913-50121	Oil seal remover

CAUTION:
Do not reuse the removed oil seals.



- Remove the bearing retainer and bearings.

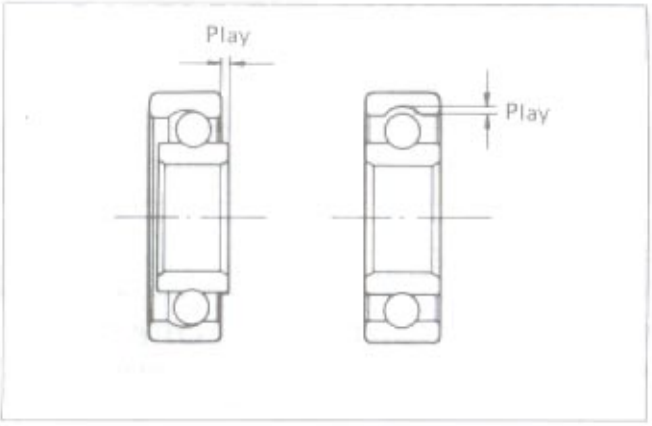




ENGINE COMPONENTS INSPECTION AND SERVICING

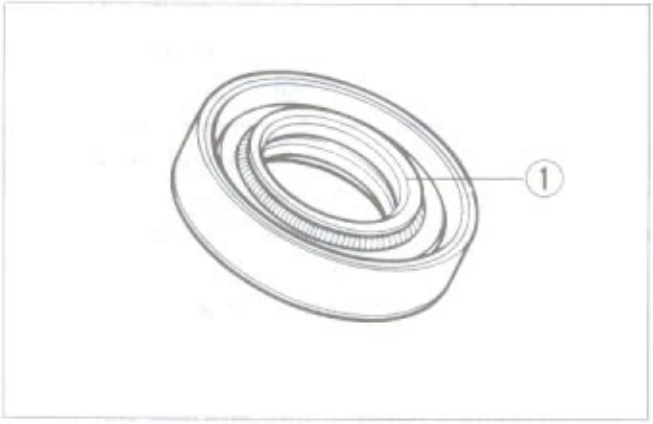
BEARINGS

- Wash the bearing with cleaning solvent and lubricate with motor oil before inspecting.
- Turn the inner race and check to see that the inner race turns smoothly.
- If it does not turn lightly, quietly and smoothly, or if noise is heard, the bearing is defective and must be replaced with a new one.



OIL SEALS

- Damage to the lip ① of the oil seal may result in leakage of the fuel-air mixture or oil. Inspect for damage and be sure to replace damaged parts if there are any.



CRANKSHAFT

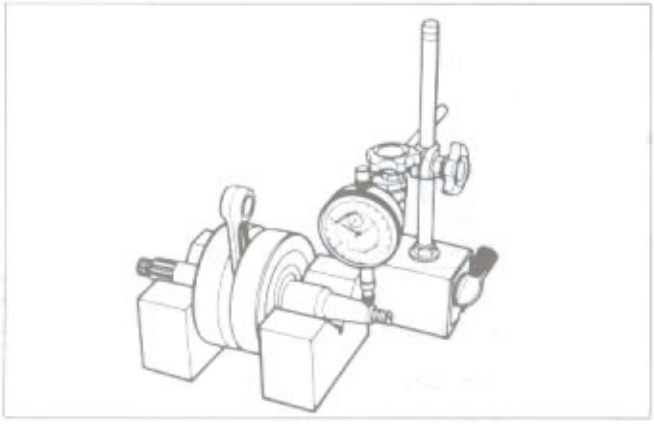
CRANKSHAFT RUNOUT

- Support the crankshaft by "V" blocks, with the dial gauge rigged to read the runout as shown.

Service Limit	0.05 mm

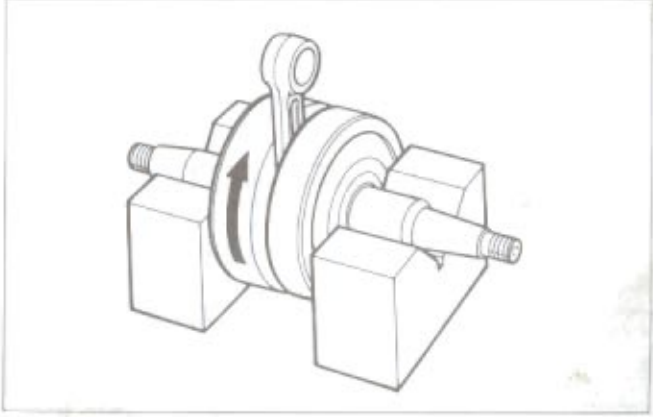
- Excessive crankshaft runout is often responsible for abnormal engine vibration. Such vibration shortens engine life.

09900-21304	V-block
09900-20701	Magnetic stand
09900-20606	Dial gauge (1/100 mm)



CONDITION OF BIG-END BEARING

- Turn the crankshaft with the connecting rod to feel the smoothness of rotary motion in the big end. Move the rod up and down while holding the crankshaft rigidly to be sure that there is no rattle in the big end.



CON-ROD SMALL END BORE I.D.

- Using a caliper gauge, measure the con-rod small end diameter.

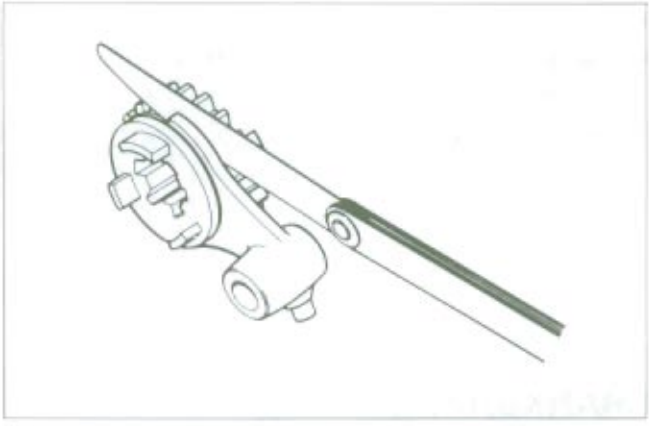
Service Limit	18.040 mm

09900-20605	Dial calipers

GEARS AND SHIFTING FORKS

- Upon disassembling the engine, immediately inspect the transmission internals, visually examining the gears for damage and checking the meshed condition of gear teeth. Using a thickness gauge, check the shifting fork clearance in the groove of its gear.

09900-20803	Thickness gauge



Shifting fork clearance in the groove.

- This clearance for each of the three shifting forks plays an important role in the smoothness and positiveness of shifting action. Each fork has its prongs fitted into the annular groove provided in its gear. In operation, there is sliding contact between fork and gear and, when a shifting action is initiated, the fork pushes the gear axially. Too much a clearance is, therefore, liable to cause the meshed gears to slip apart.
- If the clearance checked is noted to exceed the limit specified, replace the fork or its gear, or both.

Shift fork – groove clearance

	Service Limit
for 3rd and 4th drive gear	0.45 mm
for 5th driven gear	
for top driven gear	

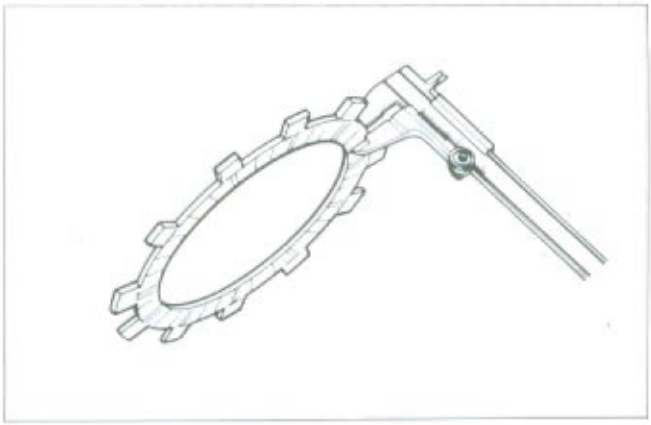
CLUTCH PLATES

- Clutch plates in service remain in oily condition as they were lubricated with oil. Because of this condition, both drive and driven plates are subject to little wearing action and therefore last much longer. Their life depends largely on the quality of oil used in the clutch and also on the way the clutch is operated.
- These plates are expendable: they are meant to be replaced when found worn down or distorted to the respective limit: use a caliper to check thickness and claw width and a thickness gauge and surface plate to check distortion.

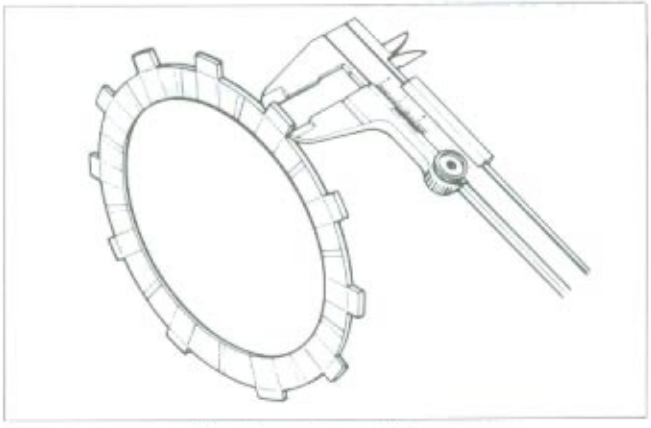
09900-20102	Vernier calipers
09900-20804	Thickness gauge

Service Limit

Item	Drive plate	Driven plate
Thickness	2.6 mm	–
Claw width	11.0 mm	–
Distortion	–	0.10 mm



Checking thickness



Checking claw width

CLUTCH SPRINGS

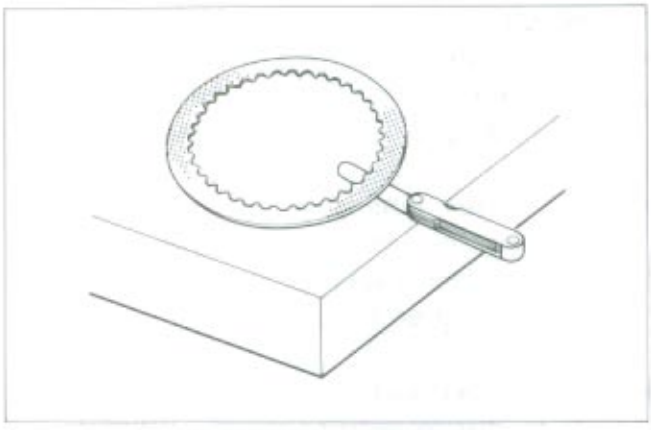
- Clutch springs which have lost their tension also cause clutch slipping, resulting in loss of power and rapid wear of the clutch plates.
- Remove the clutch spring and measure their free length with calipers.

09900-20102	Vernier calipers

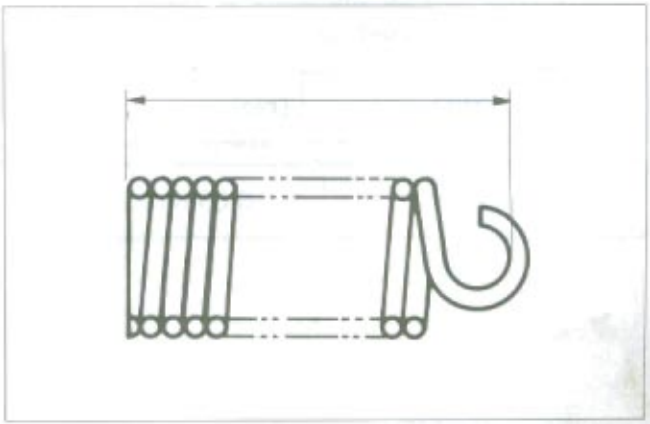
Service Limit	30.4 mm

NOTE:

* If one of springs is longer than service limit, renew all of them at a time.
* When screwing the clutch spring into the sleeve hub, hook side screws in first and adjust the spring height.



Checking distortion



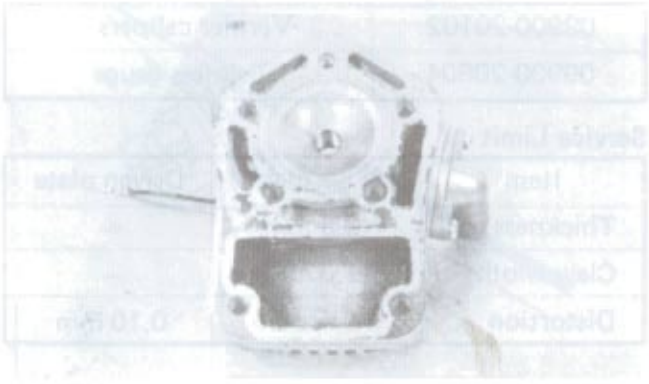
CLUTCH RELEASE BEARING

- Inspect this thrust-type bearing for any abnormality, particularly cracks, upon removal from the clutch, to decide whether it can be reused or should be replaced.
- Smooth engagement and disengagement of the clutch depends much on the condition of this bearing.

CYLINDER HEAD

DECARBON

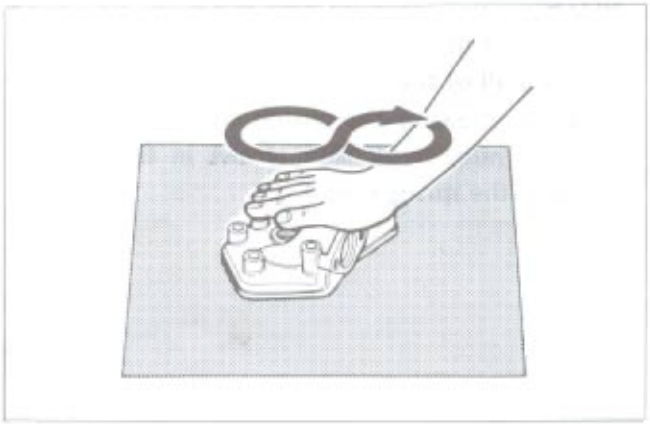
- Decarbonize the combustion chamber.



CYLINDER HEAD DISTORTION

- Check the gasketed surface of the cylinder head for distortion with a straightedge and thickness gauge, taking a clearance reading at several places.
- If the largest reading at any portion of the straightedge exceeds the limit, rework the surface by rubbing it against emery paper (of about #400) laid flat on the surface plate in a lapping manner.
- The gasketed surface must be smooth and perfectly flat in order to secure a tight joint: a leaky joint can be the cause of reduced power output and increased fuel consumption.

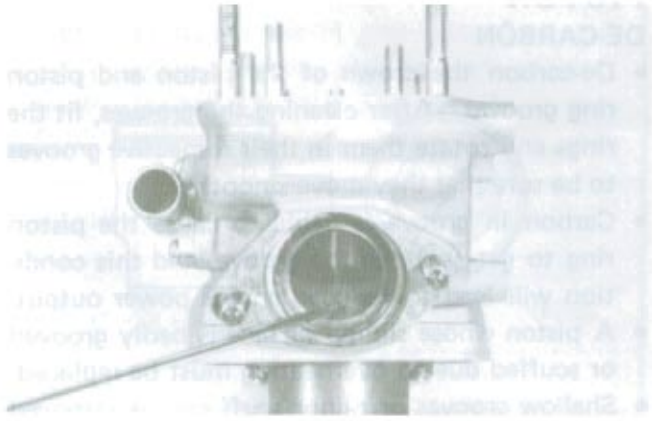
09900-20803	Thickness gauge
Service Limit	0.05 mm



CYLINDER

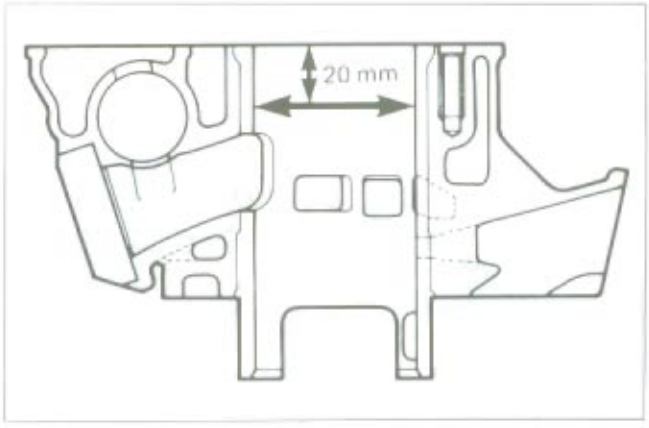
DECARBON

- Decarbon the exhaust port and the upper part of the cylinder, taking care not to damage the cylinder wall surface.



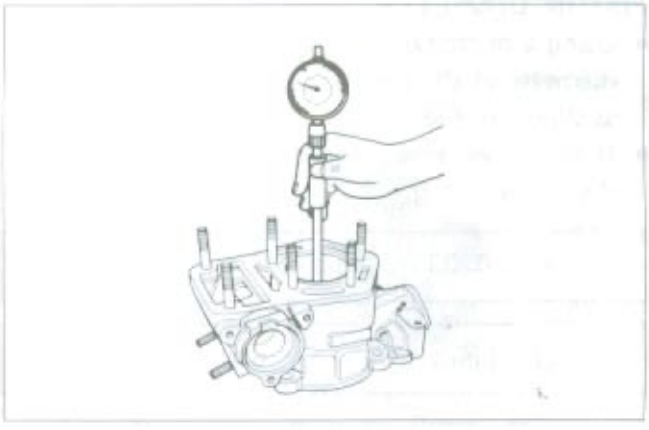
CYLINDER BORE

- The wear of the cylinder wall is determined from diameter reading taken at 20 mm from the top of the cylinder with a cylinder gauge.
- If the wear thus determined exceeds the limit indicated below, rework the bore to the next oversize by using a boring machine or replace the cylinder with a new one.
- Oversize pistons are available in two sizes: 0.5 mm and 1.0 mm oversizes.



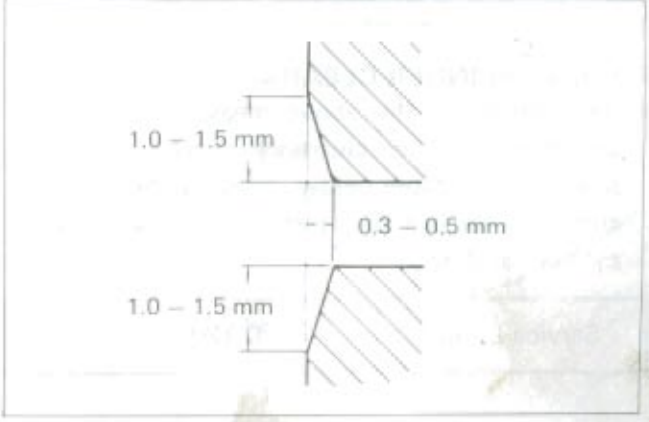
09900-20508	Cylinder gauge set

Service Limit	54.060 mm



- After reworking the bore to an oversize, be sure to chamfer the edges of ports and smooth the chamfered edges with emery paper. To chamfer, use a scraper, taking care not to nick the wall surface.

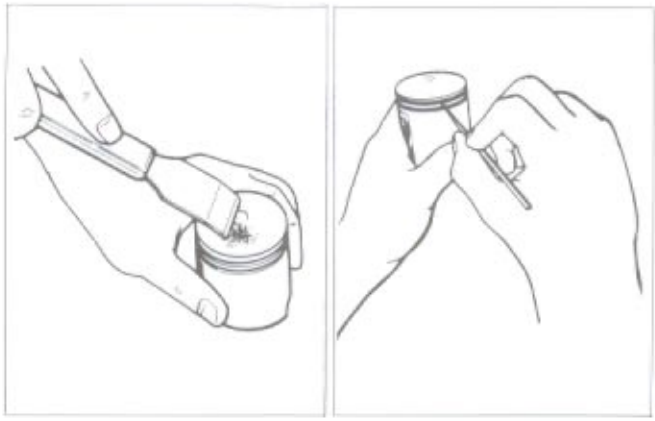
NOTE:
Minor surface flaws on the cylinder wall due to seizure or similar abnormalities can be corrected by grinding the flaws off with fine-grain emery paper. If the flaws are deep grooves or otherwise persist, the cylinder must be reworked with a boring machine to the next oversize.

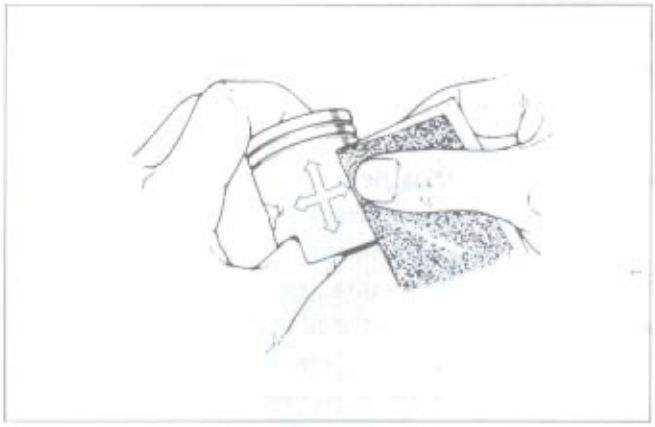


PISTON

DE-CARBON

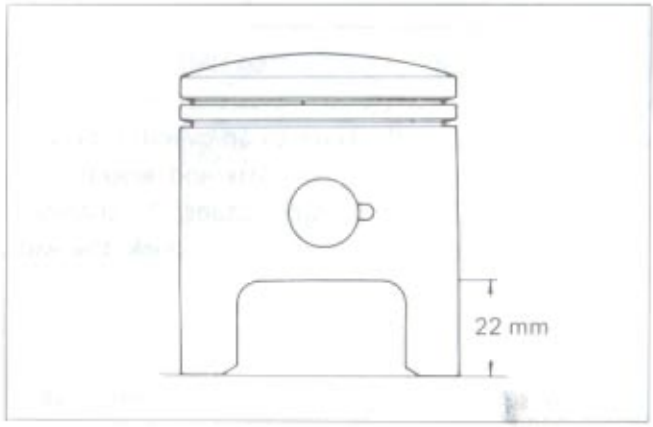
- De-carbon the crown of the piston and piston ring grooves. After cleaning the grooves, fit the rings and rotate them in their respective grooves to be sure that they move smoothly.
- Carbon in groove is liable to cause the piston ring to get stuck in the groove, and this condition will lead to reduced engine power output.
- A piston whose sliding surface is badly grooved or scuffed due to overheating must be replaced.
- Shallow grooves or minor scuff can be removed by grinding with emery paper of about #400.





PISTON DIAMETER

- Using a micrometer, measure the piston outside diameter at the place 22 mm from the skirt end as shown in Fig.
- If the measurement is less than the limit, replace the piston.



09900-20203	Micrometer (50 – 75 mm)

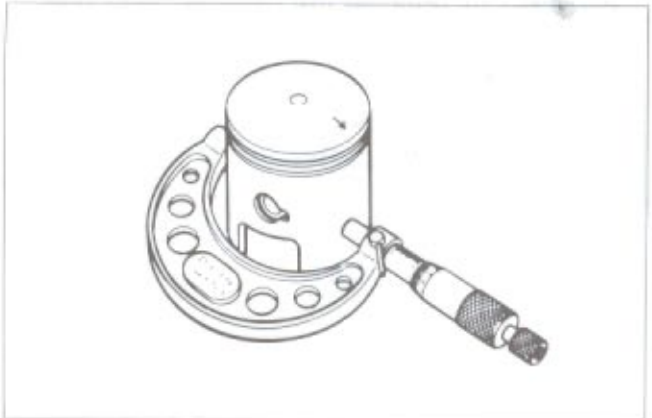
Service Limit	53.880 mm

Piston oversize	0.5, 1.0 mm

PISTON-CYLINDER CLEARANCE

- As a result of the above measurement, if the piston to cylinder clearance exceeds the limit shown in the table below, overhaul the cylinder and use an oversize piston, or replace both cylinder and piston.

Service Limit	0.120 mm

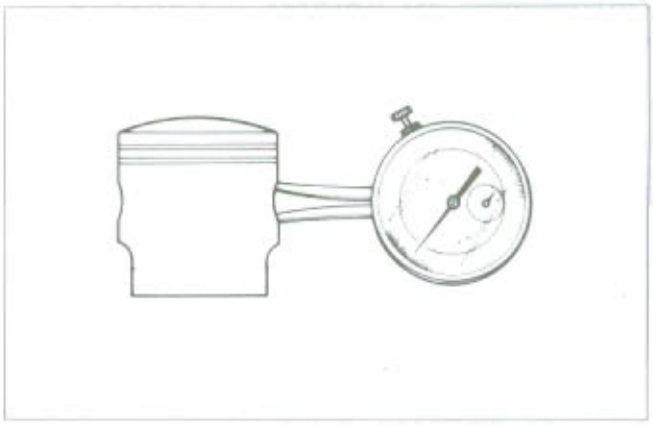


PISTON PIN BORE I.D.

- Using a caliper gauge, measure the piston pin bore inside diameter.
- If reading exceeds the following service limit, replace it with a new one.

Service Limit	14.030 mm

09900-20605	Dial calipers

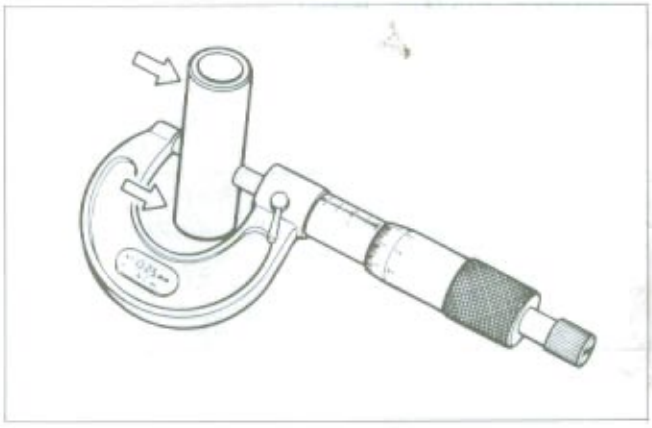


PISTON PIN O.D.

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

09900-20205	Micrometer (0 – 25 mm)

Service Limit	13.980 mm



PISTON RINGS

PISTON RING END GAP

- Check each ring for end gap, reading the gap with a thickness gauge as shown in Fig. If the end gap is found to exceed the limit, indicated below, replace it with a new one.
- The end gap of each ring is to be measured with the ring fitted squarely into the cylinder bore and held at the least worn part near the cylinder bottom, as shown in Fig.

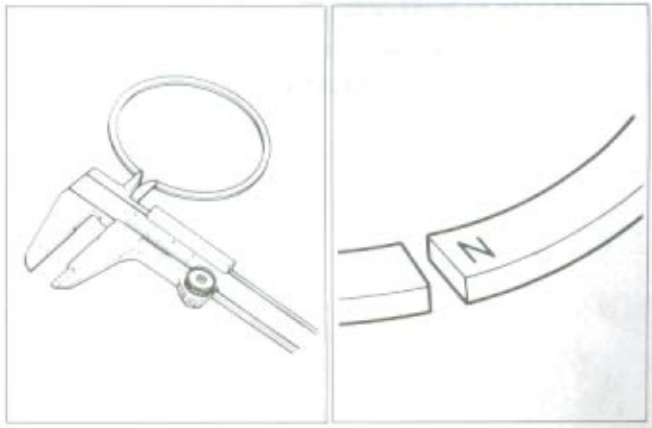
09900-20803	Thickness gauge

Service Limit	0.75 mm

PISTON RING FREE END GAP

- As the piston ring wears, its end gap increases reducing engine power output because of the resultant blowby gas through the enlarged gap. Here lies the importance of using piston rings with end gaps within the limit.
- Measure the piston ring free end gap to check the spring tension.

Mark	Service Limit
N (1st)	3.6 mm
R (2nd)	5.2 mm

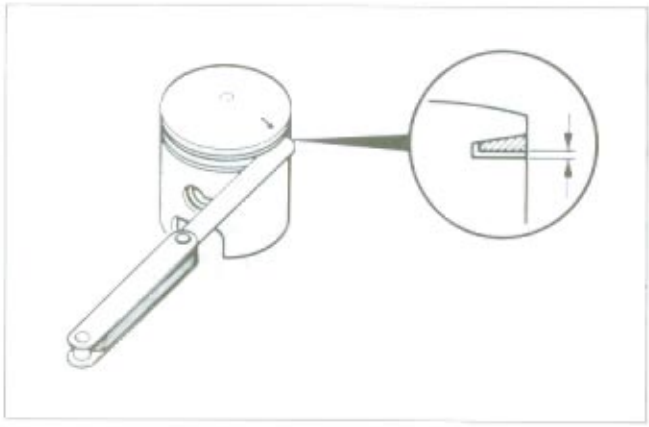


PISTON RING TO GROOVE CLEARANCE

- Fix the piston ring in the piston ring groove, measure the ring side clearance with the thickness gauge while matching the sliding surface of piston and ring.

STD Clearance	0.02 – 0.06 mm

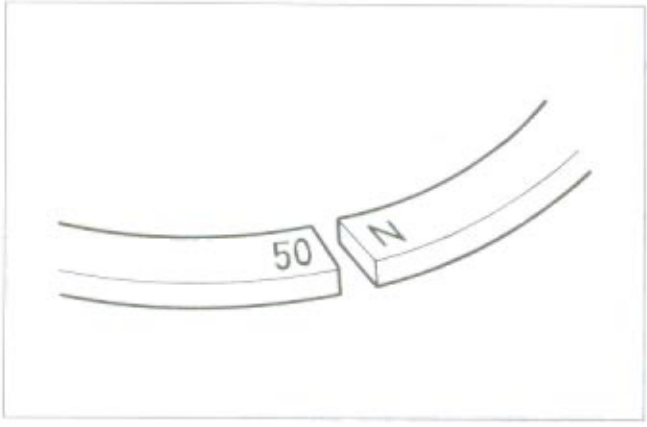
09900-20803	Thickness gauge



OVERSIZE PISTON RING

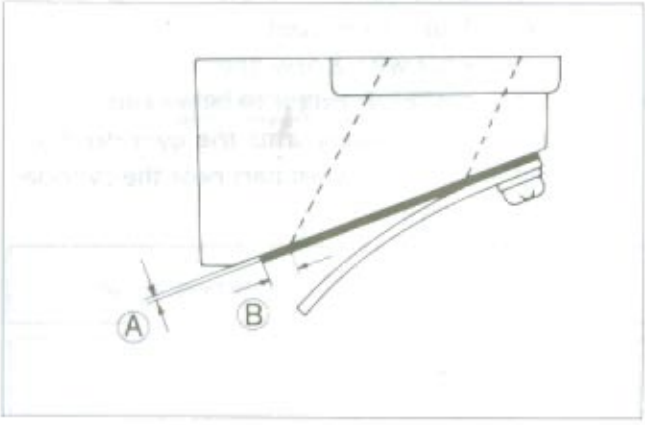
- The following two types of oversize piston rings are used. They bear the following identification numbers.

Oversize	Mark (1st and 2nd)
0.5 mm	50
1.0 mm	100



REED VALVE

- Check the clearance Ⓐ between reed valve and its seat and the dimension Ⓑ. If the clearance Ⓐ is noted to exceed 0.2 mm, replace the reed valve assembly. The dimension Ⓑ is at least 1 mm.



EXHAUST VALVE

De-carbon the exhaust valve and check and clean the outer surface of exhaust valve.

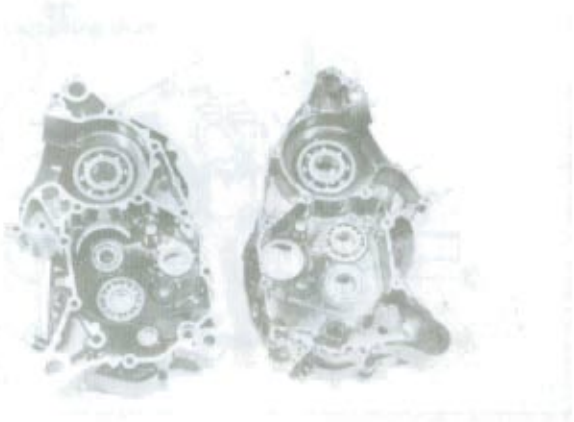
ENGINE REASSEMBLY

Reassembly is generally performed in the reverse order of disassembly, but there are a number of reassembling steps that demand or deserve detailed explanation or emphasis. These steps will be taken up for respective parts and components.

BEARINGS

Insert the bearing into the right and left crankcases by using the special tool. After the bearing is installed, be sure to lubricate to prevent initial wear.

09913-75820	Bearing installer
09913-76010	Bearing installer
09913-85210	Bearing installer



OIL SEALS

Fit the oil seals to the crankcase following the procedure below.

- Replace the removed oil seals with new ones.
- Apply SUZUKI Super Grease "A" to the lip of the oil seals.

99000-25010	SUZUKI Super Grease "A"

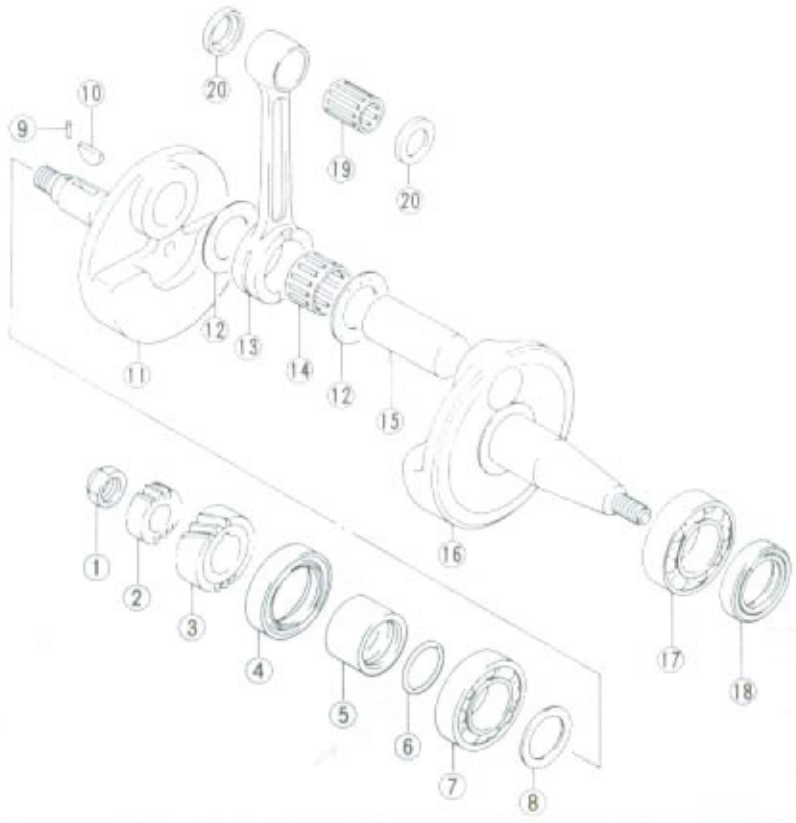
- Be sure to apply Thread Lock "1342" to outer surfaces of the right and left crankshaft oil seals, to prevent them from moving.

NOTE:
Apply engine oil to each running and sliding part before reassembling.

09900-32050	Thread Lock "1342"

- When fitting the oil seal in the crankcase, insert it slowly by using the special tool.

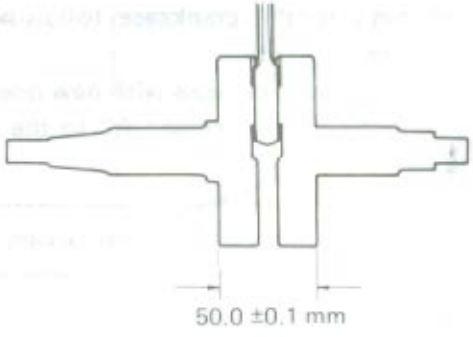
CRANKSHAFT



(1) Water pump drive gear nut
(2) Water pump drive gear
(3) Primary drive gear
(4) Right crank oil seal
(5) Spacer
(6) O-ring
(7) Right crank bearing
(8) Shim (14 kinds)
(9) Pin
(10) Key
(11) Right crankshaft
(12) Washer
(13) Con-rod
(14) Big end bearing
(15) Crank pin
(16) Left crankshaft
(17) Left crank bearing
(18) Left crank oil seal
(19) Piston pin bearing
(20) Washer

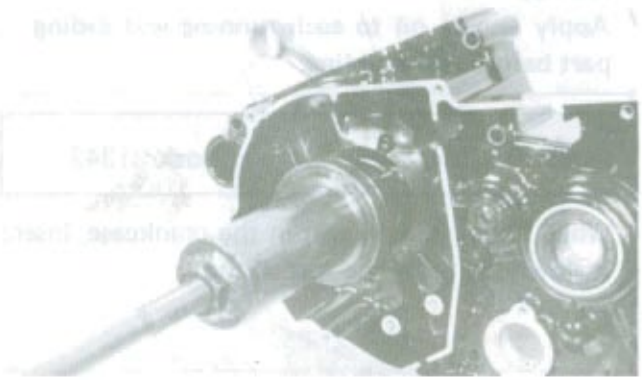
- Decide the width between the webs referring to the figure at right when rebuilding the crankshaft.

Crank web to web width	50.0 ± 0.1 mm



- When mounting the crankshaft in the crankcase, it is necessary to pull its left end into the crankcase by using the special tools.

09910-32812	Crankshaft installer
09910-32850	Attachment "E"
09910-32820	Crankshaft installer spacer

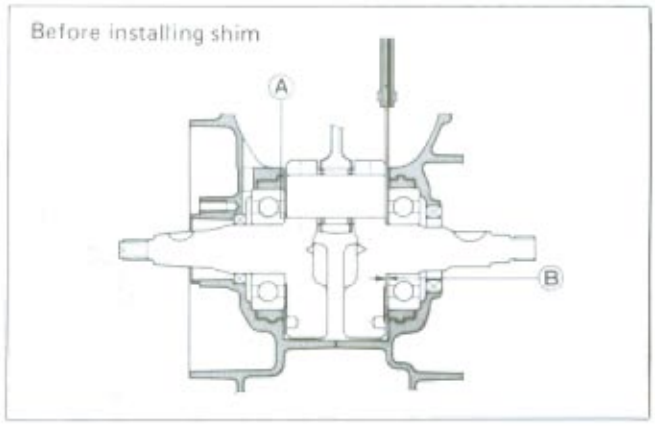


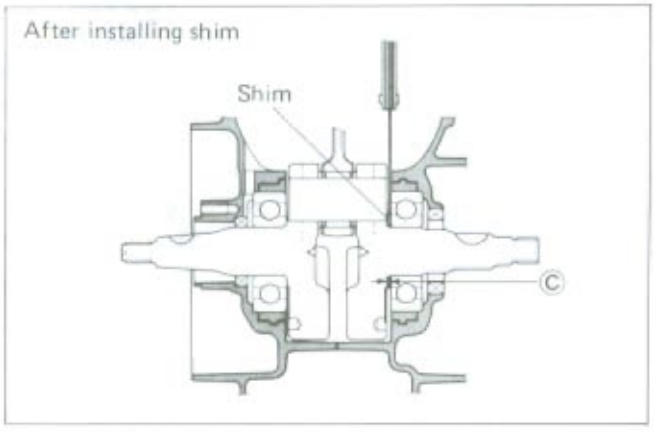
CRANKSHAFT SHIM SELECTION

When installing a new crankshaft, after choosing the correct shim as following procedure, install the correct shim on new crankshaft.

- Degrease the crankshaft and shim.
- Inspect that position Ⓐ is no clearance.
- Install the crankshaft to crankcases, and then tighten the crankcase with screws.
- Measure the clearance Ⓑ between right crank web and right crank bearing by using the thickness gauge.
- Separate the crankcase.
- Select the proper size of shim from the following table.
- Tighten the crankcase after installing the shim, and then check the clearance Ⓒ with a thickness gauge. If the clearance Ⓒ is out of service data, select the proper size of shim.
- After selecting the proper size of shim, install the crankshaft with shim to the crankcase. Tighten crankcase screws and check to see that the crankshaft turns smoothly.

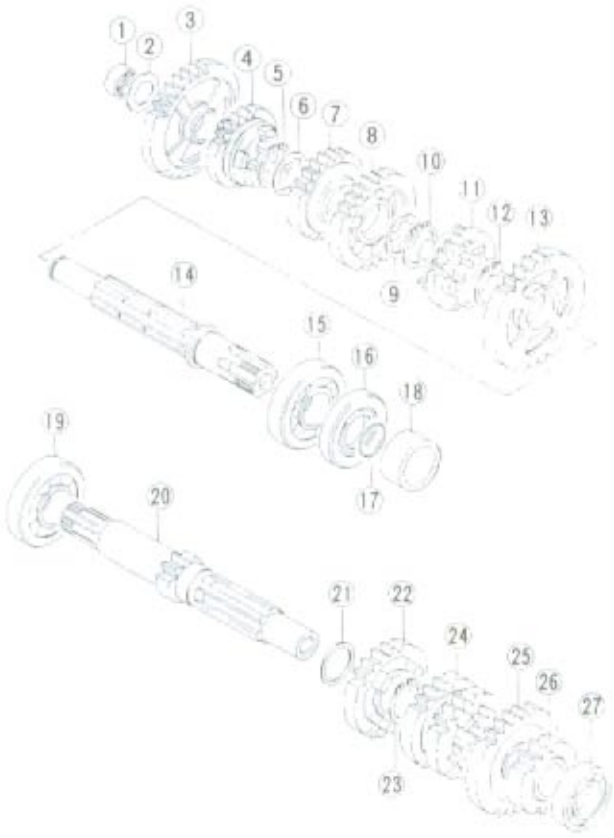
09900-20803	Thickness gauge





Clearance Ⓑ	Shim thickness	Clearance Ⓒ	Part number of shim
0.75 – 0.80	0.60	0.15 – 0.20	09181-25051
0.80 – 0.85	0.65	0.15 – 0.20	09181-25052
0.85 – 0.90	0.70	0.15 – 0.20	09181-25053
0.90 – 0.95	0.75	0.15 – 0.20	09181-25054
0.95 – 1.00	0.80	0.15 – 0.20	09181-25055
1.00 – 1.05	0.85	0.15 – 0.20	09181-25056
1.05 – 1.10	0.90	0.15 – 0.20	09181-25057
1.10 – 1.15	0.95	0.15 – 0.20	09181-25058
1.15 – 1.20	1.00	0.15 – 0.20	09181-25059
1.20 – 1.25	1.05	0.15 – 0.20	09181-25060
1.25 – 1.30	1.10	0.15 – 0.20	09181-25061
1.30 – 1.35	1.15	0.15 – 0.20	09181-25062
1.35 – 1.40	1.20	0.15 – 0.20	09181-25063
1.40 – 1.44	1.25	0.15 – 0.19	09181-25064

TRANSMISSION

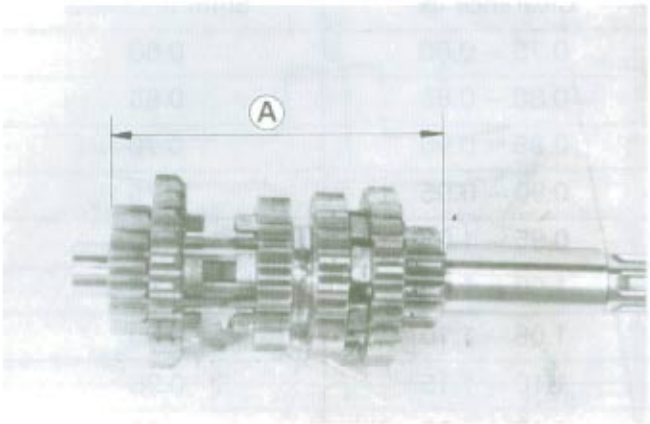


(1) Bearing RH
(2) Washer
(3) Low driven gear
(4) 5th driven gear
(5) Circlip
(6) Washer
(7) 4th driven gear
(8) 3rd driven gear
(9) Washer
(10) Circlip
(11) Top driven gear
(12) Circlip
(13) 2nd driven gear
(14) Driveshaft
(15) Bearing LH
(16) Oil seal
(17) O-ring
(18) Spacer
(19) Bearing RH
(20) Countershaft
(21) Washer
(22) 5th drive gear
(23) Circlip
(24) 3rd/4th drive gear
(25) Top drive gear
(26) 2nd drive gear
(27) Bearing LH

COUNTERSHAFT

Mounting 2nd drive gear

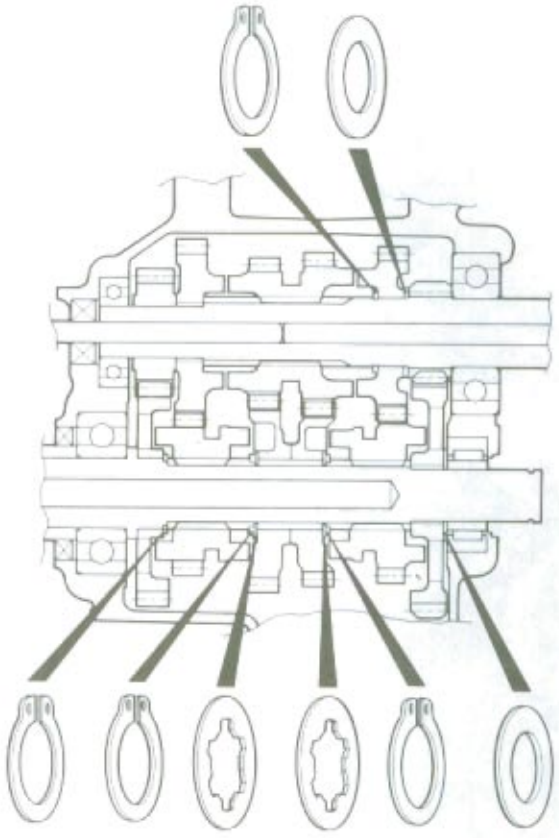
- Press-fit the 2nd drive gear onto the countershaft. Before reassembling, coat the internal face of the 2nd drive gear with Thread Lock Super "1333B" and install it so that the length Ⓐ is as shown in Fig.



Countershaft length (Low to 2nd) Ⓐ	91.8 – 91.9 mm

99000-32020	Thread Lock Super "1333B"

NOTE:
* Take care not to smear TOP drive gear with Thread Lock Super "1333B".
* After mounting the 2nd drive gear, check that TOP drive gear spins smoothly by moving it with your fingers.
* This procedure may be performed only twice before shaft replacement.

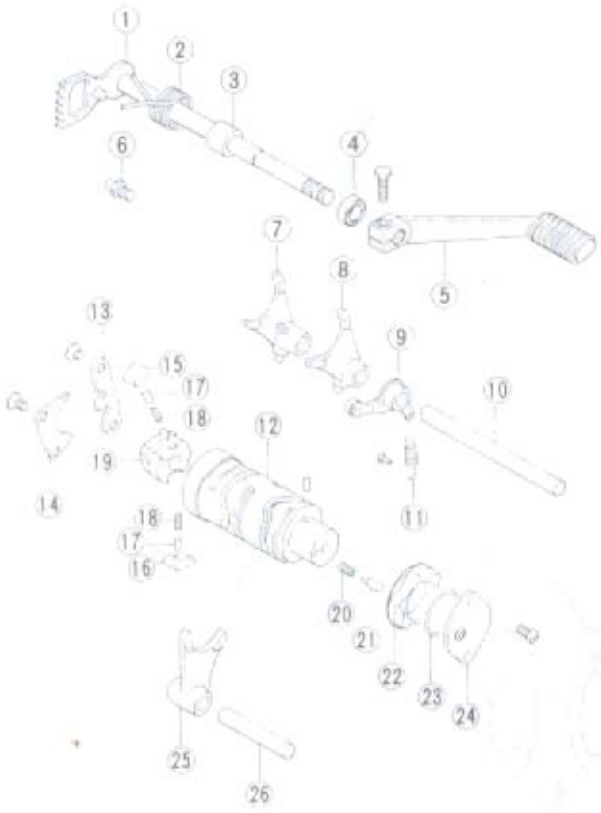


NOTE:
In reassembling the transmission, attention must be given to the locations and positions of washers and circlips. The cross sectional view given here will serve as a reference for correctly mounting the gears, washers and circlips.

CAUTION:
* Never reuse a circlip. After a circlip has been removed from a shaft, the removed circlip should be discarded and a new circlip must be installed.
* When installing a new circlip, care must be taken not to expand the end gap larger than required to slip the circlip over the shaft.
* After installing a circlip, always insure that it is completely seated in its groove and securely fitted.

• When installing a circlip, pay attention to the direction of the circlip. Fit it to the side where the thrust is as shown in the figure with the rounded side against the gear surface.

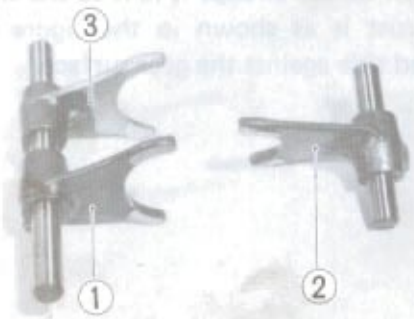
GEARSHIFT CAM AND FORK



① Gearshift shaft
② Return spring
③ Spacer
④ Oil seal
⑤ Gearshift lever
⑥ Arm stopper
⑦ Gearshift fork No. 1
⑧ Gearshift fork No. 3
⑨ Cam stopper
⑩ Fork shaft No.1
⑪ Spring
⑫ Cam
⑬ Cam guide
⑭ Pawl lifter
⑮ Pawl No. 1
⑯ Pawl No. 2
⑰ Pin
⑱ Spring
⑲ Cam driven gear
⑳ Spring
㉑ Switch contact
㉒ Stopper plate
㉓ O-ring
㉔ Neutral switch
㉕ Gearshift fork No. 2
㉖ Fork shaft No. 2

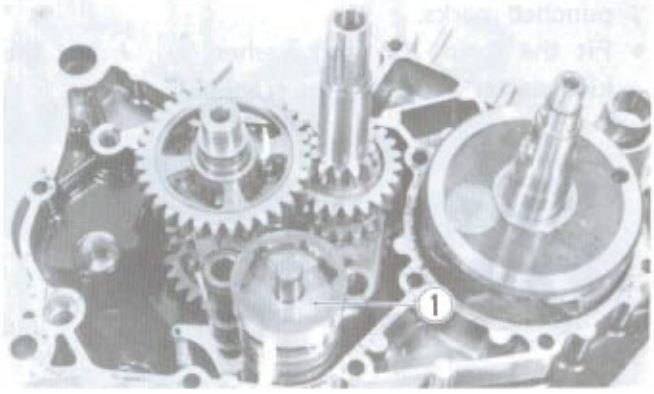
- When installing the stopper plate, align the pin on the gearshift cam with the groove in the stopper plate.

NOTE:
Three kinds of gearshift forks, ①, ② and ③, are used. They resemble each other very closely in external appearance and configuration.
Carefully examine the photograph for correct installing positions and directions.

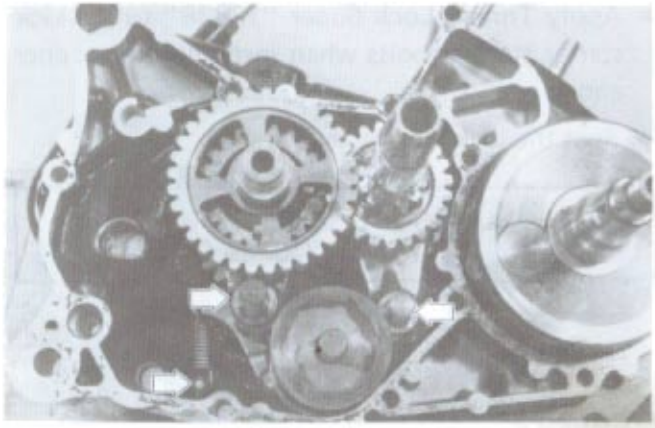


① For 5th driven gear (No.1)
② For 3rd/4th drive gear (No.2)
③ For top driven gear (No.3)

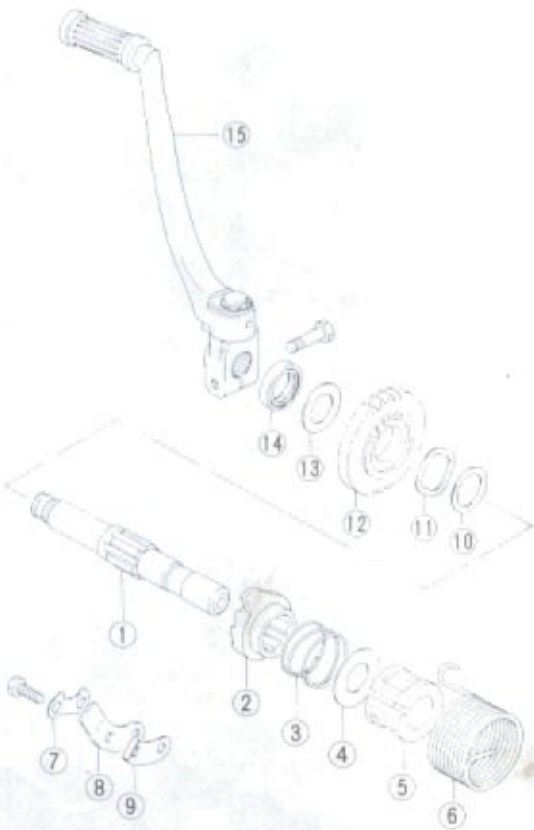
- After fitting the gearshift forks into the gearshift grooves and fit the gearshift cam ① on the crankcase.



- Install the fork shaft No. 1 and No. 2.
- Hook the cam stopper spring.

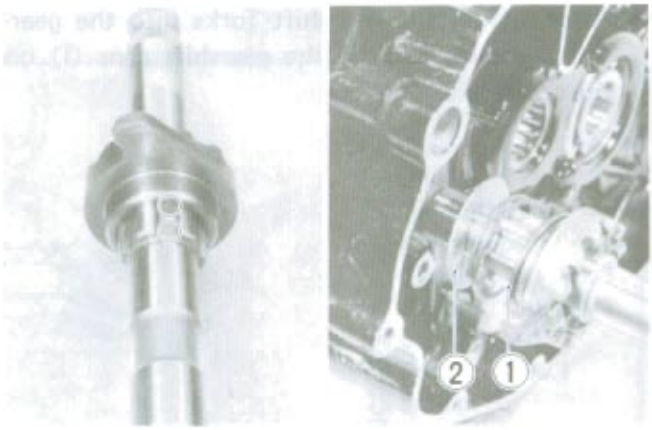


KICK STARTER



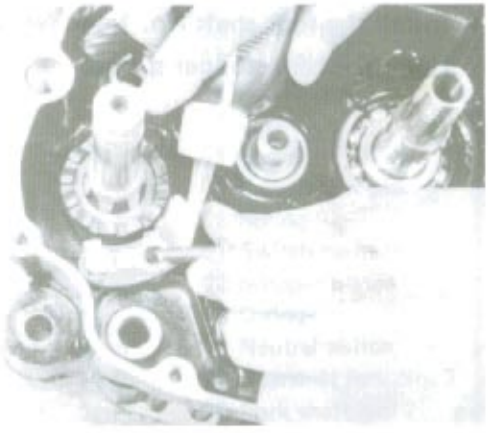
① Kick starter shaft
② Kick starter
③ Spring
④ Washer
⑤ Spring guide
⑥ Kick starter return spring
⑦ Washer
⑧ Guide
⑨ Stopper
⑩ Washer
⑪ Wave washer
⑫ Kick starter drive gear
⑬ Washer
⑭ Oil seal
⑮ Kick starter lever

- When fitting the kick starter, be sure to align the punched marks.
- Fit the spring ① and washer ②. Insert the kick starter shaft into the crankcase.

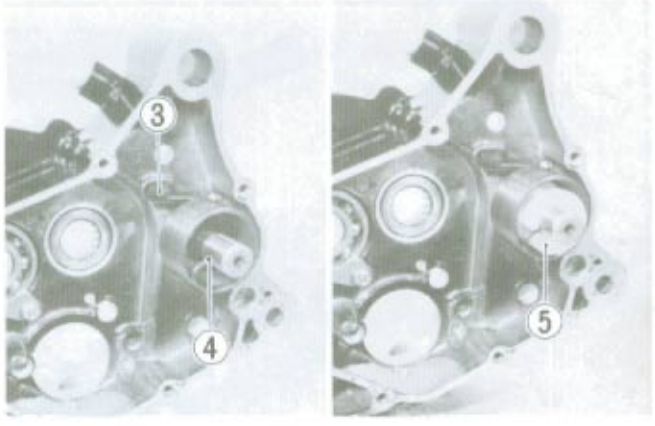


- Apply Thread Lock Super "1333B" to the kick starter stopper bolts when installing the stopper and guide.
- Bent the lock washer.

99000-32020	Thread Lock Super "1333B"



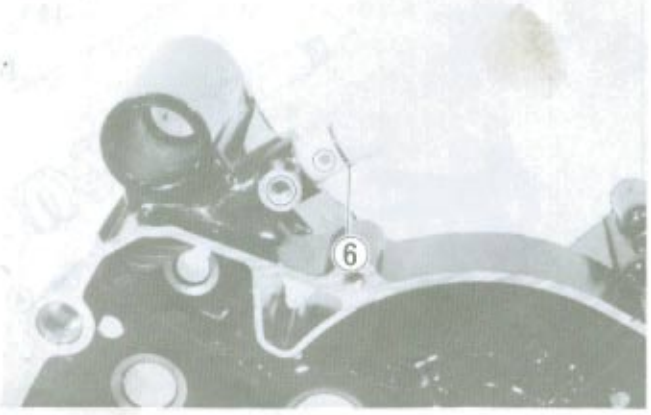
- When fitting kick return spring, hook part ③ of return spring onto crankcase, turn it ½ a turn clockwise with pliers and fit part ④ of return spring into hole of kick shaft. Then, fit spring guide ⑤.



TACHOMETER DRIVEN GEAR

- When installing the tachometer driven gear, align the holes.

CAUTION:
Replace the O-ring ⑥ with a new one.



CRANKCASE

When reassembling the crankcase, pay attention to the following.

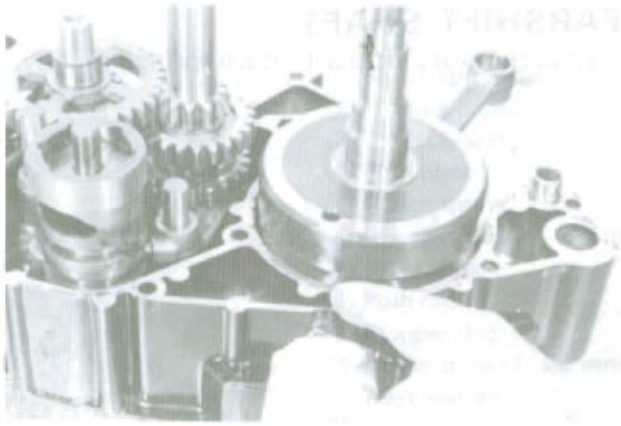
- Apply grease to the lip of oil seals.

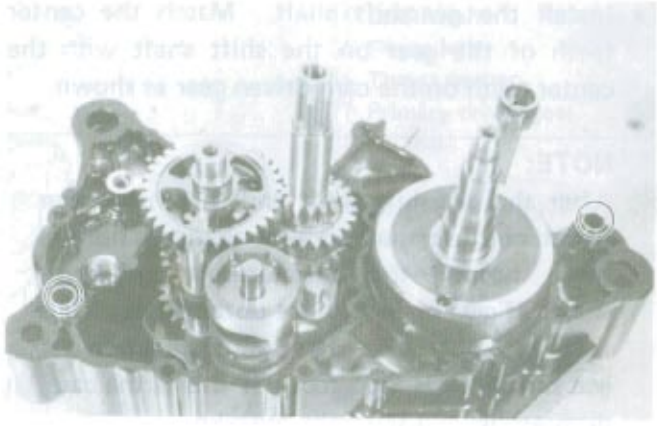
99000-25010	SUZUKI Super Grease "A"

- Remove SUZUKI Bond No. 1207B on the fitting surfaces of the right and left halves of crankcase and thoroughly remove oil stains.
- Apply SUZUKI Bond No. 1207B uniformly to the fitting surface of the right half of the crankcase and fit the right half on the left half within few minutes.

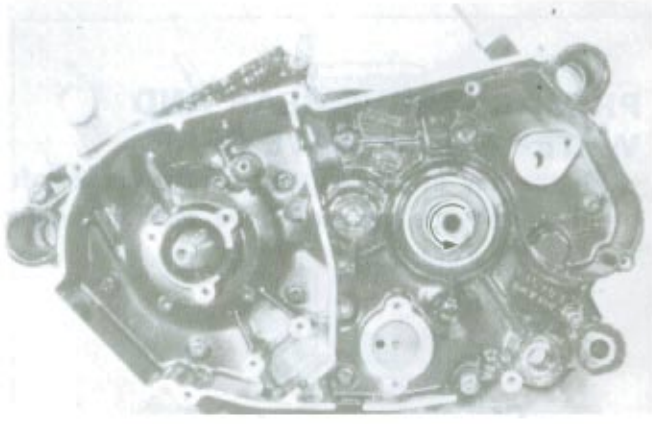
99000-31140	SUZUKI Bond No. 1207B

- Position two dowel pins as shown in photo.





- After the crankcase bolts have been tightened, check if driveshaft and countershaft rotate smoothly.

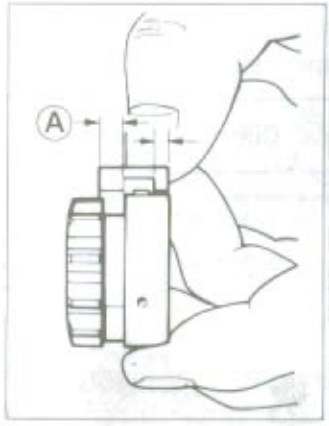


CAM DRIVEN GEAR

- When installing the gear shifting pawls into the cam driven gear. The large shoulder Ⓐ must face to the outside as shown.
- Install the cam guide ① and pawl lifter ②. Apply Thread Lock "1342" to the threaded part of the securing screws.

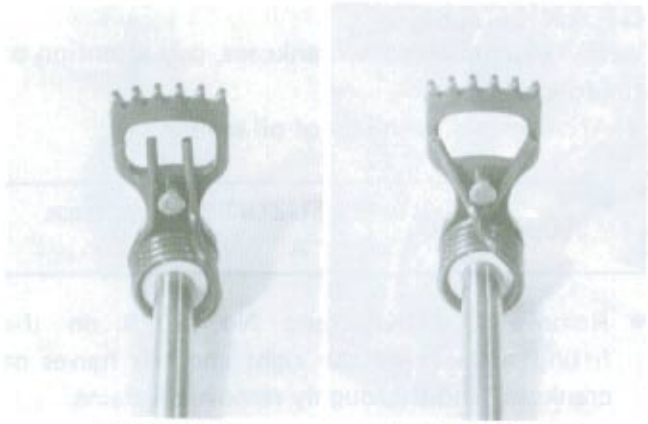
99000-32050	Thread Lock "1342"

NOTE:
Tighten the pawl lifter with the longer screws.



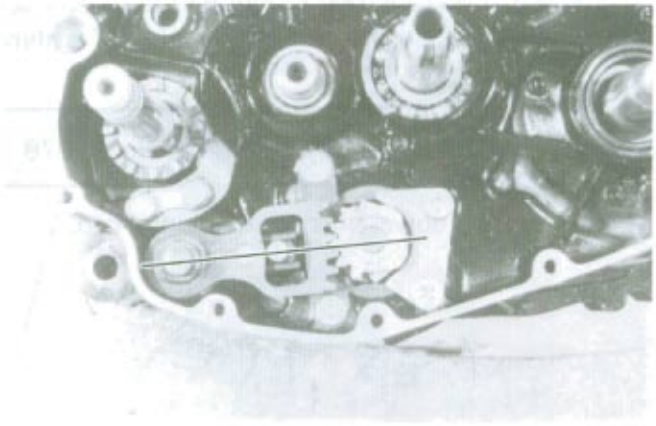
GEARSHIFT SHAFT

- Install the gearshift shaft return spring properly.



CORRECT INCORRECT

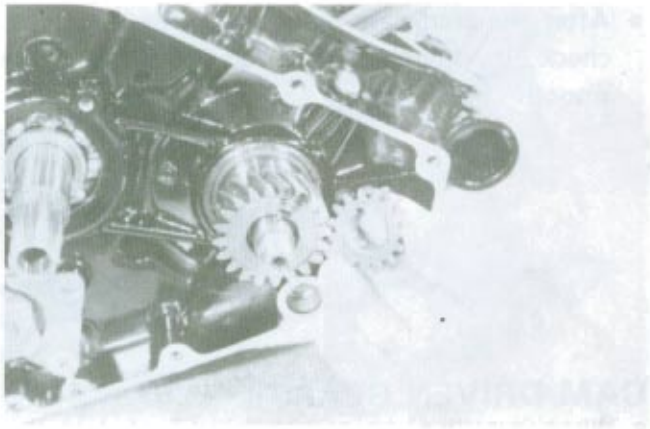
- Install the gearshift shaft. Match the center teeth of the gear on the shift shaft with the center teeth on the cam driven gear as shown.



NOTE:
After the gearshift shaft and fork have been fitted, confirm that the gear change is normal while turning the countershaft and drive shaft. If gear change is not obtained, it means that assembly of gears or installation of gearshift fork is incorrect. If this is the case, disassemble and trace the mistake.

PRIMARY DRIVE GEAR AND WATER PUMP DRIVE GEAR

- Fit the key in the key slot on the crankshaft, and install the primary drive gear and water pump drive gear.

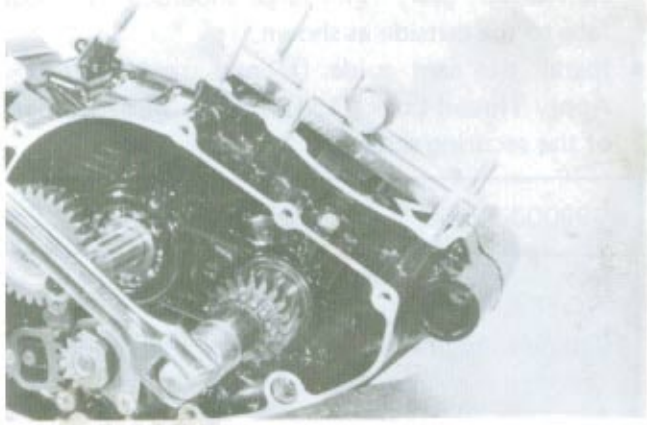


- Tighten the water pump drive gear nut by using the special tool to the specified torque.

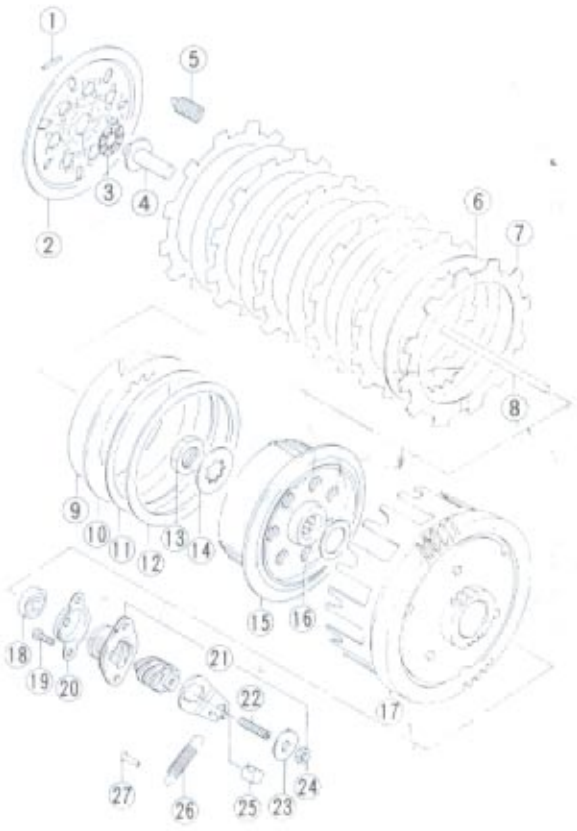
09910-20115	Conrod holder

Tightening torque	60 – 80 N·m (6.0 – 8.0 kg-m)

NOTE:
This nut has left hand threads.



CLUTCH

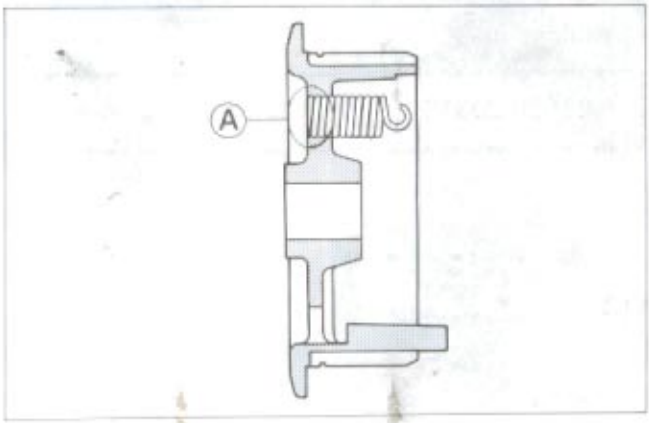


1. Clutch spring pin
2. Pressure plate
3. Thrust bearing
4. Push piece
5. Clutch spring
6. Driven plate (T: 1.6 mm)
7. Drive plate
8. Push rod
9. Stopper ring
10. Driven plate (T: 2.0 mm)
11. Wave washer
12. Wave washer seat
13. Sleeve hub nut
14. Lock washer
15. Sleeve hub
16. Thrust washer
17. Primary driven gear
18. Oil seal
19. Screw
20. Release screw cover
21. Release screw assembly
22. Adjust screw
23. Washer
24. Lock nut
25. Release arm end piece
26. Spring
27. Protector

CLUTCH SPRING

- Be sure that the ends of the clutch spring are kept at the same height as the surface of the clutch sleeve hub.

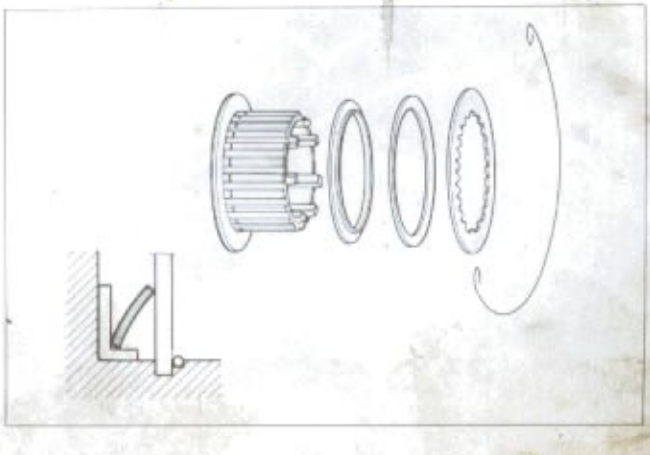
NOTE:
Attach the spring so that the spring does not pop out of hub bottom surface, as shown by Ⓐ in the Fig.



DRIVEN PLATE NO. 2

- Install the wave washer seat, wave washer and thicker driven plate (2.0 mm) in the clutch sleeve hub.

NOTE:
When fitting this wave washer, be sure to face its concave side to clutch driven plate side, as shown in Fig.



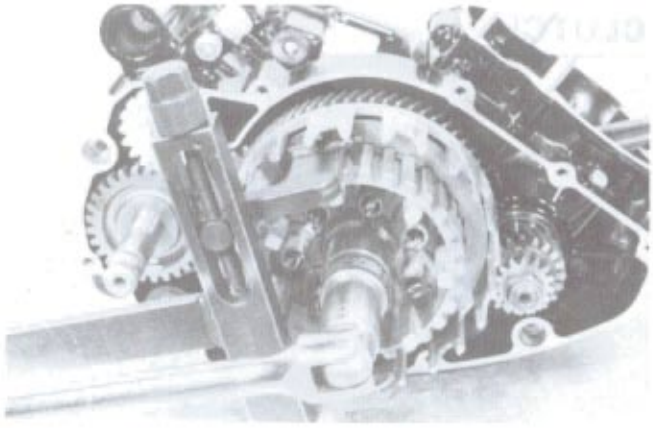
- Press down the wave washer with pliers. Fix the piano wire in the groove of the sleeve hub. Always use a new piano wire clip.

CLUTCH SLEEVE HUB NUT

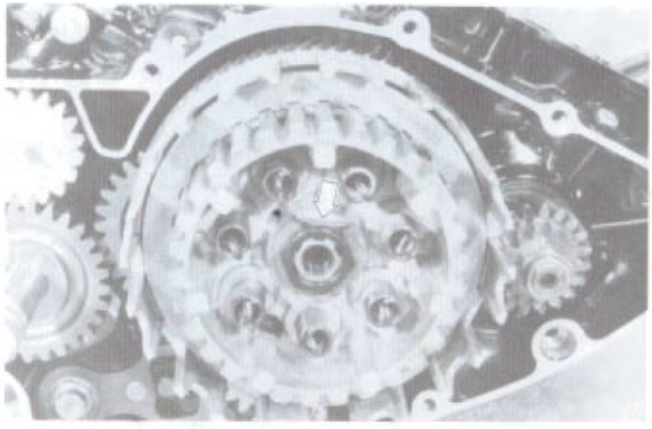
- Tighten the clutch sleeve hub nut to the specification by using the special tool.

09920-53710	Clutch sleeve hub holder

Tightening torque	50 – 70 N·m (5.0 – 7.0 kg-m)



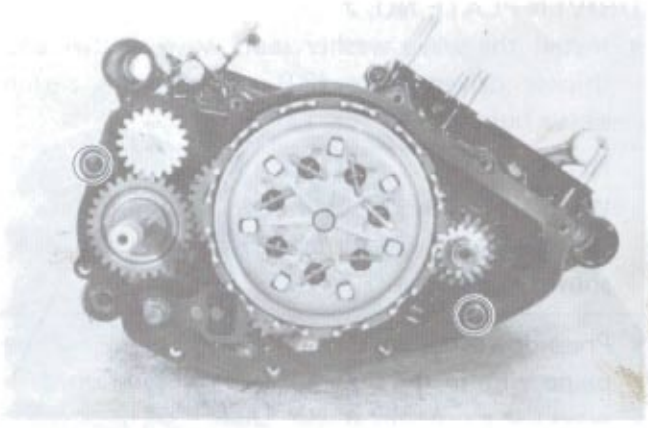
- Be sure to lock the nut by firmly bending the tongue of the washer.



- Install the clutch spring pin by using the special tool.

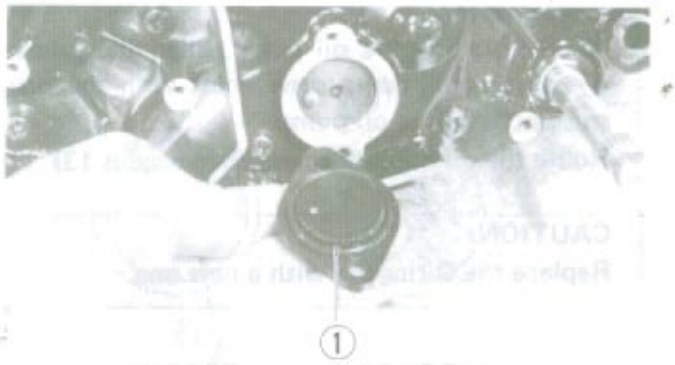
09920-20310	Clutch spring hook

- Fit the new gasket and dowel pins.



- Install the spring and switch contact to the cam and tighten the switch body.

CAUTION: Replace the O-ring ① with a new one.



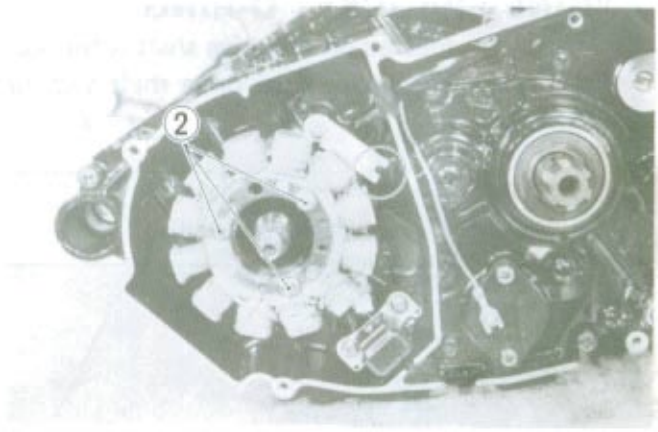
MAGNETO

MAGNETO STATOR

- Fit the stator on the crankcase.
- Apply a small quantity of Thread Lock "1342" to the threaded parts of screws ②.

99000-32050	Thread Lock "1342"

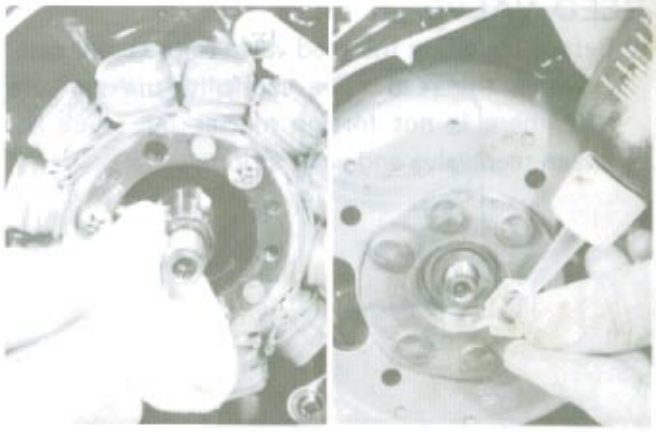
- Align the groove of the lead wire clamp and protrusion of the crankcase.



MAGNETO ROTOR

- Clean thoroughly both mating surfaces of the rotor and crankshaft with cleaning solvent.
- Fit key in the key slot on the crankshaft.
- Install the magneto rotor.
- Apply a small quantity of Thread Lock Super "1322" to the threaded parts of crankshaft.

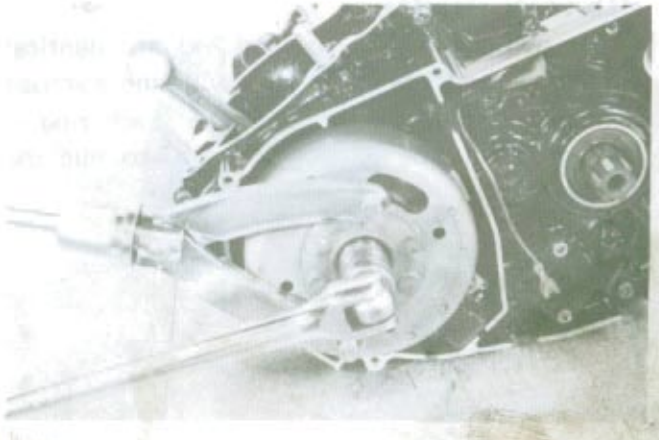
99000-32110	Thread Lock Super "1322"



- Tighten the magneto rotor nut to the specification by using the special tool.

09930-40113	Rotor holder

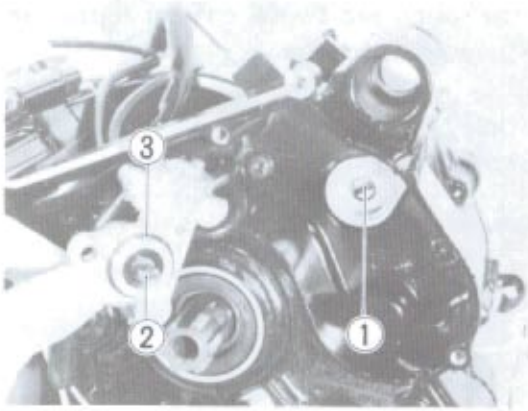
Tightening torque	50 – 60 N·m (5.0 – 6.0 kg-m)



OIL PUMP

- When installing the oil pump, align the groove ① of the oil pump drive shaft with the protrusion ② of the oil pump.
- Route the oil hoses properly (See page 8-13).

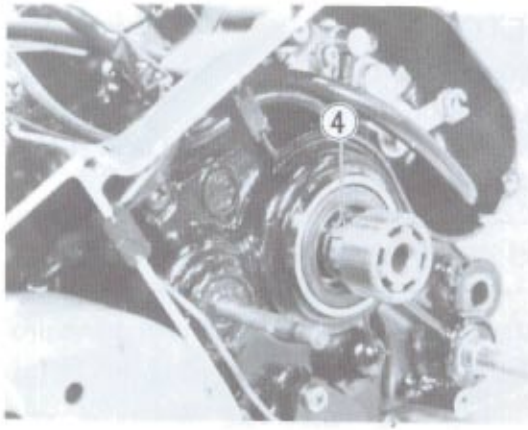
CAUTION:
Replace the O-ring ③ with a new one.



ENGINE SPROCKET O-RING

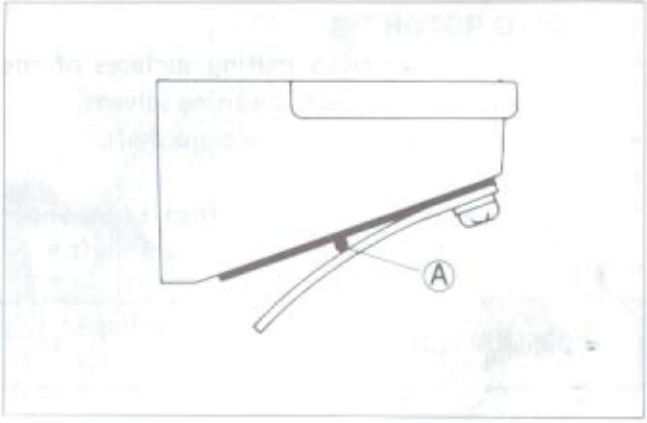
The O-ring ④ located on the drive shaft is for sealing the clearance between the drive shaft and the spacer.

CAUTION:
Replace the O-ring with a new one.



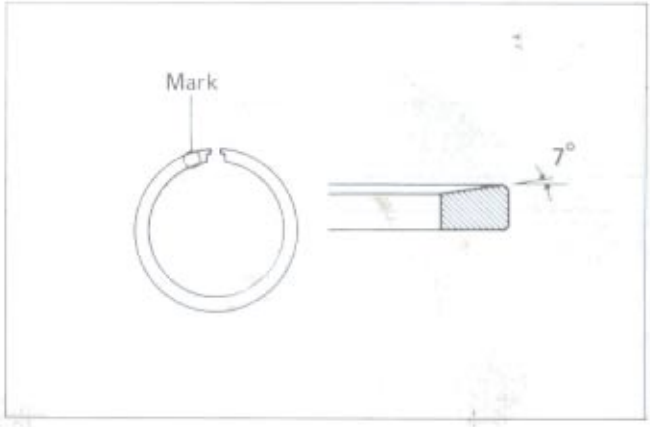
REED VALVE

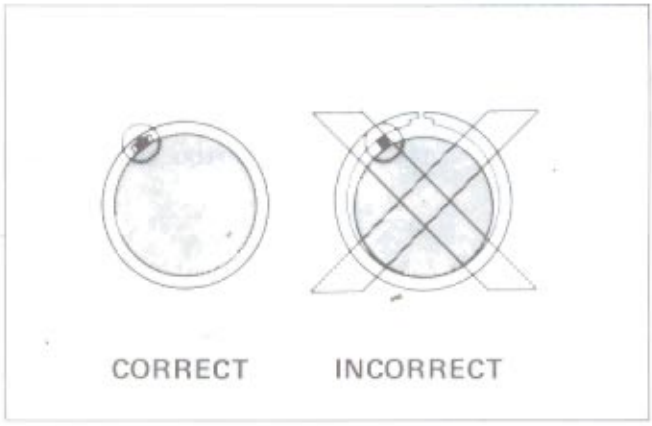
- Before installing the reed valve to the crankcase, examine the reed valve carefully, making sure that there is not foreign matter Ⓐ stuck between reed valve and valve stopper.



PISTON RINGS

- The two piston rings, 1st and 2nd, are identical in shape and key-stone type with the stamped mark, on the their upper sides. Each ring in place should be so positioned as to hug the locating pin.

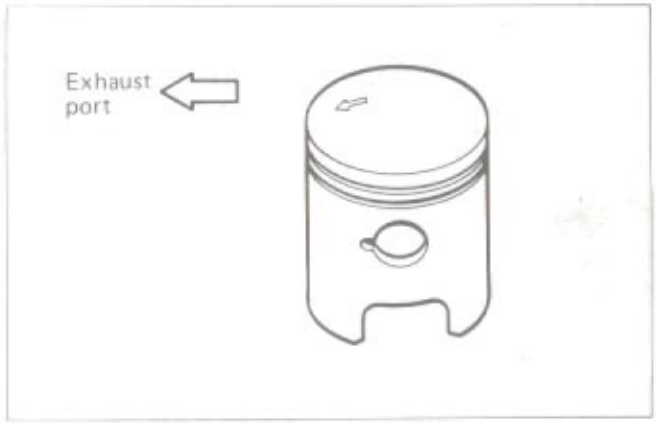




PISTON

- Before connecting the piston to the con-rod, be sure to apply SUZUKI CCI Oil or two-stroke oil to the con-rod big end and small end bearings.

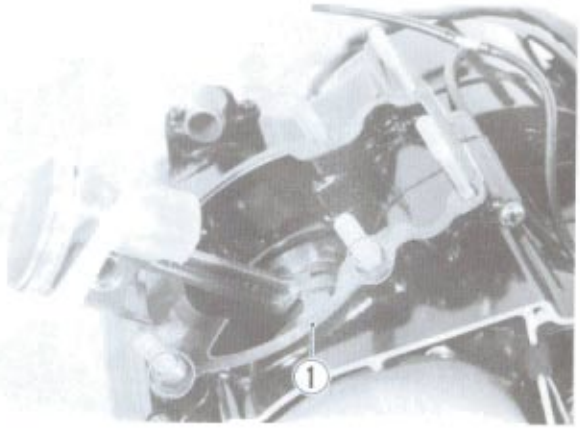
- The arrow mark on the piston crown points to the exhaust port side.



- The circlip should be mounted in such a position ① that the mating ends of the circlip do not coincide with the groove portion of the piston.

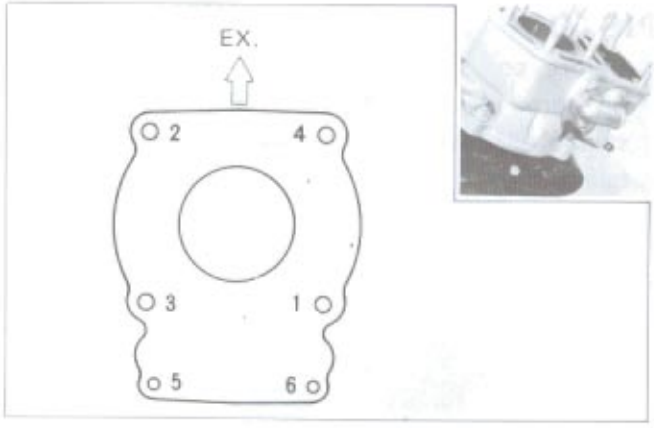
CYLINDER

- Fit the dowel pins and new cylinder gasket ①.
- Before inserting the piston in the cylinder, be sure to apply SUZUKI CCI Oil or two-stroke oil to the outer surfaces of the piston and piston ring grooves.

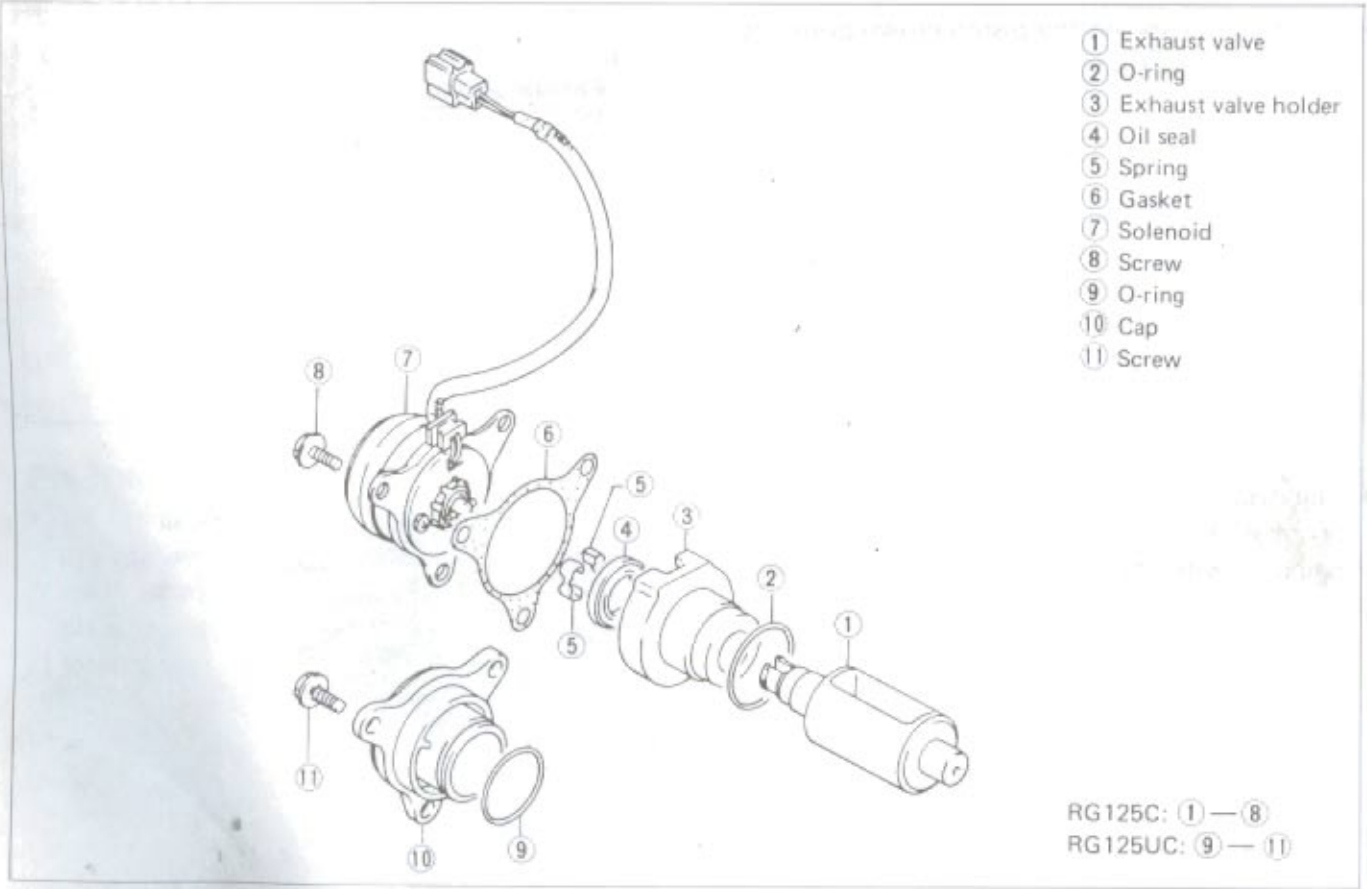


- Tighten the cylinder nut to the specified torque in the following order.

Tightening torque	8 mm	21 – 25 N·m (2.1 – 2.5 kg-m)
	6 mm	8 – 12 N·m (0.8 – 1.2 kg-m)

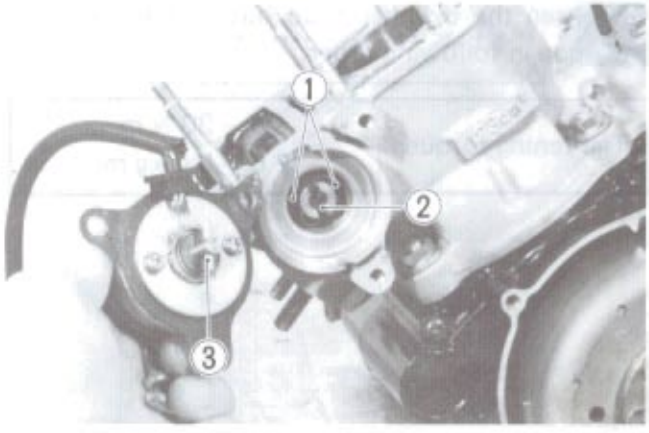


EXHAUST VALVE



- Before installing the valve, apply SUZUKI CCI Oil or two-stroke oil to the outer surface of the valve and lip of the oil seal as shown in Fig.

- Fit the springs ① properly.
- When installing the solenoid, align the groove ② and pin ③.

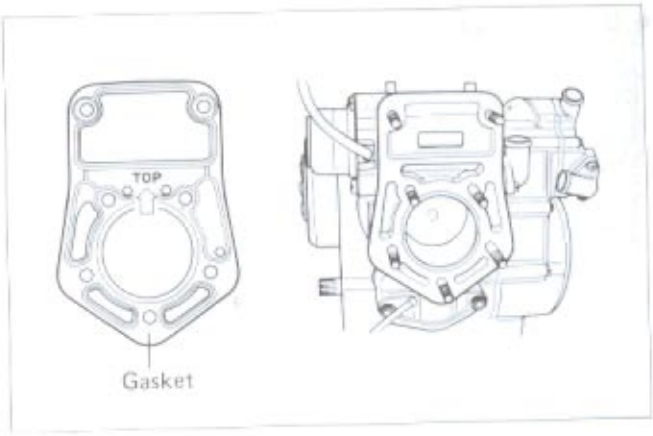


- After installing the solenoid, check the valve operation as follows.
- Connect the 12V battery ⊕ and ⊖ terminals to the solenoid terminals for 1 or 2 seconds, and make sure that the exhaust valve should be closed.
- When disconnecting the lead wires, exhaust valve opens automatically.
- Make sure to above check for several times. ,

CAUTION:
To prevent burning of the solenoid burnout, be sure to complete the inspection within a few seconds.

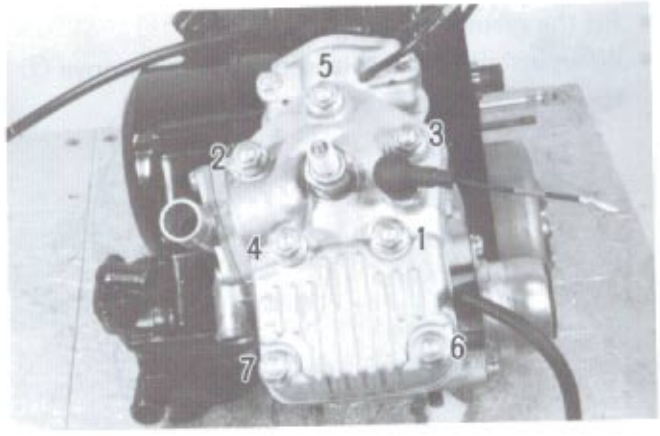
CYLINDER HEAD

- When installing the new cylinder head gasket, the "TOP" mark on the gasket to the upside.



- Tighten the cylinder head nut to the specified torque in following order.

Tightening torque	26 – 30 N·m (2.6 – 3.0 kg-m)



COOLING SYSTEM

CONTENTS

COOLING SYSTEM

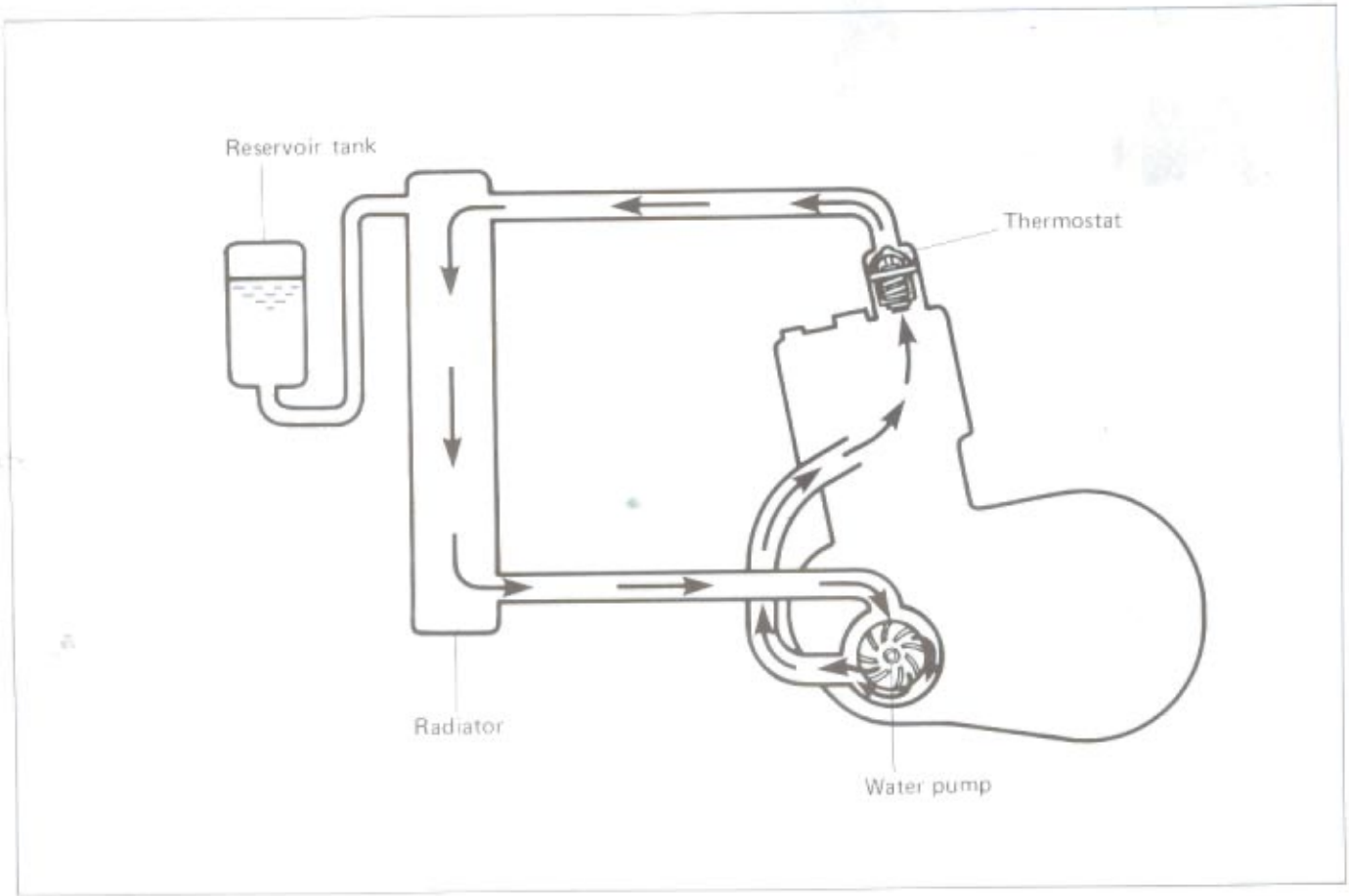
DESCRIPTION

The engine is cooled by coolant set in forced recirculation through jackets formed in the cylinder and head, and through the radiator. For the water pump, a high-capacity centrifugal pump is used. The radiator is a tube-and fin type made aluminum material, which is characterized by lightness in weight and good heat dissipation.

The thermostat is of wax pellet type, complete with a valve as the means of temperature-dependent control over the flow of coolant through the radiator. The valve is actuated by the temperature-sensitive wax contained in the pellet.

Referring to the following illustration, the thermostat is in the closed conditon, so that water recirculates through the route comprising pump, engine, by-pass holes of the thermostat and radiator in the regulated condition.

As the coolant temperature rises to 65°C and the thermostat valve unseats, the normal coolant flow is established. At about 80°C of coolant temperature, the thermostat becomes completely open and the most of heat is released to the atmosphere through the radiator core.



COOLANT

At the time of manufacture, the cooling system is filled with a 50 : 50 solution of distilled water and anti-freeze/summer coolant. This 50 : 50 mixture will provide excellent heat protection, and will protect the cooling system from freezing at temperatures above −31°C (−24°F).
If the motorcycle is to be exposed to temperatures below −31°C (−24°F), this mixing ratio should be increased up to 55% or 60% according to the Fig. 2.

NOTE:
Also included in the coolant at the time of manufacture is bar's leak material to help ensure protection against coolant leakage.

NOTE:
The characteristics of different anti-freezes vary. Read the label to know the protection you will have.

CAUTION:
Do not put in more than 60% anti-freeze or less than 50%. Do not mix different brands of anti-freeze.

ANTI-LEAKAGE MATERIAL

The anti-freeze is characterized by very high values of permeability and accident leakage of the cooling system is highly likely. The anti-leakage substance is used to prevent such a possible leakage and every new motorcycle is serviced with "Bar's Leaks". The same material or its equivalent should be filled in the radiator when coolant is changed.
"Bar's Leaks" is available as one of spare parts in solid form. A suitable amount for use is 1/5 pack per model and in the case of a liquid anti-leakage material available in the market, 15 – 18 ml should be used.

99000-24240	Bar's Leaks

CAUTION:
Anti-leakage material should not be added except the time of the renewal of cooling water.

50%	Water	510 ml
	Coolant	510 ml

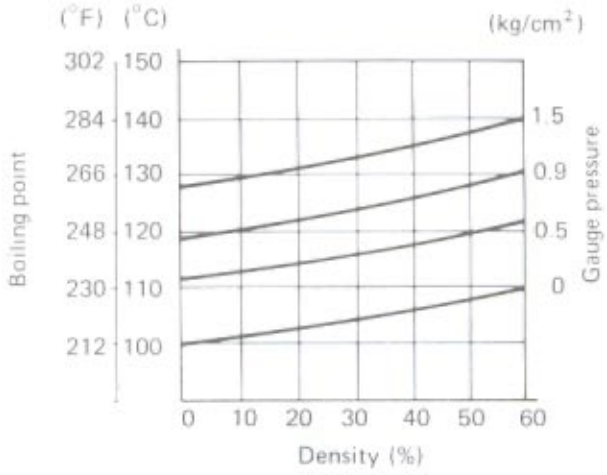


Fig. 1 Coolant density-boiling point curve.

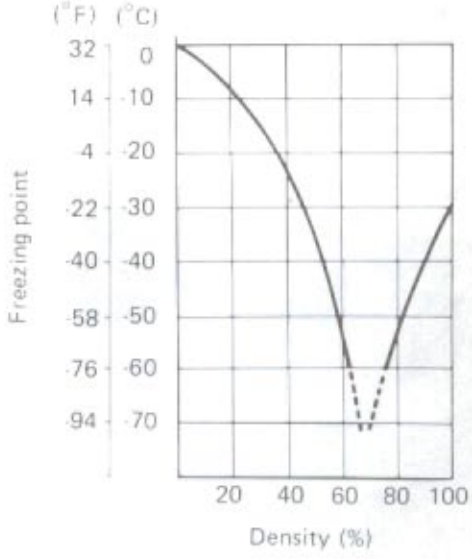
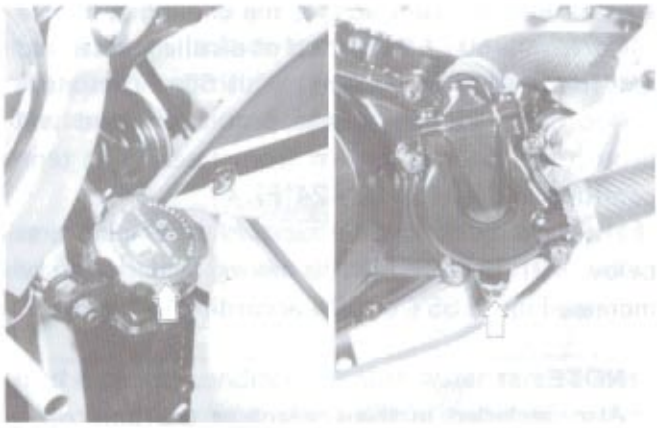


Fig. 2 Coolant density-freezing point curve.

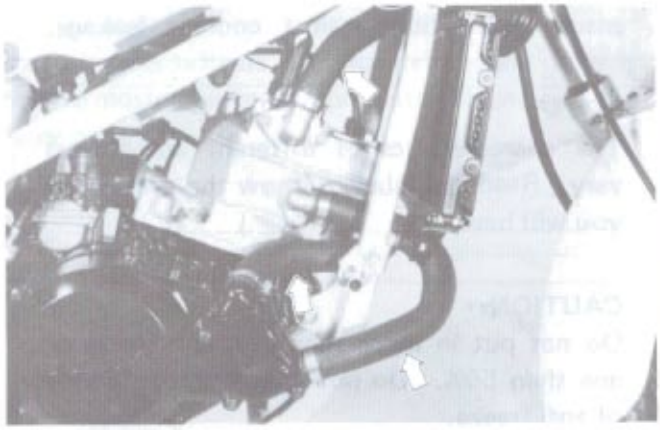
RADIATOR

REMOVAL

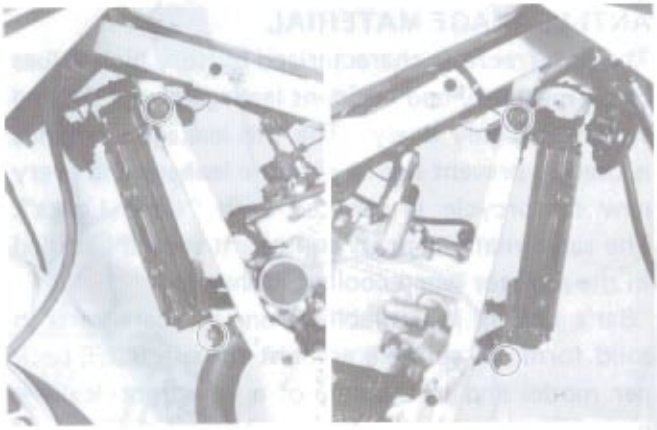
- Remove the lower cover (See page 7-1).
- Remove the side covers (See page 7-2).
- Remove the radiator cap.
- Drain the coolant by removing drain plug.



- Disconnect the radiator hoses.



- Remove the radiator by removing the mounting nut.

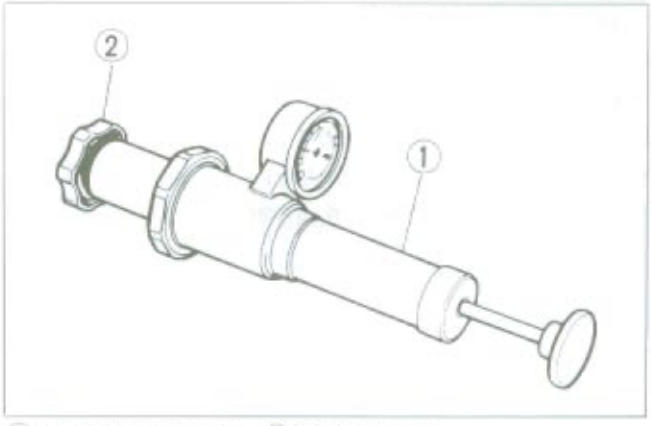


INSPECTION

Before removing the radiator and draining coolant, inspect the following two items.

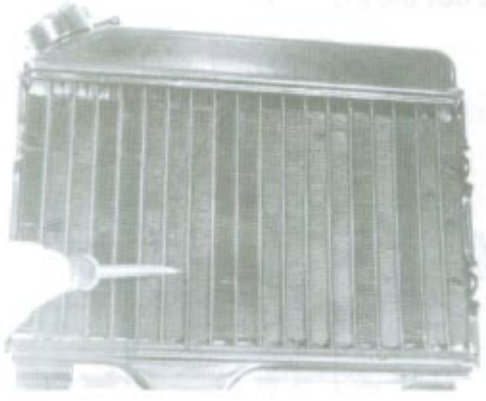
1. Test the cooling system for tightness by using the radiator tester as follows:
   Remove the radiator cap, and connect the tester to the filler. Give a pressur of about 1 kg/cm² and see if the system holds this pressure for 10 seconds. If the pressure should fall during this 10-second interval, it means that there is a leaking point in the system; In such a case, inspect the entire system and replace the leaking component or part.
2. Test the radiator cap for relieving pressure by using the radiator tester in the following manner: Fit the cap to the tester, as shown, and build up pressure slowly by operating the tester. Make sure that the pressure build-up stops at 0.9 ± 0.2 kg/cm² and that, with the tester held at a standstill, the cap is capable of that pressure for at least 10 seconds. Replace the cap if it is found not to satisfy either of these two requirements.

Radiator cap valve release pressure	90 ± 20 kPa (0.9 ± 0.2 kg/cm²)



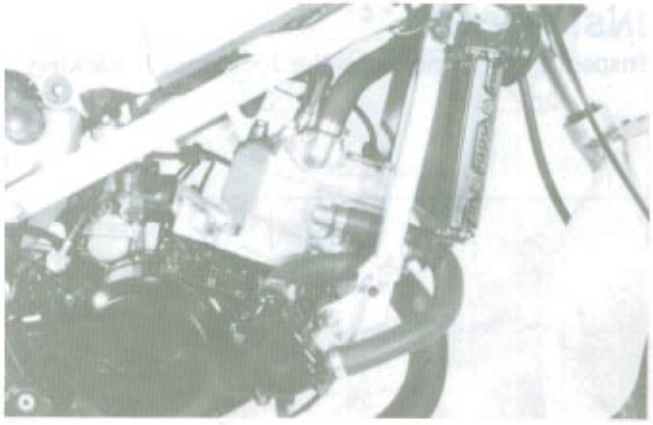
① Radiator cap tester ② Radiator cap

3. Road dirt or trashes stuck to the fins must be removed. Use of compressed air is recommended for this cleaning. Fins bent down or dented can be repaired by straightening them with the blade of a small screwdriver.
4. Any water hose found in cracked condition or flattened must be replaced.



RADIATOR HOSES

Inspect for leakage from the radiator hose connecting (joint) section and from the radiator hose itself and fork kinks in the radiator hose.
If any leakage from the radiator hose are detected, the radiator hose should be replaced.
Any leakages from the connecting (joint) section should be corrected by proper tightening.



REMOUNTING

The radiator is to be installed in the reverse order of the removal procedure and carry out the following step. After installing the radiator, be sure to supply coolant: refer to page 2-12 for refilling information.

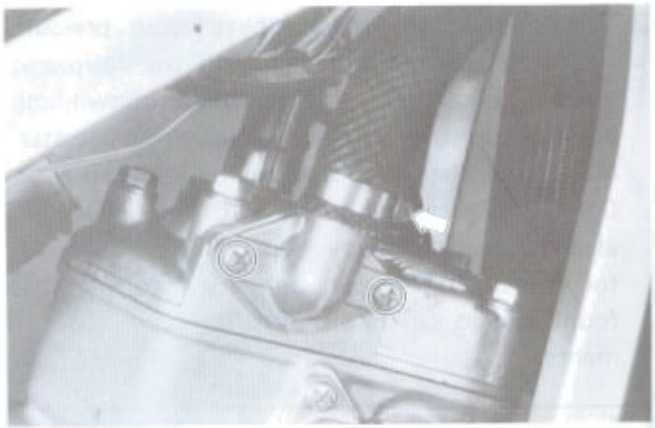
- Tighten the radiator mounting nut by holding the cushion bolt with open end wrench.

Tightening torque	7 – 9 N·m (0.7 – 0.9 kg-m)

THERMOSTAT

REMOVAL

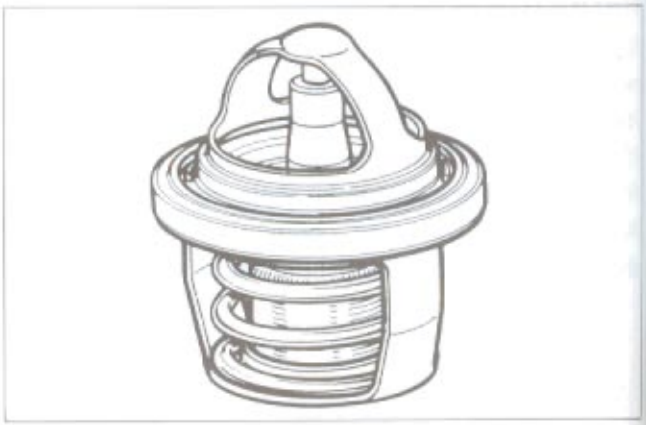
- Drain coolant (See page 4-3).
- Disconnect the radiator hose.
- Remove the thermostat cover.



- Take out the thermostat.

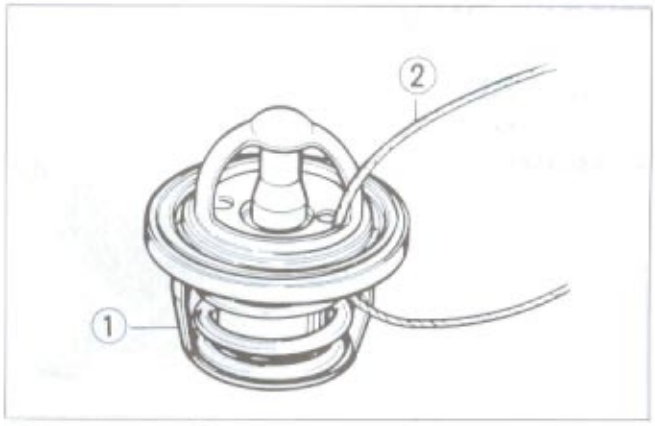
INSPECTION

Inspect the thermostat pellet for signs of cracking.



Test the thermostat at the bench for control action, in the following manner.

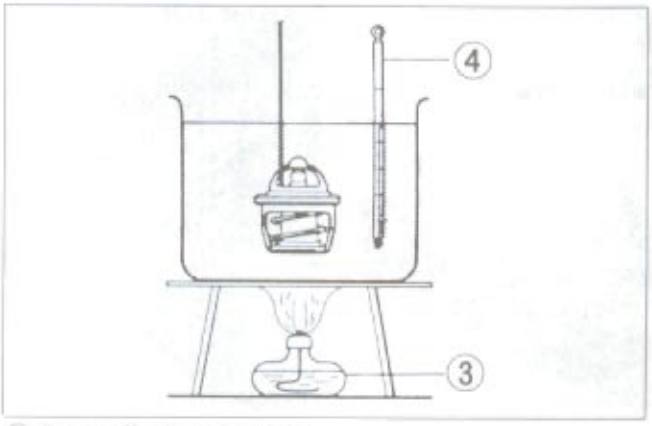
- Pass a fine thread between valve and seat, as shown in the illustration.
- Immerse the thermostat in the water contained in the pan, as shown in the illustration. Note that the immersed thermostat is in suspension. Heat the water by placing the pan on a stove and observe the rising temperature on the thermometer.



① Thermostat ② Fine thread

- Read the thermometer just when the thermostat drops to the bottom of the pan. This reading, which is the temperature level at which the thermostat valve beings to open, should be anywhere between 63.5°C and 66.5°C.

Thermostat valve opening temperature	65.0 ± 1.5°C

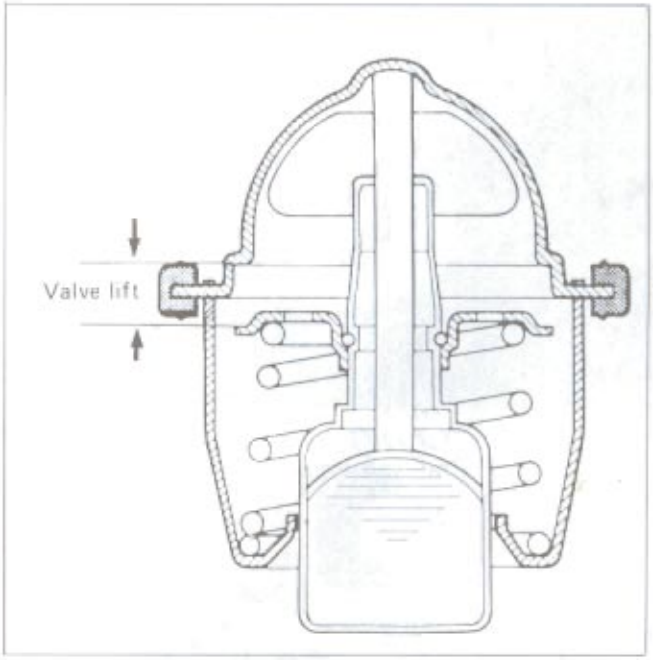


③ Stove ④ Thermometer

- Keep on heating the water to raise its temperature to and beyond 80°C.
- Just when the water reaches 80°C, the thermostat valve should have lifted by at least 3.0 mm.

Thermostat valve lift	Over 3.0 mm at 80°C

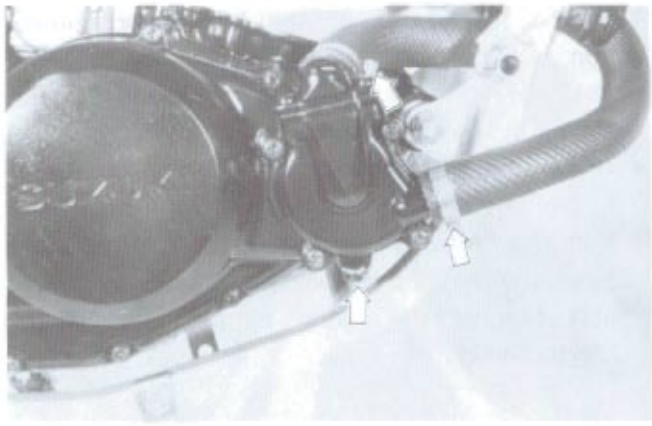
- A thermostat failing to satisfy either of the two requirements (start-to-open temperature and valve lift) must be replaced.



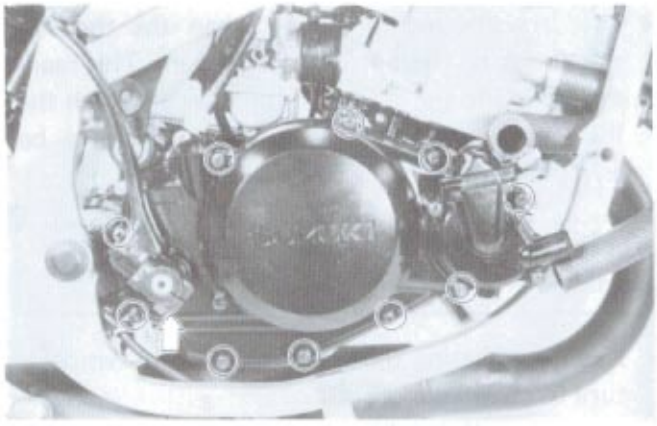
WATER PUMP

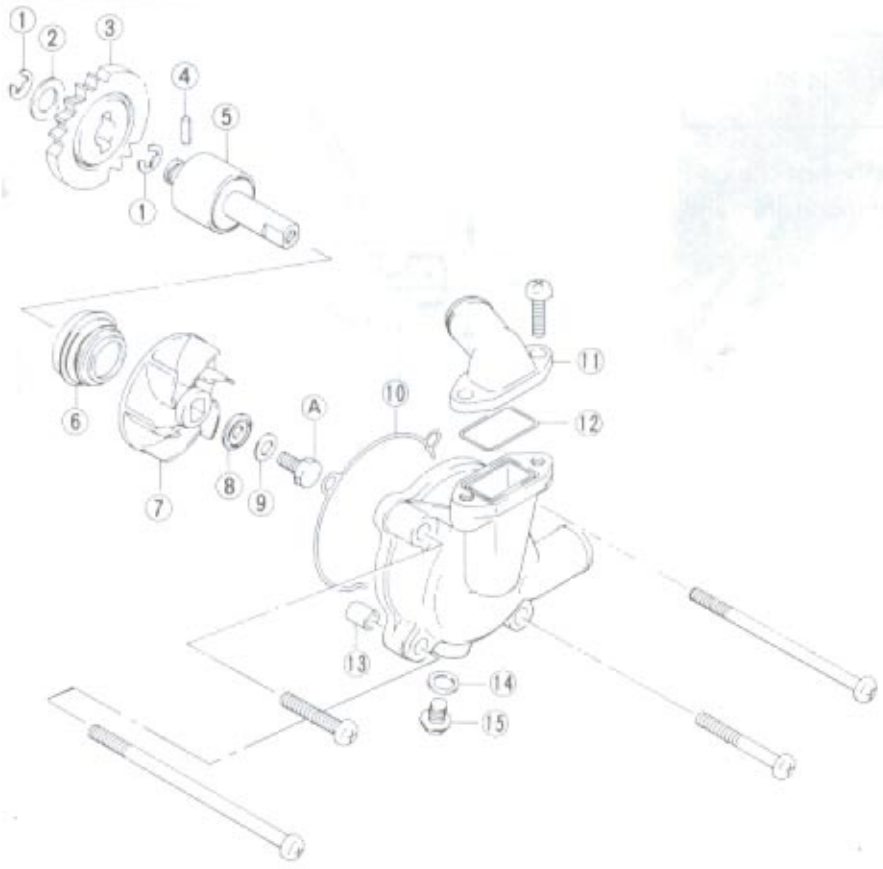
REMOVAL

- Drain coolant (See page 4-3).
- Disconnect the hoses.



- Drain transmission oil (See page 3-2).
- Remove the kick starter lever.
- Remove the clutch cover.





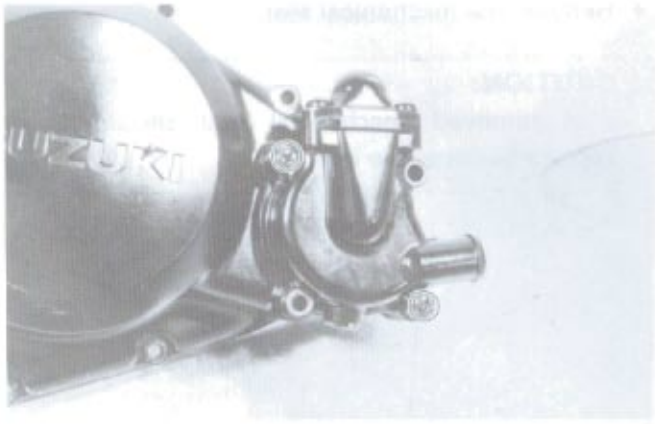
① E-ring
② Shim (3 kinds)
③ Water pump driven gear
④ Pin
⑤ Water pump shaft
⑥ Mechanical seal
⑦ Impeller
⑧ Washer seal
⑨ Lock washer
⑩ O-ring
⑪ Inlet connector
⑫ O-ring
⑬ Dowel pin
⑭ Gasket
⑮ Drain bolt

Tightening torque

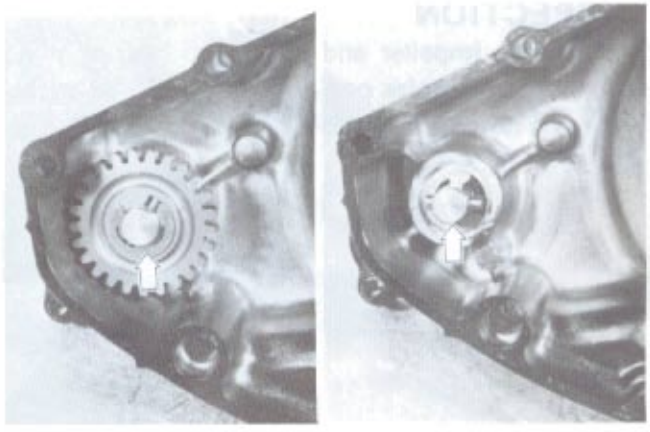
Item	N·m	kg-m
Ⓐ	7 – 9	0.7 – 0.9

DISASSEMBLY

- Remove the water pump case.



- Remove the E-ring and take off the shim and driven gear.
- Remove the pin and E-ring.

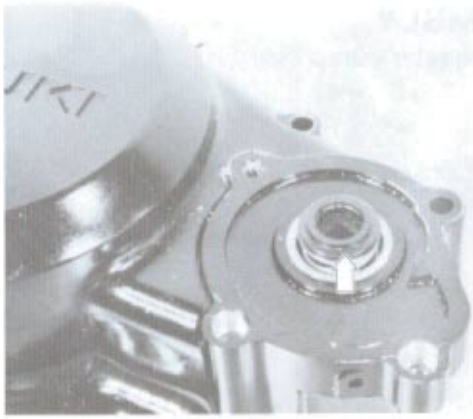


- Remove the water pump by holding the water pump shaft.

- Remove the water pump shaft by tapping with plastic hummer.

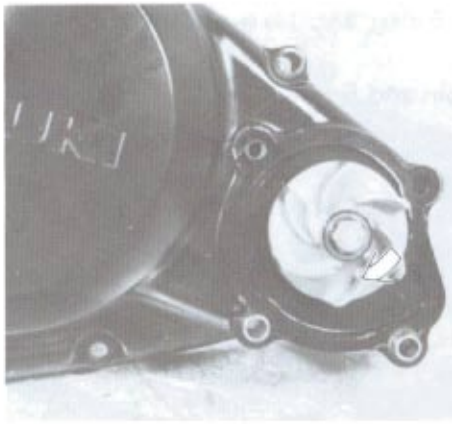
- Remove the mechanical seal.

CAUTION:
The removed mechanical seal should be replaced with a new one.

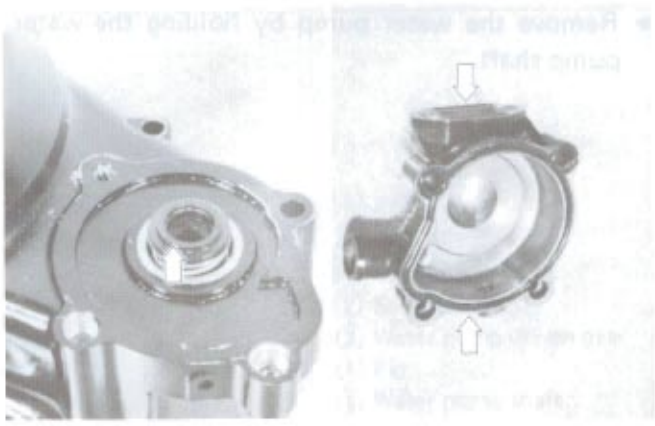


INSPECTION

- Turn the impeller and check the bearing play. If abnormal noise occures or any sign of stickiness is noted, replace the water pump shaft with a new one.



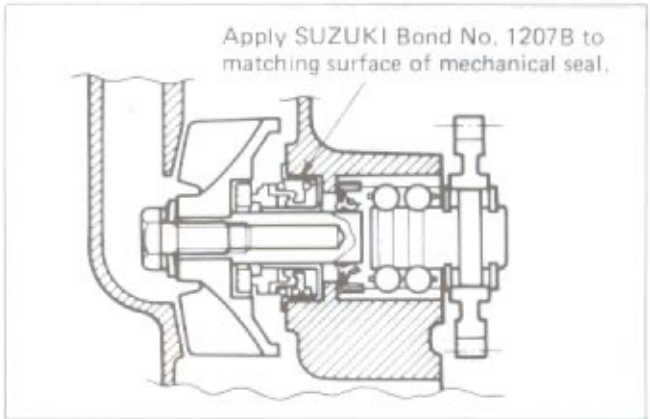
- Visually inspect the mechanical seal, seal washer and O-ring. If any sign of water leakage is noted, replace the mechanical seal.



REASSEMBLY

Reassemble and remount the water pump in the reverse order of disassembly and removal.
Apply SUZUKI BOND NO. 1207B as shown in the illustration.

99000-31140	SUZUKI Bond No. 1207B

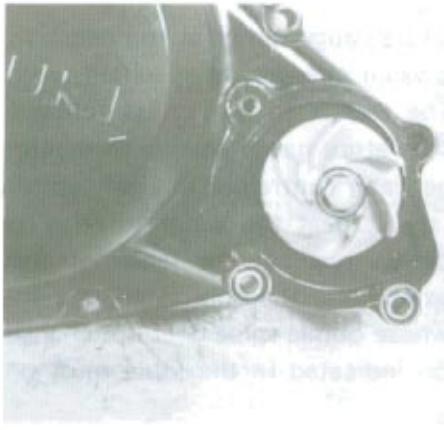


CAUTION:
Use a new gasket ① for impeller center bolt. When installing the gasket, face the iron side to the spring washer and bolt.

- Tighten the impeller bolt.

Tightening torque	7 – 9 N·m (0.7 – 0.9 kg-m)

- Position the dowel pins.

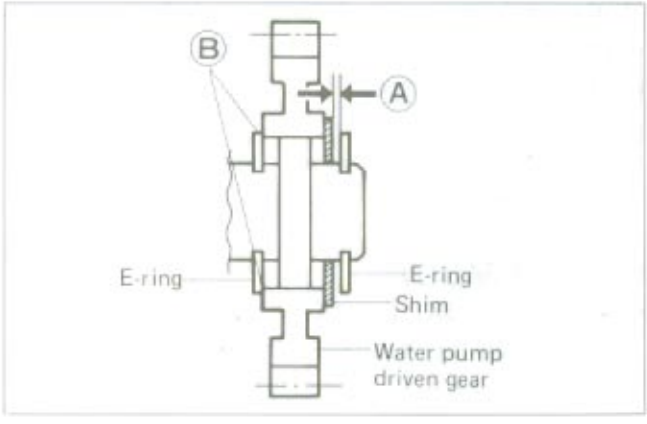


- Install the removed shim, and measure the clearance Ⓐ between the E-ring and the shim by using the thickness gauge.

Clearance Ⓐ	0 – 0.2 mm

09900-20803	Thickness gauge

NOTE:
When measuring the clearance, push the gear to the left and make sure that clearance Ⓑ should be 0 (Zero).



- If the clearance Ⓐ is not within the specification, select the proper size of shim from the following table and adjust the clearance Ⓐ.

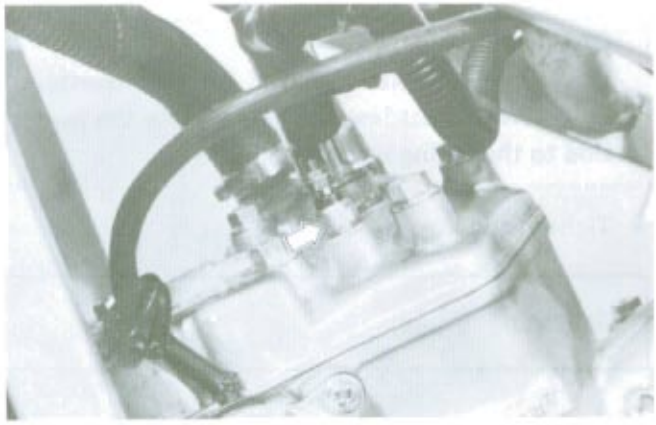
Part No.	Shim thickness
08221-12223	0.1 mm
08221-12224	0.2 mm
08221-12225	0.5 mm

- Fill the radiator with the coolant (See page 2-12).

TEMPERATURE GAUGE

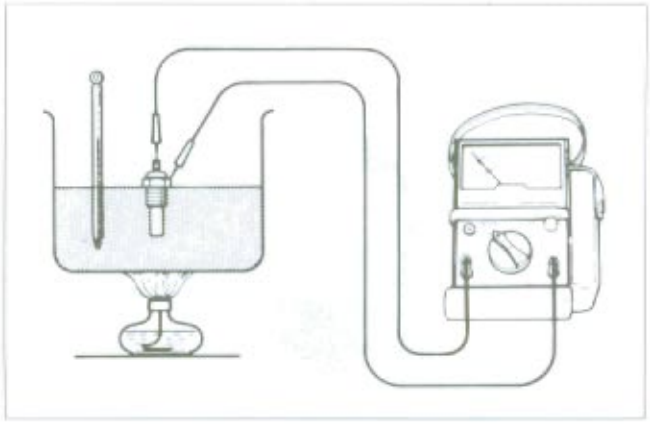
REMOVAL

- Drain coolant (See page 4-3).
- Remove the temperature gauge after disconnecting the lead wire.



INSPECTION

Test the temperature gauge sensor at the bench to see if its ohmic value changes, as specified, with temperature. The test is to be run as follows: Connect the temperature gauge to the ohmmeter and place it in the water contrained in a pan, which is placed on a stove, heat the water to raise its temperature slowly, reading the thermometer placed in the pan and also the ohmmeter. A temperature gauge whose ohmic value does not change in the proportion indicated in the table must be replaced.



If the resistance noted to show infinity or too much difference in resistance value, temperature gauge must be replaced.

For inspecting the water temperature meter, refer to page 6-9.

Temperature gauge specification

Water temp. °C(°F)	Standard resistance (Ω)
50 (122)	156
80 (176)	53
100 (212)	29

REASSEMBLY

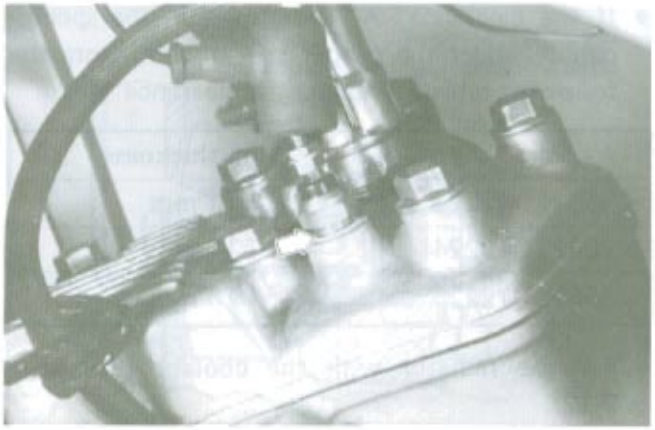
- Apply SUZUKI Bond No. 1207B to the thread portion of the temperature gauge and connect the lead wire.

CAUTION:
Take special care when handling the temperature gauge. It may cause damage if it gets a sharp impact.

99000-31140	SUZUKI Bond No. 1207B

Tightening torque	12 – 18 N·m (1.2 – 1.8 kg-m)

- Fill the radiator with the coolant. (See page 2-12).

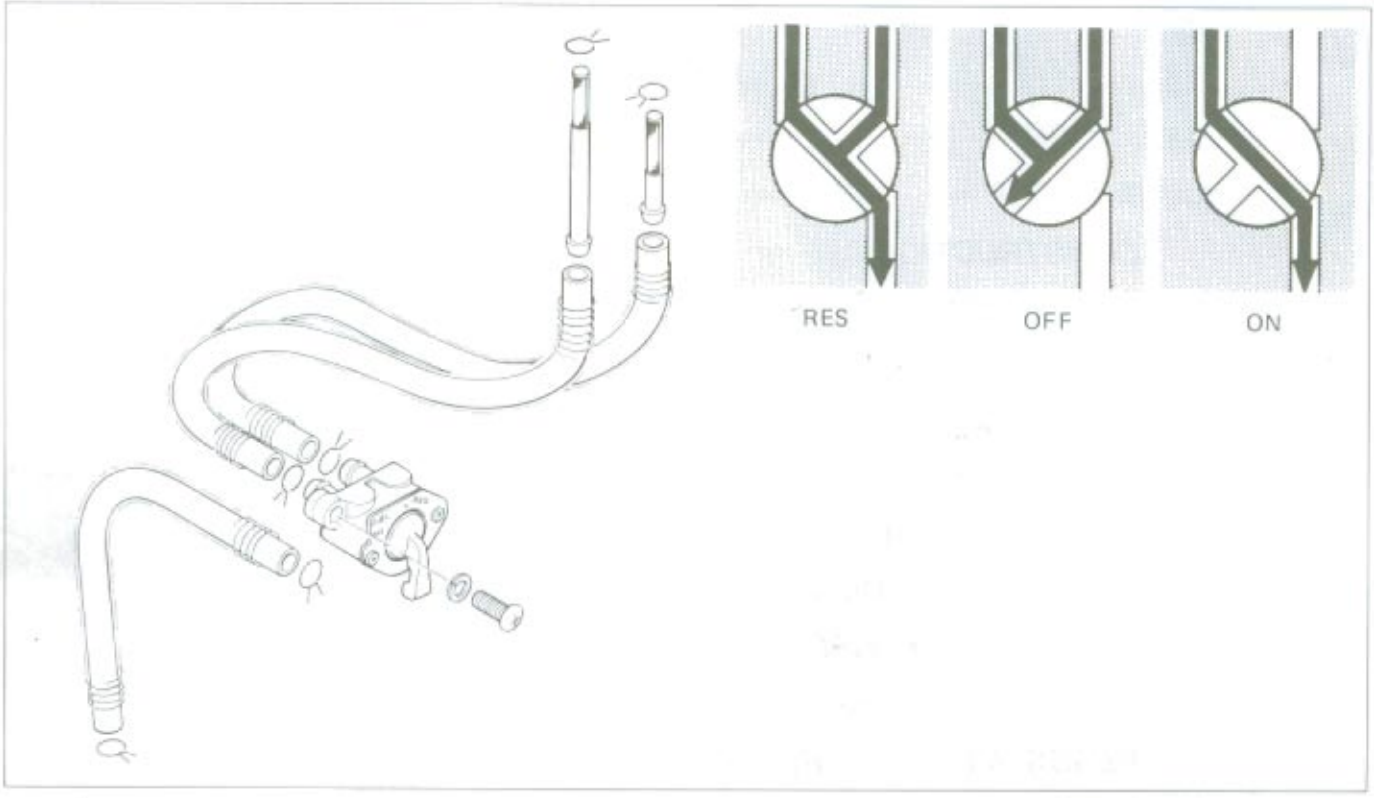


FUEL AND OIL SYSTEM

CONTENTS

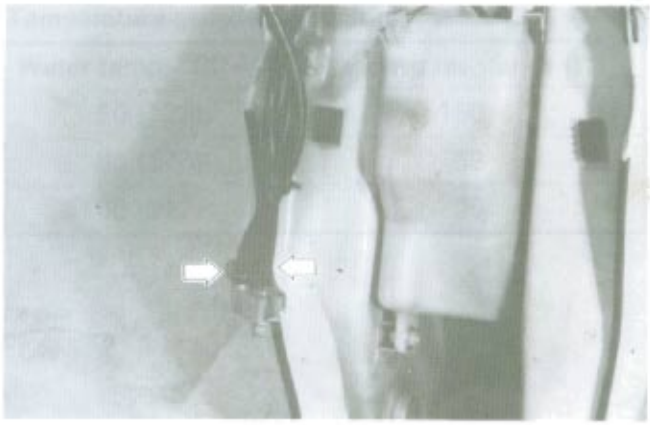
FUEL COCK

A valve is provided at the top of the fuel cock lever and can switch over to "OFF", "ON" and "RES". With the valve "ON" (normal), the main passage opens. With the valve "OFF", both holes close.



REMOVAL

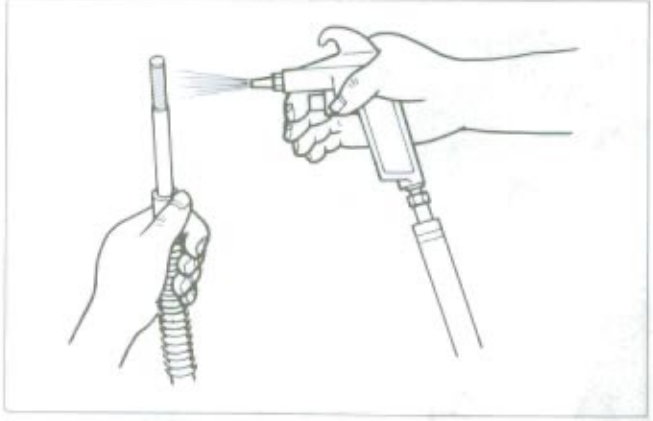
- Turn the fuel cock to "OFF" position and disconnect the fuel hose from the carburetor.
- Remove the fuel tank. (See page 3-2)
- Place a clean oil pan under the fuel cock assembly, turn the fuel cock to "RES" position and drain fuel.
- Disconnect the "ON" and "RES" hoses from the fuel cock.



WARNING:
Gasoline is very explosive.
Extreme care must be taken.

CLEANING

Rust or foreign matter in fuel tends to build up on the filter, which, when the filter has been neglected for a long period, inhibits the flow of fuel.
Remove the rust or foreign matter from the filter using compressed air.



REMOUNTING

The fuel cock can be mounted in the reverse order of removal, and route the fuel hoses properly (See page 8-13).

CARBURETOR

CONSTRUCTION

① Cap
② Throttle valve spring
③ Cable stopper plate
④ E-ring
⑤ Jet needle
⑥ Throttle valve
⑦ Needle jet
⑧ Pilot air screw
⑨ Throttle valve stop screw
⑩ O-ring
⑪ Needle valve
⑫ Needle valve stopper plate
⑬ Washer
⑭ Main jet
⑮ Pilot jet
⑯ Plug
⑰ Float
⑱ Pin
⑲ Gasket
⑳ Drain screw
㉑ Plunger
㉒ Holder guide

CARBURETOR SETTING TABLE

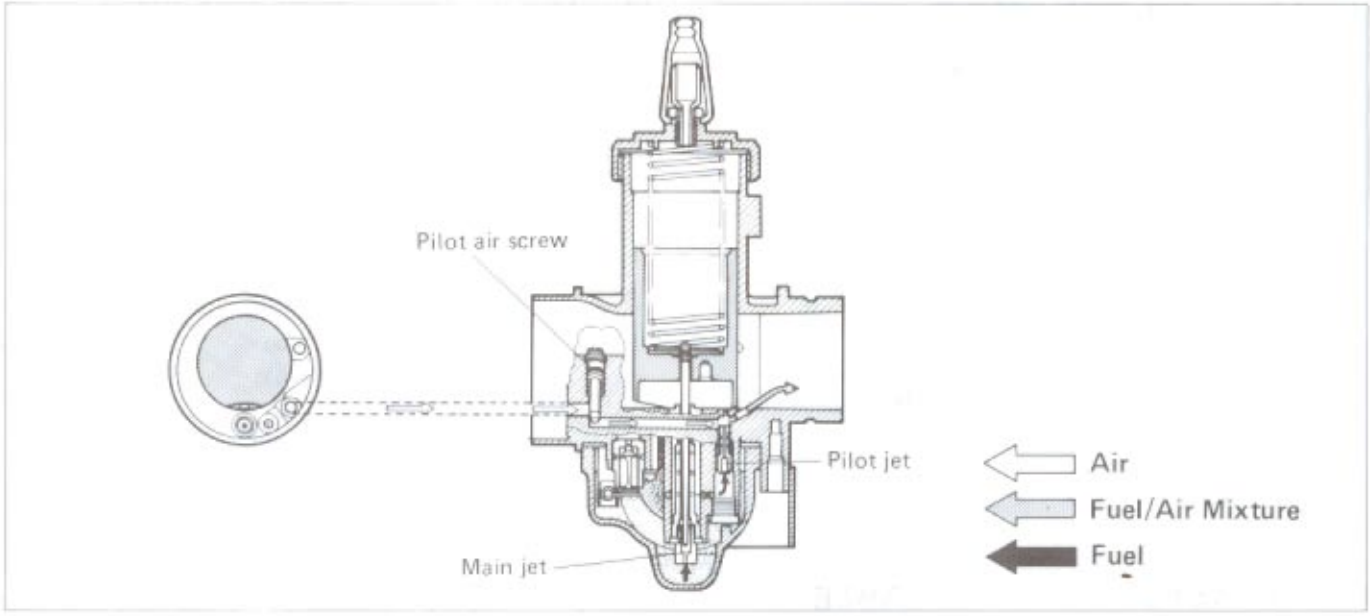
ITEM		SPECIFICATION	
		The others	For Singapore
Carburetor type		MIKUNI VM28SS	←
Bore size		28 mm	←
I.D. No.		36A00	36A10
Idle r/min.		1 400 ± 150 r/min.	←
Float height		25.0 ± 1.0 mm	←
Main jet	(M.J.)	# 180	# 160
Main air jet	(M.A.J.)	0.6 mm	←
Jet needle	(J.N.)	5EL45-3rd	5EL45-2nd
Needle jet	(N.J.)	P-6	P-5
Cut-away	(C.A.)	2.5	←
Pilot jet	(P.J.)	# 35	←
By-pass	(B.P.)	1.2 mm	←
Pilot outlet	(P.O.)	0.6 mm	←
Pilot air screw	(P.A.S.)	3/4 turn out	←
Valve seat	(V.S.)	2.5 mm	←
Starter jet	(G.S.)	# 50	←
Throttle cable play		0.5 – 1.0 mm	←

SLOW SYSTEM

This system supplies fuel during engine operation with piston valve closed or slightly opened.

The fuel passes through the main jet and metered by the pilot jet is mixed with the proper amount of air metered by the pilot air screw and is separated into fine particles. Mixture then exits into the main bore through the pilot outlet.

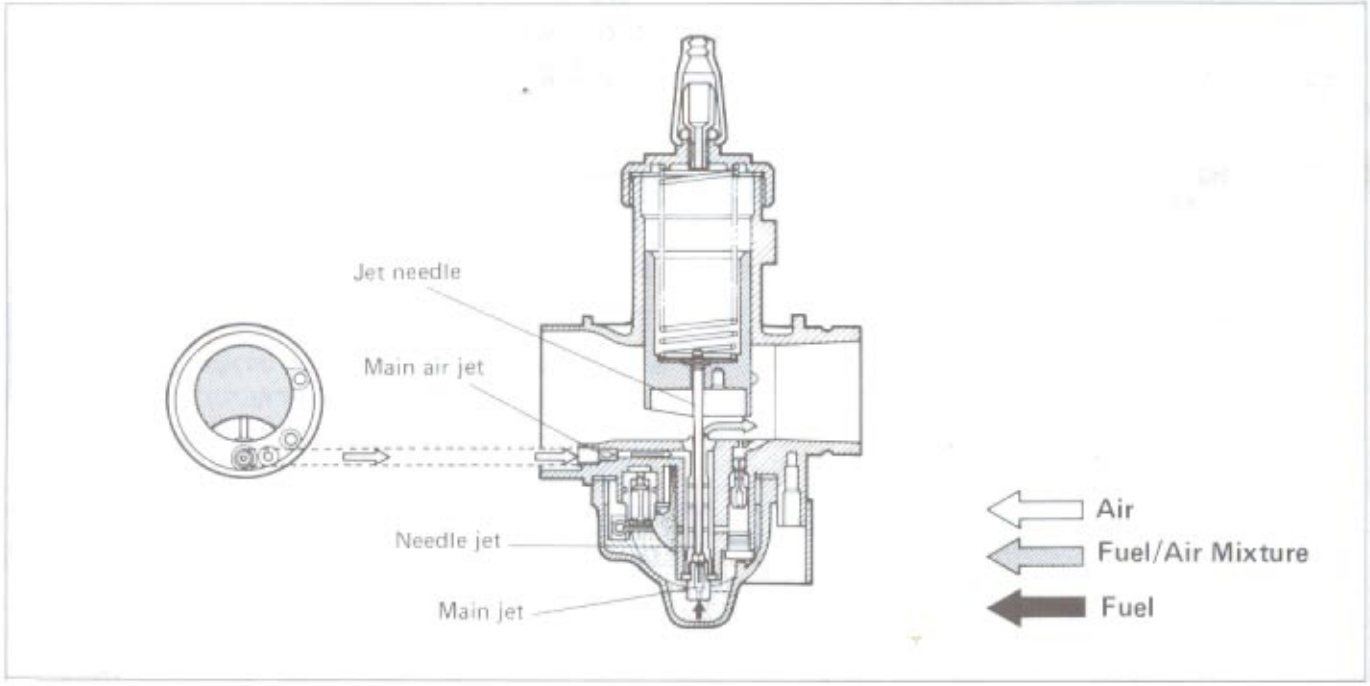
The pilot air screw controls the fuel/air mixture ratio. When the piston valve opens a little, the mixture jets through the by-pass and the pilot outlet holes.



MAIN SYSTEM

This system supplies fuel during engine operation when the piston valve is ¼—Full open.

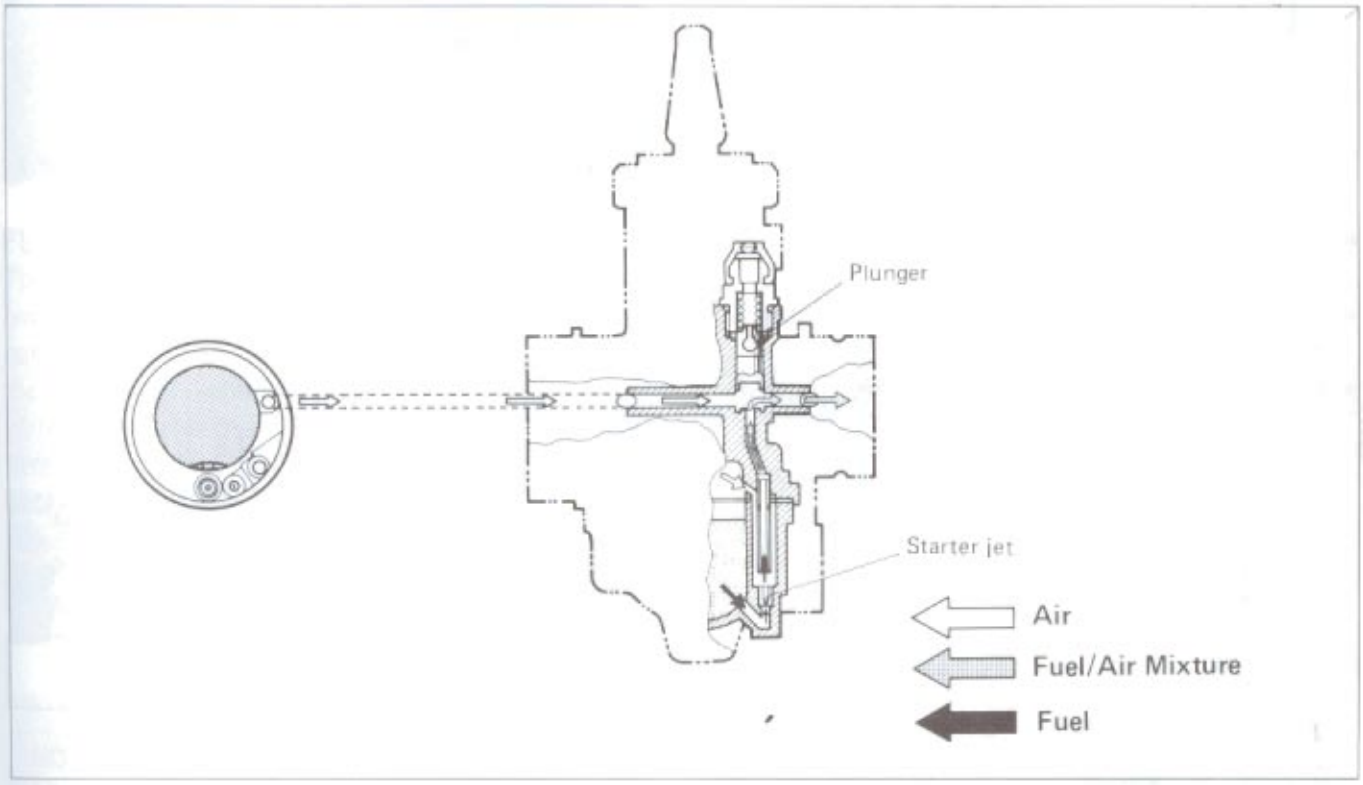
The fuel passes through the main jet and mixes with air metered by the main air jet. The mixture passes by the clearance between the needle jet and jet needle and then exits into the main bore after being metered by the jet needle.



STARTER SYSTEM

When the starter plunger is pulled up, the fuel metered by the starter jet is mixed with air coming from the float chamber. This mixture, rich with fuel, flows into the plunger area and mixes again with air coming from the starter air passage.

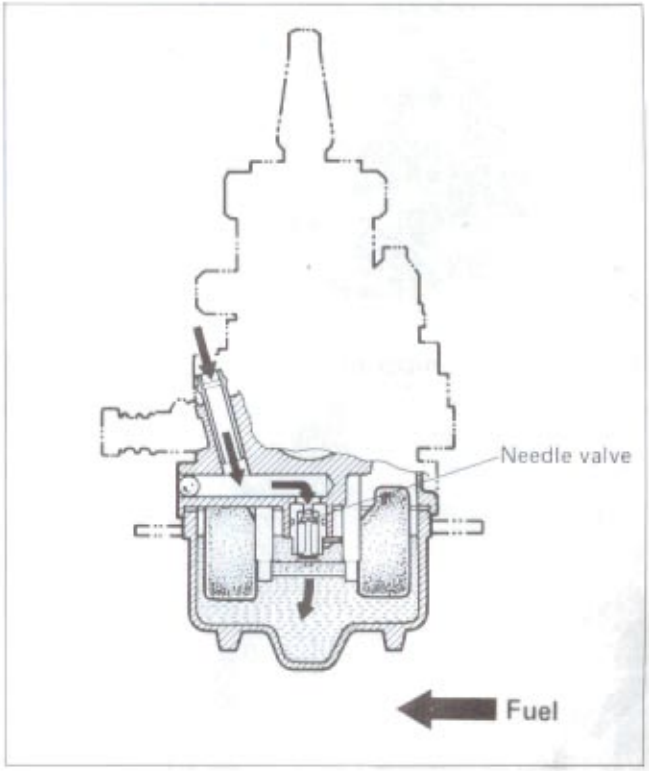
The two successive mixings of fuel with air are such that a proper fuel/air mixture for starting is produced when the mixture is sprayed out through starter outlet into the main bore.



FLOAT SYSTEM

Floats and needle valve are associated with the same mechanism, so that, as the floats move up and down, the needle valve too moves likewise. When fuel level is up in float chamber, floats are up and needle valve remains pushed up against valve seat. Under this condition, no fuel enters the float chamber.

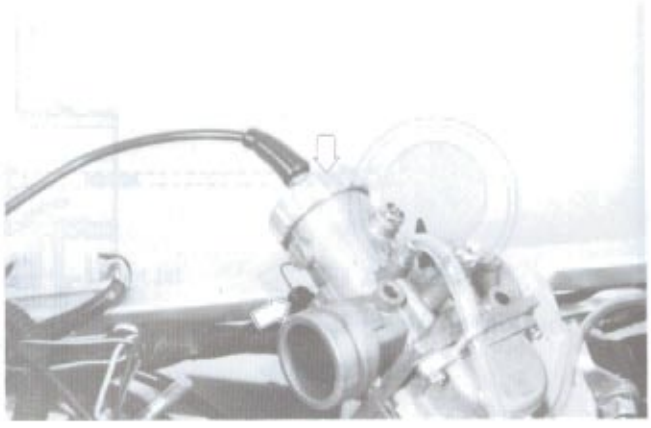
As the fuel level falls, floats go down and needle valve unseats itself to admit fuel into the chamber. In this manner, needle valve admits and shuts off fuel alternately to maintain a practically constant fuel level inside the float chamber.

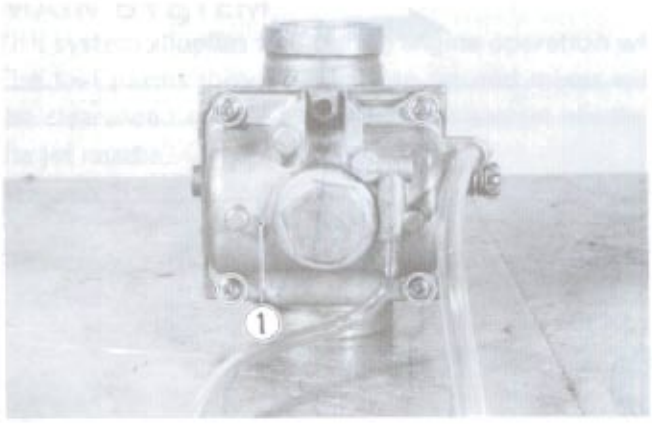


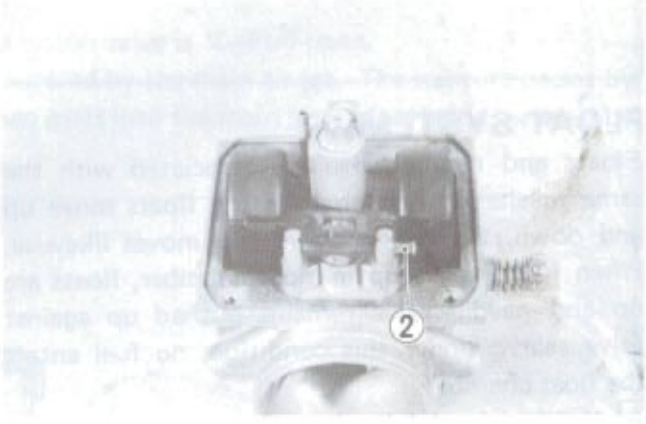
REMOVAL AND DISASSEMBLY

- Turn the fuel cock to the "OFF" position.
- Remove the air cleaner case clamp screw and intake pipe clamp screw.

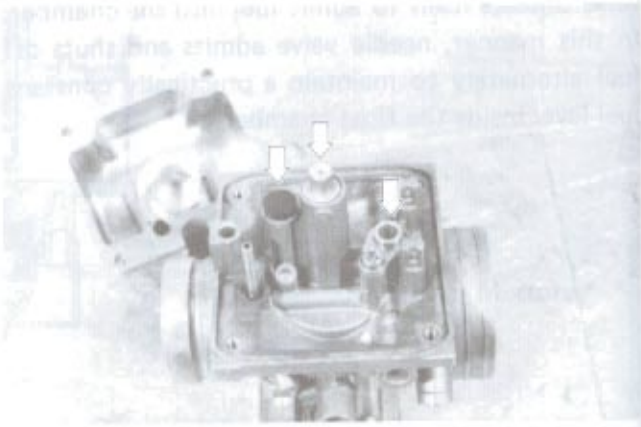
- Remove the carburetor top cap and choke cable holder from the carburetor body.
- Remove the float chamber body ① from the mixing chamber body.
- Pull out the float pin ② and remove the float.





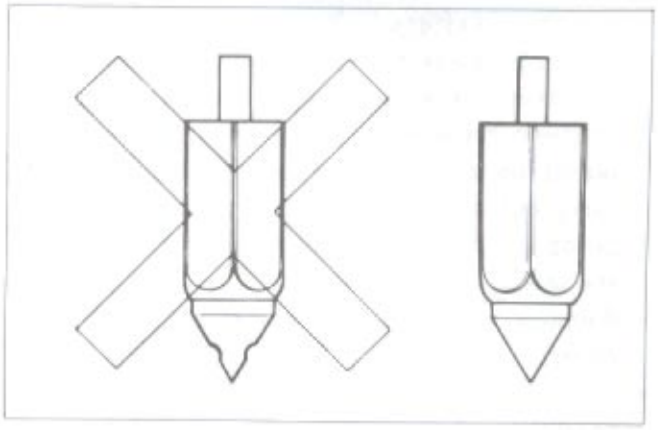


- Remove the main jet, pilot jet, needle jet and needle valve.



NEEDLE VALVE INSPECTION

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 beyond the permissible limits, similar trouble will occur. Conversely, if the needle sticks, the gasoline will not flow into the float chamber. Clean the float chamber and float parts with gasoline. If the needle is worn as shown in the illustration, replace it together with a valve seat. Clean the fuel passage of the mixing chamber with compressed air.



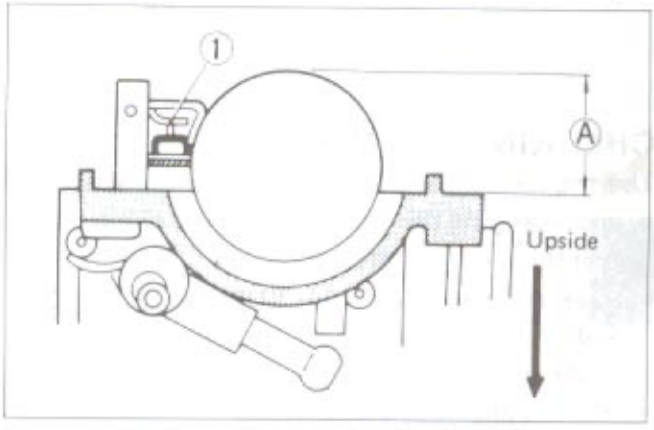
FLOAT HEIGHT ADJUSTMENT

To check the float height, invert the carburetor body, holding the float arm pin so that the pin will not slip off. With the float arm kept free, measure the height Ⓐ while float arm is just in contact with needle valve by using calipers.

Bend the tongue ① as necessary to bring the height Ⓐ to this value.

Float height	25.0 ± 1.0 mm

09900-20102	Vernier calipers

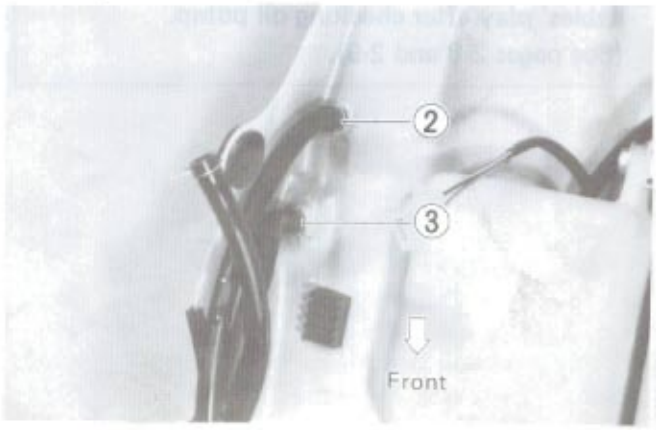


NOTE:
When measuring float height, be sure to remove the gasket.

REASSEMBLY AND REMOUNTING

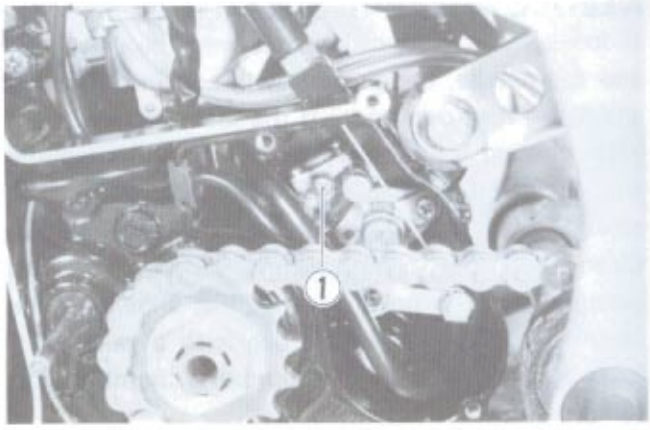
Reassemble and remount the carburetor in the reverse order of disassembly. Pay attention to the following points.

- Install the fuel strainers ("ON" ② and "RES" ③) to the fuel tank in the correct position as shown in Fig.
- Throttle cable play adjustment is necessary after mounting the carburetor. (See page 2-8.)



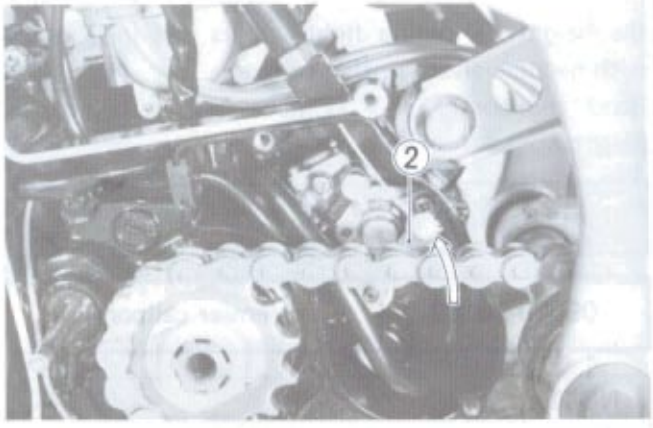
OIL PUMP

AIR BLEEDING



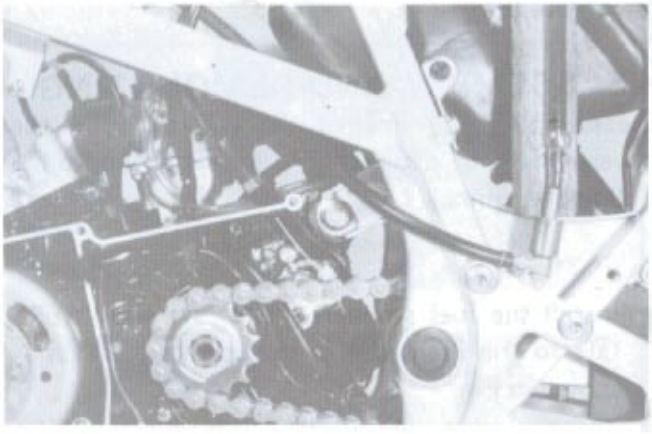
- Whenever evidence is noted of some air having leaked into the oil pipe from the oil tank in a machine brought in for servicing, or if the oil pump has to be removed for servicing, be sure to carry out an air bleeding operation with the oil pump in place before returning the machine to the user.
- Remove the magneto cover and oil pump cover.
- To bleed air, hold the machine in standstill condition. Loosen the screw ① to let out air and after making sure that the trapped air has all been bled, tighten the screw good and hard.

CHECKING OIL PUMP



Use the special tool, to check the pump for capacity by measuring the amount of oil the pump draws during the specified interval.

- Have the tool filled with SUZUKI CCI or CCI SUPER OIL and connect it to the suction side of the pump.
- Run the engine at 2 000 r/min.
- Holding engine speed at the same 2 000 r/min, move the lever up to the fully open position ② and let the pump draw for 2 minutes. For this operation, the reading taken on the device should be 1.6 – 2.0 ml.



09900-21602	CCI oil gauge

Oil pump discharge rate (Full open)	1.6 – 2.0 ml for 2 minutes at 2 000 r/min

NOTE:
Adjust both throttle and oil pump control cables' play after checking oil pump.
(See pages 2-8 and 2-9).

ELECTRICAL SYSTEM

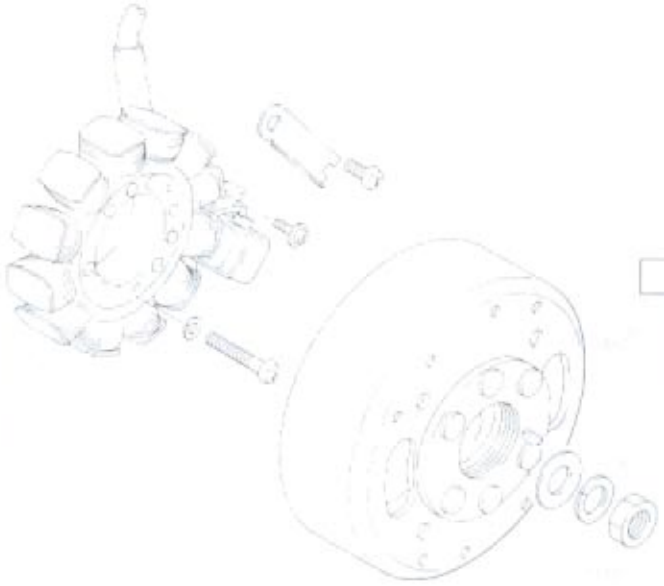
CONTENTS

IGNITION SYSTEM

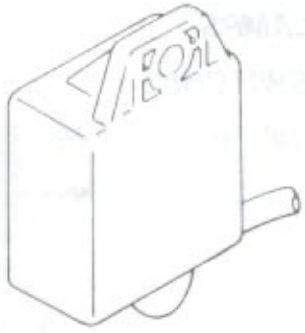
DESCRIPTION

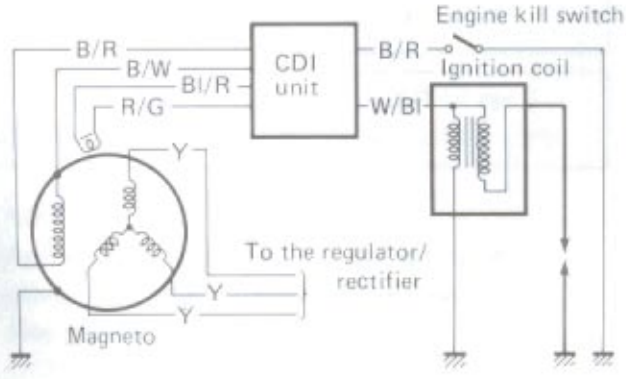
In the capacitor discharged ignition system, the electrical energy generated by the magneto charges the capacitor. This energy is released in a single surge at the specified ignition timing point, and current flows through the primary side of the ignition coil. A high voltage current is induced in the secondary windings of the ignition coil resulting in strong spark between the spark plug gaps.

MAGNETO



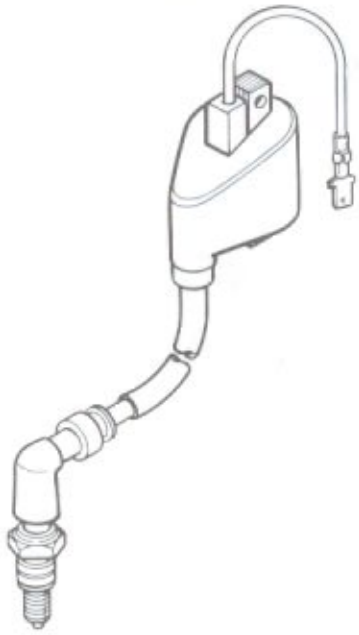
CDI UNIT





WIRE COLOR

Y : Yellow
B/R : Black with Red tracer
B/W : Black with White tracer
Bl/R : Blue with Red tracer
R/G : Red with Green tracer
W/Bl : White with Blue tracer



IGNITION COIL AND SPARK PLUG

INSPECTION

MAGNETO COIL

- Remove the seat. (See page 3-2.)
- Disconnect the pick-up and primary lead wire couplers.
- Using the pocket tester, measure the resistance between the lead wires in the following table.

09900-25002	Pocket tester

Magneto coil resistance	
Pick-up	Bl/R – R/G Approx. 80 – 170 Ω
Primary	B/R – B/W Approx. 1.5 – 4.0 Ω

NOTE:
When replacing the stator, apply a small quantity of THREAD LOCK "1342" to the threaded parts of stator screws.

99000-32050	Thread Lock "1342"

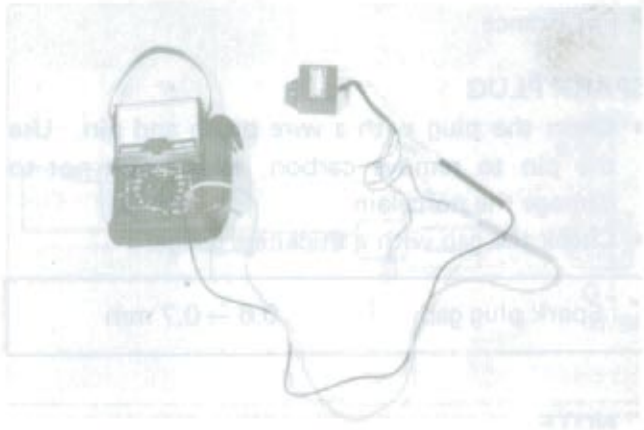
CDI UNIT

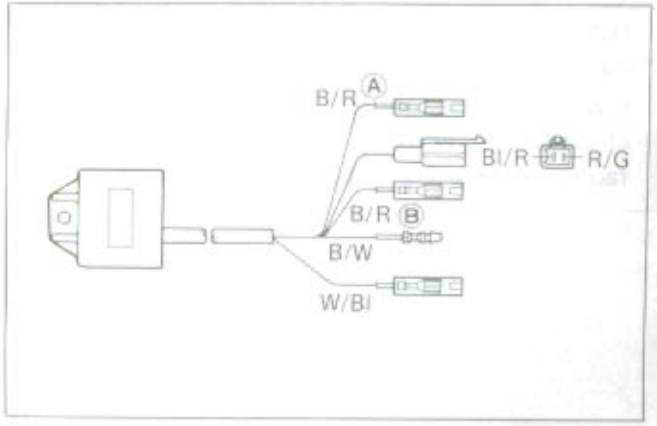
Using the pocket tester (x 1 kΩ range), measure the resistance between the lead wires in the following table.

09900-25002	Pocket tester

(Unit: Approx. kΩ)

⊖ Probe of tester to: ↓ \ ⊕ Probe of tester to: →	R/G	Bl/R	W/Bl	B/W	B/R Ⓐ	B/R Ⓑ
R/G		ON (13)	OFF	ON (13)	OFF	OFF
Bl/R	OFF		OFF	ON (0)	OFF	OFF
W/Bl	OFF	ON (3)		ON (3)	OFF	OFF
B/W	OFF	ON (0)	OFF		OFF	OFF
B/R Ⓐ	OFF	ON (14)	OFF	ON (14)		ON (0)
B/R Ⓑ	OFF	ON (14)	OFF	ON (14)	ON (0)	





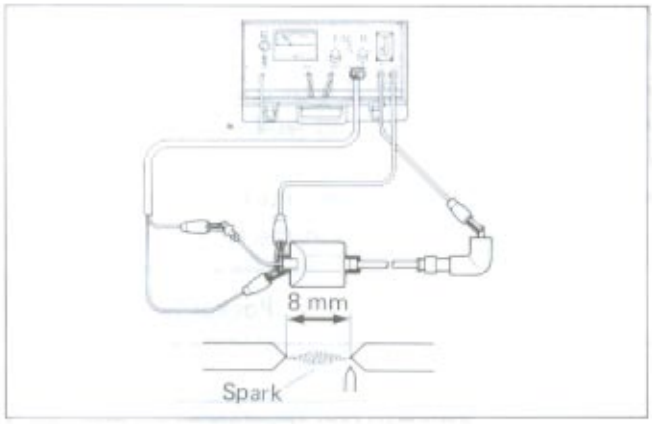
IGNITION COIL

Checking with electro tester.

- Remove the ignition coil from the frame.
- Test the ignition coil for sparking performance. Test connection is as indicated. Make sure that the three-needle sparking distance is at least 8 mm.

09900-28106	Electro tester

STD Spark performance	8 mm at 1 atm.

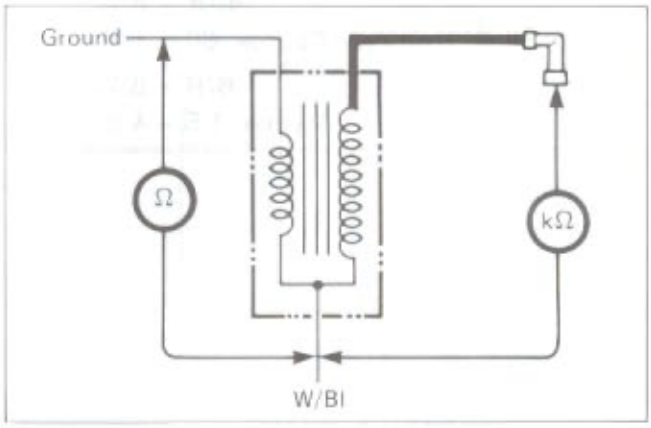


Checking with pocket tester.

09900-25002	Pocket tester

Ignition coil resistance	
Primary	W/Bl – Ground Approx. 0.1 – 1.0 Ω
Secondary	Plug cap – W/Bl Approx. 10 – 20 kΩ
	*Plug cap – W/Bl Approx. 2 – 10 kΩ

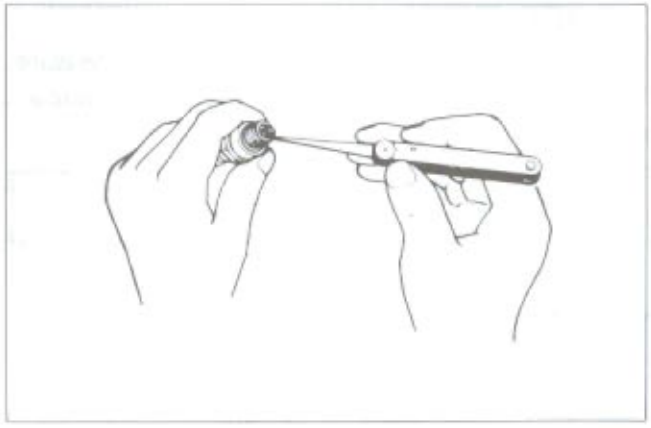
* For France



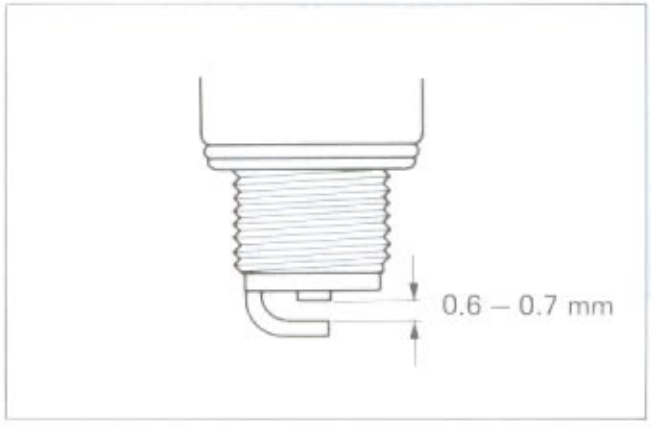
SPARK PLUG

- Clean the plug with a wire brush and pin. Use the pin to remove carbon, taking care not to damage the porcelain.
- Check the gap with a thickness gauge.

Spark plug gap	0.6 – 0.7 mm



NOTE:
If there is no sparking at the spark plug gap, replace the CDI unit or inspect the magneto coils, ignition coil and spark plug. If the magneto coils, ignition coil and spark plug checked are correct, the CDI unit may be faulty, replace the CDI unit with a new one.



EXHAUST VALVE SYSTEM
(For RG125C model)
INSPECTION
SOLENOID

Using the pocket tester (x 1 Ω range), measure the resistance between the lead wires in the following table.

09900-25002	Pocket tester

O – Bl/Y	Approx. 2 – 6 Ω

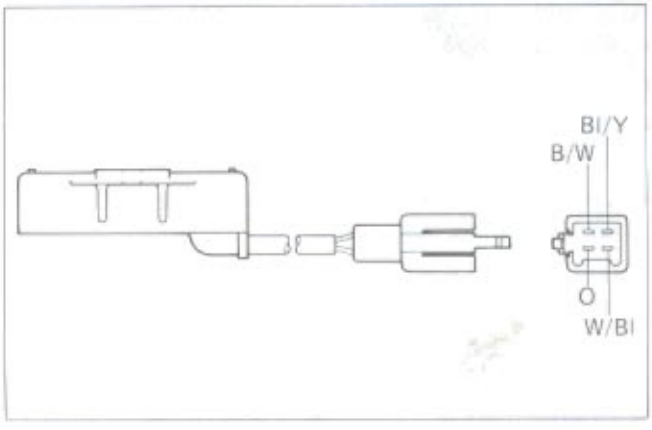
CONTROL UNIT

Using the pocket tester (x 1 kΩ range), measure the resistance between the lead wires in the following table.

09900-25002	Pocket tester

(Unit: Approx. kΩ)

⊖ Probe of tester to: / ⊕ Probe of tester to:	O	W/Bl	Bl/Y	B/W
O		ON (150)	OFF	ON (7)
W/Bl	OFF		OFF	OFF
Bl/Y	ON (3)	ON (400)		ON (18)
B/W	ON (4)	ON (80)	OFF	

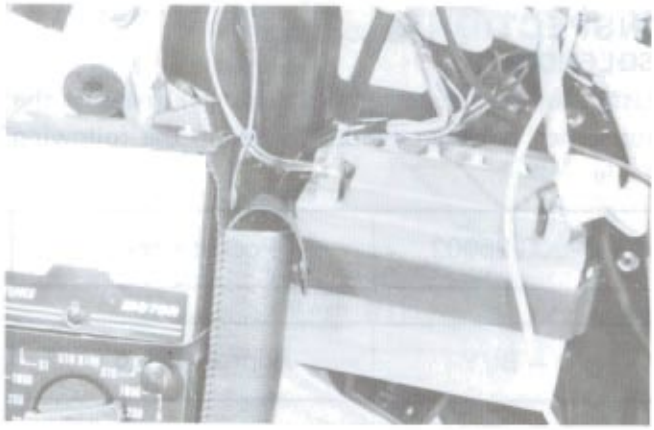


CHARGING SYSTEM

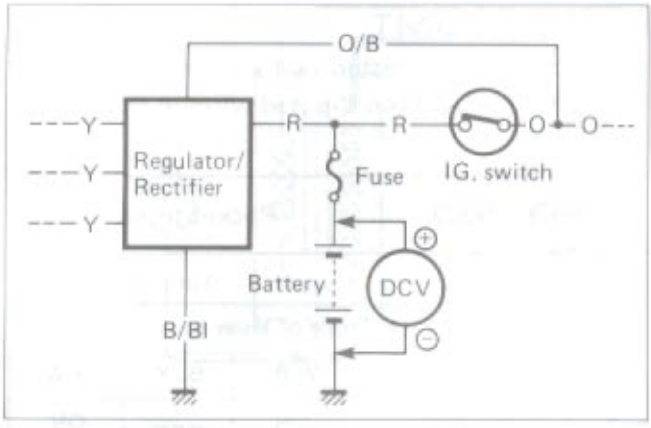
INSPECTION

CHARGING OUTPUT CHECK

- Remove the right frame cover.
- Start the engine and keep it running at 5 000 r/min and lighting switch turned ON position and dimmer switch turned HI position.
- Using a pocket tester, measure the DC voltage between the battery terminals, ⊕ and ⊖ .
  If the tester reads under 14V or over 15V, check the AC generator no-load performance. If the AC generator no-load performance meets specification, replace the regulator/rectifier.



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

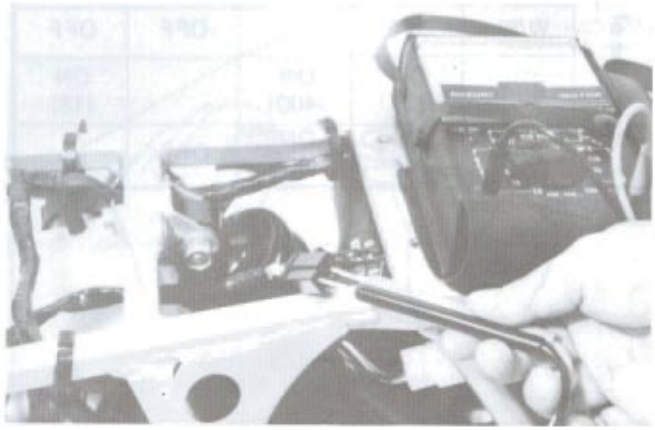


STD charging output	14 – 15V (DC) at 5 000 r/min

09900-25002	Pocket tester

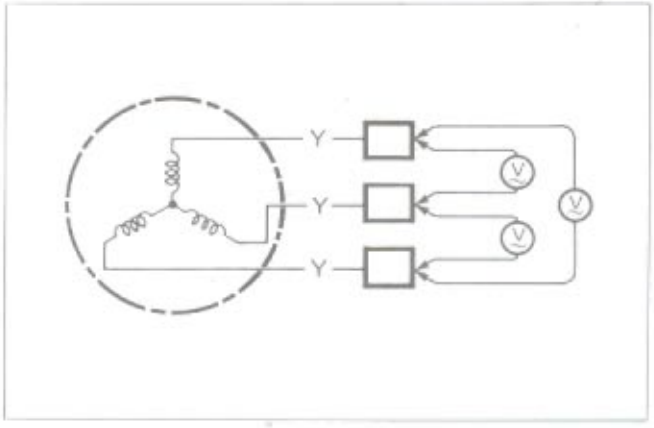
AC GENERATOR NO-LOAD PERFORMANCE

- Remove the seat and frame cover.
- Disconnect the AC generator yellow lead wires.
- Start the engine and keep it running at 5 000 r/min.
- Using the pocket tester, measure the AC voltage between the three yellow lead wires.
  If the tester reads under 30V, the AC generator (stator or rotor) is faulty.



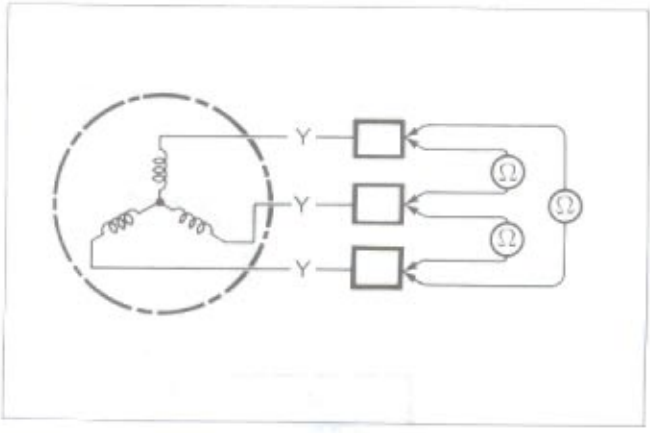
STD No-load performance	More than 30V (AC) at 5 000 r/min

09900-25002	Pocket tester



AC GENERATOR CONTINUITY CHECK

- Using the pocket tester, check the continuity between the lead wires of the stator. Each pair of stator wires should have the same reading.
  Also check that the stator core is insulated.
  Check that there is no continuity between the stator leads and ground.



NOTE:
When making this test, it is not necessary to remove the AC generator.

09900-25002	Pocket tester

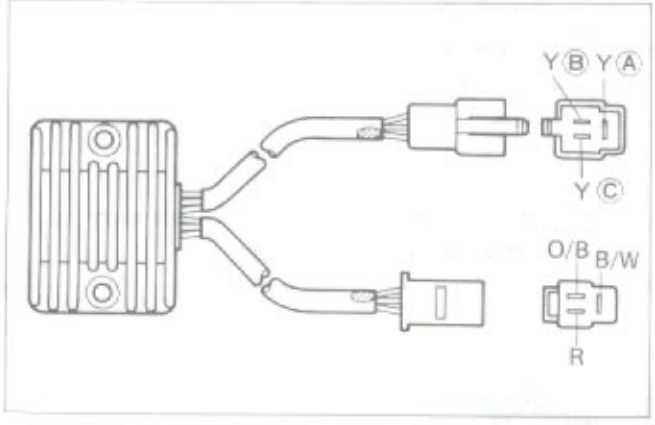
REGULATOR/RECTIFIER

Using the pocket tester (x 1 kΩ range), measure the resistance between the lead wires in the following table.

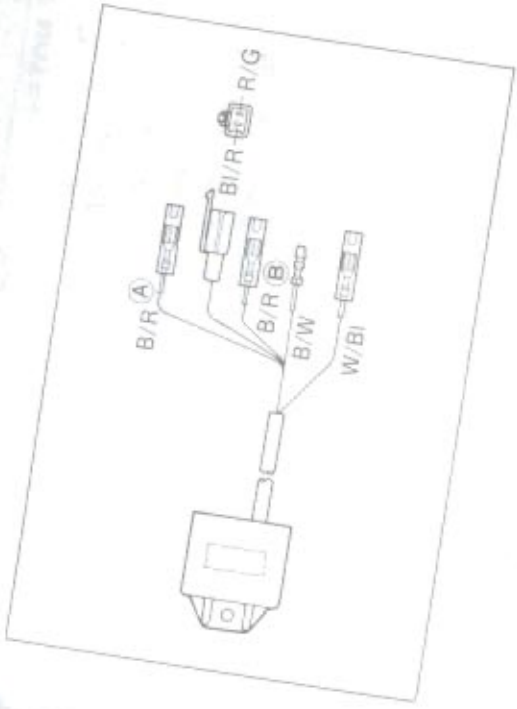
CAUTION:
As SCR and diodes are used inside this regulator/rectifier unit, the resistance values will differ when an ohmmeter other than SUZUKI pocket tester is used.

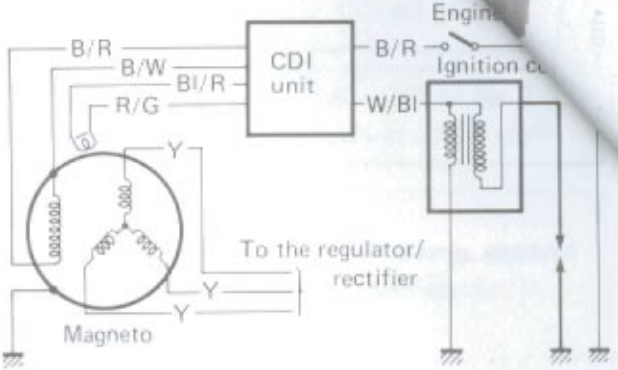
(Unit: Approx. kΩ)

⊖ Probe of tester to: ① \ ⊕ Probe of tester to:	R	O/B	B/W	Y Ⓐ	Y Ⓑ	Y Ⓒ
R		OFF	OFF	OFF	OFF	OFF
O/B	ON (9)		ON (0.3)	ON (3.5)	ON (3.5)	ON (3.5)
B/W	ON (8)	ON (0.3)		ON (3)	ON (3)	ON (3)
Y Ⓐ	ON (3)	OFF	OFF		OFF	OFF
Y Ⓑ	ON (3)	OFF	OFF	OFF		OFF
Y Ⓒ	ON (3)	OFF	OFF	OFF	OFF	



COMBINATION METER





WIRE COLOR

Y : Yellow
B/R : Black with Red tracer
B/W : Black with White tracer
Bl/R : Blue with Red tracer
R/G : Red with Green tracer
W/Bl : White with Blue tracer

IGNITION COIL AND SPA

WATER TEMPERATURE METER

As shown in Fig. 1, four coils are located in the water Temp. gauge (N_1, N_2, N_3 and N_4). As the resistance from the sending unit varies along with the coolant temperature, the current at points L_1 and L_2 will also vary. This in turn will cause the strength of the magnetic field generated in the four coils to increase or decrease (causing a related increase or decrease in the force vector H in Fig. 2) which will force the needle to move to the proper position (Fig. 3).
When the ignition switch is turned off, the pointer returns to the original position.

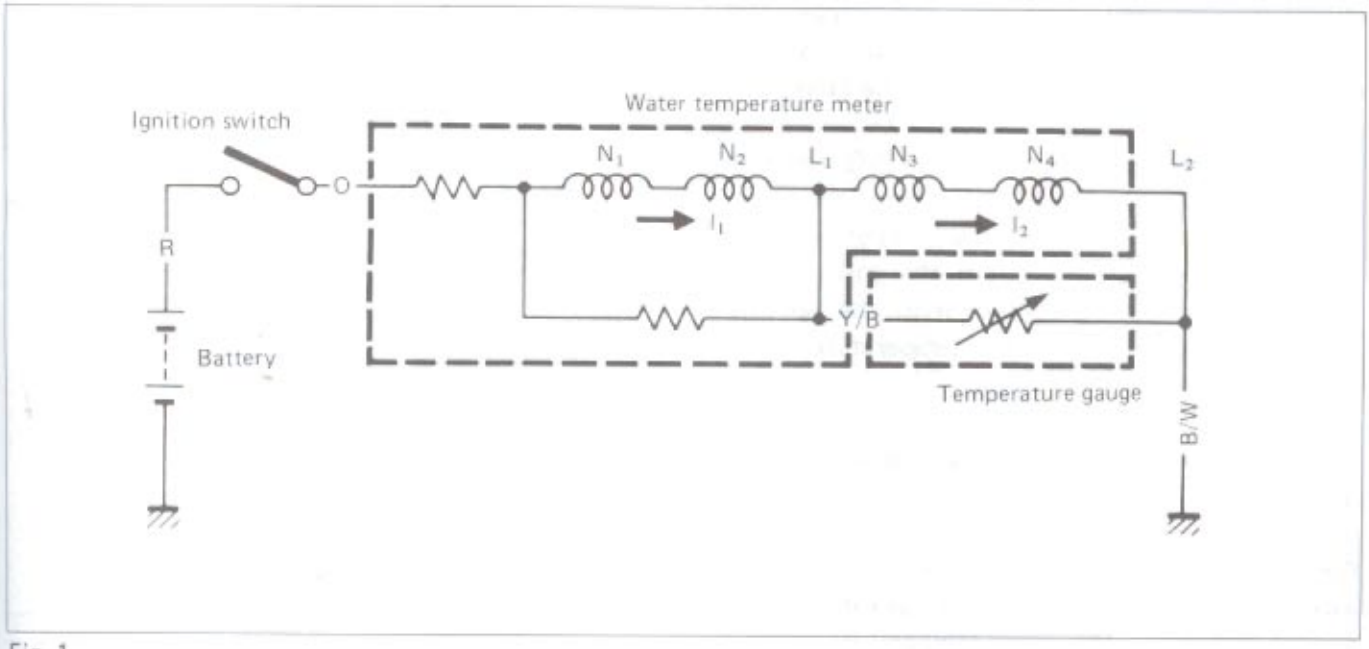


Fig. 1

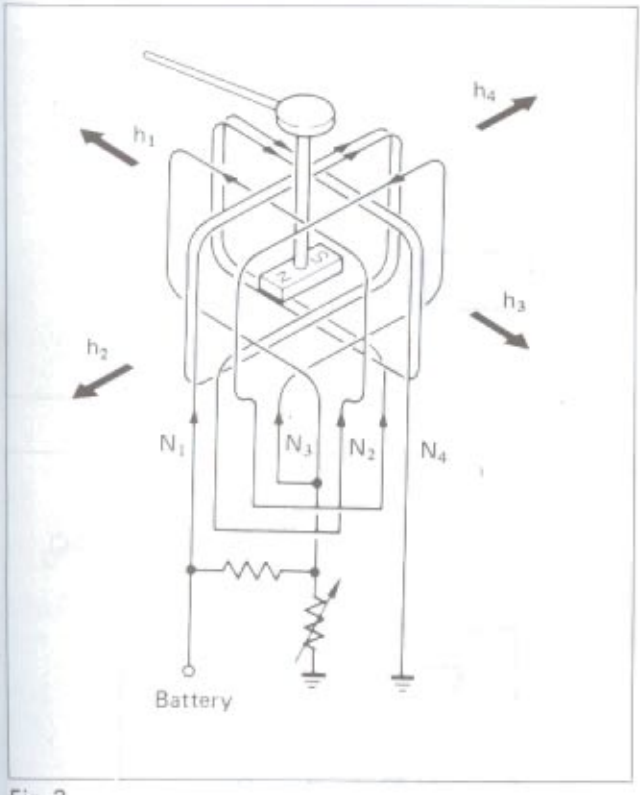


Fig. 3

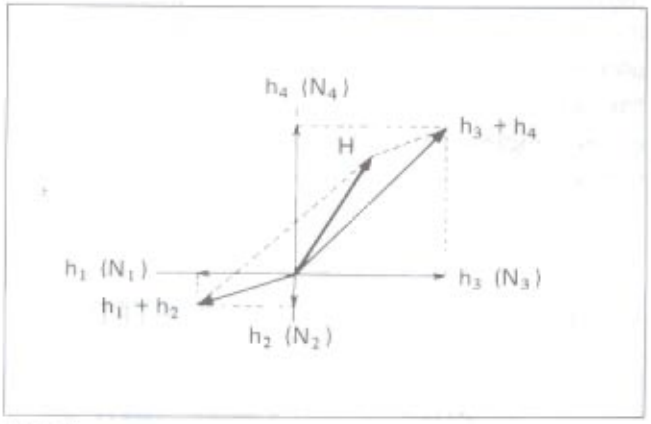


Fig. 2

WATER TEMPERATURE METER INSPECTION

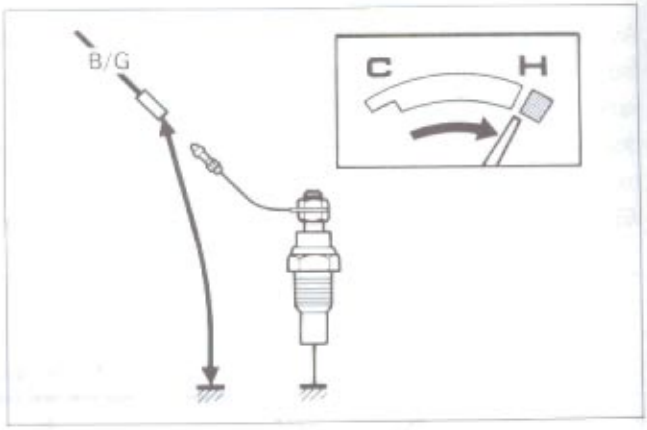
As the coil spring is installed on the needle shaft of the water temperature meter, the needle is forcibly back to the original position when ignition switch is turned OFF.

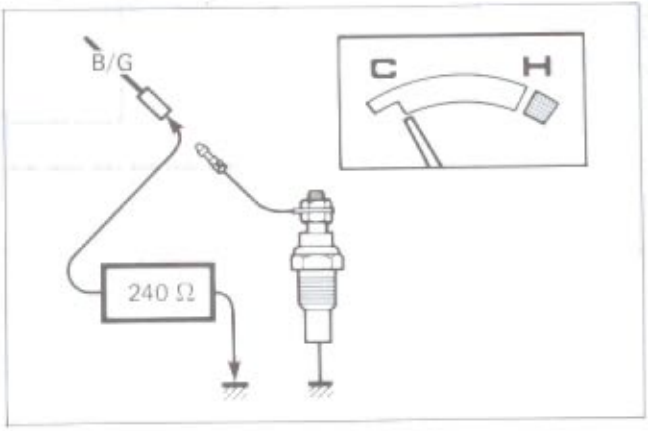
To test the water temperature meter two different checks may be used. The first, and simplest test will tell if the meter is operating but will not indicate the meters accuracy throughout the range.

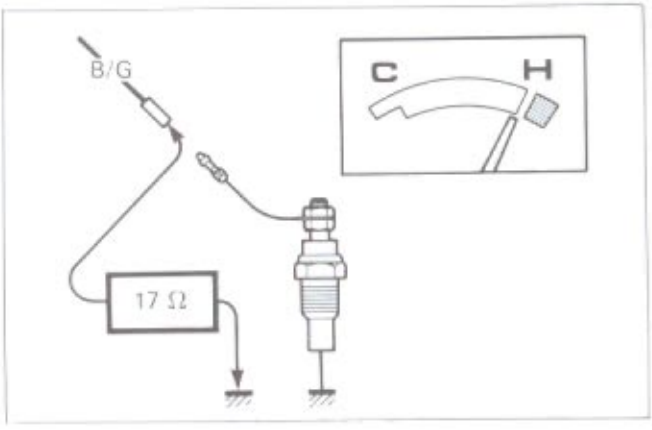
To perform this test, disconnect the B/G lead wire of the water temperature meter from the water temperature gauge. Connect a jumper wire between B/G wire coming from the main wiring harness and engine ground. With the ignition switch turned on, the water temperature meter should indicate "H".

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

Connect a 240-ohm resistor between the B/G lead wire of the water temperature gauge and the ground lead wire. The water temperature gauge is normal if its pointer indicates the C position when the specified voltage is applied to the circuit and if its pointer indicates the H position when the resistor is changed to 17 ohms. If either one or both indications are abnormal, replace the water temperature meter with a new one.

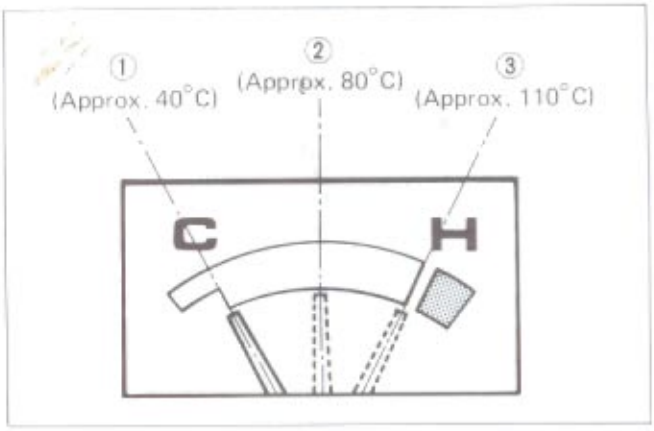






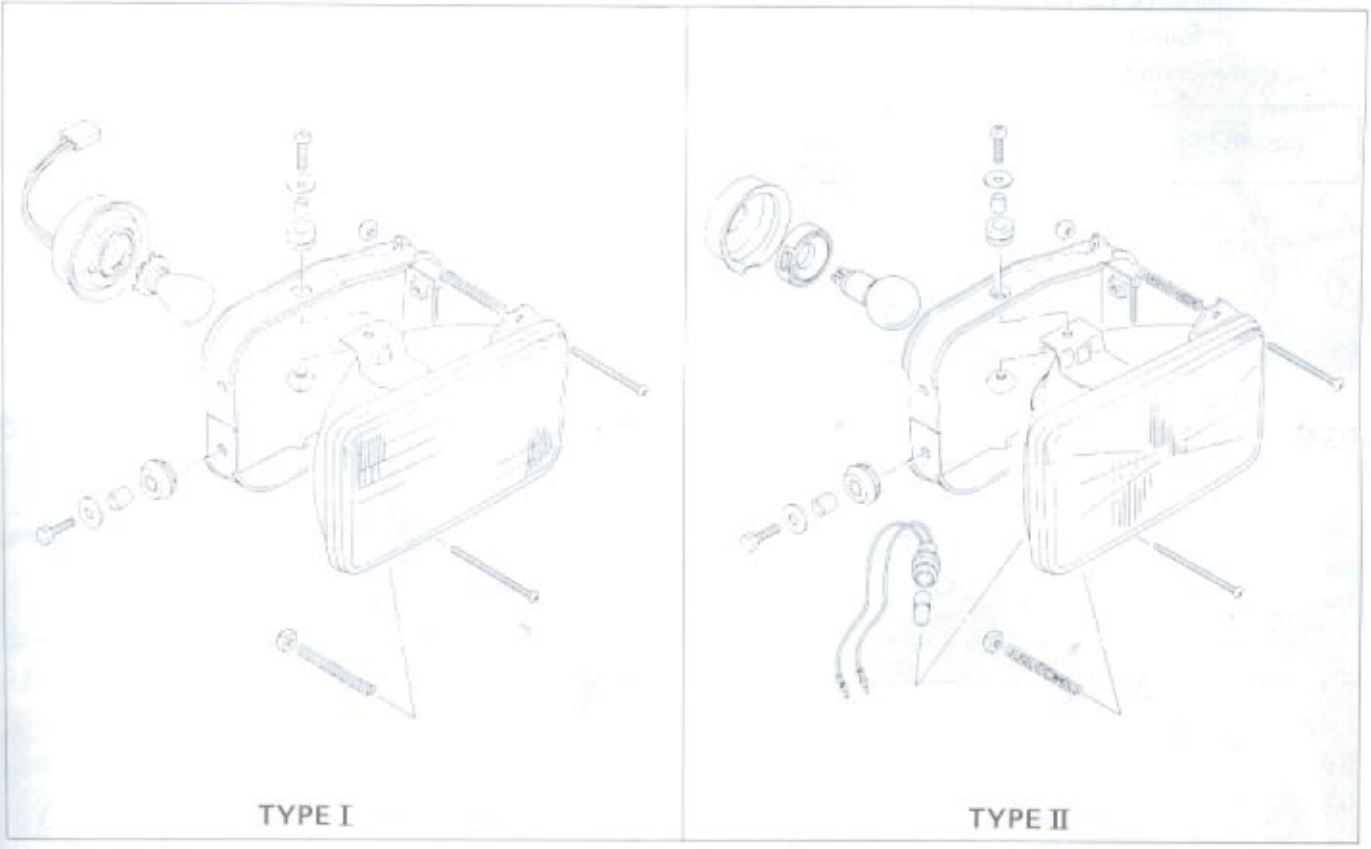
WATER TEMPERATURE METER

POSITION	RESISTANCE
①	Approx. 240 Ω
②	Approx. 53 Ω
③	Approx. 17 Ω



LAMPS

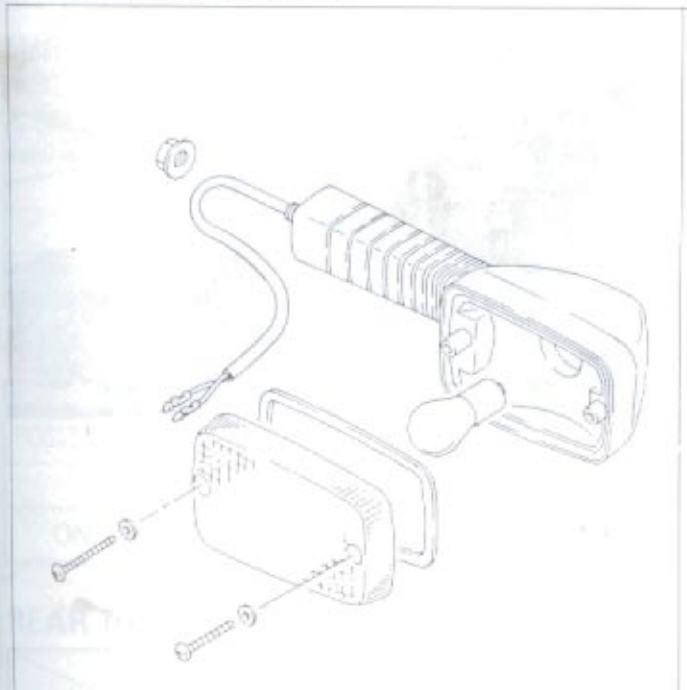
HEADLIGHT



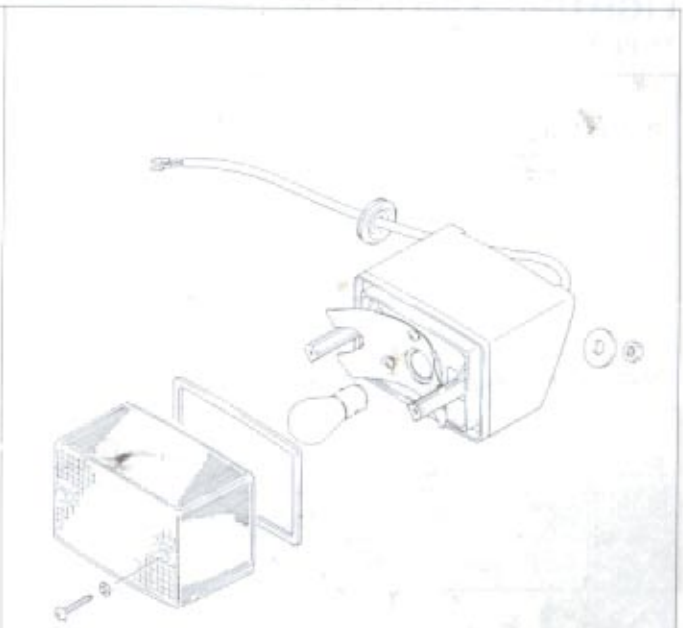
TYPE I

TYPE II

TURN SIGNAL LIGHT



TAIL/BRAKE LIGHT



CAUTION:
Do not overtighten the lens fitting screws.

SWITCHES

- Inspect each switch for continuity with the pocket tester (x 1Ω range) referring to the chart.
- If it is found any abnormality, replace the respective switch assemblies with new ones.

09900-25002	Pocket tester

IGNITION SWITCH

COLOR / POSITION	Bl/W	B/W	B/R	R	O	Gr	Br
OFF		○—○					
C	○—○	○	○	○—○			
ON				○—○		○—○	
P		○—○		○			○

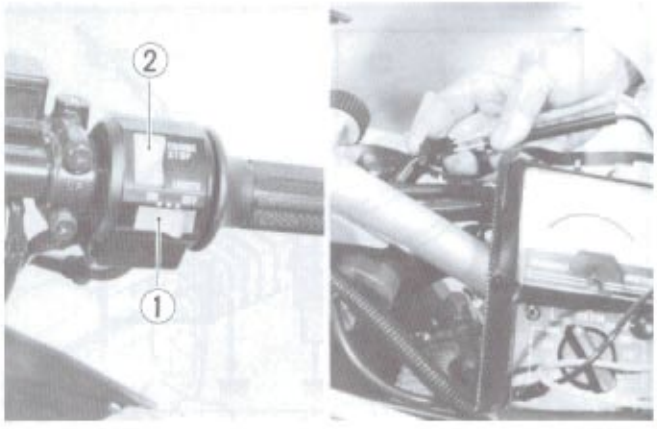
LIGHTING SWITCH ①

TYPE I

COLOR / POSITION	O	Y/W	Gr
OFF			
S	○		○
ON	○	○	○

TYPE II (For Australia and Singapore)

COLOR / POSITION	O	Y/W	Gr
OFF			
ON	○	○	○

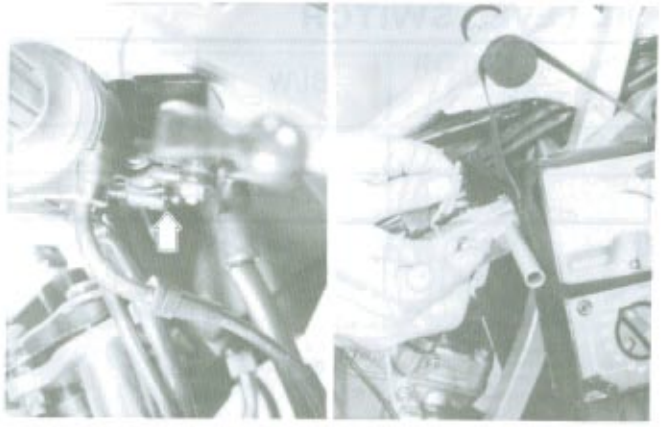


ENGINE KILL SWITCH ②

COLOR / POSITION	B/R	B/W
OFF	○	○
RUN		

FRONT BRAKE LIGHT SWITCH

COLOR / POSITION	O	W/B
OFF		
ON	○	○

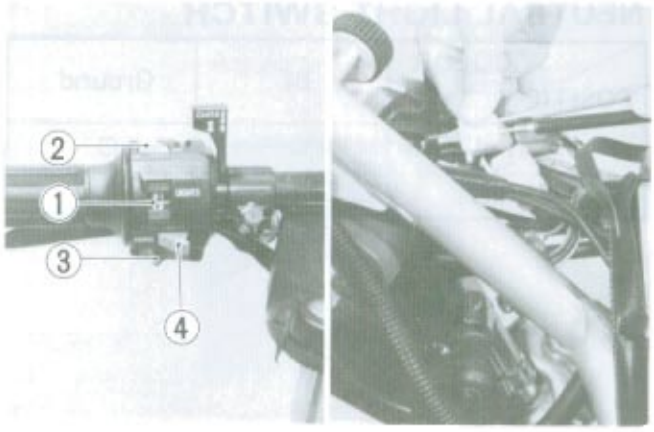


DIMMER SWITCH ①

COLOR / POSITION	W	Y	Y/W
HI		○	○
LOW	○		○

PASSING LIGHT SWITCH ②

COLOR / POSITION	O/R	Y
OFF		
ON (Push)	○	○



TURN SIGNAL LIGHT SWITCH ③

COLOR / POSITION	B	Lbl	Lg
R		○	○
•			
L	○	○	

HORN SWITCH ④

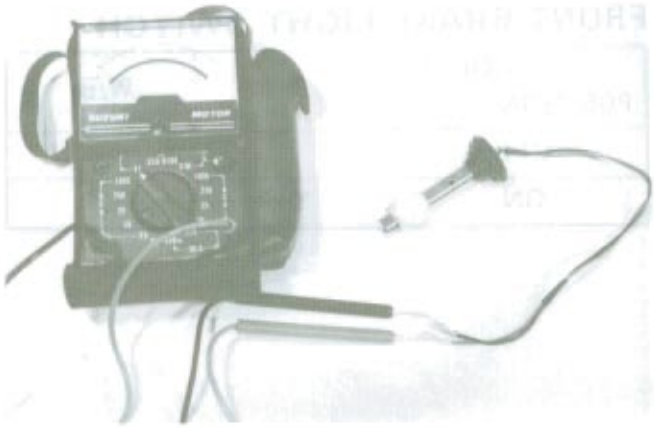
COLOR / POSITION	G	B/W
OFF		
ON (Push)	○	○

REAR BRAKE LIGHT SWITCH

COLOR / POSITION	Terminal	Terminal
OFF		
ON	○	○

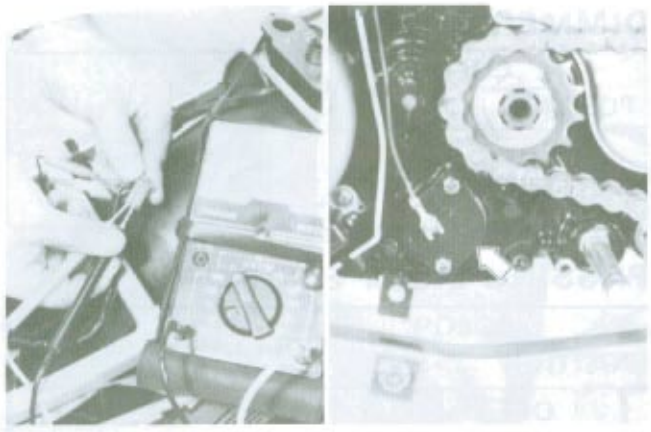
OIL LEVEL SWITCH

COLOR / POSITION	Bl/W	B/W
OFF		
ON	○———	———○



NEUTRAL LIGHT SWITCH

COLOR / POSITION	Bl	Ground
Neutral	○———	———○
The others		



WIRE COLOR

B : Black
Bl : Blue
Br : Brown
G : Green
Gr : Gray
Lbl : Light blue
Lg : Light green
O : Orange
R : Red
W : White
Y : Yellow

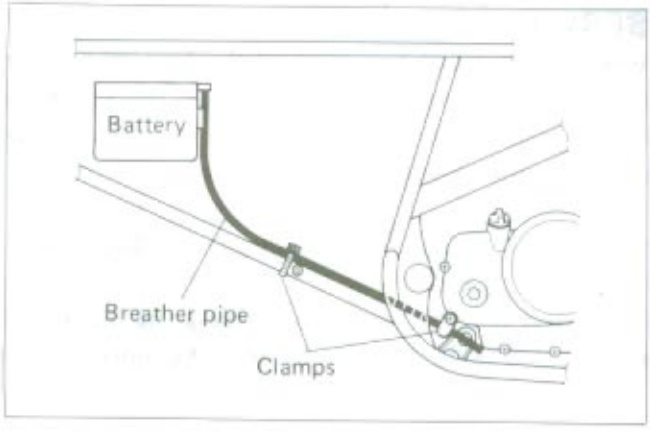
B/R : Black with Red tracer
B/W : Black with White tracer
Bl/W : Blue with White tracer
O/R : Orange with Red tracer
W/B : White with Black tracer
Y/W : Yellow with White tracer

BATTERY

SPECIFICATIONS

Type designation	YB4L-B or FB4L-B
Capacity	14.4kC (4Ah)/10HR
Standard electrolyte S.G.	1.28 at 20°C (68°F)

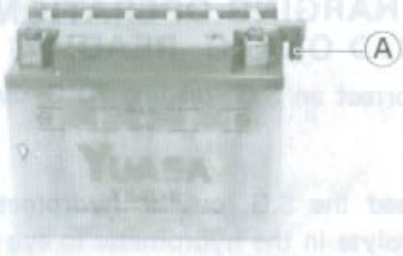
In fitting the battery to the motorcycle, connect the breather tube to the battery vent.



INITIAL CHARGING

Filling electrolyte

- Remove short sealed tube Ⓐ before filling electrolyte.
- Fill battery with electrolyte (dilute sulfuric acid solution with acid concentration of 35.0% by weight, having a specific gravity of 1.28 (at 20°C) up to indicated MAX. LEVEL. Filling electrolyte should be always cooled below 30°C before filling into battery. Leave battery standing for half an hour after filling. Add additional electrolyte if necessary.
- Charge battery with current as described in the tables shown below.



Ⓐ Sealed tube

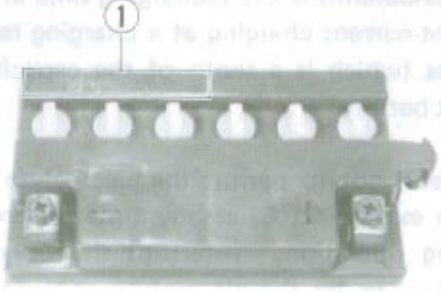
Maximum charging current	0.4A

Charging time

- The charging time for a new battery is determined by the number of months that have elapsed since the date of manufacture.

Confirmation for date of manufacture

- Date of manufacture is indicated by a three-part number ①, as follows, each indicating month, date and year.



Months after manufacturing	Within 6	Within 9	Within 12	Over 12
Necessary charging hours	20	30	40	60

- Near the end of charging period, adjust the specific gravity of electrolyte to value specified. After charging, adjust the electrolyte level to the MAX. LEVEL with DISTILLED WATER.

SERVICING

Visually inspect the surface of the battery container. If any signs of cracking or electrolyte leakage from the sides of the battery have occurred, replace the battery with a new one.

If the battery terminals are found to be coated with rust or an acidic white powdery substance, then this can be cleaned away with sandpaper.

Check the electrolyte level and add distilled water, as necessary, to raise the electrolyte to each cell's MAX. level.

Check the battery for proper charge by taking an electrolyte S.G. reading. If the reading is 1.22 or less, as corrected to 20°C, it means that the battery is still in a run-down condition and needs recharging.

NOTE:
When removing the battery from the motorcycle, disconnect ⊖ lead wire first.

RECHARGING OPERATION BASED ON S.G. READING

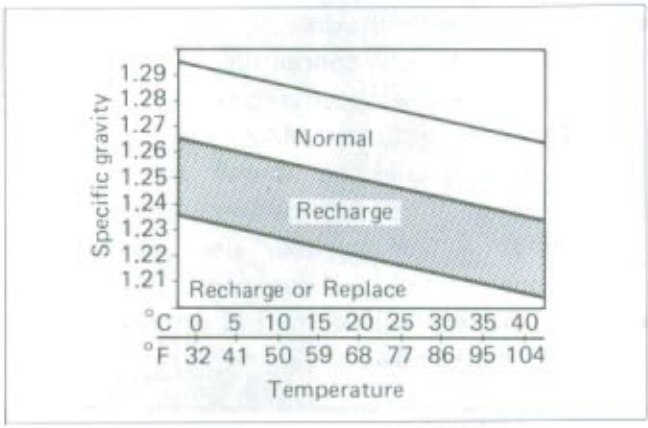
To correct an S.G. reading 20°C, use the table at right.

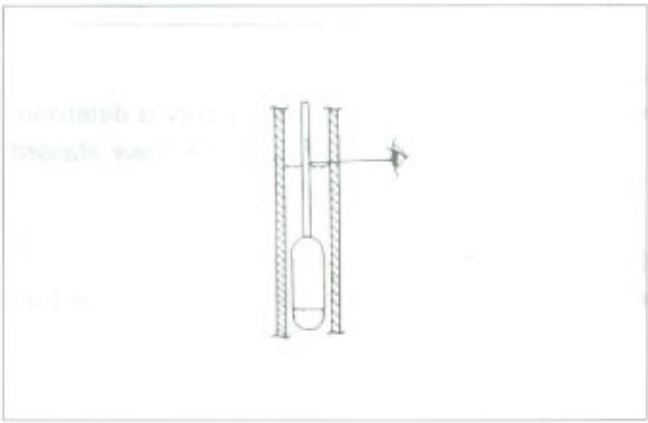
To read the S.G. on the hydrometer, bring the electrolyte in the hydrometer to eye level and read the graduations on the float scale bordering on the meniscus (curved-up portion of electrolyte surface), as shown in figure.

Check the reading (as corrected to 20°C) with chart to determine the recharging time in hours by constant-current charging at a charging rate of 0.4 amperes (which is a tenth of the capacity of the present battery).

Be careful not to permit the electrolyte temperature to exceed 45°C, at any time, during the recharging operation. Interrupt the operation, as necessary, to let the electrolyte cool down. Recharge the battery to the specification.

Electrolyte specific gravity	1.28 at 20°C (68°F)





CAUTION:
Constant-voltage charging, otherwise called "quick" charging, is not recommendable for it could shorten the life of the battery.

09900-28403	Hydrometer

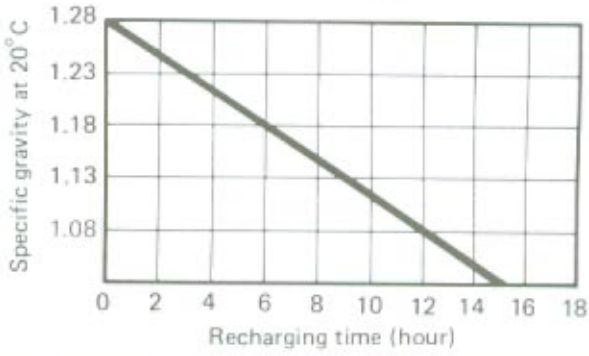
SERVICE LIFE

Lead oxide is applied to the pole plate of the battery which will come off gradually during the service. When the bottom of the battery case becomes full of the sediment, the battery cannot be used any more. If the battery is not charged for a long time, lead sulfate is generated on the surface of the pole plate and will deteriorate the performance (sulfation). Replace the battery with new one in such a case.

STORING

When a battery is left for a long term without using, it is apt to subject to sulfation. When the motorcycle is not used for more than 1 month (especially during the winter season), recharge the battery once a month at least.

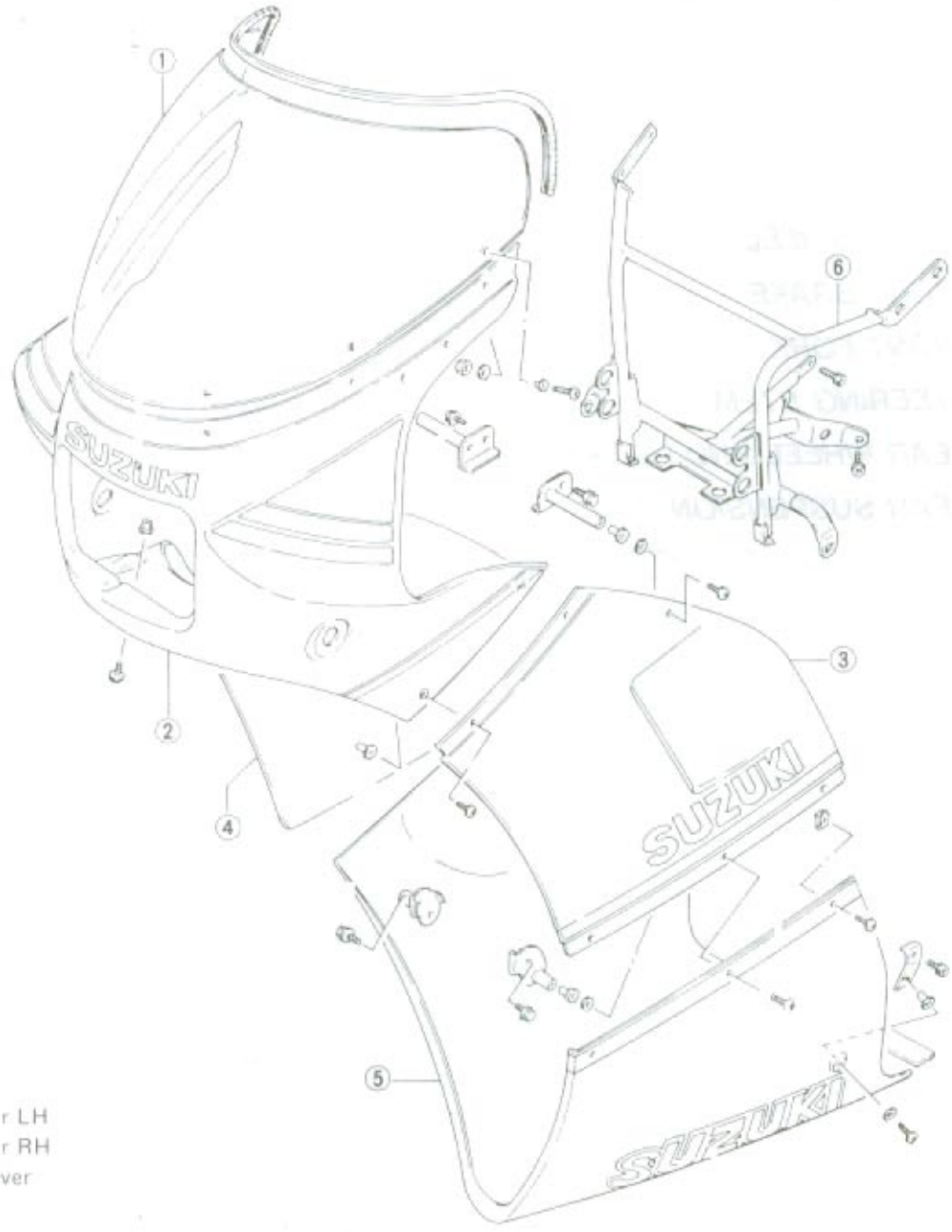
WARNING:
* Before charging a battery, remove the seal cap from each cell.
* Keep fire and sparks away from a battery being charged.
* When removing a battery from the motorcycle, be sure to remove the ⊖ terminal first.



CHASSIS

CONTENTS

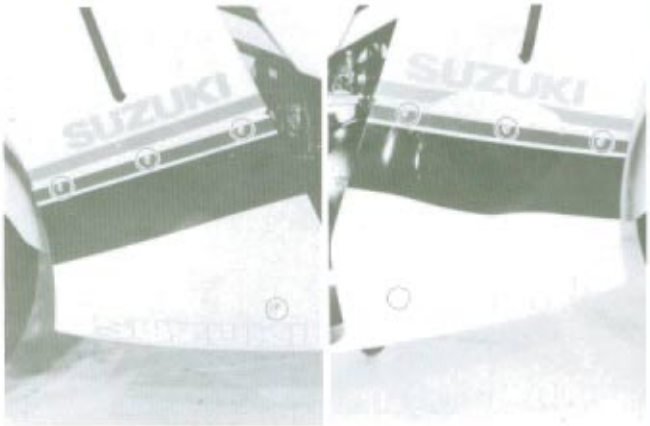
COWLING



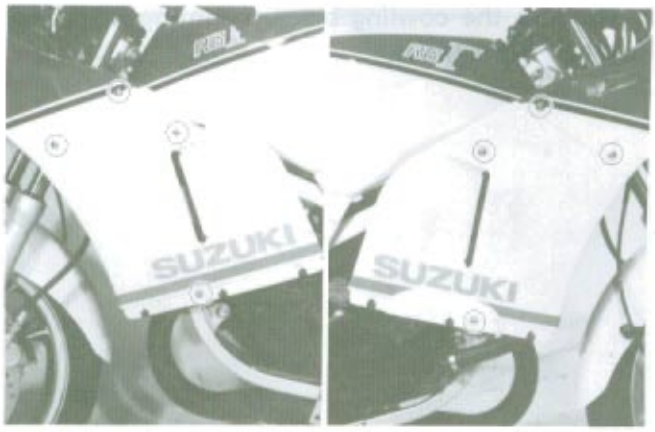
① Screen
② Cowling
③ Side cover LH
④ Side cover RH
⑤ Lower cover
⑥ Brace

REMOVAL

- Remove the lower cover.

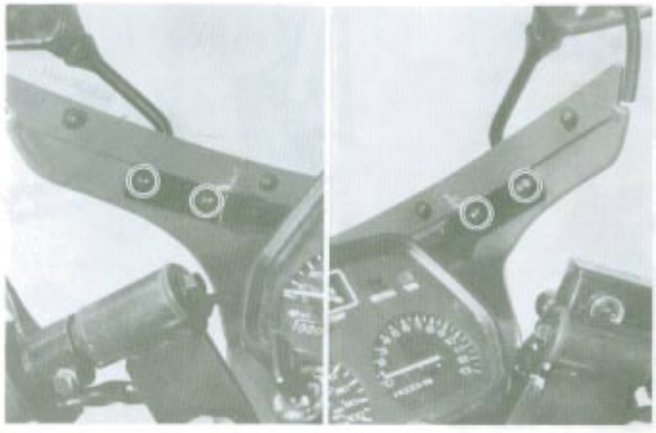


- Remove the side covers.

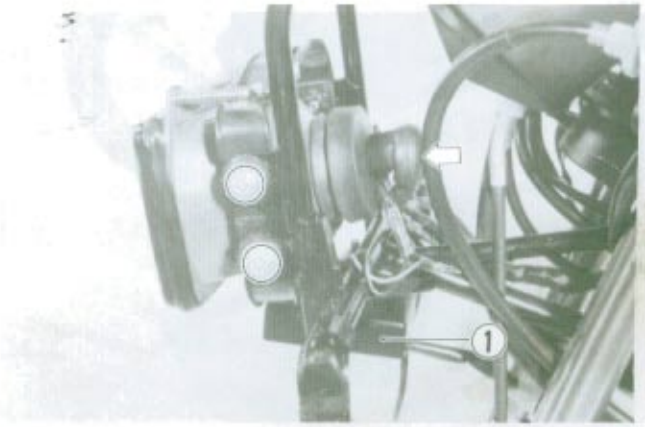


- Disconnect the front turn signal light lead wires and remove the turn signal lights.
- Remove the screws.

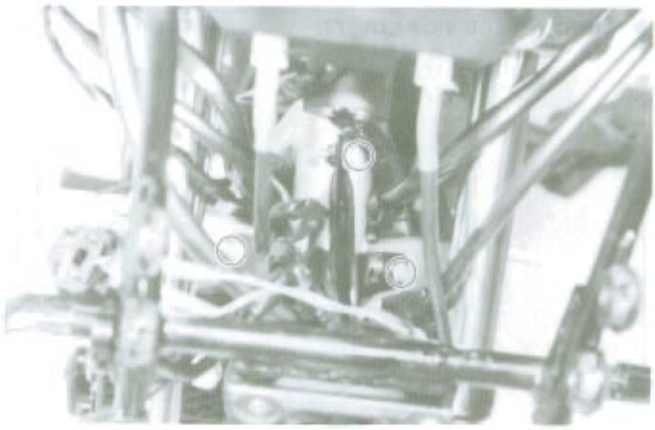
- Remove the rear view mirrors and take off the cowling.



- Disconnect the headlight coupler and lead wires.
- Remove the headlight mounting bolts and take off the headlight.
- Remove the solenoid control unit ①.



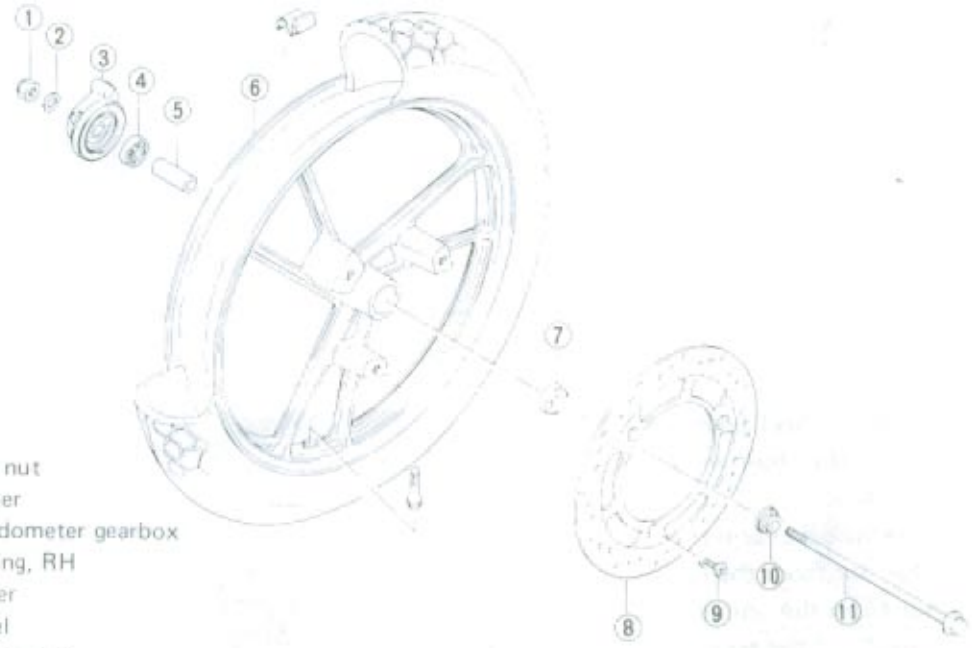
- Remove the cowling brace mounting bolts and take off the brace.



REASSEMBLY

Reassemble and remount the cowling in the reverse order of disassembly and removal.

FRONT WHEEL



1. Axle nut
2. Washer
3. Speedometer gearbox
4. Bearing, RH
5. Spacer
6. Wheel
7. Bearing, LH
8. Brake disc
9. Bolt
10. Axle spacer, LH
11. Axle shaft

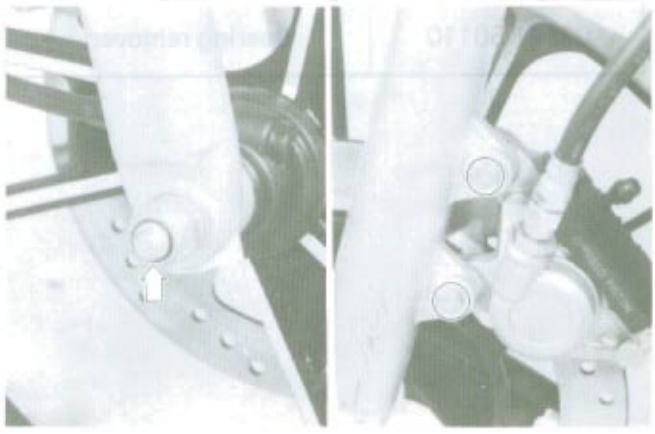
Tightening torque

Item	N-m	kg-m
1	40 – 57	4.0 – 5.7
9	15 – 25	1.5 – 2.5

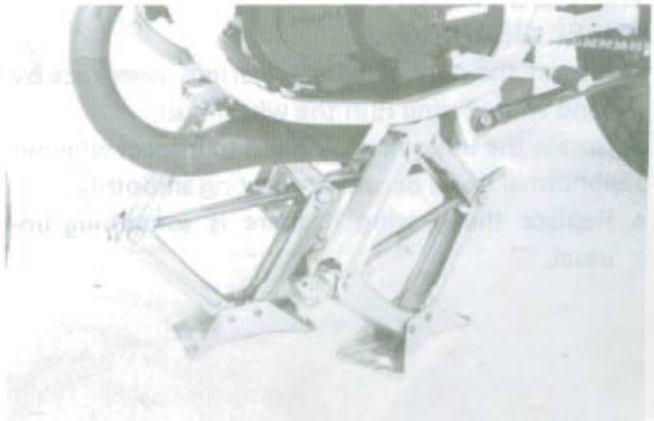
REMOVAL AND DISASSEMBLY

- Remove the axle nut.
- Remove the brake caliper.

NOTE:
Do not operate the brake lever while dismounting the caliper.

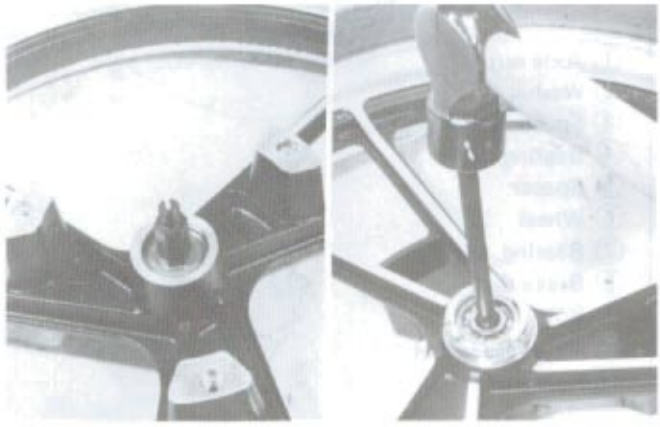


- Support the machine by jack or block.
- Draw out the axle shaft and take off the front wheel.



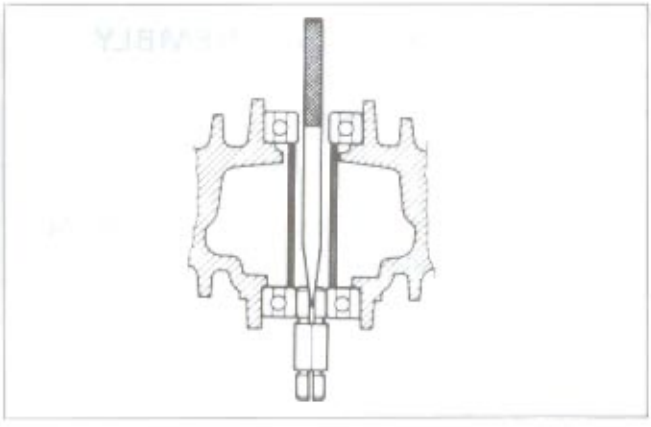
- Remove the front brake disc by using the 6 mm hexagon wrench.

- Drive out the right and left wheel bearings by using the special tool in the following procedures.
- Insert the adapter into the wheel bearing.
- After inserting the wedge bar from the opposite side, lock the wedge bar from the opposite side, lock the wedge bar in the slit of the adapter.
- Drive out the wheel bearing by knocking the wedge bar.



CAUTION:
The removed bearing should be replaced.

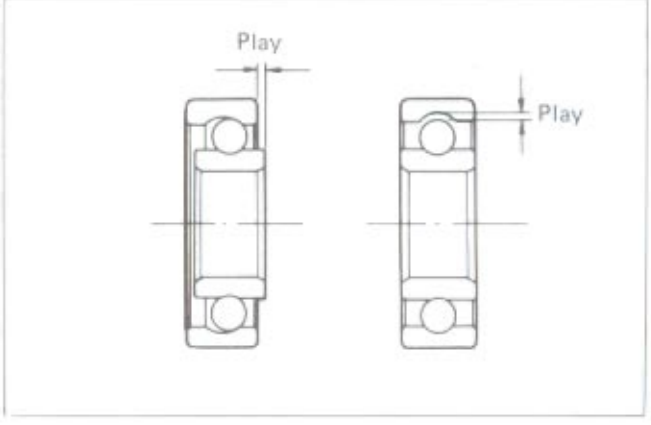
09941-50110	Bearing remover



INSPECTION

WHEEL BEARING

- Inspect the play of wheel bearings inner race by hand while fixing it in the wheel hub.
- Rotate the inner race by hand to inspect whether abnormal noise occurs or rotating smoothly.
- Replace the bearing if there is something unusual.

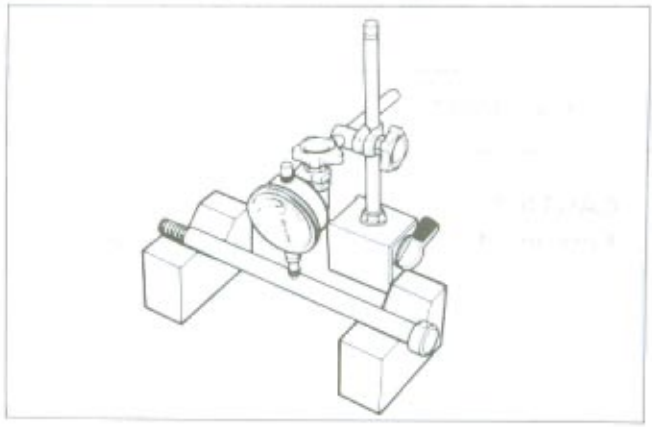


AXLE SHAFT

- 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)
09900-20701	Magnetic stand
09900-21303	"V" block set

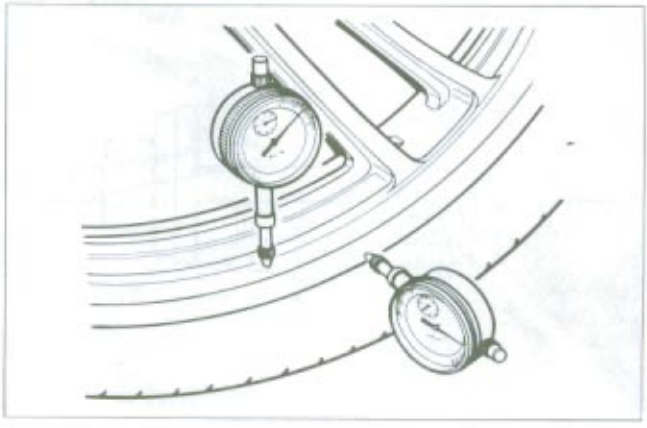
Service Limit	0.25 mm



WHEEL

- Make sure that the wheel runout does not exceed the service limit when checked as shown.
- An excessive amount of 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 replace the wheel.

Service Limit (Axial and Radial)	2.0 mm



FRONT TIRE (See page 2-18)

Service Limit (Thread depth)	1.6 mm

REASSEMBLY

Reassemble and remount the front wheel and front brake in the reverse order of disassembly and removal, and also carry out the following steps:

WHEEL BEARING

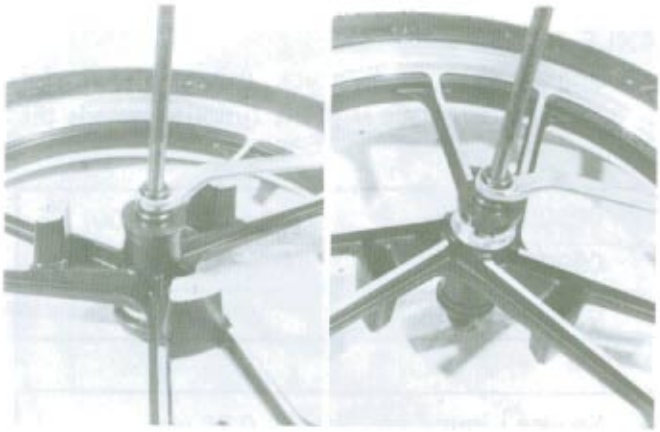
- Apply grease to the bearings before installing.

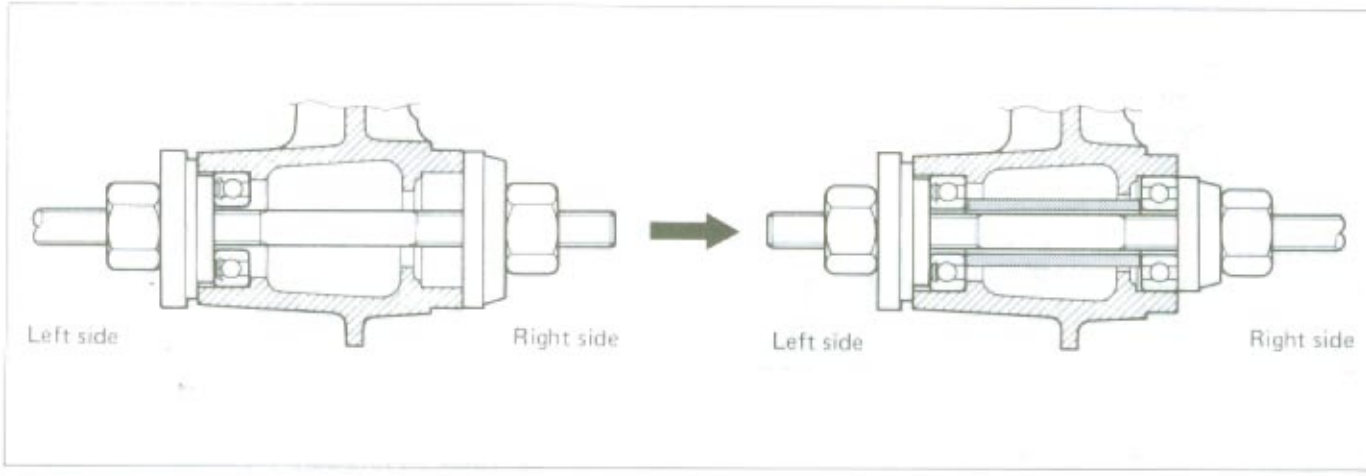
99000-25010	SUZUKI Super grease "A"

- Install the wheel bearings by using the special tool.

09941-34513	Bearing installer set

CAUTION:
First install the wheelbearing for left side.



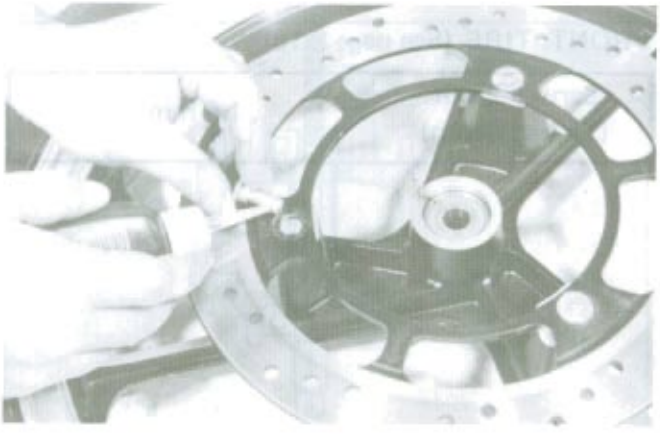


BRAKE DISC

- Make sure that the brake disc is clean and free of any greasy matter.
- Apply Thread Lock Super "1360" to the bolts and tighten them to the specification.

99000-32130	Thread Lock Super "1360"

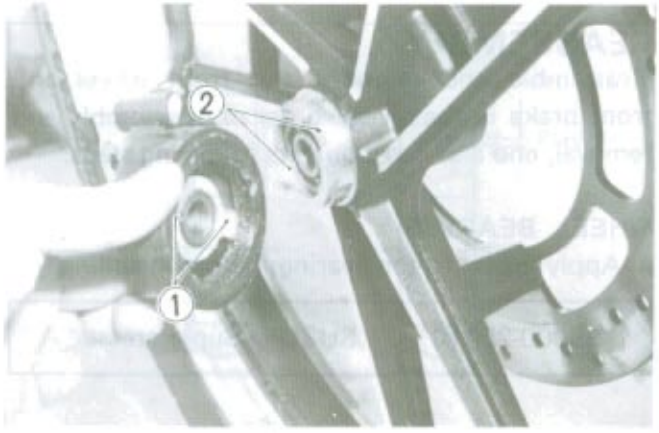
Tightening torque	15 – 25 N·m (1.5 – 2.5 kg-m)



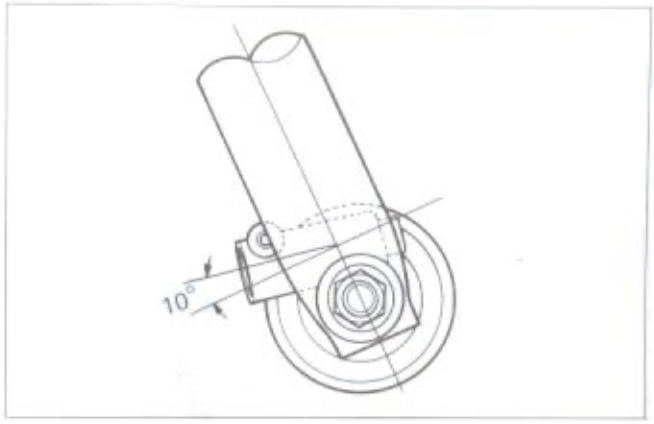
SPEEDOMETER GEARBOX

Before installing the speedometer gearbox, grease it and align the two drive pawls ① to the two recesses ② of the wheel and attach the speedometer gearbox to the wheel.

99000-25010	SUZUKI Super grease "A"



When tightening the front axle, check to be sure that the speedometers gearbox is in the position as shown in Fig. so that the speedometer cable does not bend sharply.

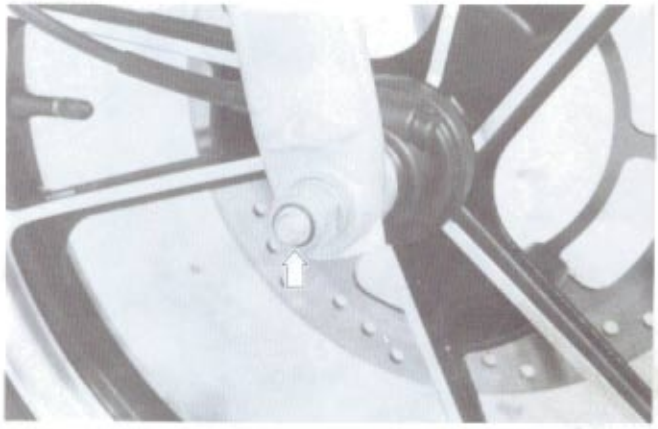


AXLE NUT

Tighten the front axle nut to the specification.

Tightening torque	40 – 57 N·m (4.0 – 5.7 kg-m)

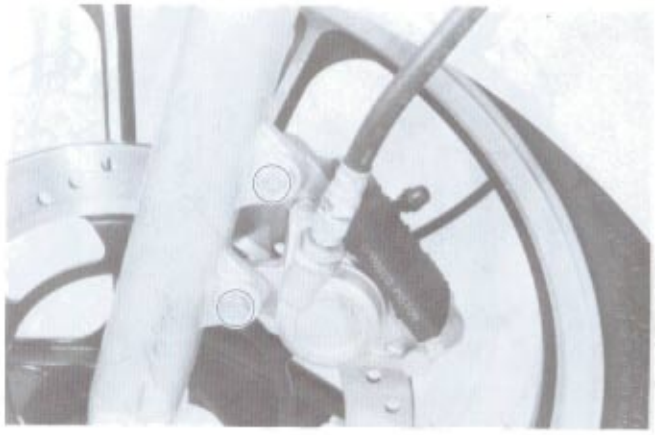
CAUTION:
The front axle nut is self-lock nut. Once the nut has been removed, it is no longer of any use. Be sure to use new nut.



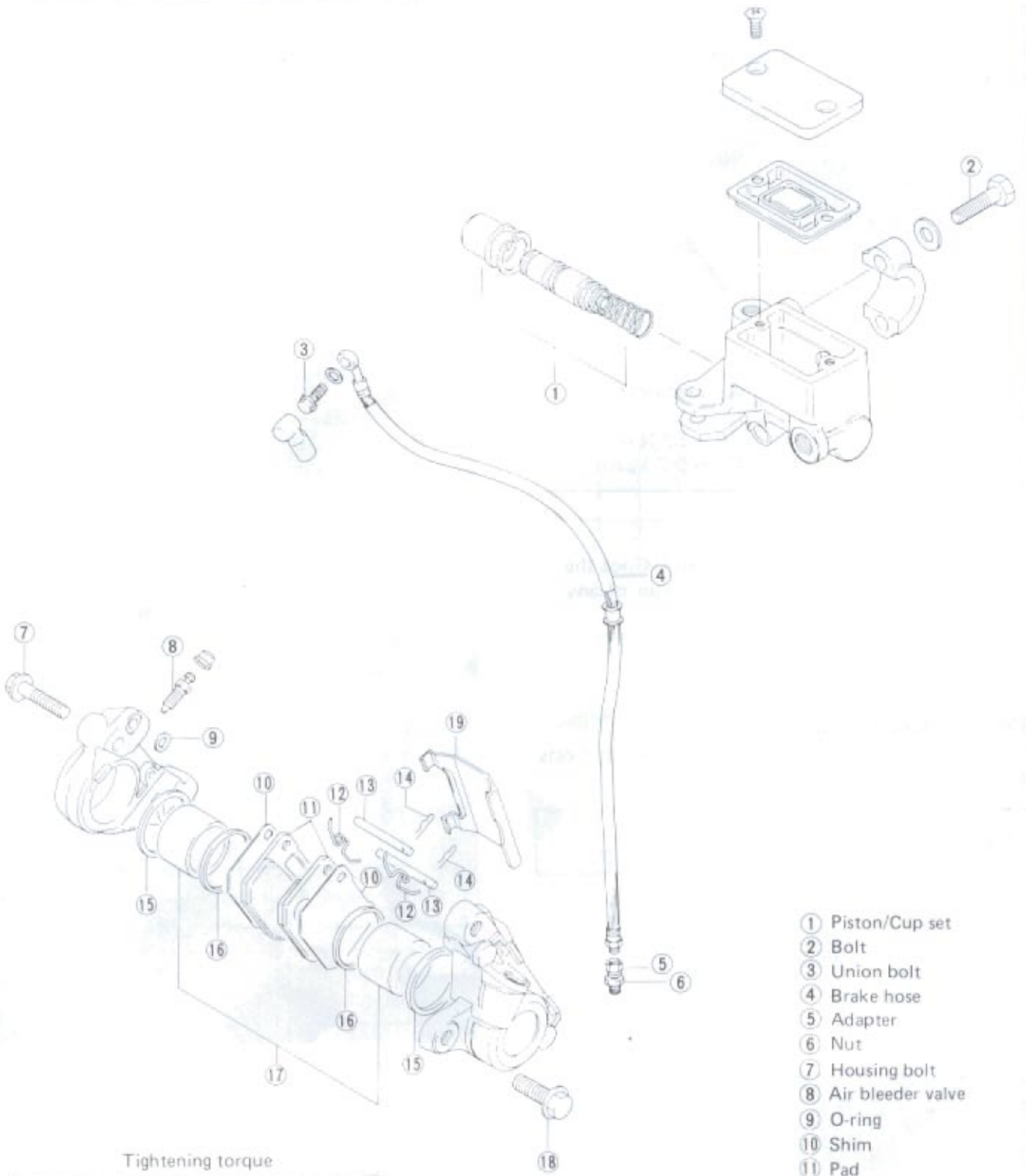
FRONT BRAKE CALIPER

Tighten the front brake caliper mounting bolts to the specification.

Tightening torque	18 – 28 N·m (1.8 – 2.8 kg-m)



FRONT BRAKE



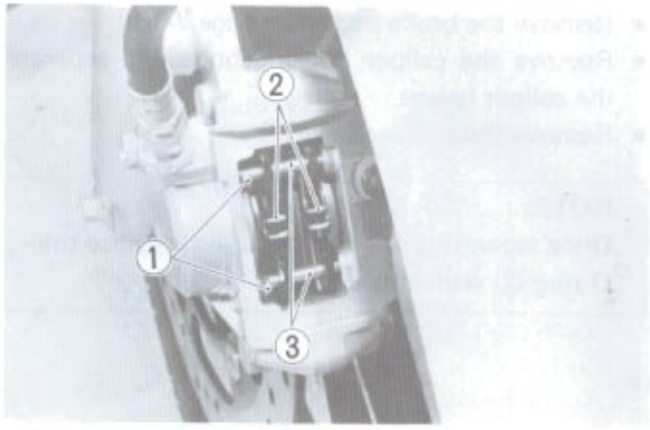
Tightening torque

Item	N·m	kg·m
②	5 – 7	0.5 – 0.7
③, ⑤, ⑥	20 – 25	2.0 – 2.5
⑦	18 – 23	1.8 – 2.3
⑧	6 – 9	0.6 – 0.9
⑱	18 – 28	1.8 – 2.8

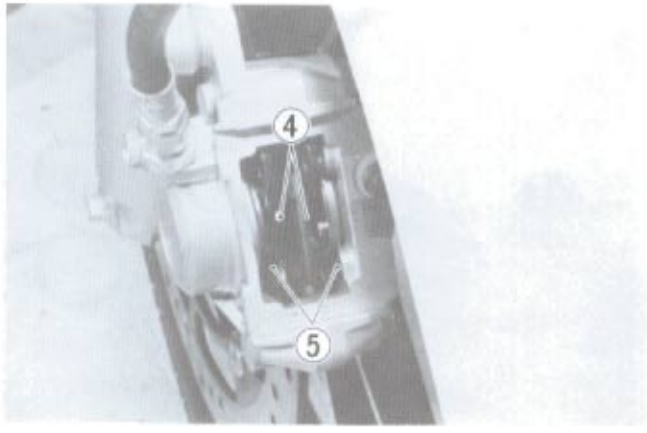
① Piston/Cup set
② Bolt
③ Union bolt
④ Brake hose
⑤ Adapter
⑥ Nut
⑦ Housing bolt
⑧ Air bleeder valve
⑨ O-ring
⑩ Shim
⑪ Pad
⑫ Spring
⑬ Pin
⑭ Clip
⑮ Piston seal
⑯ Dust boot
⑰ Piston
⑱ Caliper mounting bolt
⑲ Cover

BRAKE PAD REPLACEMENT

- Remove the dust cover.
- Remove the clips ①, spring ②, and draw out the pins ③.



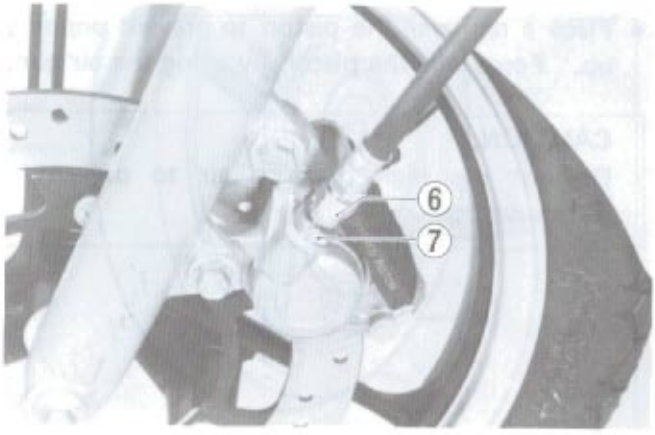
- Take out the brake pads ④ with the pad shims ⑤.



CAUTION:
Replace the brake pads as a set, otherwise braking performance will be adversely affected.

CALIPER REMOVAL AND DISASSEMBLY

- Loosen the adapter ⑥ while holding the nut ⑦.
- Disconnect the brake hose and catch the brake fluid in a suitable receptacle.



CAUTION:
Never re-use the brake fluid left over from the last servicing and stored for long periods.

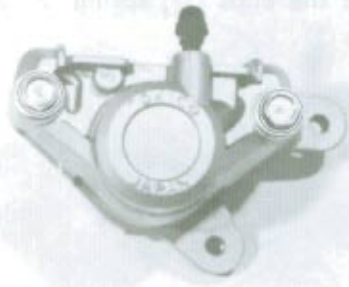
WARNING:
Brake fluid, if it leaks, will interfere with safe running and discolor painted surfaces. Check the brake hose and hose joint for cracks or leakage before riding.

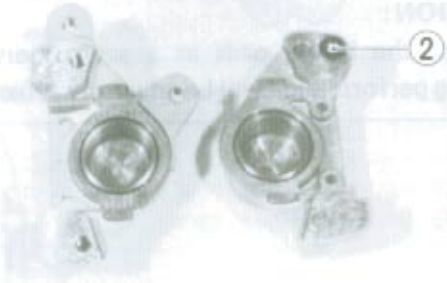
- Remove the caliper mounting bolts and take off the caliper.

NOTE:
Slightly loosen the caliper axle bolts to facilitate later disassembly.

- Remove the brake pads (See page 7-10).
- Remove the caliper housing bolts and separate the caliper halves.
- Remove the bleeder valve ①.

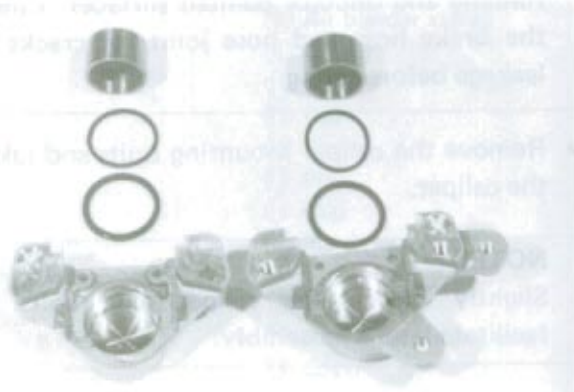
NOTE:
Once separating the caliper halves, replace the O-ring ② with a new one.





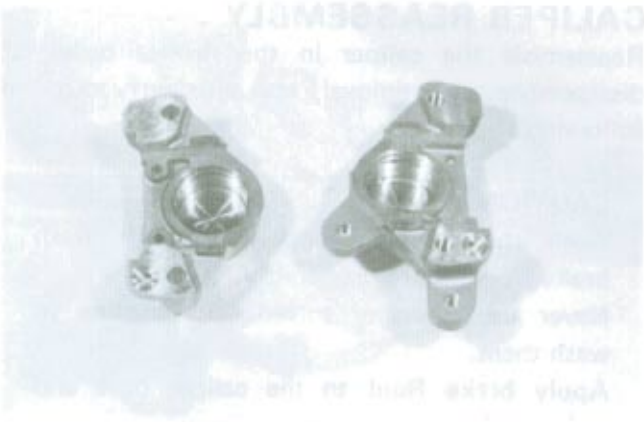
- Place a rag over the piston to prevent popping up. Force out the piston by using the air gun.

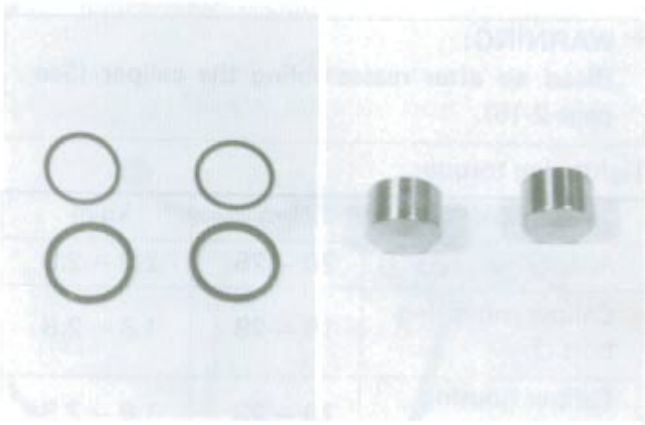
CAUTION:
Do not use high pressure air to prevent piston damage.



CALIPER AND DISC INSPECTION

- Inspect the caliper bore wall for nicks, scratches or other damage.
- Inspect the each rubber part for damage and wear.
- Inspect the piston surface for any scratches or other damage.

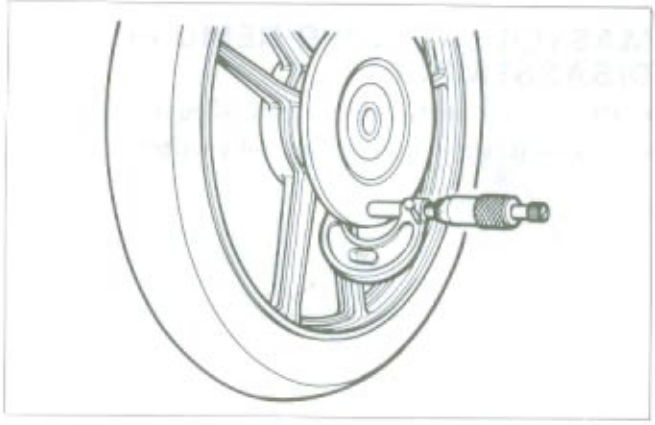




- Check the disc for wear by using a micrometer. Its thickness can be checked with disc and wheel in place. Replace the disc if the thickness exceeds the service limit.

09900-20205	Micrometer (0 – 25 mm)

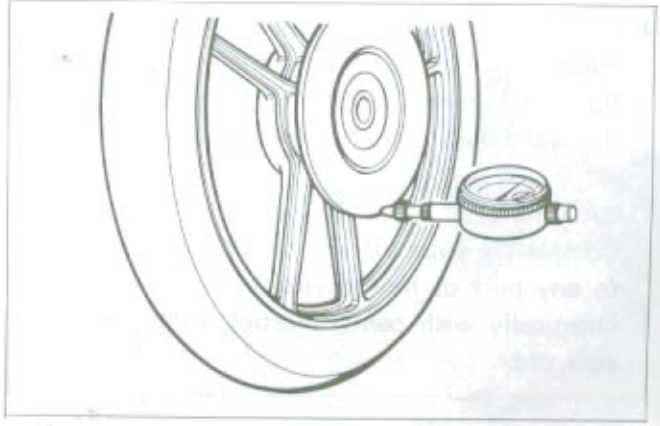
Service Limit	3.5 mm



- With the disc mounted on the wheel, check the disc for face runout with a dial gauge, as shown. Replace the disc if the runout exceeds the service limit.

09900-20606	Dial gauge (1/100 mm)
09900-20701	Magnetic stand

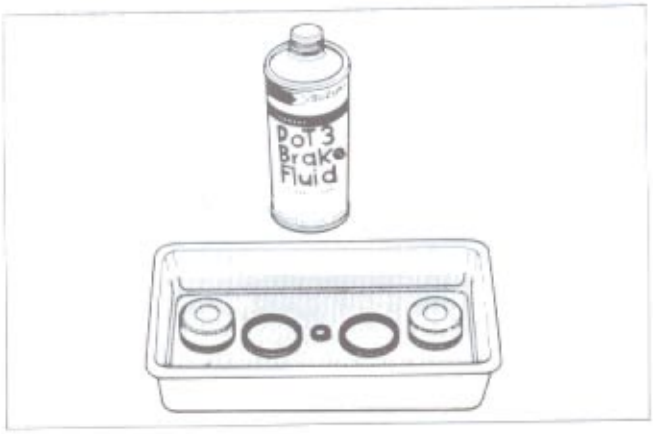
Service Limit	0.30 mm



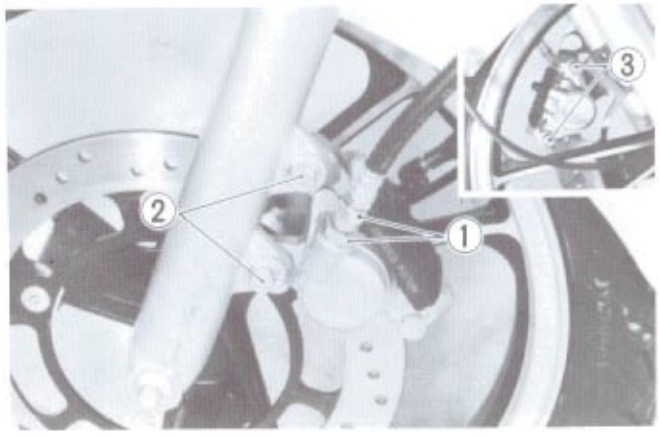
CALIPER REASSEMBLY

Reassemble the caliper in the reverse order of disassembly and removal, and also carry out the following steps:

CAUTION:
Wash the caliper components with fresh brake fluid before reassembly.
Never use cleaning solvent or gasoline to wash them.
Apply brake fluid to the caliper bore and piston to be inserted into the bore.



WARNING:
Bleed air after reassembling the caliper (See page 2-16).



Tightening torque:

Item	N·m	kg-m
Adapter and nut ①	20 – 25	2.0 – 2.5
Caliper mounting bolt ②	18 – 28	1.8 – 2.8
Caliper housing bolt ③	18 – 23	1.8 – 2.3

MASTER CYLINDER REMOVAL AND DISASSEMBLY

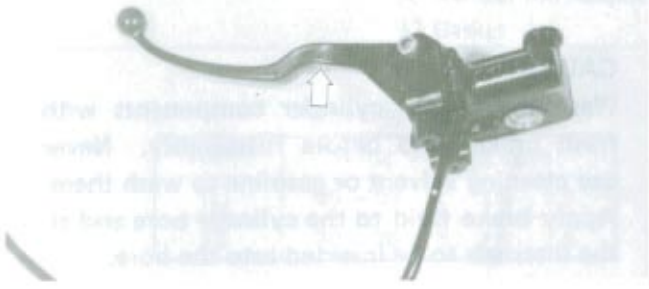
- Remove the seat and fuel tank (See page 3-2).
- Disconnect the front brake light switch.

- Place a cloth underneath the union bolt on the master cylinder to catch spilled drops of brake fluid. Unscrew the union bolt and disconnect the brake hose/master cylinder joint.

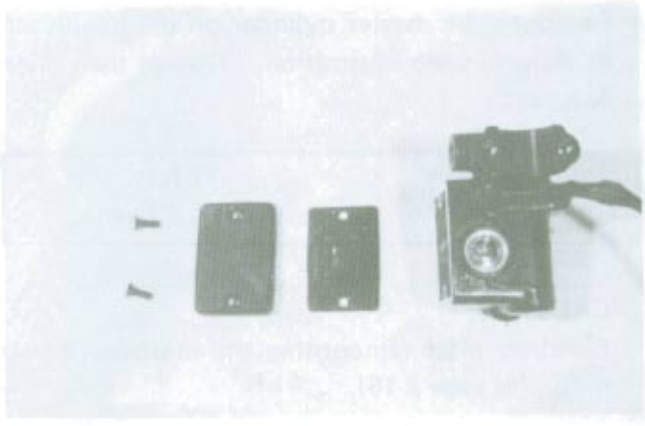
CAUTION
Completely wipe off any brake fluid adhering to any part of motorcycle. The fluid reacts chemically with paint, plastics, rubber materials, etc.

- Remove the two clamp bolts and take off the master cylinder assembly.

- Remove the front brake lever.



- Remove reservoir cap and diaphragm.
- Drain brake fluid.

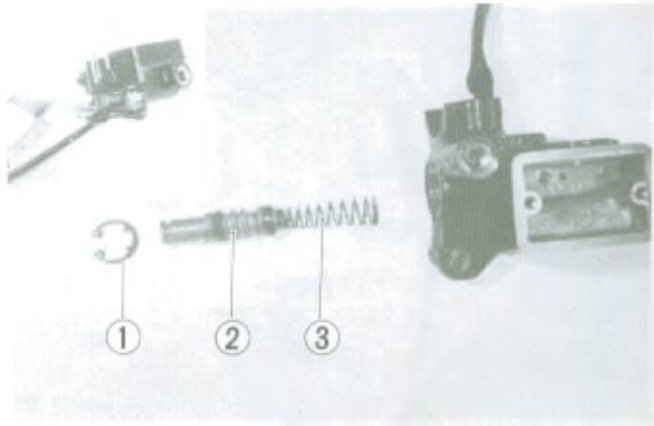


- Remove the dust boot.
- Remove the circlip by using the special tool.

09900-06108	Snap ring pliers

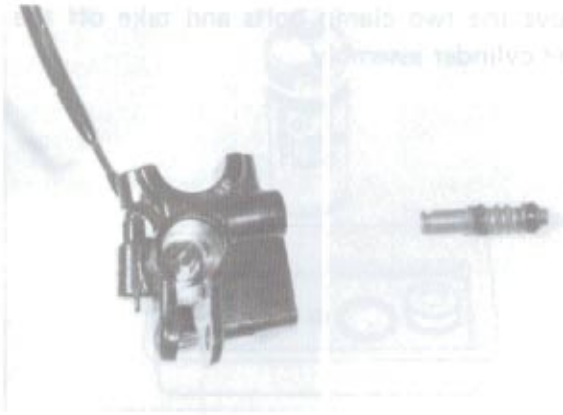
- Remove the piston and spring.

① Circlip
② Piston
③ Return spring



MASTER CYLINDER INSPECTION

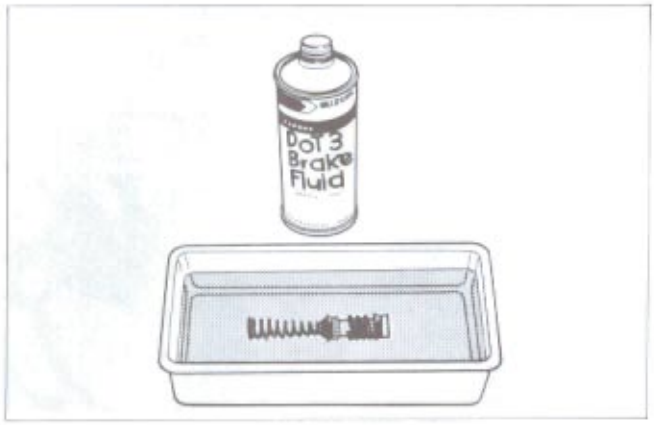
- Inspect the master cylinder bore for any scratches or other damage.
- Inspect the piston surface for scratches or other damage.



REASSEMBLY

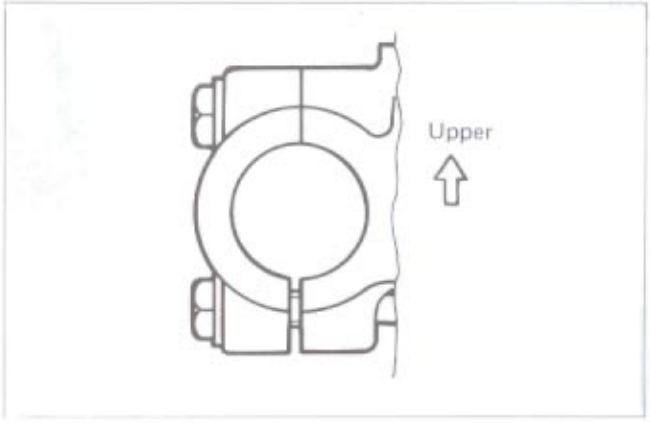
Reassemble the master cylinder in the reverse order of disassembly and also carry out the following steps:

CAUTION:
Wash the master cylinder components with fresh brake fluid before reassembly. Never use cleaning solvent or gasoline to wash them. Apply brake fluid to the cylinder bore and all the internals to be inserted into the bore.



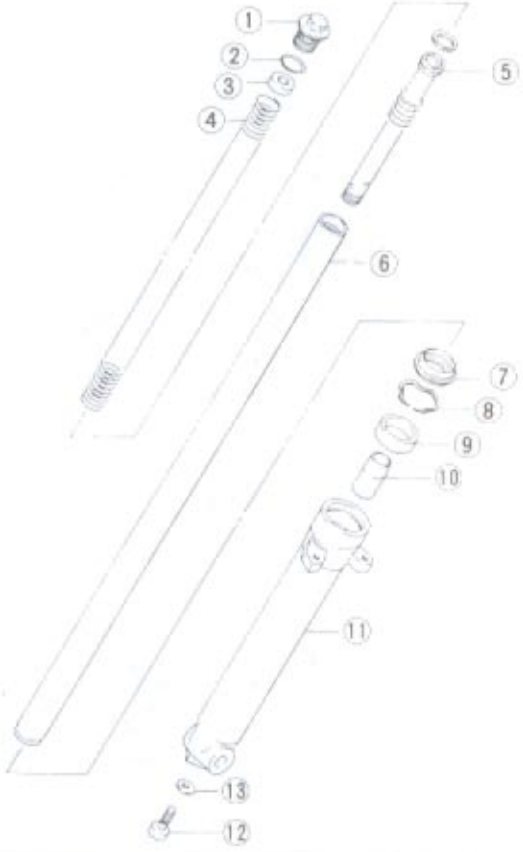
- Remount the master cylinder on the handlebar as shown in the illustration. Tighten the upper bolt first.

Tightening torque	5 – 7 N·m (0.5 – 0.7 kg-m)



CAUTION:
Bleed air after remounting the master cylinder. (See page 2-16).

FRONT FORK



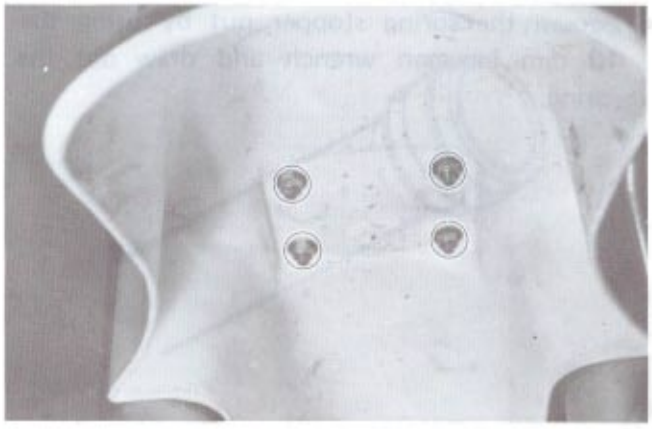
1. Cap bolt
2. O-ring
3. Spring stopper nut
4. Spring
5. Damper rod
6. Inner tube
7. Dust seal
8. Oil seal stopper
9. Oil seal
10. Oil lock piece
11. Outer tube
12. Damper rod bolt
13. Gasket

Tightening torque

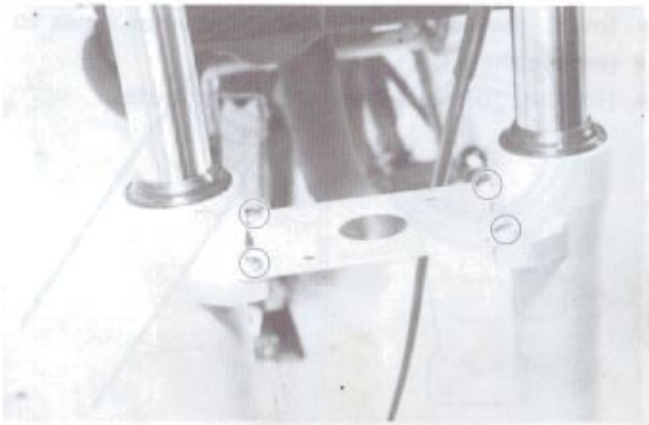
Item	N·m	kg-m
1	35 – 55	3.5 – 5.5
12	20 – 26	2.0 – 2.6

REMOVAL AND DISASSEMBLY

- Remove the front wheel (See page 7-4).
- Remove the front fender.

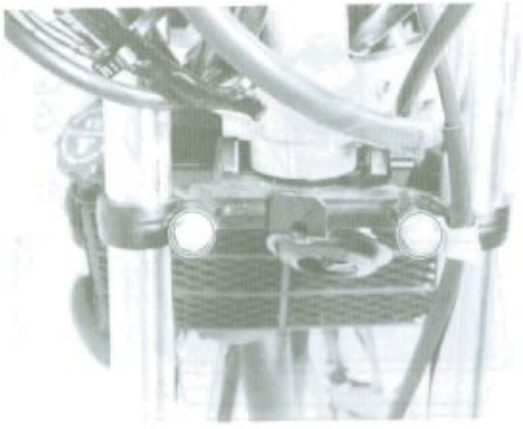


- Remove the front fender brace by using the 3 mm hexagon wrench.



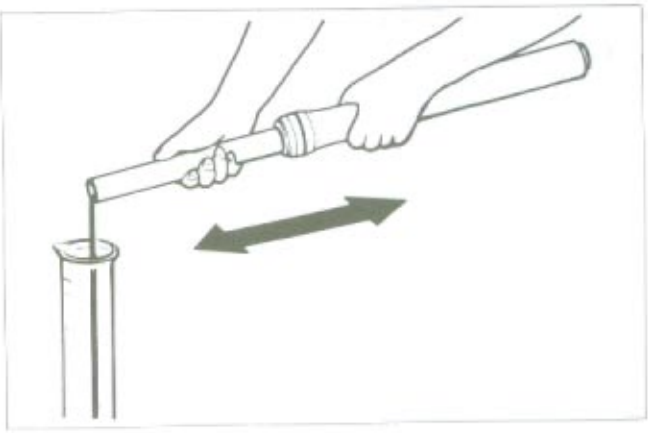
- Remove the front fork cap bolts.

- Loosen the front fork lower clamp bolts and pull down the forks.



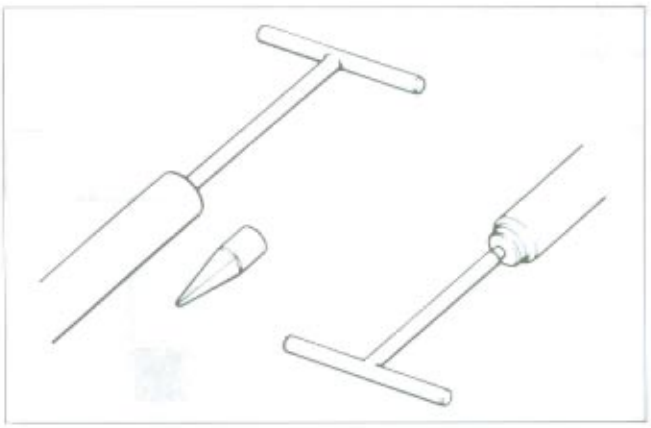
- Loosen the spring stopper nut by using the 10 mm hexagon wrench and draw out the spring.

- Invert the fork and stroke it several times to remove the oil.
- Hold the fork inverted for a few minutes.



- Remove the damper rod bolt by using the 8 mm hexagon wrench and special tools.

09940-34520	"T" handle
09940-34561	Attachment "D"

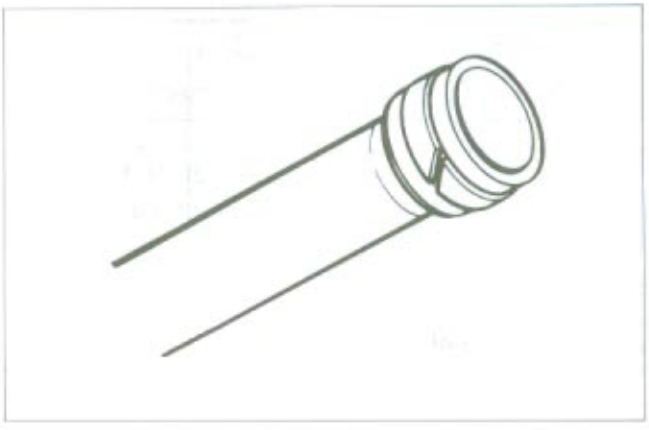


- Remove the dust seal and oil seal stopper.
- Draw out the inner tube from the outer tube.

INSPECTION

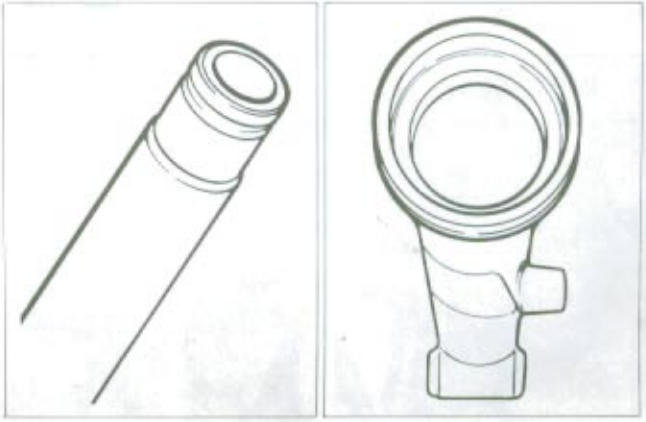
DAMPER ROD RING

- Inspect the damper rod ring for wear and damage.



INNER TUBE AND OUTER TUBE

- Inspect the inner tube and outer tube sliding surfaces for any scuffing or flaws.



FORK SPRING

- Measure the fork spring free length. If it is shorter than the service limit, replace it.

Service Limit	435 mm

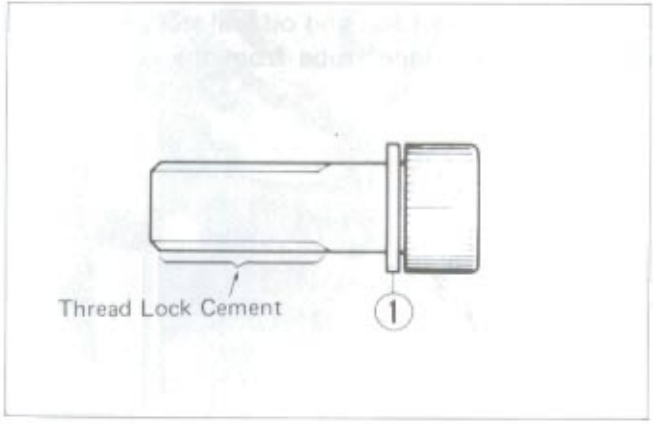
REASSEMBLY

Reassemble and remount the front fork in the reverse order of disassembly and removal, and also carry out the following steps:

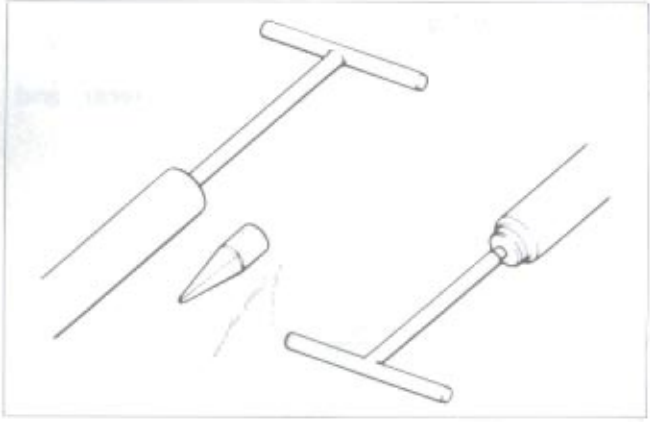
DAMPER ROD BOLT

- Apply Thread Lock Cement to the damper rod bolt and tighten the bolt to the specification by using the 8 mm hexagon wrench and special tools.

99000-32040	Thread Lock Cement



09940-34520	"T" handle
09940-34561	Attachment "D"



Tightening torque	20 – 26 N·m (2.0 – 2.6 kg-m)

CAUTION:
Use a new gasket ①.

- Install the oil seal by using the special tool.

09940-50112	Oil seal installer

FORK OIL

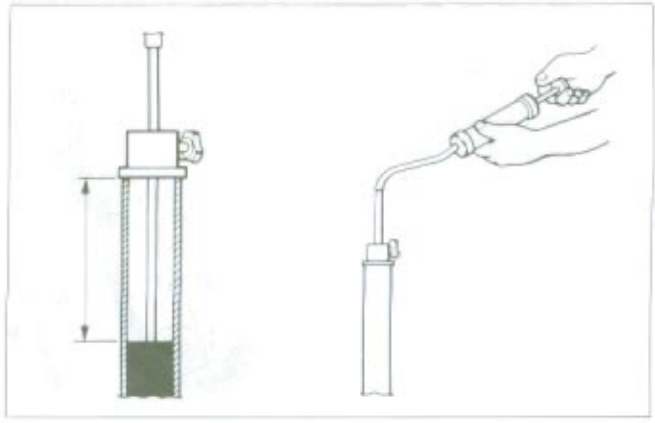
- For the fork oil, be sure to use a front fork oil whose viscosity rating meets specifications below.

Fork oil type	FORK OIL # 15
Capacity (each leg)	149 ml

- Hold the front fork vertical and adjust the fork oil level by using the special tool.

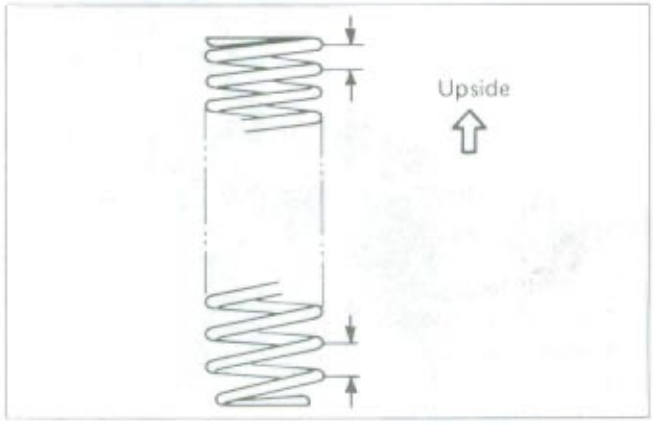
NOTE:
When adjusting oil level, remove the fork spring and compress the inner tube fully.

09943-74111	Fork oil level gauge
Oil level	137 mm

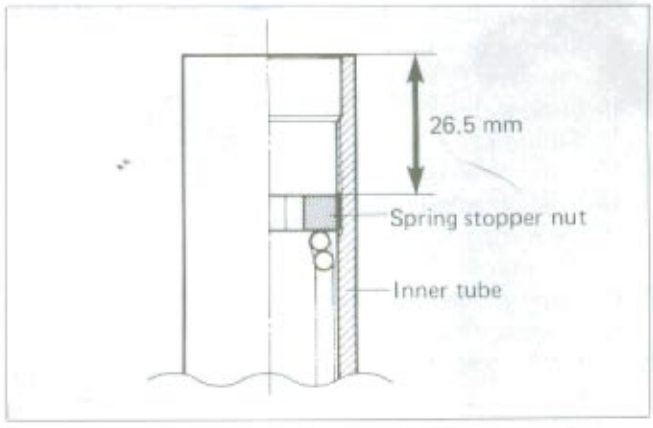


FORK SPRING

- When installing the front fork spring, the close pitch end should position upside.



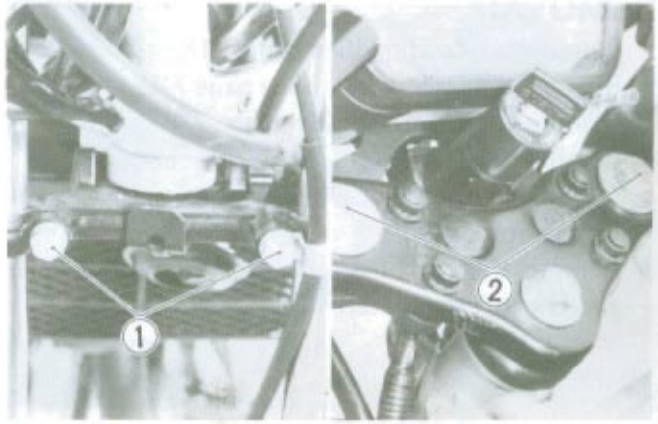
- Compress the fork spring by tightening the spring stopper nut to the 26.5 mm from top of the inner tube as shown in the illustration.



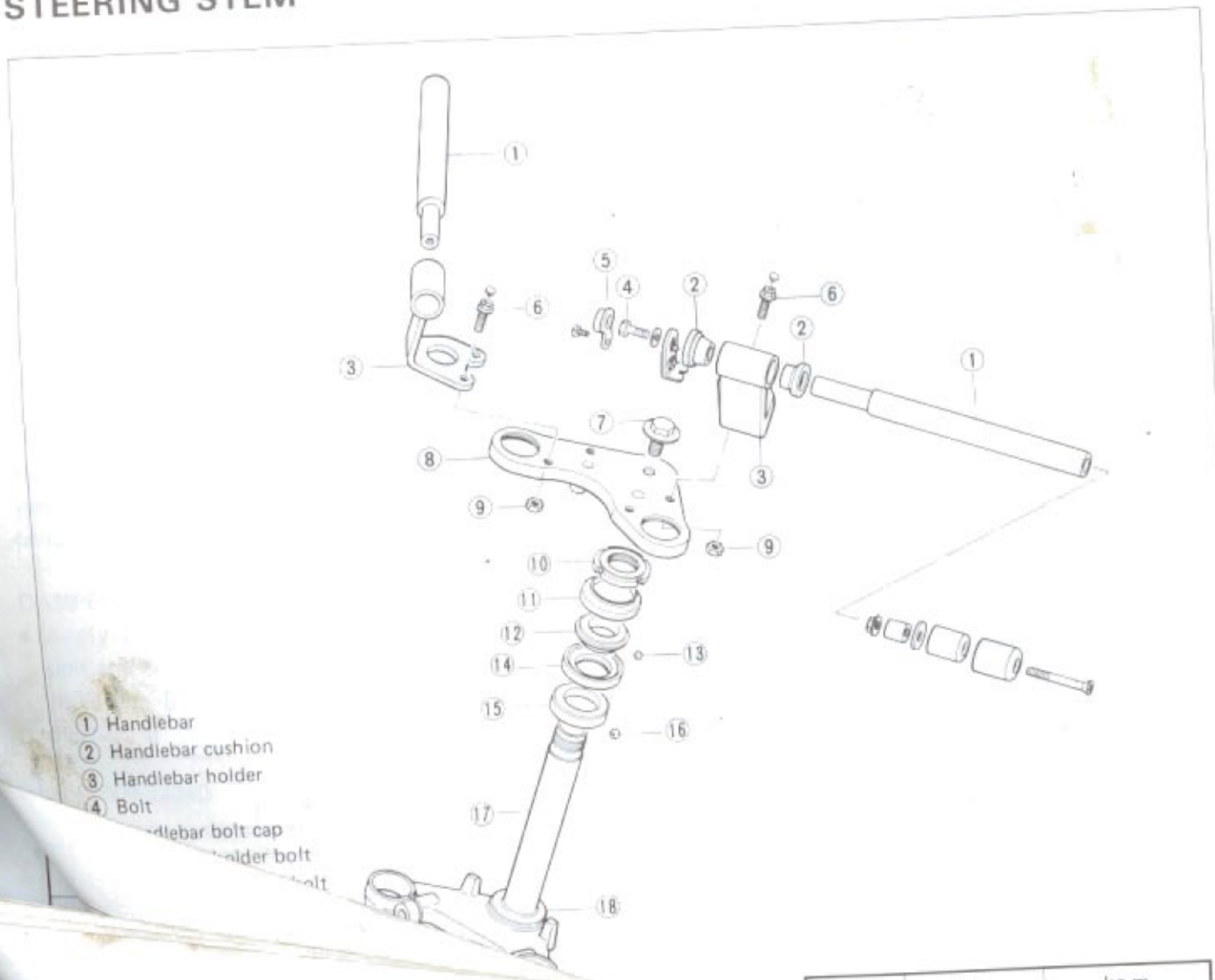
REMOUNTING

- When installing the front fork assembly, attach the top of inner tube to the lower surface of the steering stem upper bracket.
- Tighten the front fork lower clamp bolts ① and cap bolts ②.

Tightening torque	①	20 – 30 N·m (2.0 – 3.0 kg-m)
	②	35 – 55 N·m (3.5 – 5.5 kg-m)



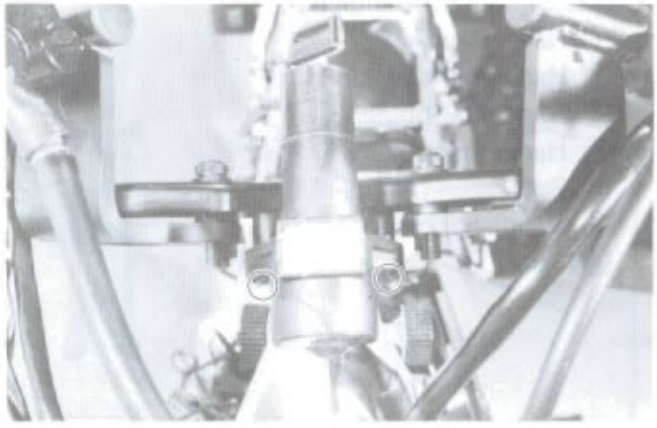
STEERING STEM



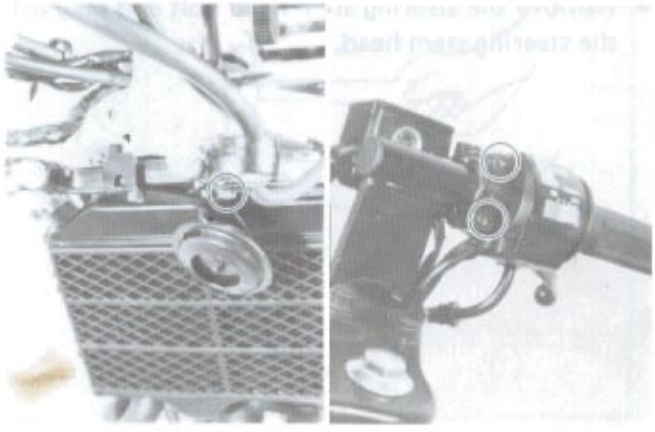
1. Handlebar
2. Handlebar cushion
3. Handlebar holder
4. Bolt
- dlebar bolt cap
- older bolt
- olt

Item	N·m	kg·m
4	15 – 25	1.5 – 2.5
6	15 – 25	1.5 – 2.5
	35 – 55	3.5 – 5.5
9	10 – 15	1.0 – 1.5
19	20 – 30	2.0 – 3.0

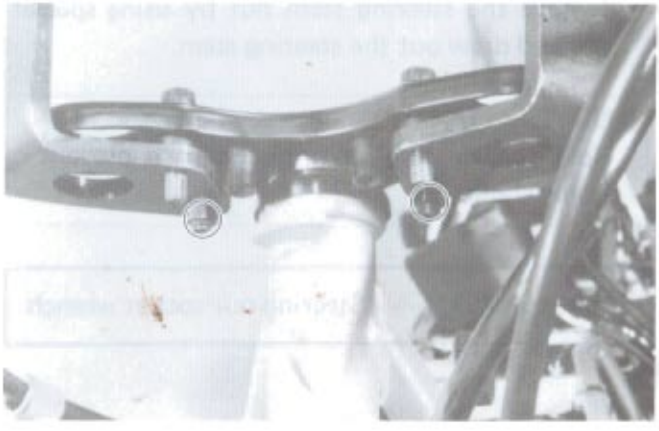
- Remove the ignition switch mounting bolts by using the 5 mm hexagon wrench and take off the ignition switch.



- Remove the brake hose clamp bolt.
- Remove the master cylinder mounting bolts.

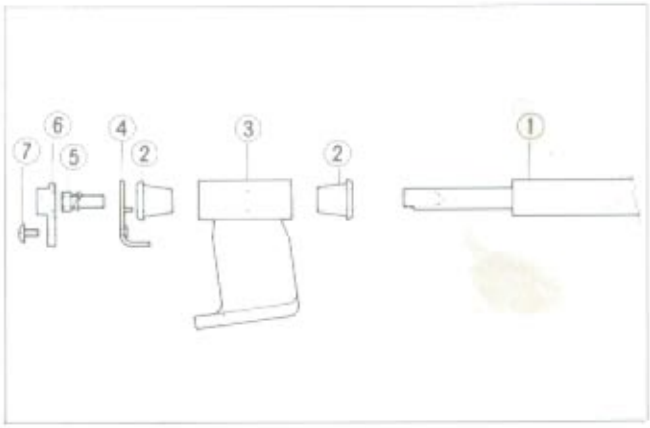


- Remove the handlebar holder lock nuts.



- Take off the four caps and then remove the handlebar holder mounting bolts by using the 6 mm hexagon wrench.

- Disassemble the handlebar.
  ① Handlebar
  ② Handlebar cushion
  ③ Handlebar holder
  ④ Handlebar plate
  ⑤ Bolt
  ⑥ Handlebar cap
  ⑦ Screw



- Remove the steering stem head bolt and take off the steering stem head.

- Remove the steering stem nut by using special tool and draw out the steering stem.

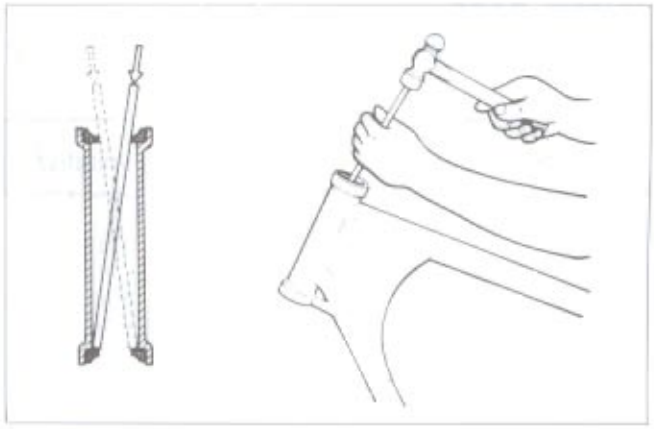
NOTE:
Hold the steering stem by hand to prevent from falling.

2040-14911	Steering nut socket wrench

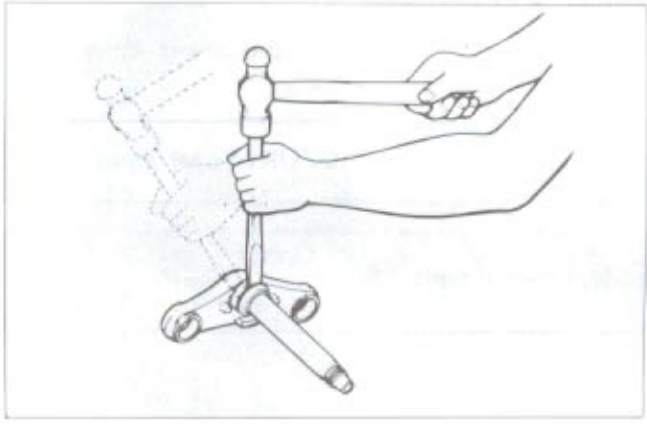
REMO

- Remov
- Remove t
- Remove the
- Remove the s
- Disconnect the tachometer cable.
- Remove the combi and take off the mete

- Draw out the two inner races fitted to the top and bottom ends of the head pipe.



- Remove the outer race fitted on the steering stem. This can be done with a chisel.



INSPECTION

Inspect and check the removed parts for the following abnormalities.

- Race wear and brinelling.
- Worn or damaged steel balls.
- Distortion of steering stem.

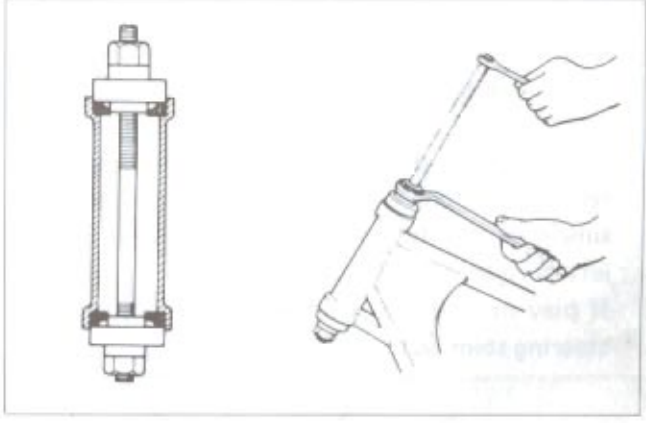
REASSEMBLY

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 using the special tool.

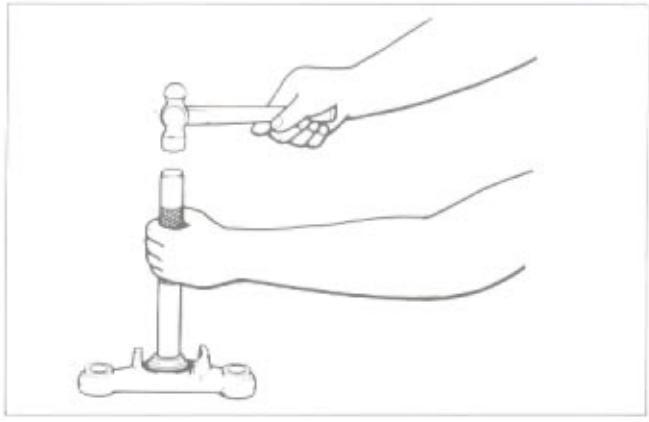
09941-34513	Steering race installer



OUTER RACE

Press in the lower outer race by using the special tool.

09941-74910	Steering bearing installer

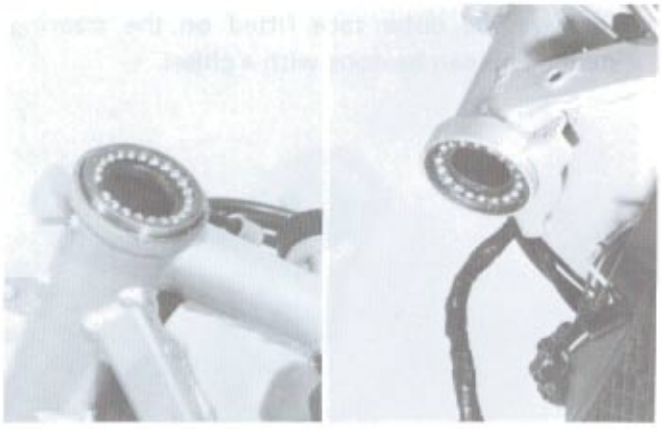


STEEL BALL

Apply grease to the upper and lower inner races when installing the steel balls.

99000-25010	SUZUKI Super grease "A"

Number of balls	Upper	22 pcs
	Lower	18 pcs

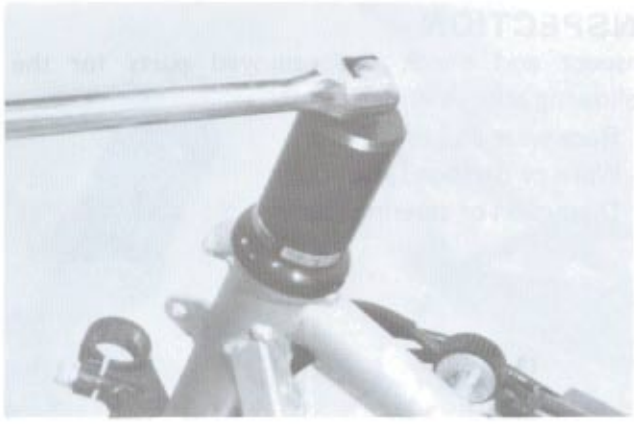


STEERING STEM NUT

Tighten the steering stem nut to 40 – 50 N·m (4.0 – 5.0 kg-m) and then turn back the stem nut 1/4 – 1/2 turn.

09940-14911	Steering nut socket wrench

NOTE:
This adjustment will vary from motorcycle to motorcycle.



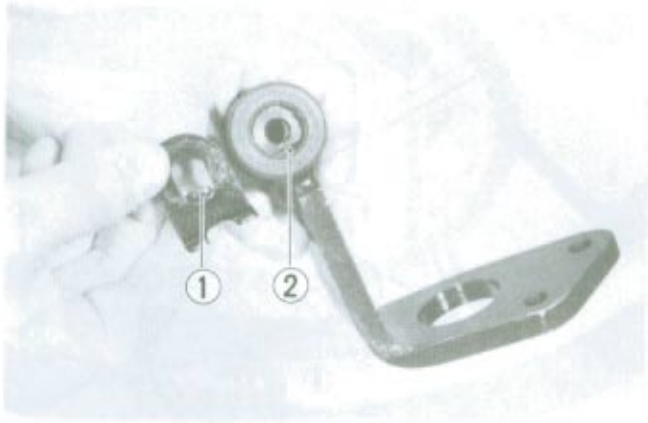
CAUTION:
After performing the adjustment and installing the steering stem, "rock" the front fork forward and backward to ensure that there is no play and that the procedure was accomplished correctly. Finally check to be sure that the steering stem moves freely from left to right with the own weight.
If play or stiffness is noticeable, re-adjust the steering stem nut.

HANDLEBAR

- When installing the handlebar plate align the pawl ① and slit ②.
- Apply THREAD LOCK SUPER "1322" to the bolt and tighten it to the specification.

99000-32110	Thread Lock Super "1322"

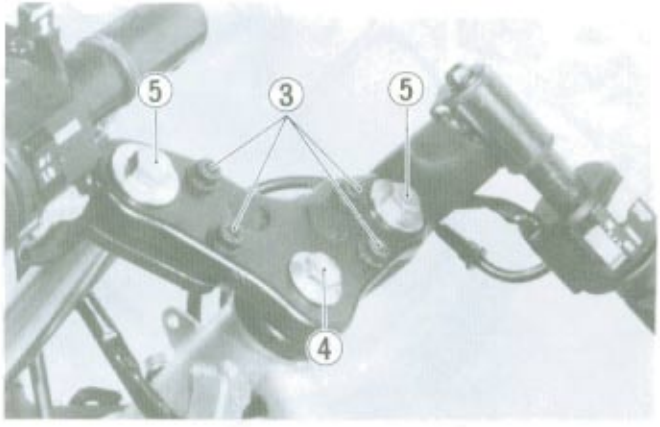
Tightening torque	15 – 25 N·m (1.5 – 2.5 kg-m)



STEERING STEM HEAD

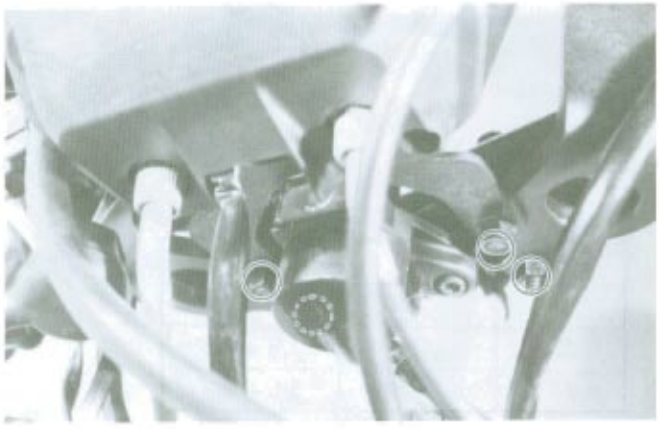
Install the front forks and then tighten the handlebar holder bolts ③, steering stem head bolt ④ and front fork cap bolts ⑤ to the specification.

Tightening torque	③	15 – 25 N·m (1.5 – 2.5 kg-m)
	④ ⑤	35 – 55 N·m (3.5 – 5.5 kg-m)



- Tighten the handlebar holder nuts to the specification.

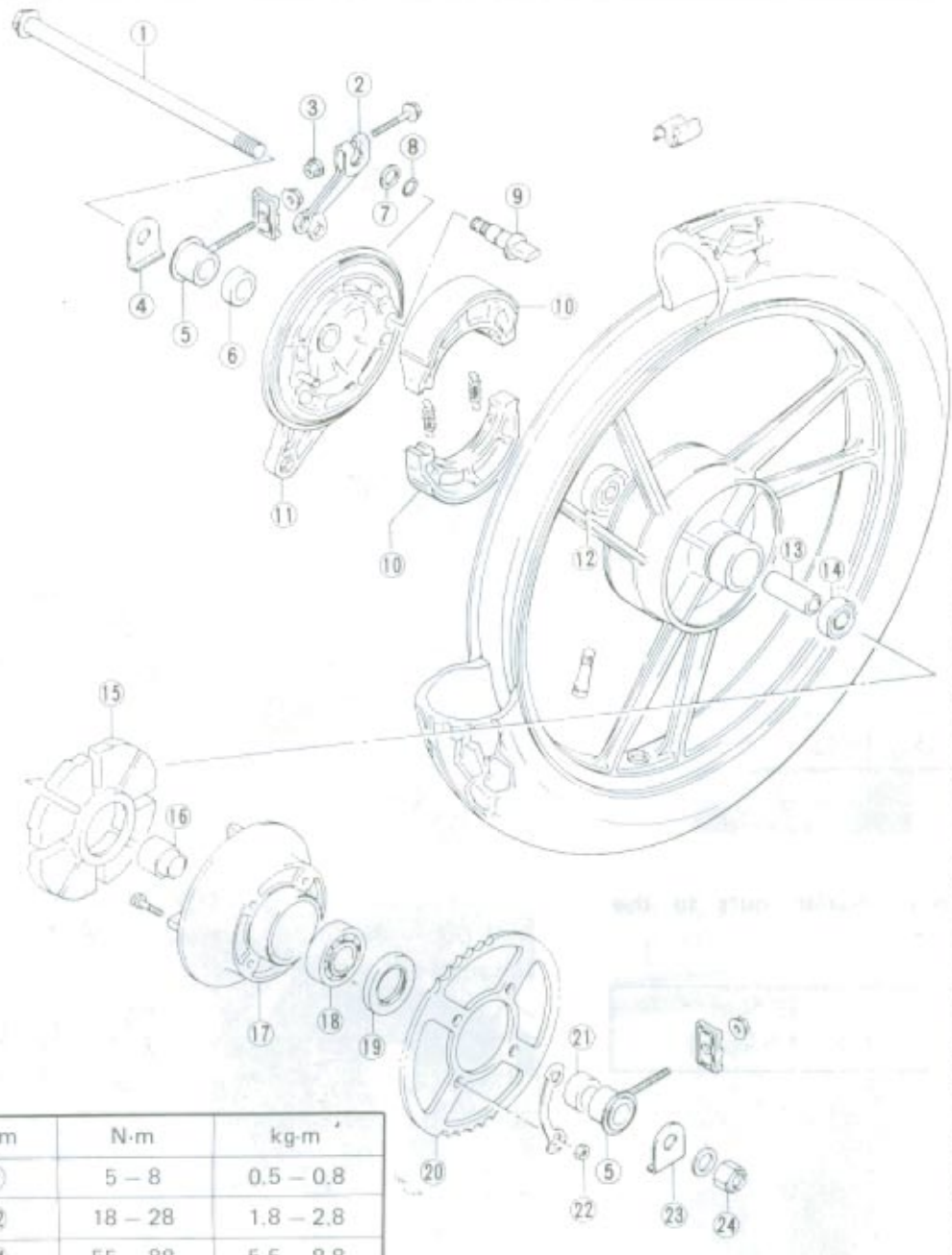
Tightening torque	10 – 15 N·m (1.0 – 1.5 kg-m)



WIRE AND CABLE ROUTING

Refer to pages 8-10 through 8-13.

REAR WHEEL AND REAR BRAKE

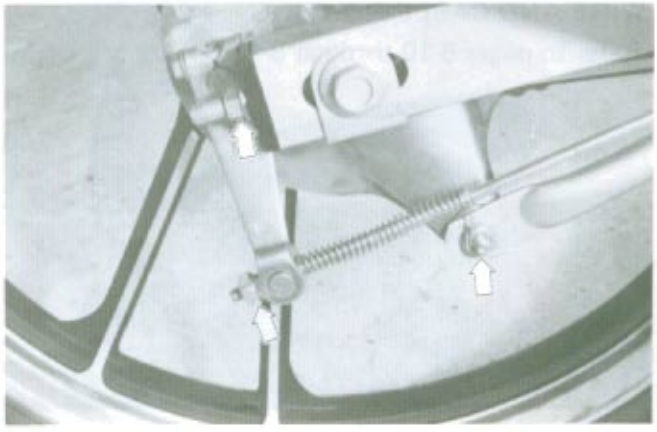


Item	N·m	kg·m
③	5 – 8	0.5 – 0.8
㉒	18 – 28	1.8 – 2.8
㉔	55 – 88	5.5 – 8.8

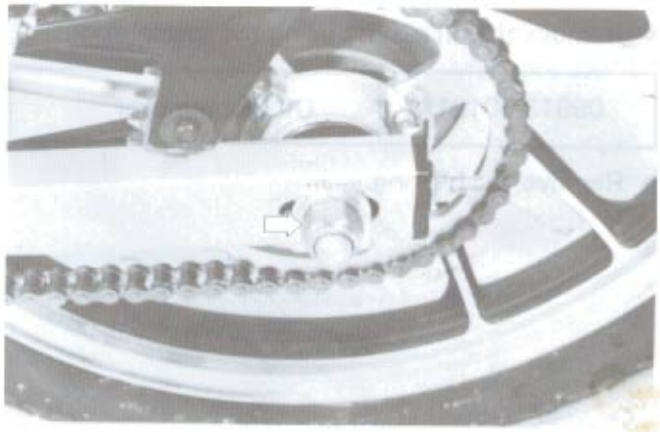
① Rear axle shaft
② Rear brake cam lever
③ Cam lever nut
④ Chain adjuster washer
⑤ Chain adjuster
⑥ Spacer RH
⑦ Washer
⑧ O-ring
⑨ Brake camshaft
⑩ Brake shoe
⑪ Panel
⑫ Bearing RH
⑬ Spacer
⑭ Bearing LH
⑮ Cushion
⑯ Retainer
⑰ Mounting drum
⑱ Bearing LH
⑲ Oil seal
⑳ Rear sprocket
㉑ Spacer LH
㉒ Rear, sprocket nut
㉓ Chain adjuster washer
㉔ Rear axle nut

REMOVAL AND DISASSEMBLY

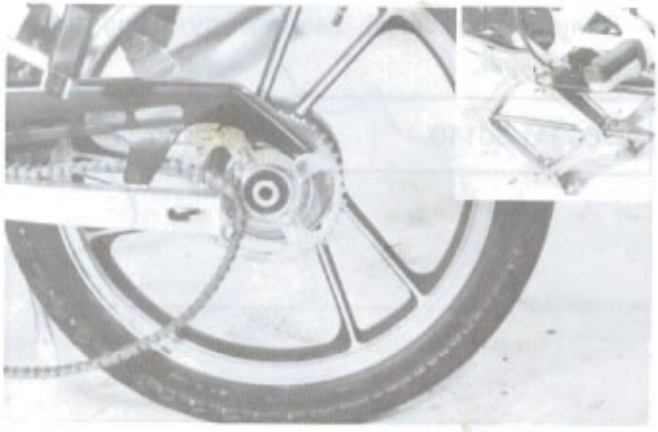
- Loosen the right and left chain adjuster nuts.
- Pull out the cotter pin and remove the torque link nut and bolt.
- Remove the brake adjust nut.



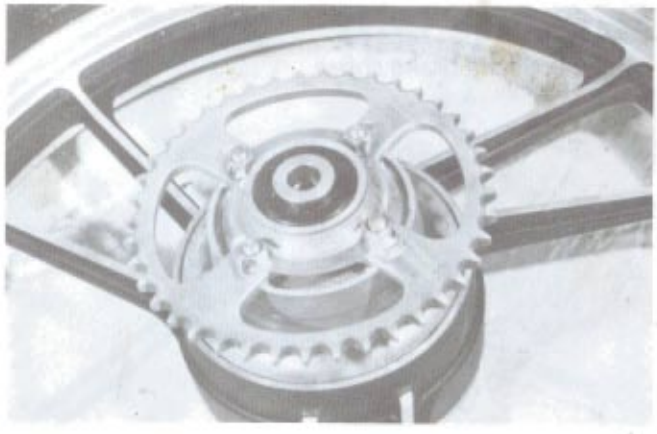
- Remove the rear axle nut.



- Support the motorcycle by the jack or block.
- Draw out the axle shaft and take off the rear wheel.



- Take off the drum with rear sprocket.



- Flatten the lock washers and remove the nuts.

CAUTION:
Do not reuse the lock washers.

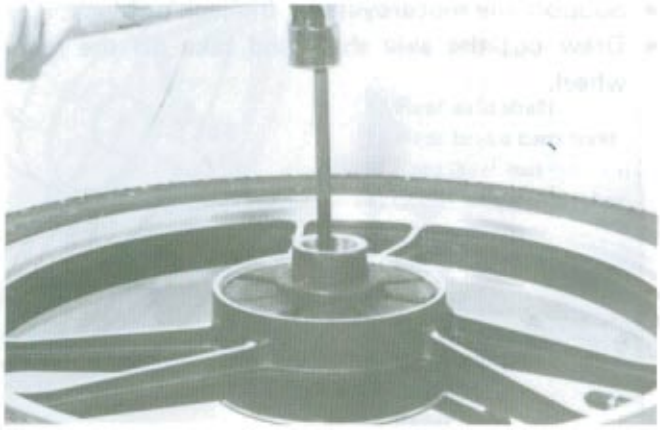
- Remove the oil seal by using the special tool.

09913-50121	Oil seal remover

- Remove the bearing.

- Remove the wheel bearings by using the special tool.

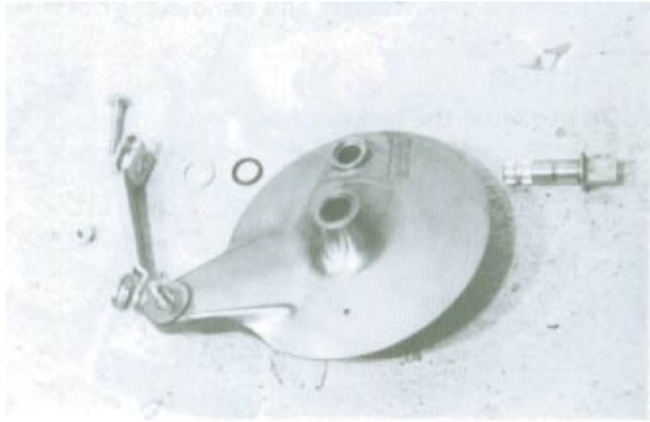
09941-50110	Bearing remover



REAR BRAKE

- Take off the brake shoes.

- Remove the brake cam lever nut and bolt.
- Take off the cam lever, washer, O-ring and camshaft.



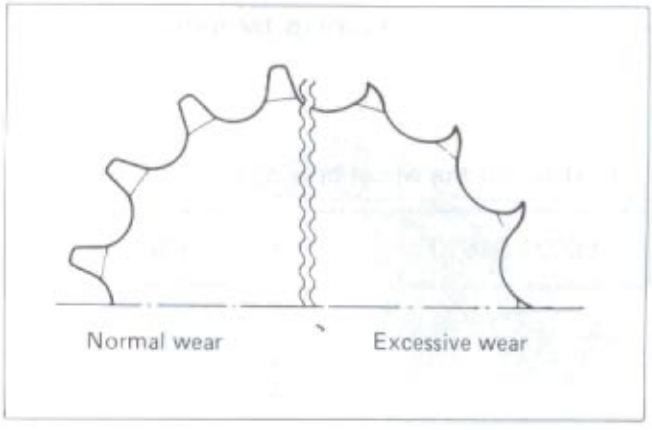
INSPECTION

WHEEL BEARING ..... See page 7-5
AXLE SHAFT ..... See page 7-6
WHEEL RIM ..... See page 7-6
REAR TIRE ..... See page 2-18

Tire tread depth Service Limit	1.6 mm

REAR SPROCKET

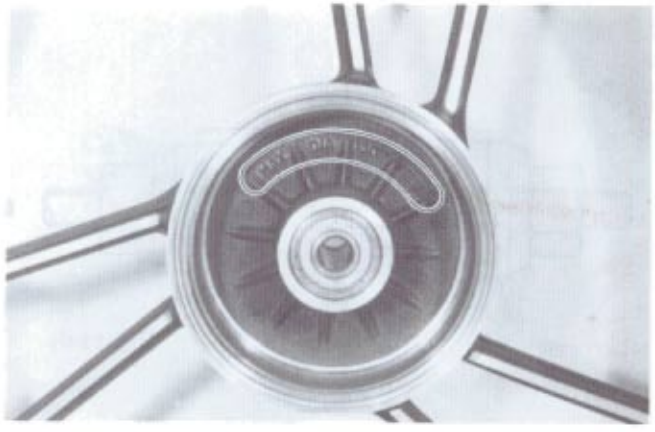
- Inspect the sprocket teeth for wear.
- If they are worn as illustrated, replace the sprocket and drive chain.



BRAKE DRUM

Measure the brake drum I.D. to determine the extent of wear and, if the limit is exceeded by the wear noted, replace the wheel. The value of this limit is indicated inside the drum.

Service Limit	130.7 mm

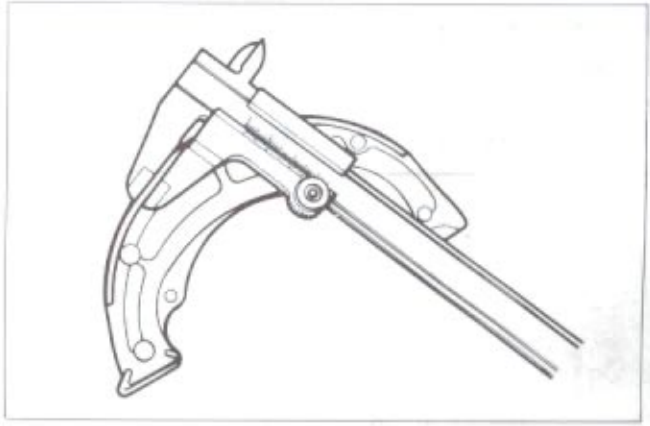


BRAKE SHOE

Check the brake shoe and decide whether it should be replaced or not from the thickness of the brake shoe lining.

Service Limit	1.5 mm

WARNING:
Replace the brake shoe with a set, otherwise braking performance will be adversely affected.



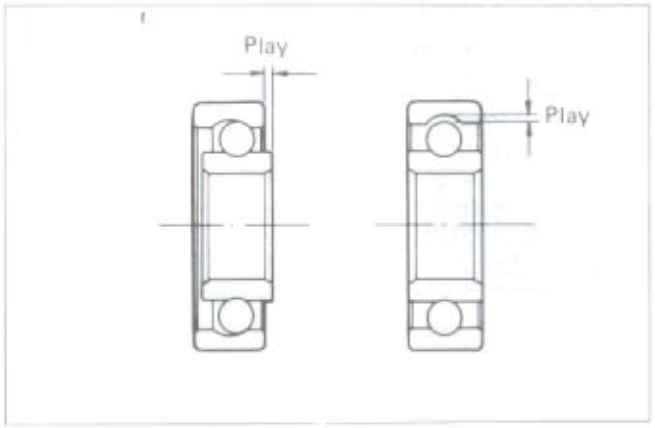
REASSEMBLY

Reassemble and remount the rear wheel and rear brake in the reverse order of disassembly and removal, and also carry out the following steps:

WHEEL BEARING AND DRUM BEARING

- Apply grease to the bearings before installing.

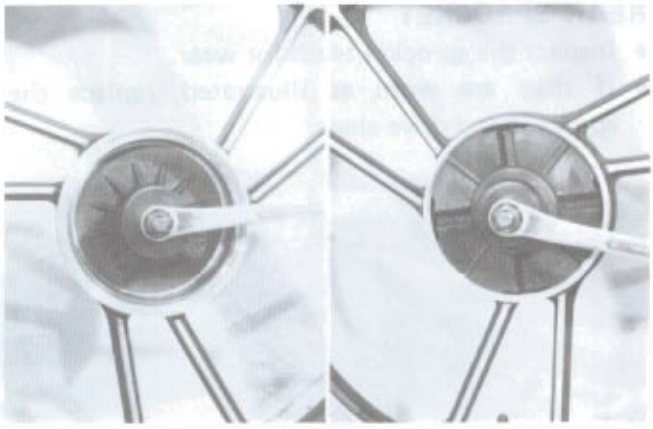
99000-25010	SUZUKI Super grease "A"

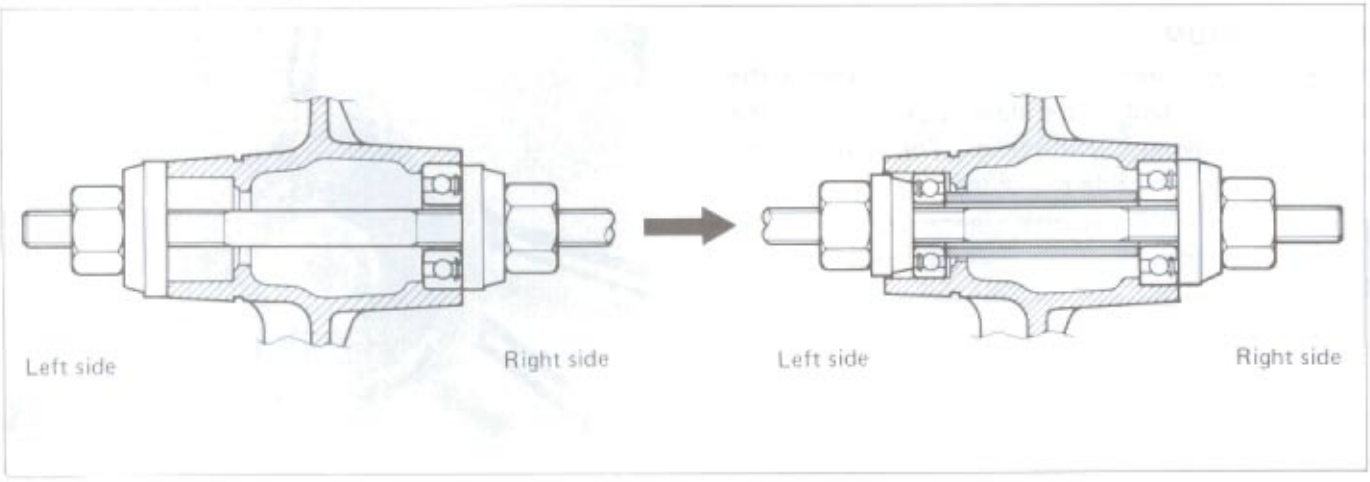


- Install the wheel bearings by using the special tool.

NOTE:
First install the wheel bearing for right side.

09924-84510	Bearing installer set





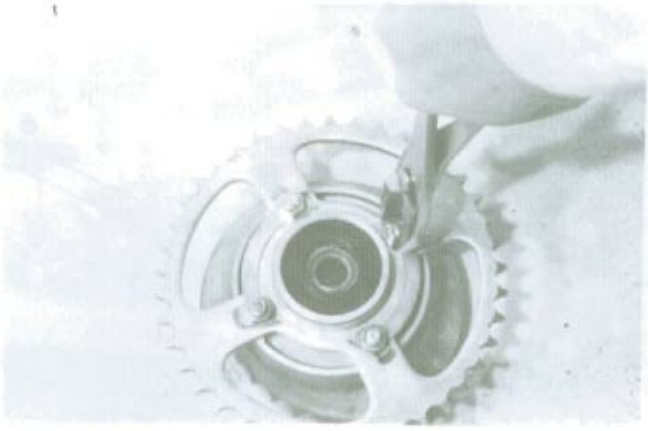
- Install the drum bearing by using the special tool.

09913-76010	Bearing installer

REAR SPROCKET

After tightening the nuts to the specification, bend the washers to lock the nuts.

Tightening torque	18 – 28 N·m (1.8 – 2.8 kg-m)

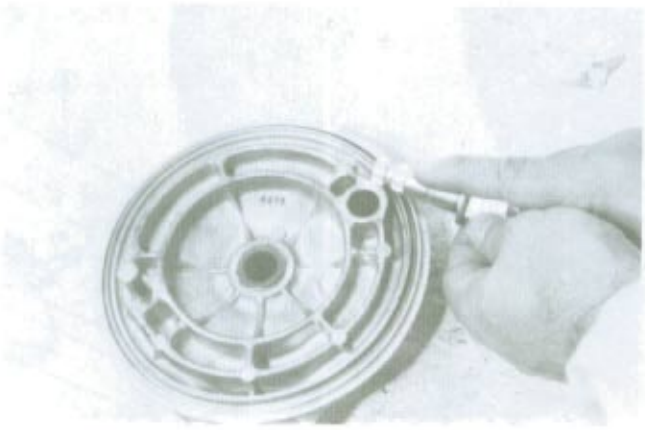


REAR BRAKE

- Apply grease to the brake camshaft.

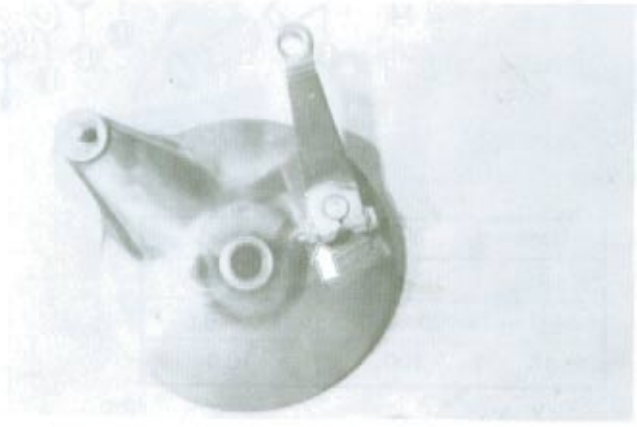
99000-25010	SUZUKI Super grease "A"

WARNING:
Be careful not to apply too much grease to the brake camshaft. If grease gets on the lining, brake slippage will result.



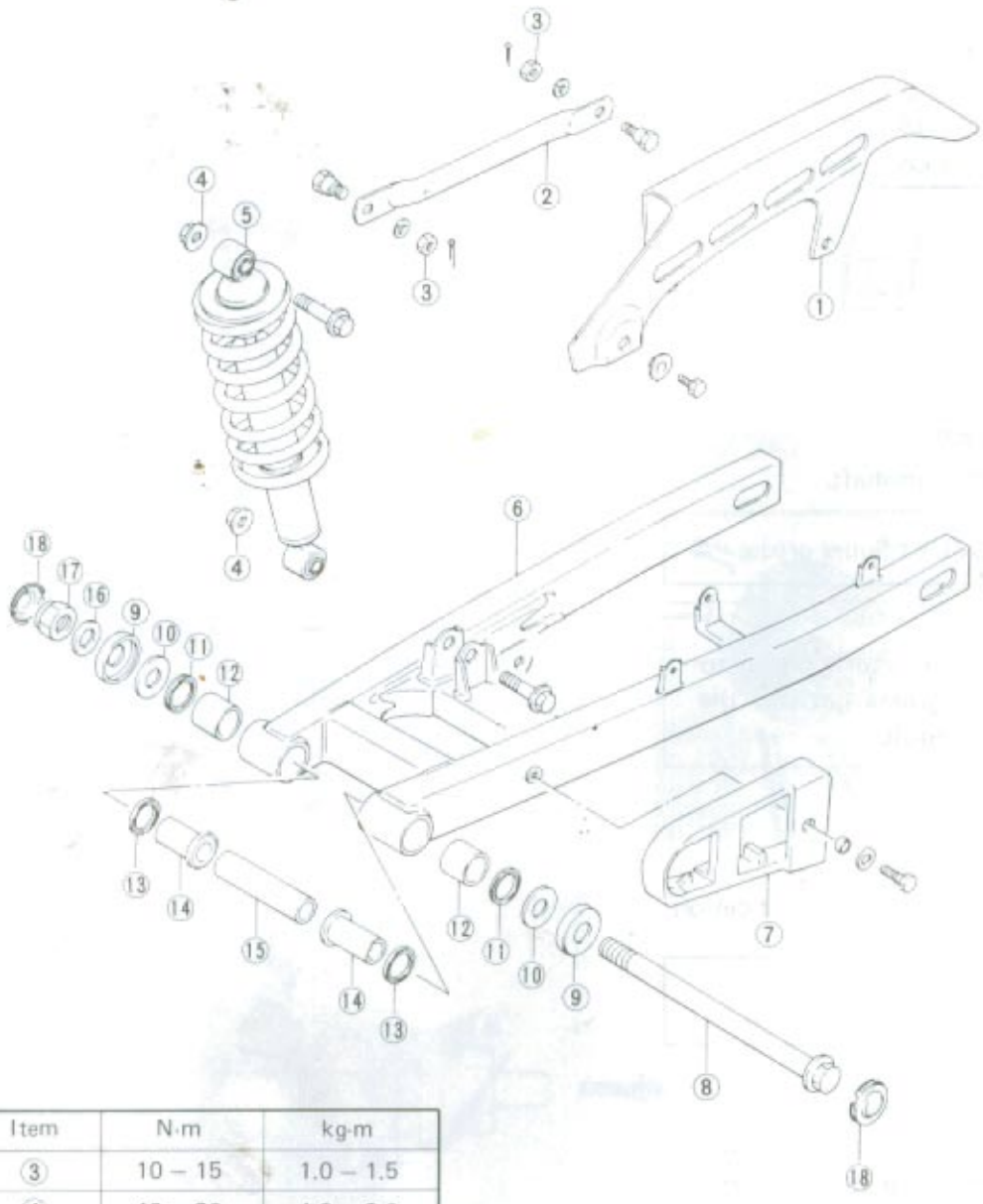
- Tighten the cam lever nut to the specification.

Tightening torque	5 – 8 N·m (0.5 – 0.8 kg-m)



CAUTION:
Adjust the drive chain slack and rear brake pedal free travel after installation of the rear wheel. (See page 2-14 and 2-17).

REAR SUSPENSION



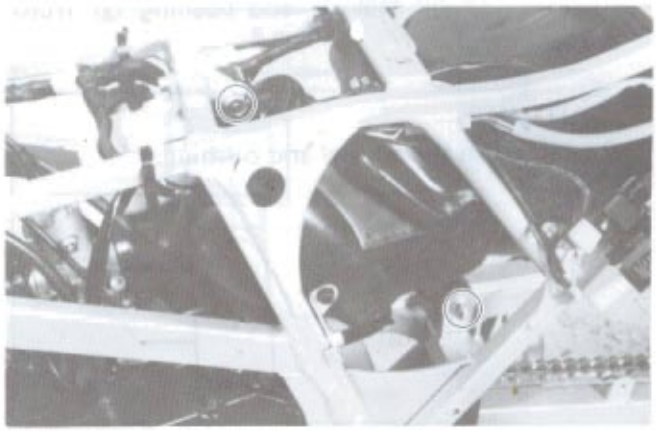
Item	N·m	kg-m
③	10 – 15	1.0 – 1.5
④	40 – 60	4.0 – 6.0
⑰	100	10.0

① Chain case
② Torque link
③ Nut
④ Nut
⑤ Rear shock absorber
⑥ Swingarm
⑦ Chain buffer
⑧ Swingarm pivot shaft
⑨ Dust seal
⑩ Thrust washer
⑪ Oil seal
⑫ Bushing
⑬ Oil seal
⑭ Spacer
⑮ Center spacer
⑯ Washer
⑰ Axle nut
⑱ Cap

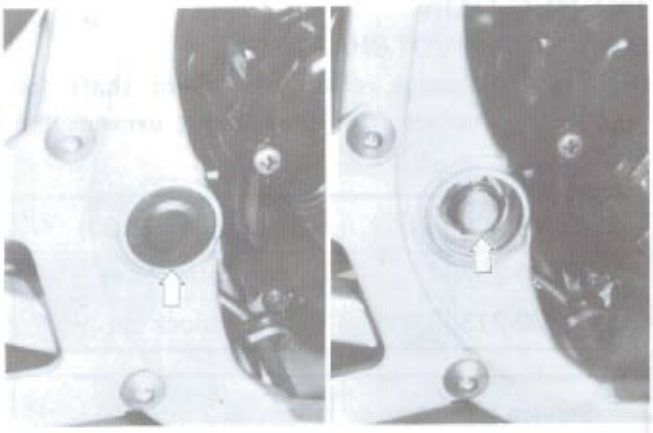
REMOVAL AND DISASSEMBLY

- Remove the rear wheel (See page 7-27).
- Remove the chain case.

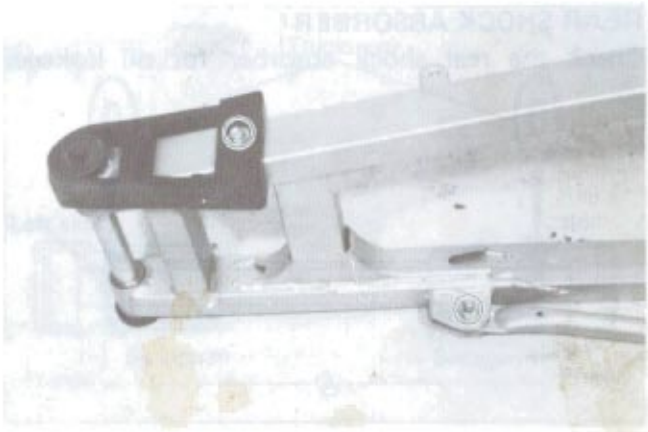
- Remove the shock absorber mounting nuts and bolts and take off the shock absorber.



- Remove the right and left caps.
- Remove the swingarm pivot shaft nut and draw out the pivot shaft.
- Take off the swingarm from the chassis.

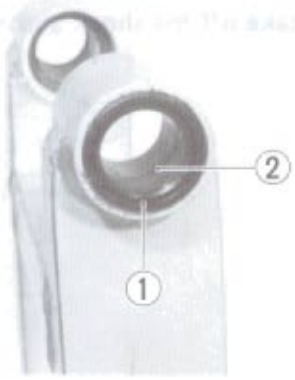


- Pull out the cotter pin and remove the torque link mounting nut and bolt.
- Remove the chain buffer.



- Remove the dust seals, center spacer, spacers and oil seals.

- Remove the oil seal ① and bushing ② from the swingarm.

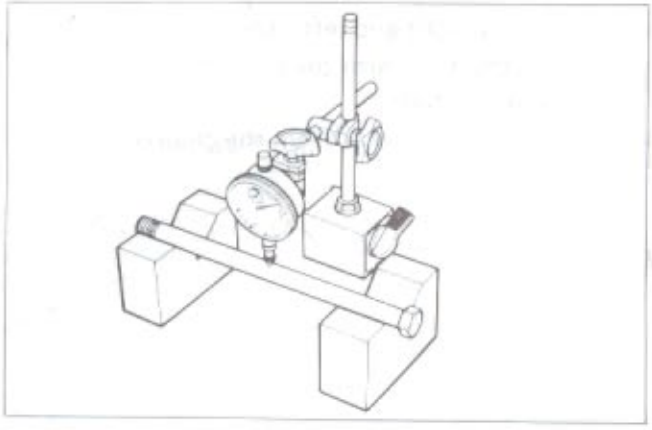


CAUTION:
Do not reuse the oil seal and bushing.

INSPECTION

SWINGARM PIVOT SHAFT

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



09900-20606	Dial gauge (1/100)
09900-20701	Magnetic stand
09900-21303	"V" block set

Service Limit	0.6 mm

REAR SHOCK ABSORBER

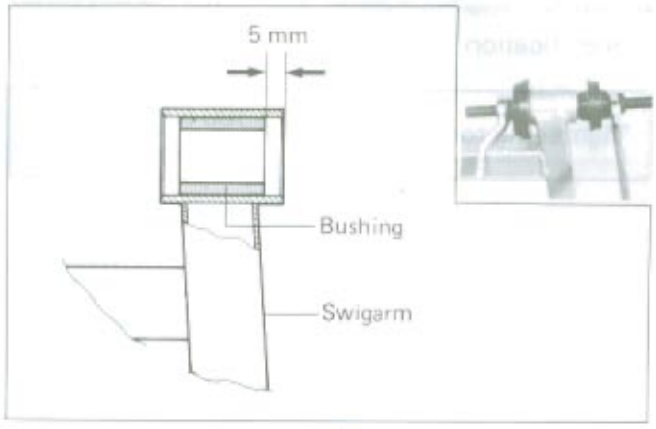
Check the rear shock absorber for oil leakage.

REASSEMBLY

Reassemble the rear suspension, in the reverse order of disassembly and removal, and also carry out the following steps.

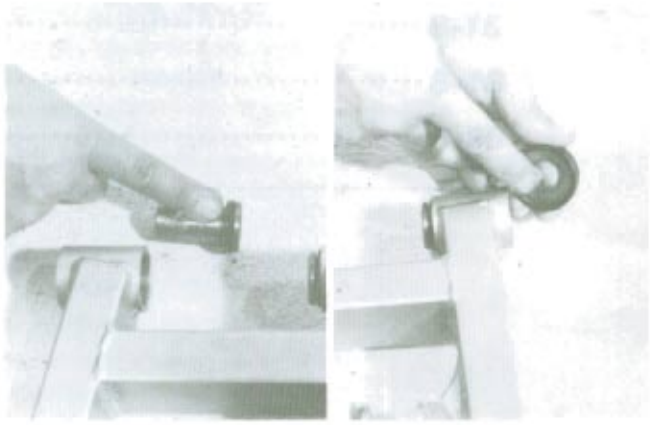
- Install the new bushing into 5 mm from the end of the swingarm as shown in illustration.

09941-34513	Bearing installer

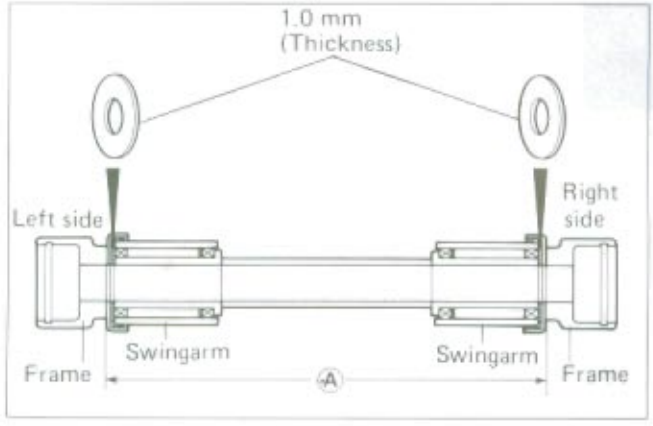


- Apply grease to the spacer, lip of oil seal and dust seal.

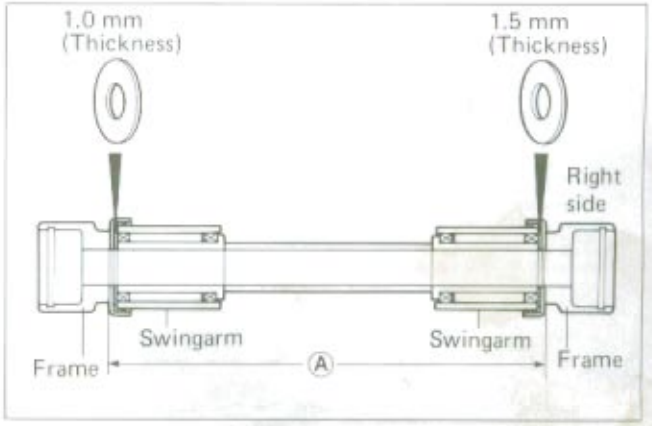
99000-25010	SUZUKI Super grease "A"



- Before installing the swingarm, measure the inside length Ⓐ of the frame by using the varnier calipers and select the right and left thrust washers are as follows.
  1. If the inside length Ⓐ is under 172.2 mm, install 1.0 mm thrust washers for the both sides as shown in the illustration.

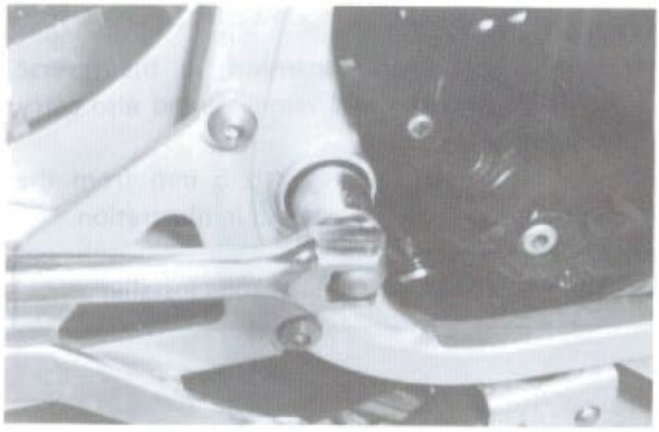


  2. If the inside length Ⓐ is over 172.2 mm, install the 1.0 mm thrust washer for the left side and 1.5 mm thrust washer for the right side as shown in the illustration.



- Tighten the swingarm pivot shaft nut to the specification.

Tightening torque	100 N·m 10.0 kg-m



SERVICING INFORMATION

CONTENTS

TROUBLESHOOTING

ENGINE

Complaint	Symptom and possible causes	Remedy
Engine will not start, or is hard to start	**Plug not sparking**	
	1. Fouled spark plug.	Clean.
	2. Wet spark plug.	Clean and dry.
	3. Defective ignition coil.	Replace.
	4. Open or short in high-tension cord.	Replace.
	5. Defective pick-up coil, primary coil or CDI unit.	Replace.
	No fuel reaching the carburetors	
	1. Clogged hole in the fuel tank cap.	Clean.
	2. Clogged or defective fuel cock.	Clean or replace.
	3. Defective carburetor needle valve.	Replace.
	4. Clogged fuel pipe or suction cock pipe.	Clean.
Engine stalls easily.	1. Fouled spark plug.	Clean.
	2. Defective pick-up coil, primary coil or CDI unit.	Replace.
	3. Clogged fuel pipe.	Replace.
	4. Clogged jets in carburetor.	Clean.
Noisy engine.	**Noise appears to come from piston**	
	1. Piston or cylinder worn down.	Replace.
	2. Combustion chamber fouled with carbon.	Clean.
	3. Piston pin or piston pin bore worn.	Replace.
	4. Piston ring groove worn.	Replace.
	5. Piston pin bearing worn.	Replace.
	Noise seems to come from clutch	
	1. Worn splines of countershaft or hub.	Replace.
	2. Worn teeth of clutch plates.	Replace.
	3. Distorted clutch plates, driven and drive.	Replace.
	Noise seems to come from crankshaft	
	1. Rattling bearings due to wear.	Replace.
	2. Big-end bearings worn and burnt.	Replace.
	3. Journal bearing worn and burnt.	Replace.
	Noise seems to come from transmission	
	1. Gears worn or rubbing.	Replace.
	2. Badly worn splines.	Replace.
	3. Primary gears worn or rubbing.	Replace.
Slipping clutch	1. Clutch control out of adjustment or loss of play.	Adjust.
	2. Weakened clutch springs.	Replace.
	3. Worn or distorted pressure plate.	Replace.
	4. Distorted clutch plates, driven and drive.	Replace.
Dragging clutch	1. Clutch control out of adjustment or too much play.	Adjust.
	2. Some clutch springs weakened while others are not.	Replace.
	3. Distorted pressure plate or clutch plates.	Replace.
Transmission will no shift	1. Broken gearshift cam.	Replace.
	2. Distorted gearshift forks.	Replace.
Transmission will not shift back.	1. Broken return spring on shift shaft.	Replace.
	2. Shift shafts are rubbing or sticky.	Repair or replace.

Complaint	Symptom and possible causes	Remedy
Transmission jumps out of gear.	1. Worn shifting gears on drive shaft or countershaft. 2. Distorted or worn gearshift forks. 3. Weakened stopper spring on gearshift stopper.	Replace. Replace. Replace.
Engine idles poorly	1. Spark plug gap too wide. 2. Defective ignition coil. 3. Defective pick-up coil, primary coil or CDI unit. 4. Float-chamber fuel level out of adjustment in carburetor. 5. Clogged jets.	Adjust. Replace. Replace. Adjust. Clean or adjust.
Engine runs poorly in high-speed range.	1. Spark plug gap too narrow. 2. Clogged jets. 3. Defective ignition coil. 4. Defective pick-up coil, primary coil or CDI unit. 5. Float-chamber fuel level too low. 6. Clogged air cleaner element. 7. Clogged fuel pipe, resulting in inadequate fuel supply to carburetor. 8. Clogged suction cock pipe. 9. Diffective solenoid or control unit.	Adjust. Clean. Replace. Replace. Adjust. Clean. Clean, and prime. Clean. Replace.
Dirty or heavy exhaust smoke.	1. Oil pump out of adjustment. 2. Damage or worn crankshaft oil seal.	Adjust. Replace.
Engine lacks power.	1. Worn piston rings or cylinder. 2. Spark plug gap incorrect. 3. Clogged jets in carburetor. 4. Float-chamber fuel level out of adjustment. 5. Clogged air cleaner element. 6. Sucking air from intake pipe. 7. Too much engine oil in the engine. 8. Diffective solenoid or control unit.	Replace Adjust or replace. Clean. Adjust. Clean. Retighten or replace. Drain out excess oil. Replace.
Engine overheats.	1. Heavy carbon deposit on piston crown. 2. Not enough oil in the engine. 3. Defective oil pump or clogged oil circuit. 4. Fuel level too low in float chamber. 5. Suck air from intake pipe. 6. Use incorrect engine oil. 7. Defective cooling system.	Clean. Add oil. Replace or clean. Adjust. Retighten or replace. Change. See radiator section.

CARBURETOR

Complaint	Symptom and possible causes	Remedy
Trouble with starting.	1. Starter jet is clogged. 2. Starter pipe is clogged. 3. Air leaking from carburetor's joint or oil pump adjusting hole screw. 4. Starter plunger is not operating properly.	Clean. Clean. Check and retighten. Repair.
Idling or low-speed trouble.	1. Pilot jet is clogged or loose. 2. Air leaking from carburetor's joint, oil pump adjusting hole screw or starter. 3. Pilot outlet is clogged. 4. Starter plunger is not fully closed.	Check and clean. Check and adjust. Check and clean. Check and adjust.
Medium- or high-speed trouble.	1. Main jet is clogged. 2. Needle jet is clogged. 3. Throttle valve is not operating properly. 4. Filter is clogged.	Check and clean. Check and clean. Check throttle valve for operation. Check and clean.
Overflow and fuel level functuations.	1. Needle valve is worn or damaged. 2. Float is not working properly. 3. Foreign matter has adhered to needle valve. 4. Fuel level is too high or low. 5. Clogged carburetor air vent pipe.	Replace. Check and adjust. Clean. Adjust float height. Clean

RADIATOR

Complaint	Symptom and possible causes	Remedy
Engine overheats.	1. Not enough coolant. 2. Radiator core is clogged with dirt or trashes. 3. Erratic thermostat, stuck in closed position. 4. Clogged water passage. 5. Air trapped in the cooling circuit. 6. Defective water pump. 7. Use incorrect coolant.	Add. Clean. Replace. Clearn. Bleed out air. Replace. Change.
Engine overcools.	1. Erratic thermostat, stuck in full-open position. 2. Extremely cold weather.	Replace. Put on the radiator cover.

ELECTRICAL

Complaint	Symptom and possible causes	Remedy
No sparking or poor sparking.	1. Defective ignition coil. 2. Defective spark plug. 3. Defective pick-up coil, primary coil or CDI unit.	Replace. Replace. Replace.
Spark plug soon become fouled with carbon.	1. Mixture too rich. 2. Idling speed set too high. 3. Incorrect gasoline. 4. Dirty element in air cleaner. 5. Spark plug too cold.	Adjust carburetor. Adjust carburetor. Change. Clean. Replace by hot type plug.
Spark plug become fouled too soon.	1. Worn piston rings. 2. Piston or cylinder worn.	Replace. Replace.
Spark plug electrodes overheat or burn.	1. Spark plug too hot. 2. The engine overheats. 3. Spark plug loose. 4. Mixture too lean.	Replace by cold type plug. Tune up. Retighten. Adjust carburetor.
Generator does not charge.	1. Open or short in lead wires, or loose lead connections. 2. Shorted, grounded or open generator coils. 3 Shorted or punctured regulator/rectifier.	Repair or replace or retighten. Replace. Replace.
Generator charges, but charging rate is below the specification.	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. Dfective regulator/rectifier. 4. Not enough electrolyte in the battery. 5. Defective cell plates in the battery.	Repair, or retighten. Replace. Replace. Add distilled water to the MAX. level. Replace the battery.
Generator overcharges.	1. Internal short-circuit in the battery. 2. Resistor element in the regulator/rectifier damaged or defective. 3 Regulator/rectifier poorly grounded.	Replace the battery Replace. Clean and tighten ground connection.
Unstable charging.	1. Lead wire insulation frayed due to vibration, resulting in intermittent shorting. 2. Generator internally shorted. 3. Defective regulator/rectifier.	Repair or replace. Replace. Replace.

BATTERY

Complaint	Symptom and possible causes	Remedy
"Sulfation", acidic white powdery substance or spots on surfaces of cell plates.	1. Not enough electrolyte.	Add distilled water, if the battery has not been damaged and "sulfation" has not advanced too far, and recharge.
	2. Battery case is cracked.	Replace the battery.
	3. Battery has been left in a run-down condition for a long time.	Replace the battery.
	4. Adulterated electrolyte (Foreign matter has entered the battery and become mixed with the electrolyte.	If "sulfation" has not advanced too far, try to restore the battery by replacing the electrolyte, recharging it fully with the battery detached from the motorcycle and then adjusting electrolyte S.G.
Battery runs down quickly.	1. The charging method is not correct.	Check the generator, regulattor/rectifier and circuit connections, and make necessary adjustments to obtain specified charging operation.
	2. Cell plates have lost much of their active material as a result of over-charging.	Replace the battery, and correct the charging system.
	3. A short-circuit condition exists within the battery due to excessive accumulation of sediments caused by the high electrolyte S.G.	Replace the battery.
	4. Electrolyte S.G. is too low.	Recharge the battery fully and adjust electrolyte S.G.
	5. Adulterated electrolyte.	Replace the electrolyte, recharge the battery and then adjust S.G.
	6. Battery is too old.	Replace the battery.
Reversed battery polarity.	The battery has been connected the wrong way round in the system, so that it is being charged in the reverse direction.	Replace the battery and be sure connect the battery properly.
Battery "sulfation"	1. Charging rate too low or too high. (When not in use battery should be recharged at least once a month to avoid sulfation).	Replace the battery.
	2. Battery electrolyte excessive or insufficient, or its specific gravity too high or too low.	Keep the electrolyte up to the prescribed level, or adjust the S.G. by consulting the battery maker's directions.
	3. The battery left unused for too long in cold climate.	Replace the battery, if badly sulfated.
Battery discharges too rapidly.	1. Dirty container top and sides.	Clean.
	2. Impurities in the electrolyte or electrolyte S.G. is too high.	Change the electrolyte by consulting the battery maker's directions.

CHASSIS

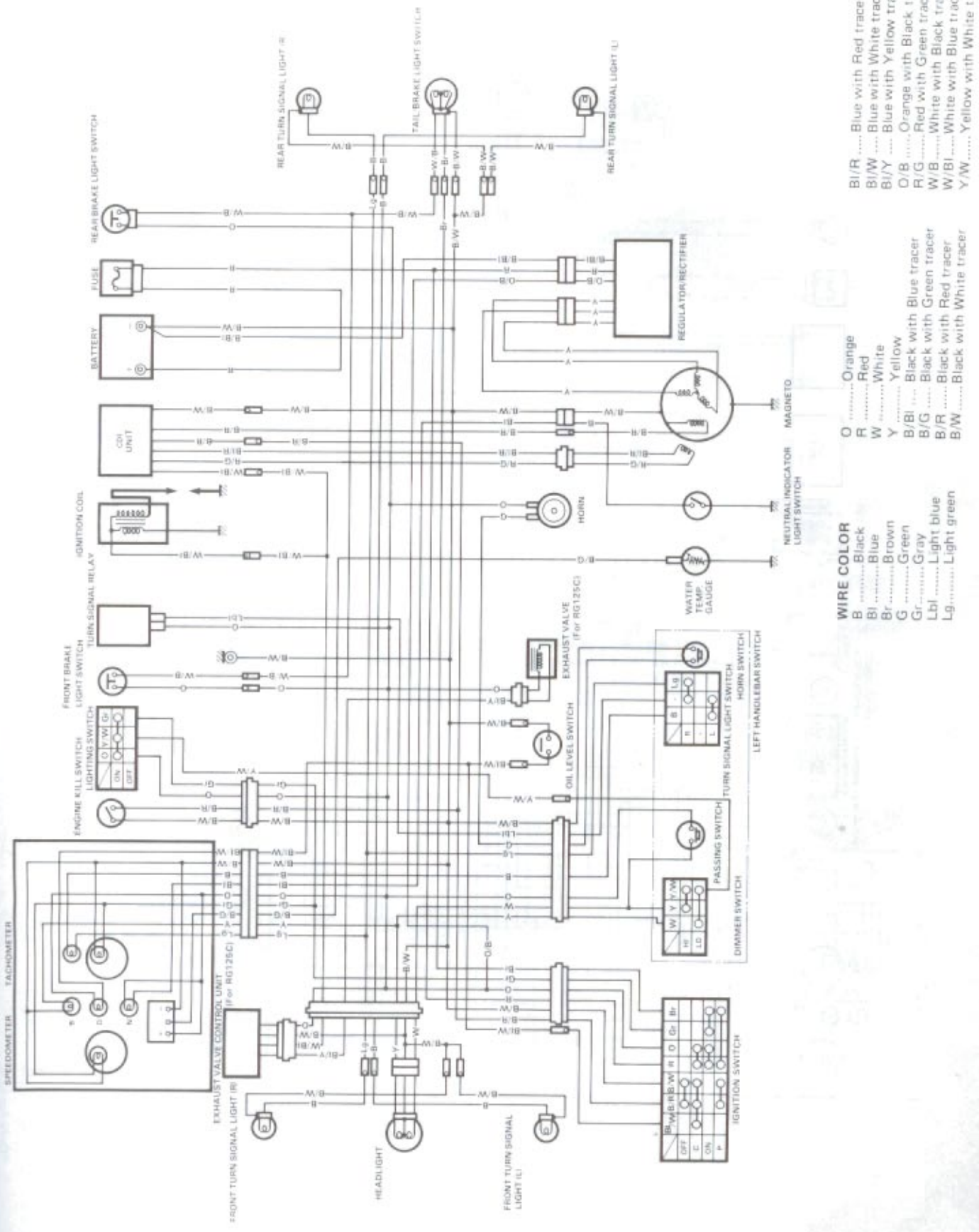
Complaint	Symptom and possible causes	Remedy
Steering feels too heavy or stiff.	1. Steering stem nut overtightened. 2. Worn race or steel balls. 3. Distorted steering stem. 4. Not enough pressure in tires.	Adjust. Replace. Replace. Adjust.
Wobbly steering.	1. Loss of balance between right and left front suspensions. 2. Distorted front fork. 3. Distorted wheel. 4. Worn-down front wheel bearings. 5. Defective or incorrect tire. 6. Loose nut on axle.	Replace. Repair or replace. Replace. Replace. Replace. Retighten.
Wobbly front wheel.	1. Distorted wheel. 2. Worn-down front wheel bearings. 3. Defective or incorrect tire. 4. Loose nut on axle.	Replace. Replace. Replace. Retighten.
Front suspension too soft.	1. Weakened springs. 2. Not enough fork oil.	Replace. Refill.
Front suspension too stiff.	1. Fork oil too viscous. 2. Too much fork oil.	Replace. Remove excess oil.
Noisy front suspension.	1. Not enough fork oil. 2. Loose nuts on suspension.	Refill. Retighten.
Woobly rear wheel.	1. Distorted wheel. 2. Worn-down rear wheel bearings. 3. Defective or incorrect tire. 4. Loose nut on axle. 5. Worn swingarm bushings. 6. Loosen nuts on the rear suspension.	Replace. Replace. Replace. Retighten. Replace. Retighten.
Rear suspension too stiff.	1. Worn swingarm bushings.	Replace.
Noisy rear suspension.	1. Loose nuts on suspension. 2. Worn swingarm bushings.	Retighten. Replace.

BRAKES

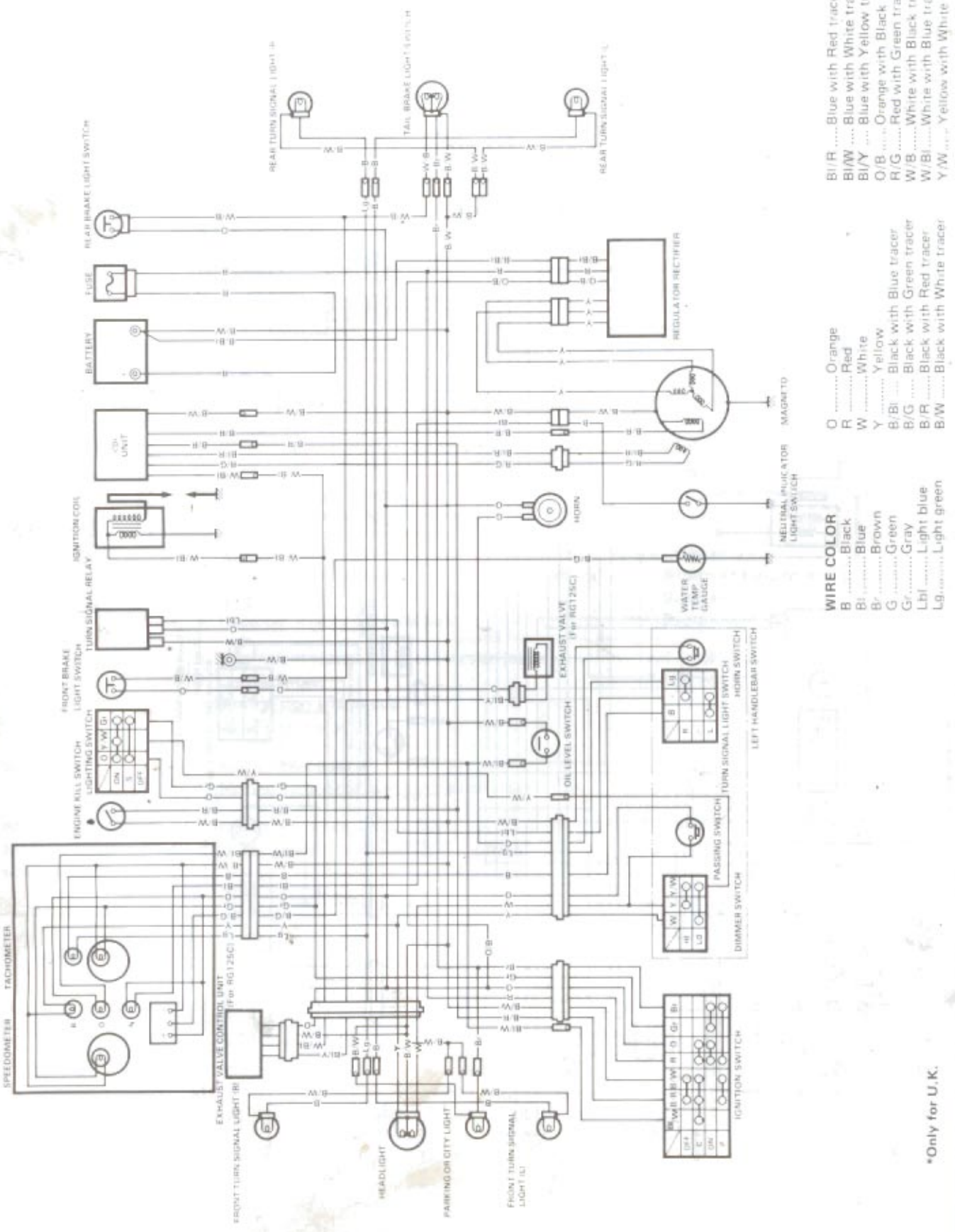
Complaint	Symptom and possible causes	Remedy
Insufficient brake power.	1. Leakage of brake fluid from hydraulic system. 2. Worn pads. 3. Oil adhesion on engaging surface of pads. 4. Worn disc. 5. Air in hydraulic system. 6. Too much brake pedal play. 7. Excessively worn shoes. 8. Friction surfaces of shoes are dirty with oil. 9. Excessively worn drum.	Repair or replace. Replace. Clean disc and pads. Replace. Bleed air. Adjust. Replace. Replace. Replace.
Brake squeaking.	1. Carbon adhesion on pad surface. 2. Tilted pad. 3. Damaged wheel bearing. 4. Loose front wheel axle. 5. Worn pads. 6. Foreign material in brake fluid. 7. Clogged return port of master cylinder. 8. Friction surface of shoes are carbonised. 9. Loose rear wheel axle. 10. Excessively worn shoes.	Repair surface with sandpaper. Modify pad fitting. Replace. Tighten to specified torque. Replace. Replace brake fluid. Disassemble and clean master cylinder. Remove carbon with emery paper. Retighten to the specified torque. Replace.
Excessive brake lever stroke.	1. Air in hydraulic system. 2. Insufficient brake fluid. 3. Improper quality of brake fluid.	Bleed air. Replenish fluid to specified level; Bleed air. Replace with correct fluid.
Leakage of brake fluid.	1. Insufficient tightening of connection joints. 2. Cracked hose. 3. Worn piston and/or cup. 4. Worn piston seal.	Tighten to specified torque. Replace. Replace piston and/or cup. Replace.
Brake drags.	1. Rusty moving parts. 2. Moving parts dirty with oil or poorly lubricated.	Clean. Clean, or lubricate.
Brake gives abnormal noise when applied.	1. Excessively worn brake linings. 2. Gritty foreign matters are stuck on brake linings. 3. Dirty brake drum.	Replace. Clean Clean.

WIRING DIAGRAM

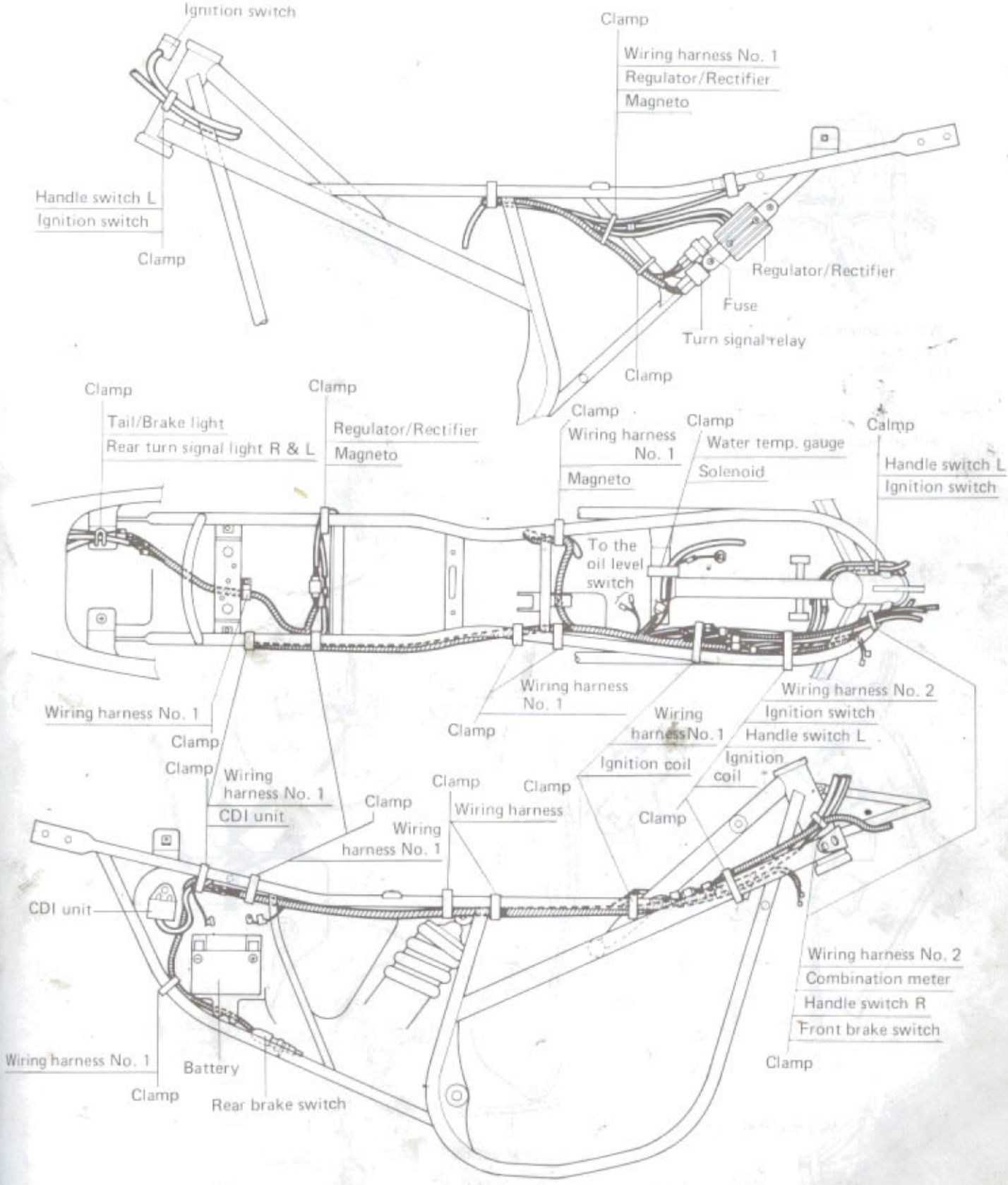
FOR AUSTRALIA AND SINGAPORE

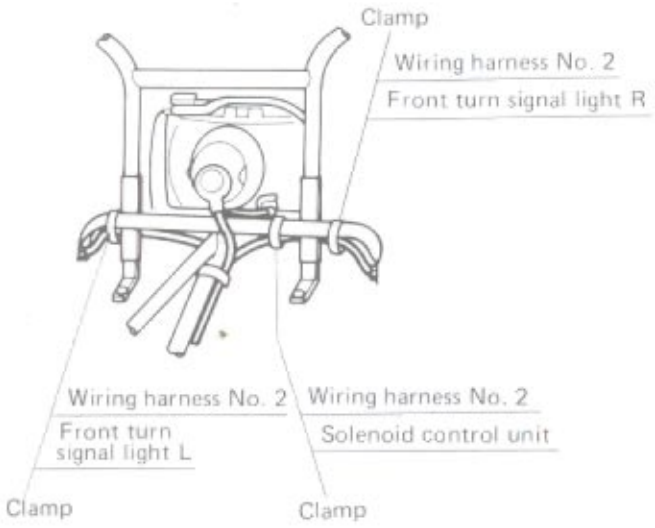


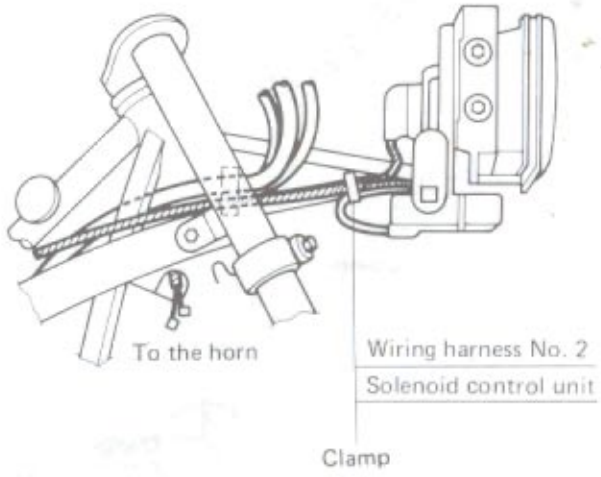
FOR THE OTHERS

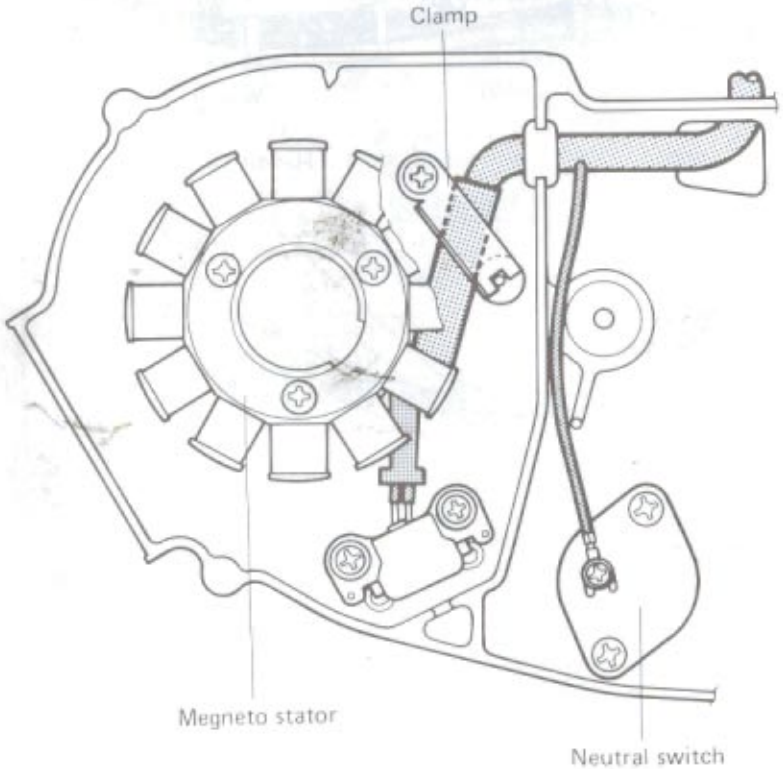


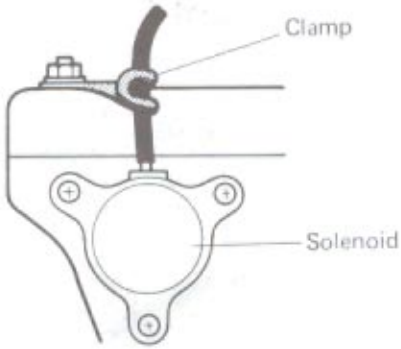
WIRE ROUTING



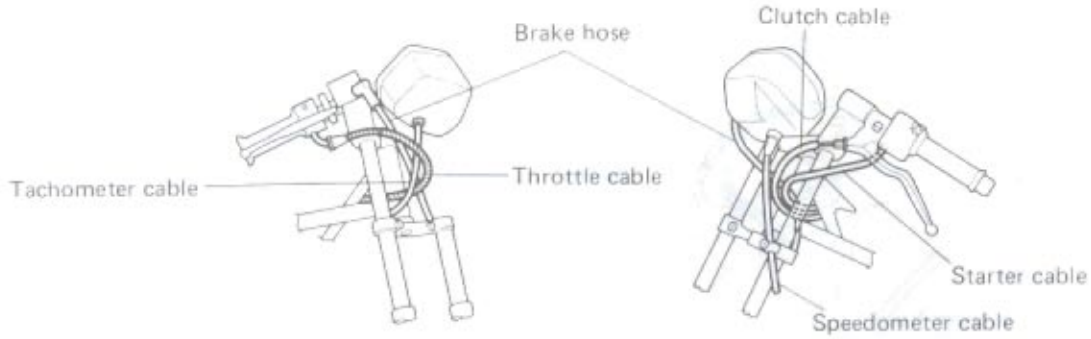

Clamp
Wiring harness No. 2
Front turn signal light R
Wiring harness No. 2
Front turn signal light L
Wiring harness No. 2
Solenoid control unit
Clamp
Clamp

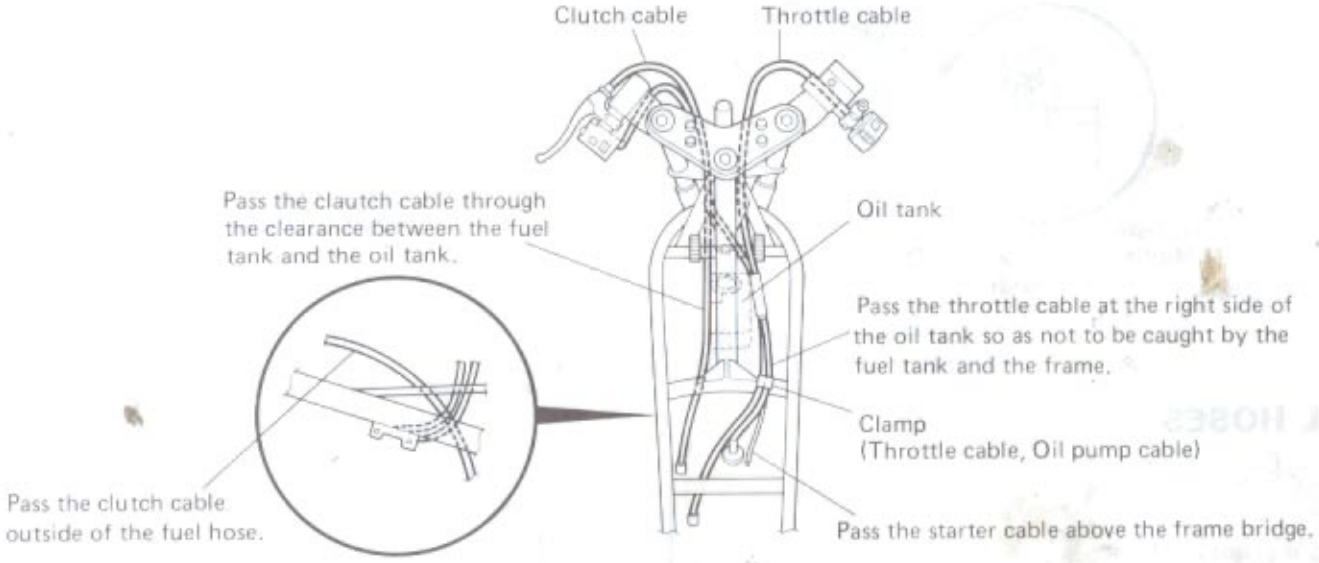

To the horn
Wiring harness No. 2
Solenoid control unit
Clamp

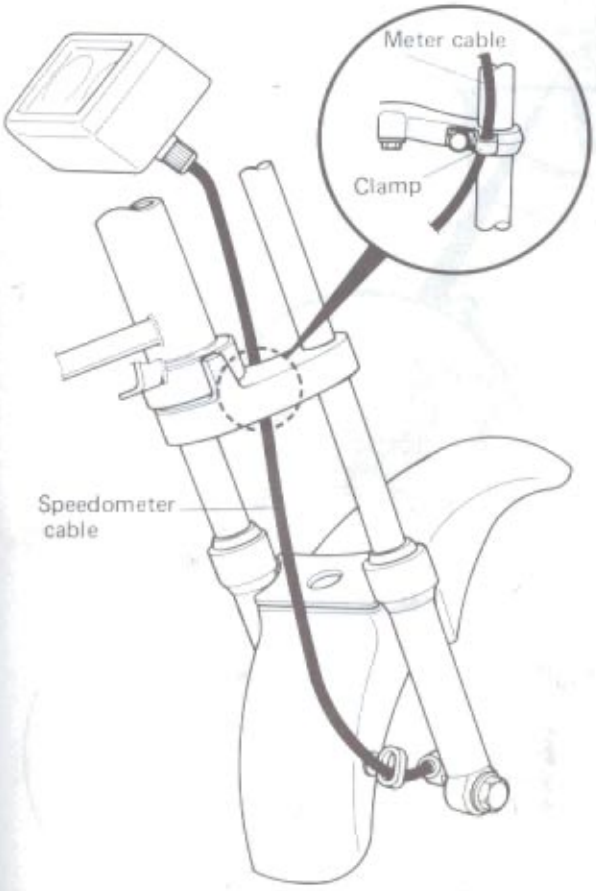

Clamp
Megneto stator
Neutral switch

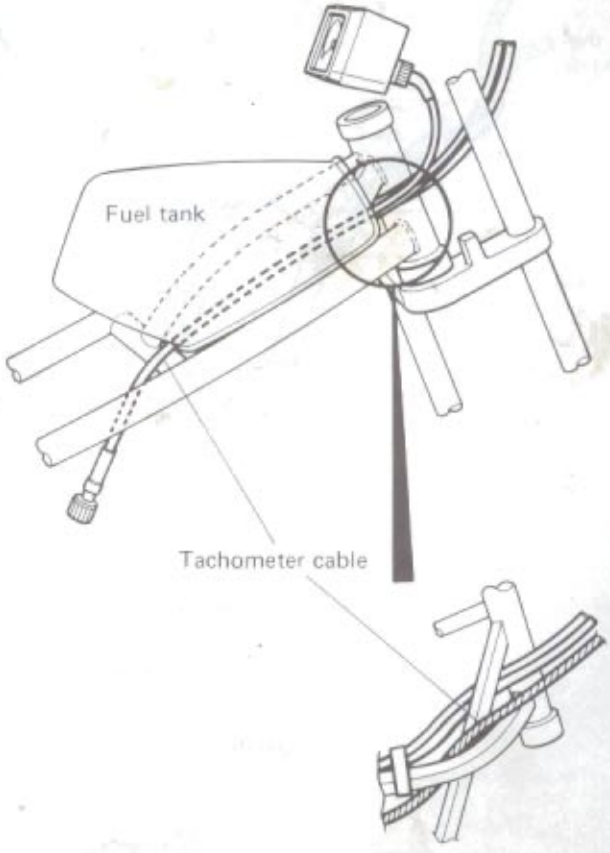

Clamp
Solenoid

CABLE ROUTING



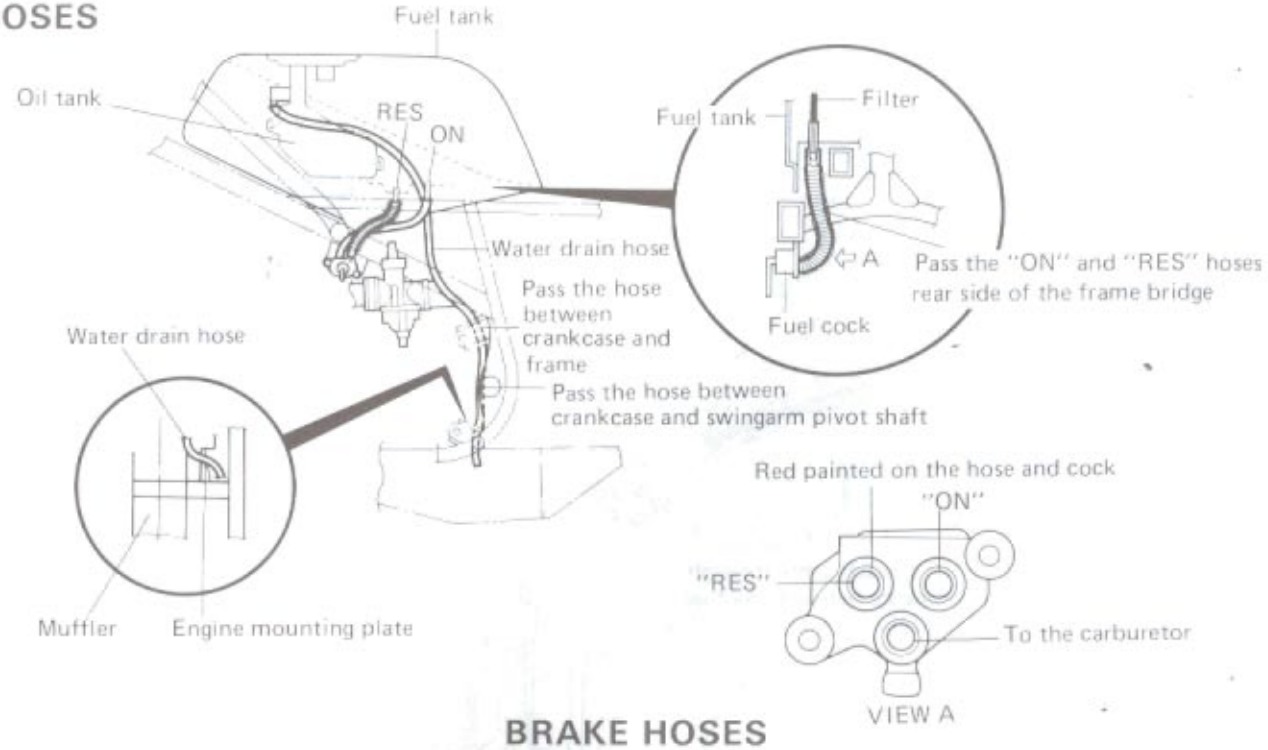




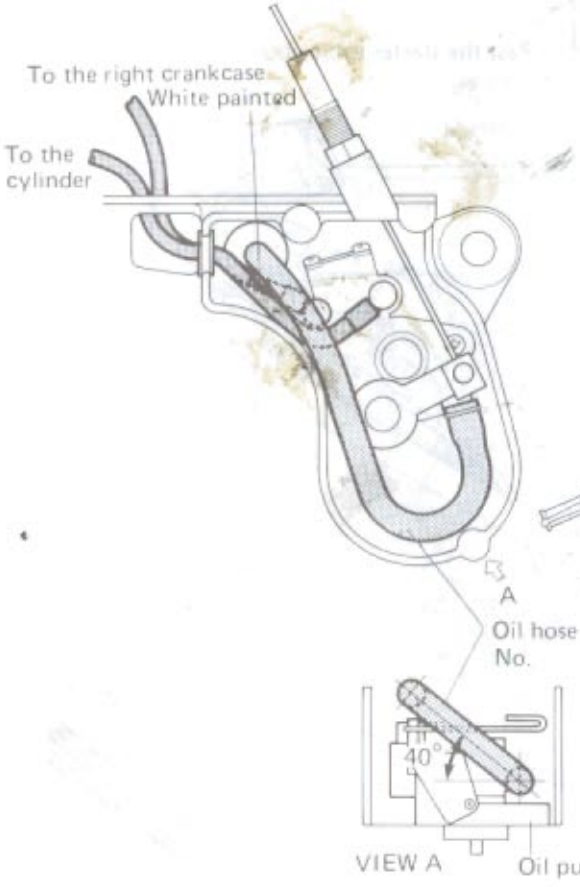


HOSE ROUTING

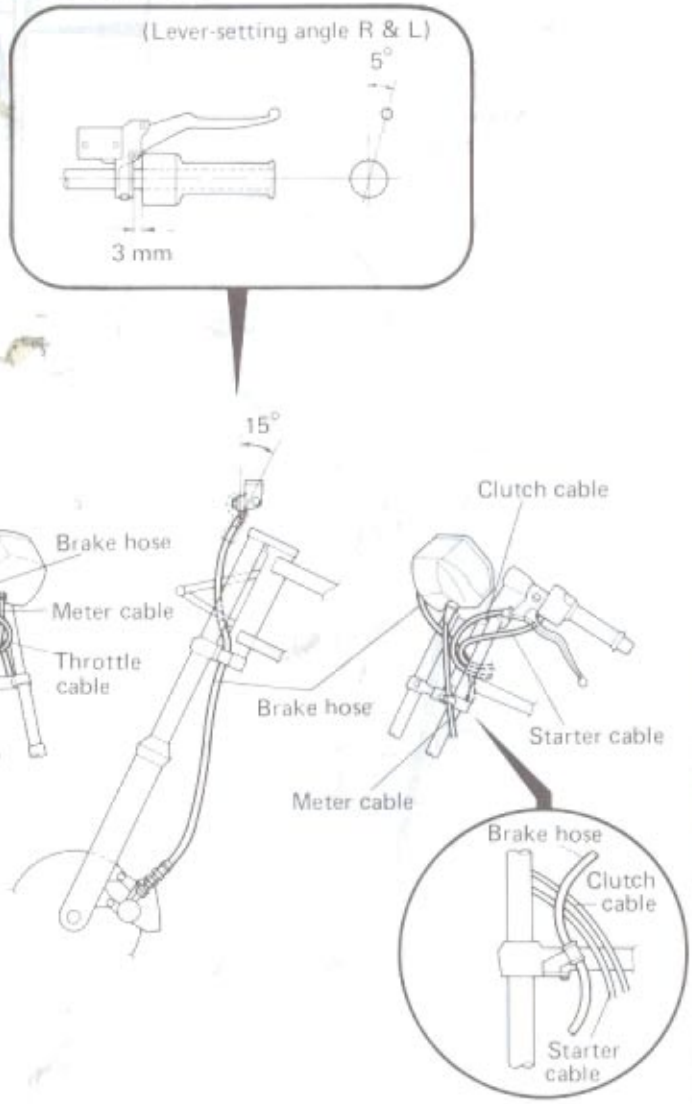
FUEL HOSES

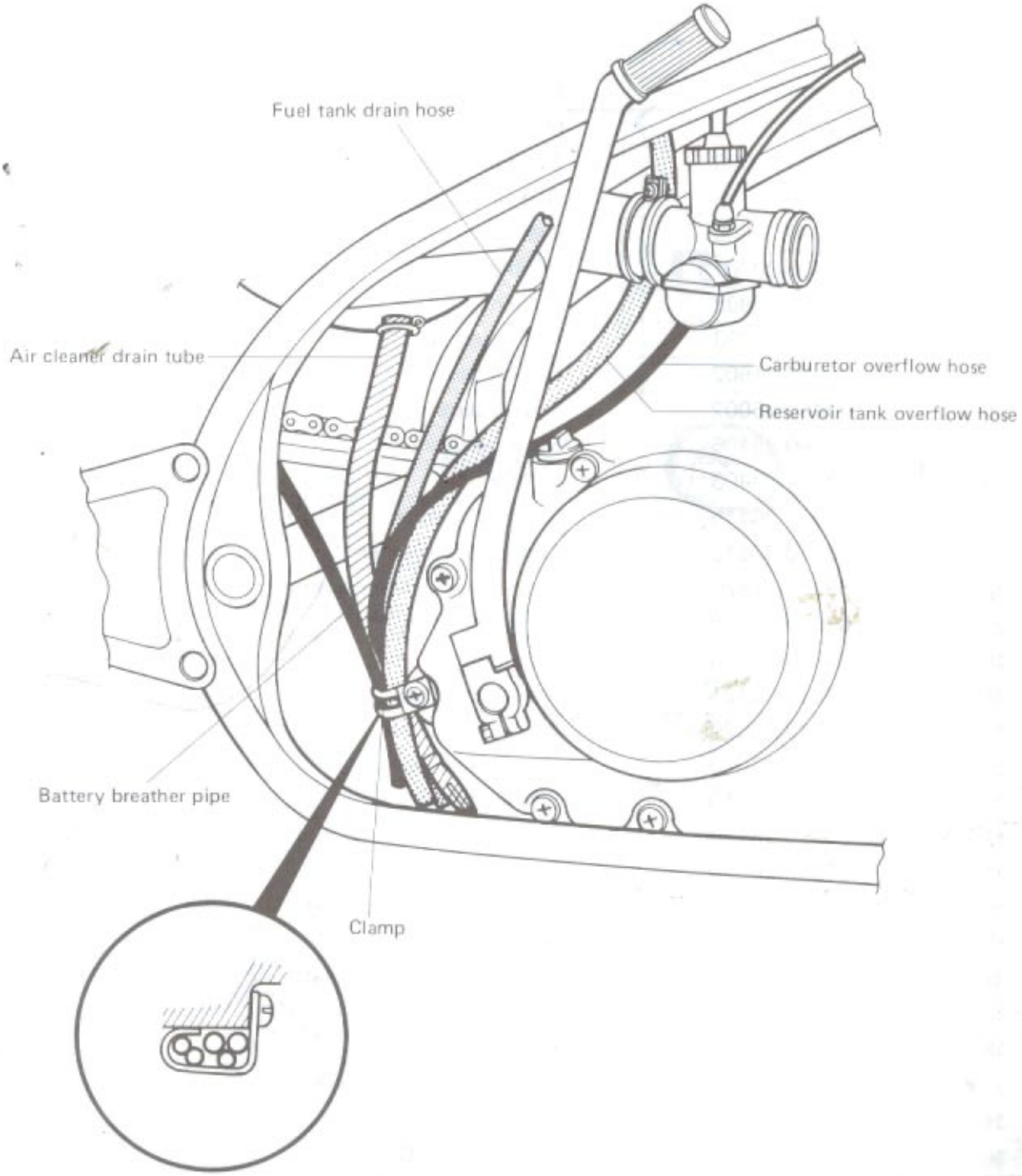


OIL HOSES



BRAKE HOSES

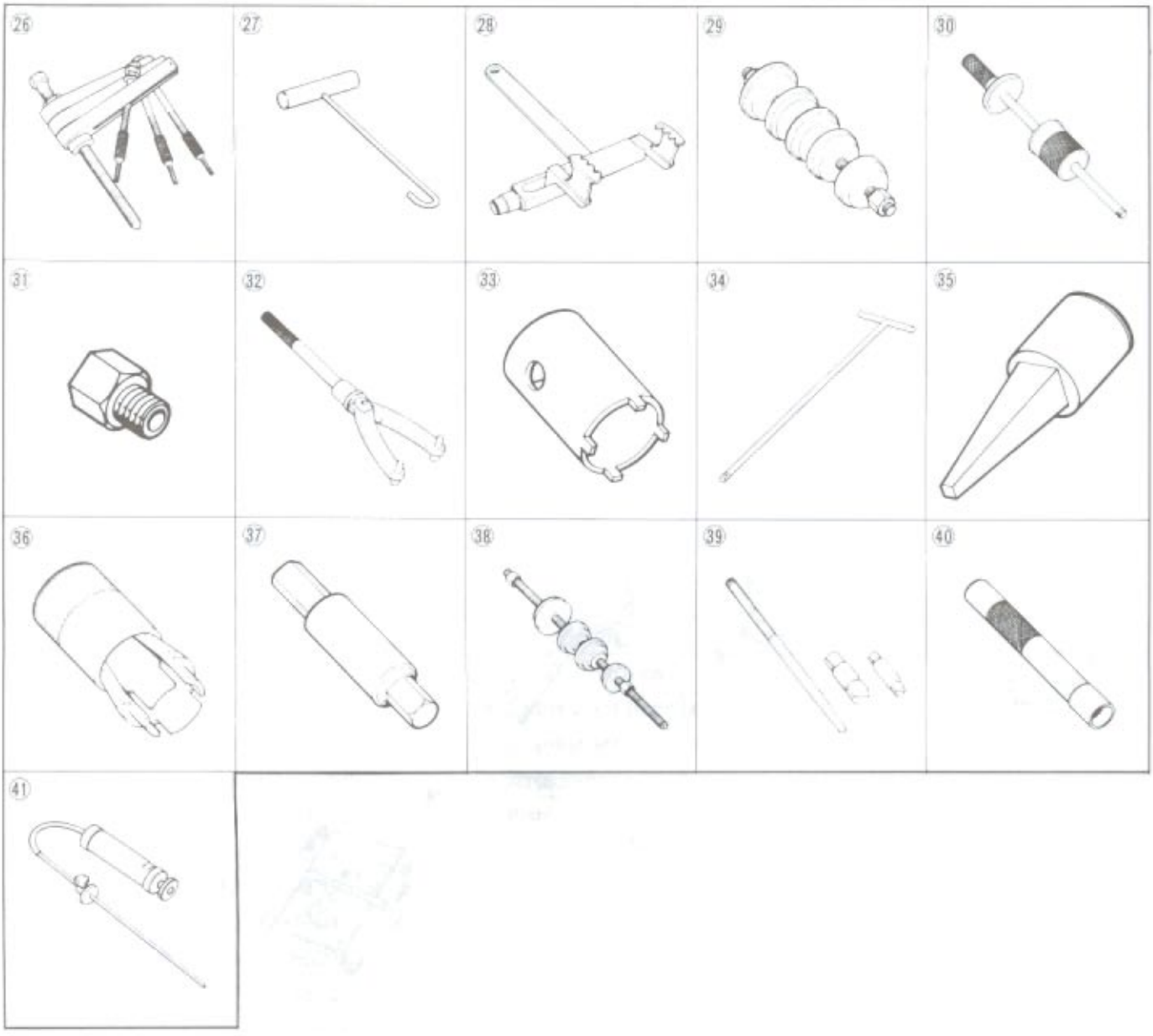



Fuel tank drain hose
Air cleaner drain tube
Carburetor overflow hose
Reservoir tank overflow hose
Battery breather pipe
Clamp

SPECIAL TOOLS

Item	Part No.	Part Name
①	09900-00401	Hexagon wrench set
②	09900-06107	Snap ring pliers (Open type)
③	09900-06108	Snap ring pliers (Close type)
④	09900-09003	Impact driver set
⑤	09900-20102	Vernier calipers
⑥	09900-20203	Micrometer (50 – 75 mm)
	09900-20205	Micrometer (0 – 25 mm)
⑦	09900-20508	Cylinder gauge set
⑧	09900-20605	Dial calipers
⑨	09900-20606	Dial gauge (1/100 mm)
⑩	09900-20701	Magnetic stand
⑪	09900-20803	Thickness gauge
⑫	09900-21303	"V" block set (75 mm)
⑬	09900-21602	CCI oil gauge
⑭	09900-25002	Pocket tester
⑮	09900-28106	Electro-tester
⑯	09900-28403	Hydrometer
⑰	09910-20115	Con-rod stopper
⑱	09910-32812	Crankshaft installer
⑲	09910-32820	Crankshaft installer spacer
⑳	09910-32850	Attachment "E"
㉑	09910-34510	Piston pin puller
㉒	09913-50121	Oil seal remover
㉓	09913-75820	Bearing remover
㉔	09913-76010	Bearing installer
㉕	09913-85210	Bearing installer
㉖	09920-13120	Crankcase separating tool
㉗	09920-20310	Spring hook
㉘	09920-53710	Clutch sleeve hub holder
㉙	09924-84510	Bearing installer set
㉚	09930-30102	Rotor remover slide shaft
㉛	09930-30161	Attachment "C"
㉜	09930-40113	Rotor holder
㉝	09940-14911	Steering nut socket wrench
㉞	09940-34520	"T" handle
㉟	09940-34561	Attachment "D"
㊱	09940-50112	Front fork oil seal installer
㊲	09941-03610	Hexagon combination wrench (8 x 10 mm)
㊳	09941-34513	Bearing installer set
㊴	09941-50110	Wheel bearing remover

Item	Part No.	Part Name
㊵	09941-74910	Steering bearing installer
㊶	09943-74111	Front fork oil level gauge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TIGHTENING TORQUE

ENGINE

ITEM	N·m	kg-m
Cylinder head nut	26 – 30	2.6 – 3.0
Cylinder base nut (8 mm)	21 – 25	2.1 – 2.5
Cylinder base nut (6 mm)	8 – 12	0.8 – 1.2
Exhaust pipe clamp nut	23 – 29	2.3 – 2.9
Muffler mounting bolt	18 – 28	1.8 – 2.8
Spark plug	25 – 30	2.5 – 3.0
Mission oil drain plug	20 – 25	2.0 – 2.5
Magneto rotor nut	50 – 60	5.0 – 6.0
Clutch sleeve hub nut	50 – 70	5.0 – 7.0
Water pump drive gear nut	60 – 80	6.0 – 8.0
Water drain plug	10 – 14	1.0 – 1.4
Engine sprocket nut	80 – 100	8.0 – 10.0
Radiator mounting nut	7 – 9	0.7 – 0.9
Water temp. gauge	12 – 18	1.2 – 1.8
Impeller bolt	7 – 9	0.7 – 0.9

CHASSIS

ITEM	N·m	kg-m
Handlebar set bolt	15 – 25	1.5 – 2.5
Handlebar holder bolt	15 – 25	1.5 – 2.5
Handlebar holder nut	10 – 15	1.0 – 1.5
Front fork cap bolt	35 – 55	3.5 – 5.5
Front fork lower clamp bolt	20 – 30	2.0 – 3.0
Front fork damper rod bolt	20 – 26	2.0 – 2.6
Caliper housing bolt	18 – 23	1.8 – 2.3
Caliper air bleeder valve	6 – 9	0.6 – 0.9
Front brake caliper mounting bolt	18 – 28	1.8 – 2.8
Front brake hose union bolt (Cylinder, caliper side)	20 – 25	2.0 – 2.5
Front brake master cylinder bolt	5 – 7	0.5 – 0.7
Steering stem head bolt	35 – 55	3.5 – 5.5
Front brake disc bolt	15 – 25	1.5 – 2.5
Front axle nut	40 – 57	4.0 – 5.7
Engine mounting nut	60 – 72	6.0 – 7.2
	70 – 88	7.0 – 8.8
Engine mounting bracket bolt	18 – 28	1.8 – 2.8
Swingarm pivot nut	100	10.0
Rear torque link nut	10 – 15	1.0 – 1.5
Rear shock absorber nut (upper & lower)	40 – 60	4.0 – 6.0

ITEM	N·m	kg-m
Rear brake cam lever nut	5 – 8	0.5 – 0.8
Rear axle nut	55 – 88	5.5 – 8.8
Rear sprocket nut	18 – 28	1.8 – 2.8

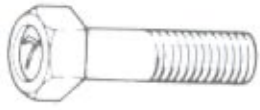
TIGHTENING TORQUE CHART

For other bolts and nuts not listed above, refer to this chart:

Bolt Diameter Ⓐ (mm)	Conventional or "4" marked bolt		"7" marked bolt	
	N·m	kg-m	N·m	kg-m
4	1 – 2	0.1 – 0.2	1.5 – 3	0.15 – 0.3
5	2 – 4	0.2 – 0.4	3 – 6	0.3 – 0.6
6	4 – 7	0.4 – 0.7	8 – 12	0.8 – 1.2
8	10 – 16	1.0 – 1.6	18 – 28	1.8 – 2.8
10	22 – 35	2.2 – 3.5	40 – 60	4.0 – 6.0
12	35 – 55	3.5 – 5.5	70 – 100	7.0 – 10.0
14	50 – 80	5.0 – 8.0	110 – 160	11.0 – 16.0
16	80 – 130	8.0 – 13.0	170 – 250	17.0 – 25.0
18	130 – 190	13.0 – 19.0	200 – 280	20.0 – 28.0

Conventional bolt

"4" marked bolt



"7" marked bolt

SERVICE DATA

CYLINDER + PISTON + PISTON RING

Unit: mm

ITEM	STANDARD			LIMIT
Piston to cylinder clearance	0.070–0.080			0.120
Cylinder bore	54.000–54.015 Measure at 20 mm from the top surface			54.060
Piston diam.	53.925–53.940 Measure at 22 mm from the skirt end			53.880
Cylinder distortion	———			0.05
Cylinder head distortion	———			0.05
Piston ring free end gap	1st	N	Approx. 4.5	3.6
	2nd	R	Approx. 6.5	5.2
Piston ring end gap	1st & 2nd		0.15–0.30	0.75
Piston ring to groove clearance	1st		0.02–0.06	———
	2nd		0.02–0.06	———
Piston pin bore	14.002–14.010			14.030
Piston pin O.D.	13.994–14.000			13.980

CONROD + CRANKSHAFT

Unit: mm

ITEM	STANDARD	LIMIT
Conrod small end I.D.	18.000–18.008	18.040
Crank web to web width	50.0 ± 0.1	———
Crankshaft runout	———	0.05

OIL PUMP

ITEM	SPECIFICATION
Oil pump reduction ratio	3.547 (67/20 × 29/17 × 18/29)
CCI pump discharge rate (Full open)	1.6–2.0 ml for 2 minutes at 2 000 r/min.

CLUTCH

Unit: mm

ITEM		STANDARD	LIMIT
Clutch cable play		4	———
Clutch release screw		1/4 Turn back	———
Drive plate thickness		2.9–3.1	2.6
Drive plate claw width		11.8–12.0	11.0
Driven plate thickness	No.1	1.6	———
	No.2	2.0	———
Driven plate distortion		———	0.10
Clutch spring free length		———	30.4

THERMOSTAT + RADIATOR

ITEM	STANDARD	LIMIT
Thermostat valve opening temperature	65 ± 1.5°C	—
Thermostat valve lift	Over 3.0 mm at 80°C	—
Radiator cap valve release pressure	90 ± 20 kPa (0.9 ± 0.2 kg/cm²)	—

TRANSMISSION

Unit: mm Except ratio

ITEM		STANDARD	LIMIT
Primary reduction ratio		3.350 (67/20)	—
Final reduction ratio		2.800 (42/15)	—
		*2.866 (43/15)	—
Gear ratios	Low	2.750 (33/12)	—
	2nd	1.857 (26/14)	—
	3rd	1.368 (26/19)	—
	4th	1.095 (23/21)	—
	5th	0.956 (22/23)	—
	Top	0.840 (21/25)	—
Shift fork to groove clearance		0.05–0.25	0.45
Shift fork groove width	No.1&No.3	4.45–4.55	—
	No.2	5.45–5.55	—
Shift fork thickness	No.1&No.3	4.3–4.4	—
	No.2	5.3–5.4	—
Countershaft length (Low to 2nd)		$92^{-0.1}_{-0.2}$	—

*For E-30

DRIVE CHAIN

Unit: mm

ITEM	STANDARD		LIMIT
Drive chain	Type	D.I.D.: D.I.D. 428VC.1 TAKASAGO: RK428HO	—
	Links	128	—
	20-pitch length	—	255.5
Drive chain slack	15–25		—

CARBURETOR

ITEM	SPECIFICATION	
	E-02,04,15,17,18,21,24	E-30
Carburetor type	MIKUNI VM28SS	←
Bore size	28 mm	←
I.D. No.	36A00	36A10
Idle r/min.	1 400 ± 150 r/min.	←
Float height	25 ± 1.0 mm	←
Main jet (M.J.)	#180	#160
Main air jet (M.A.J.)	0.6 mm	←
Jet needle (J.N.)	5EL45-3rd	5EL45-2nd

ITEM		SPECIFICATION	
		E-02,04,15,17,18,21,24	E-30
Needle jet	(N.J.)	P-6	P-5
Cut-away	(C.A.)	2.5	←
Pilot jet	(P.J.)	#35	←
By-pass	(B.P.)	1.2 mm	←
Pilot outlet	(P.O.)	0.6 mm	←
Pilot air screw	(P.A.S.)	3/4 turn out	←
Valve seat	(V.S.)	2.5 mm	←
Starter jet	(G.S.)	#50	←
Throttle cable play		0.5–1.0 mm	←

ELECTRICAL

Unit: mm

ITEM	SPECIFICATION		NOTE
Ignition timing	22° B.T.D.C. at 4 000 r/min.		
Exhaust valve	Open→close	7 400 r/min.	
	Close→open	6 750 r/min.	
Spark plug	Type	NGK: BR8ES N.D.: W24ESR	E-02
	Gap	0.6–0.8	
	Type	NGK: B8ES N.D.: W24ES	E-04
	Gap	0.6–0.8	
	Type	NGK: BR9ES N.D.: W27ESR	E-15,17,18,21
	Gap	0.6–0.8	
	Type	NGK: B9ES N.D.: W27ES	E-24, 30
	Gap	0.6–0.8	
Spark performance	Over 8 at 1 atm.		
Ignition coil resistance	Primary	W/Bl–Ground Approx. 0.1–1.0 Ω	E-02, 15, 17, 18 21, 24, 30
	Secondary	Plug cap–W/Bl Approx. 10–20 kΩ	
	Primary	W/Bl–Ground Approx. 0.1–1.0 kΩ	E-04
	Secondary	Plug cap–W/Bl Approx. 2–10 kΩ	
Magneto coil resistance	Primary	B/R–B/W Approx. 1.5–4.0 Ω	
	Pick-up	Bl/R–R/G Approx. 80–170 Ω	
Solenoid resistance	O–Bl/Y	Approx. 2–6 Ω	For RG125C
Generator no-load voltage	More than 30 V (AC) at 5 000 r/min.		
Regulated voltage	14.0–15.0 V at 5 000 r/min.		

ITEM	SPECIFICATION		NOTE
Battery	Type designation	YB4L-B FB4L-B	
	Capacity	12V14.4kC(4Ah)/10HR	
	Standard electrolyte S.G.	1.28 at 20°C (68°F)	
Fuse size	15 A		

WATTAGE

Unit: W

ITEM		SPECIFICATION	
		E-02,04,15,17,18,21	E-24,30
Headlight	HI	45	←
	LO	40	45
Tail/Brake light		5/21	8/23
Turn signal light		21	23
Tachometer light		3.4	←
Speedometer light		3.4	←
Turn signal indicator light		3.4	←
High beam indicator light		1.7	←
Neutral indicator light		3.4	←
Oil level warning light		3.4	←
Parking or position light		4	

BRAKE + WHEEL

Unit: mm

ITEM	STANDARD		LIMIT
Rear brake pedal free travel	20 – 30		———
Rear brake pedal height	62.5		———
Brake drum I.D.	Rear	———	130.7
Brake lining thickness	Rear	———	1.5
Brake disc thickness	Front	4.0 ± 0.2	3.5
Brake disc runout	Front	———	0.30
Master cylinder bore	Front	12.700 – 12.743	———
Master cylinder piston diam.	Front	12.657 – 12.684	———
Brake caliper cylinder bore	Front	33.960 – 34.010	———
Brake caliper piston diam.	Front	33.878 – 33.928	———
Wheel rim runout	Axial	———	2.0
	Radial	———	2.0
Wheel axle runout	Front	———	0.25
	Rear	———	0.25
Tire size	Front	80/100-16 45P	———
	Rear	90/90-18 51P	———
Tire tread depth	Front	———	1.6
	Rear	———	1.6

SUSPENSION

Unit: mm

ITEM	STANDARD	LIMIT	NOTE
Front fork stroke	130	—	
Front fork spring free length	—	435	
Front fork oil level	137	—	
Rear wheel travel	110	—	
Swingarm pivot shaft runout	—	0.6	

TIRE PRESSURE

COLD INFLATION TIRE PRESSURE	SOLO RIDING			DUAL RIDING		
	kPa	kg/cm²	psi	kPa	kg/cm²	psi
FRONT	200	2.00	28	200	2.00	28
REAR	200	2.00	28	225	2.25	32

FUEL + OIL + COOLANT

ITEM	SPECIFICATION		NOTE
Fuel type	Gasoline used should be graded 85-95 octane or higher. An unleaded or low-lead gasoline type is recommended.		
Fuel tank including reserve	13.0 L		
reserve	1.7 L		
Engine oil type	SUZUKI CCI or SUZUKI CCI SUPER OIL		
Engine oil tank capacity	1.2 L		
Transmission oil type	SAE 20W/40		
Transmission oil capacity	Change	900 ml	
	Overhaul	950 ml	
Front fork oil type	Fork oil #15		
Front fork oil capacity (each leg)	149 ml		
Coolant type	Use an anti-freeze/coolant compatible with an aluminum radiator, mixed with distilled water only, at the ratio of 50 : 50.		
Radiator including reserve	1 020 ml		
Brake fluid type	DOT3, DOT4 or SAE J1703		

SPECIFICATION AND DESTINATION

E-02: For U.K.
E-04: For France
E-15: For Finland
E-17: For Sweden
E-18: For Switzerland
E-21: For Belgium
E-24: For Australia
E-30: For Singapore

RG125H ('87-MODEL)

This section gives only service data for RG125H model. Refer to the sections 1 through 8 except for the items described in this section.

CONTENTS

SERVICE DATA

CYLINDER + PISTON + PISTON RING

Unit: mm

ITEM	STANDARD			LIMIT
Piston to cylinder clearance	0.070—0.080			0.120
Cylinder bore	54.000—54.015 Measure at 20 mm from the top surface			54.060
Piston diam.	53.925—53.940 Measure at 22 mm from the skirt end			53.880
Cylinder distortion	———			0.05
Cylinder head distortion	———			0.05
Piston ring free end gap	1st	N	Approx. 4.5	3.6
	2nd	R	Approx. 6.5	5.2
Piston ring end gap	1st & 2nd		0.15—0.30	0.75
Piston ring to groove clearance	1st		0.02—0.06	———
	2nd		0.02—0.06	———
Piston pin bore	14.002—14.010			14.030
Piston pin O.D.	13.994—14.000			13.980

CONROD + CRANKSHAFT

Unit: mm

ITEM	STANDARD	LIMIT
Conrod small end I.D.	18.000—18.008	18.040
Crank web to web width	50.0 ± 0.1	———
Crankshaft runout	———	0.05

OIL PUMP

ITEM	SPECIFICATION
Oil pump reduction ratio	3.547 (67/20 × 29/17 × 18/29)
CCI pump discharge rate (Full open)	1.6—2.0 ml for 2 minutes at 2 000 r/min.

CLUTCH

Unit: mm

ITEM		STANDARD	LIMIT
Clutch cable play		4	———
Clutch release screw		1/4 Turn back	———
Drive plate thickness		2.9—3.1	2.6
Drive plate claw width		11.8—12.0	11.0
Driven plate thickness	No.1	1.6	———
	No.2	2.0	———
Driven plate distortion		———	0.10
Clutch spring free length		———	30.4

THERMOSTAT + RADIATOR

ITEM	STANDARD	LIMIT
Thermostat valve opening temperature	65 ± 1.5°C	—
Thermostat valve lift	Over 3.0 mm at 80°C	—
Radiator cap valve release pressure	90 ± 20 kPa (0.9 ± 0.2 kg/cm²)	—

TRANSMISSION

Unit: mm (Except ratio)

ITEM		STANDARD		LIMIT
Primary reduction ratio		3.350 (67/20)		—
Final reduction ratio		2.800 (42/15)		—
	For E-30	2.866 (43/15)		—
Gear ratios	Low	2.750 (33/12)		—
	2nd	1.857 (26/14)		—
	3rd	1.368 (26/19)		—
	4th	1.095 (23/21)		—
	5th	0.956 (22/23)		—
	Top	0.840 (21/25)		—
Shift fork to groove clearance		0.05–0.25		0.45
Shift fork groove width		No.1&No.3	4.45–4.55	—
		No.2	5.45–5.55	—
Shift fork thickness		No.1&No.3	4.3–4.4	—
		No.2	5.3–5.4	—
Countershaft length (Low to 2nd)		$92\ ^{-0.1}_{-0.2}$		—

DRIVE CHAIN

Unit: mm

ITEM	STANDARD		LIMIT
Drive chain	Type	D.I.D.: D.I.D. 428VC.1 TAKASAGO: RK428HO	—
	Links	128	—
	20-pitch length	—	255.5
Drive chain slack	15–25		—

CARBURETOR

ITEM		SPECIFICATION	
		E-02,04,15,17,18,21,24,53	E-30
Carburetor type		MIKUNI VM28SS	←
Bore size		28 mm	←
I.D. No.		36A00	36A10
Idle r/min.		1 400 ± 150 r/min.	←
Float height		25 ± 1.0 mm	←
Main jet	(M.J.)	#180	#160
Main air jet	(M.A.J.)	0.6 mm	←
Jet needle	(J.N.)	5EL45-3rd	5EL45-2nd

ITEM		SPECIFICATION	
		E-02,04,15,17,18,21,24,53	E-30
Needle jet	(N.J.)	P-6	P-5
Cut-away	(C.A.)	2.5	←
Pilot jet	(P.J.)	#35	←
By-pass	(B.P.)	1.2 mm	←
Pilot outlet	(P.O.)	0.6 mm	←
Air screw	(A.S.)	3/4 turn back	←
Valve seat	(V.S.)	2.5 mm	←
Starter jet	(G.S.)	#50	←
Throttle cable play		0.5 – 1.0 mm	←

ELECTRICAL

Unit: mm

ITEM	SPECIFICATION		NOTE
Ignition timing	22° B.T.D.C. at 4 000 r/min.		
Exhaust valve	Open→close	7 400 r/min.	
	Close→open	6 750 r/min.	
Spark plug	Type	NGK: BR8ES N.D.: W24ESR	E-02, 53
	Gap	0.6 – 0.8	
	Type	NGK: B8ES N.D.: W24ES	E-04
	Gap	0.6 – 0.8	
	Type	NGK: BR9ES N.D.: W27ESR	E-15,17,18,21
	Gap	0.6 – 0.8	
	Type	NGK: B9ES N.D.: W27ES	E-24, 30
	Gap	0.6 – 0.8	
Spark performance	Over 8 at 1 atm.		
Ignition coil resistance	Primary	W/Bl – Ground Approx. 0.1 – 1.0 Ω	E-02, 15, 17, 18, 21, 24, 30, 53
	Secondary	Plug cap – W/Bl Approx. 10 – 20 kΩ	
	Primary	W/Bl – Ground Approx. 0.1 – 1.0 kΩ	E-04
	Secondary	Plug cap – W/Bl Approx 2 – 10 kΩ	
Magneto coil resistance	Primary	B/R – B/W Approx. 1.5 – 4.0 Ω	
	Pick-up	Bl/R – R/G Approx. 80 – 170 Ω	
Solenoid resistance	O – Bl/Y	Approx. 2 – 6 Ω	RG125H
Generator no-load voltage	More than 30 V (AC) at 5 000 r/min.		
Regulated voltage	14.0 – 15.0 V at 5 000 r/min.		

ITEM	SPECIFICATION		NOTE
Battery	Type designation	YB4L-B FB4L-B	
	Capacity	12V14.4kC(4Ah)/10HR	
	Standard electrolyte S.G.	1.28 at 20°C (68°F)	
Fuse size	15 A		

WATTAGE

Unit: W

ITEM		SPECIFICATION	
		E-02,04,15,17,18,21,53	E-24,30
Headlight	HI	45	←
	LO	40	45
Tail/Brake light		5/21	8/23
Turn signal light		21	23
Tachometer light		3.4	←
Speedometer light		3.4	←
Turn signal indicator light		3.4	←
High beam indicator light		1.7	←
Neutral indicator light		3.4	←
Oil level warning light		3.4	←
Parking or position light		4	

BRAKE + WHEEL

Unit: mm

ITEM	STANDARD		LIMIT
Rear brake pedal free travel	20–30		———
Rear brake pedal height	62.5		———
Brake drum I.D.	Rear	———	130.7
Brake lining thickness	Rear	———	1.5
Brake disc thickness	Front	4.0 ± 0.2	3.5
Brake disc runout	Front	———	0.30
Master cylinder bore	Front	12.700–12.743	———
Master cylinder piston diam.	Front	12.657–12.684	———
Brake caliper cylinder bore	Front	33.960–34.010	———
Brake caliper piston diam.	Front	33.878–33.928	———
Wheel rim runout	Axial	———	2.0
	Radial	———	2.0
Wheel axle runout	Front	———	0.25
	Rear	———	0.25
Tire size	Front	80/100-16 45P	———
	Rear	90/90-18 51P	———
Tire tread depth	Front	———	1.6
	Rear	———	1.6

SUSPENSION

Unit: mm

ITEM	STANDARD	LIMIT	NOTE
Front fork stroke	130	———	
Front fork spring free length	———	435	
Front fork oil level	137	———	
Rear wheel travel	110	———	
Swingarm pivot shaft runout	———	0.6	

TIRE PRESSURE

COLD INFLATION TIRE PRESSURE	SOLO RIDING			DUAL RIDING		
	kPa	kg/cm²	psi	kPa	kg/cm²	psi
FRONT	200	2.00	28	200	2.00	28
REAR	200	2.00	28	225	2.25	32

FUEL + OIL + COOLANT

ITEM	SPECIFICATION		NOTE
Fuel type	Gasoline used should be graded 85-95 octane or higher. An unleaded or low-lead gasoline type is recommended.		
Fuel tank including reserve	13.0 L		
reserve	1.7 L		
Engine oil type	SUZUKI CCI or SUZUKI CCI SUPER OIL		
Engine oil tank capacity	1.2 L		
Transmission oil type	SAE 20W/40		
Transmission oil capacity	Change	900 ml	
	Overhaul	950 ml	
Front fork oil type	Fork oil #15		
Front fork oil capacity (each leg)	149 ml		
Coolant type	Use an anti-freeze & Summer coolant compatible with aluminum radiator, mixed with distilled water only, at the ratio of 50 : 50.		
Radiator including reserve	1 020 ml		
Brake fluid type	DOT3, DOT4 or SAE J1703		

SPECIFICATION AND DESTINATION

E-02: For U.K.
E-04: For France
E-15: For Finland
E-17: For Sweden
E-18: For Switzerland
E-21: For Belgium
E-24: For Australia
E-30: For Singapore
E-53: For Spain

RG125J ('88-MODEL)

CONTENTS

SERVICE DATA

CYLINDER + PISTON + PISTON RING

Unit: mm

ITEM	STANDARD			LIMIT
Piston to cylinder clearance	0.070–0.080			0.120
Cylinder bore	54.000–54.015 Measure at 20 mm from the top surface			54.060
Piston diam.	53.925–53.940 Measure at 22 mm from the skirt end			53.880
Cylinder distortion	———			0.05
Cylinder head distortion	———			0.05
Piston ring free end gap	1st	N	Approx. 4.5	3.6
	2nd	R	Approx. 6.5	5.2
Piston ring end gap	1st & 2nd		0.15–0.30	0.75
Piston ring to groove clearance	1st		0.02–0.06	———
	2nd		0.02–0.06	———
Piston pin bore	14.002–14.010			14.030
Piston pin O.D.	13.994–14.000			13.980

CONROD + CRANKSHAFT

Unit: mm

ITEM	STANDARD	LIMIT
Conrod small end I.D.	18.000–18.008	18.040
Crank web to web width	50.0 ± 0.1	———
Crankshaft runout	———	0.05

OIL PUMP

ITEM	SPECIFICATION
Oil pump reduction ratio	3.547 (67/20 × 29/17 × 18/29)
CCI pump discharge rate (Full open)	1.6–2.0 ml for 2 minutes at 2 000 r/min.

CLUTCH

Unit: mm

ITEM		STANDARD	LIMIT
Clutch cable play		4	———
Clutch release screw		1/4 Turn back	———
Drive plate thickness		2.9–3.1	2.6
Drive plate claw width		11.8–12.0	11.0
Driven plate thickness	No.1	1.6	———
	No.2	2.0	———
Driven plate distortion		———	0.10
Clutch spring free length		———	30.4

THERMOSTAT + RADIATOR

ITEM	STANDARD	LIMIT
Thermostat valve opening temperature	65 ± 1.5°C	—
Thermostat valve lift	Over 3.0 mm at 80°C	—
Radiator cap valve release pressure	90 ± 20 kPa (0.9 ± 0.2 kg/cm²)	—

TRANSMISSION

Unit: mm (Except ratio)

ITEM		STANDARD	LIMIT
Primary reduction ratio		3.350 (67/20)	—
Final reduction ratio		2.800 (42/15)	—
	For E-30	2.866 (43/15)	—
Gear ratios	Low	2.750 (33/12)	—
	2nd	1.857 (26/14)	—
	3rd	1.368 (26/19)	—
	4th	1.095 (23/21)	—
	5th	0.956 (22/23)	—
	Top	0.840 (21/25)	—
Shift fork to groove clearance		0.05–0.25	0.45
Shift fork groove width	No.1&No.3	4.45–4.55	—
	No.2	5.45–5.55	—
Shift fork thickness	No.1&No.3	4.3–4.4	—
	No.2	5.3–5.4	—
Countershaft length (Low to 2nd)		$92\ ^{-0.1}_{-0.2}$	—

DRIVE CHAIN

Unit: mm

ITEM	STANDARD		LIMIT
Drive chain	Type	D.I.D.: D.I.D. 428VC.1 TAKASAGO: RK428HO	—
	Links	128	—
	20-pitch length	—	255.5
Drive chain slack	15–25		—

CARBURETOR

ITEM	SPECIFICATION		
	E-02,04,15,17,21	E-18	E-30
Carburetor type	MIKUNI VM28SS	←	←
Bore size	28 mm	←	←
I.D. No.	36A00	36A30	36A10
Idle r/min.	1 400 ± 150 r/min.	1 500 ± 100 r/min.	1 400 ± 150 r/min.
Float height	25 ± 1.0 mm	←	←
Main jet (M.J.)	#180	←	#160
Main air jet (M.A.J.)	0.6 mm	←	←
Jet needle (J.N.)	5EL45-3rd	5EL53-2nd	5EL45-2nd

ITEM		SPECIFICATION		
		E-02,04,15,17,21	E-18	E-30
Needle jet	(N.J.)	P-6	←	P-5
Cut-away	(C.A.)	2.5	←	←
Pilot jet	(P.J.)	#35	#25	#35
By-pass	(B.P.)	1.2 mm	←	←
Pilot outlet	(P.O.)	0.6 mm	←	←
Air screw	(A.S.)	3/4 turn back	PRE-SET (1 1/2 turn back)	3/4 turn back
Valve seat	(V.S.)	2.5 mm	←	←
Starter jet	(G.S.)	#50	←	←
Throttle cable play		0.5 – 1.0 mm	←	←

ELECTRICAL

Unit: mm

ITEM	SPECIFICATION		NOTE
Ignition timing	22° B.T.D.C. at 4 000 r/min.		
Exhaust valve	Open→close	7 400 r/min.	
	Close→open	6 750 r/min.	
Spark plug	Type	NGK: BR8ES N.D.: W24ESR	RG125UJ E-02
	Gap	0.6 – 0.8	
	Type	NGK: B8ES N.D.: W24ES	RG125UJ E-04
	Gap	0.6 – 0.8	
	Type	NGK: BR9ES N.D.: W27ESR	RG125J E-02,15,17, 18,21
	Gap	0.6 – 0.8	
	Type	NGK: B9ES N.D.: W27ES	RG125J E-04,30
	Gap	0.6 – 0.8	
Spark performance	Over 8 at 1 atm.		
Ignition coil resistance	Primary	W/Bl – Ground Approx. 0.1 – 1.0 Ω	E-02, 15, 17, 18, 21, 24, 30, 53
	Secondary	Plug cap – W/Bl Approx. 10 – 20 kΩ	
	Primary	W/Bl – Ground Approx. 0.1 – 1.0 Ω	E-04
	Secondary	Plug cap – W/Bl Approx. 2 – 10 kΩ	
Magneto coil resistance	Primary	B/R – B/W Approx. 1.5 – 4.0 Ω	
	Pick-up	Bl/R – R/G Approx. 80 – 170 Ω	
Solenoid resistance	O – Bl/Y	Approx. 2 – 6 Ω	RG125J
Generator no-load voltage	More than 30 V (AC) at 5 000 r/min.		
Regulated voltage	14.0 – 15.0 V at 5 000 r/min.		

ITEM	SPECIFICATION		NOTE
Battery	Type designation	YB4L-B FB4L-B	
	Capacity	12V14.4kC(4Ah)/10HR	
	Standard electrolyte S.G.	1.28 at 20°C (68°F)	
Fuse size	15 A		

WATTAGE

Unit: W

ITEM		SPECIFICATION	
		E-02,04,15,17,18,21,53	E-24,30
Headlight	HI	45	←
	LO	40	45
Tail/Brake light		5/21	8/23
Turn signal light		21	23
Tachometer light		3.4	←
Speedometer light		3.4	←
Turn signal indicator light		3.4	←
High beam indicator light		1.7	←
Neutral indicator light		3.4	←
Oil level warning light		3.4	←
Parking or position light		4	

BRAKE + WHEEL

Unit: mm

ITEM	STANDARD		LIMIT
Rear brake pedal free travel	20 – 30		—
Rear brake pedal height	62.5		—
Brake drum I.D.	Rear	—	130.7
Brake lining thickness	Rear	—	1.5
Brake disc thickness	Front	4.0 ± 0.2	3.5
Brake disc runout	Front	—	0.30
Master cylinder bore	Front	12.700 – 12.743	—
Master cylinder piston diam.	Front	12.657 – 12.684	—
Brake caliper cylinder bore	Front	33.960 – 34.010	—
Brake caliper piston diam.	Front	33.878 – 33.928	—
Wheel rim runout	Axial	—	2.0
	Radial	—	2.0
Wheel axle runout	Front	—	0.25
	Rear	—	0.25
Tire size	Front	80/100-16 45P	—
	Rear	90/90-18 51P	—
Tire tread depth	Front	—	1.6
	Rear	—	1.6

SUSPENSION

Unit: mm

ITEM	STANDARD	LIMIT	NOTE
Front fork stroke	130	———	
Front fork spring free length	———	435	
Front fork oil level	137	———	
Rear wheel travel	110	———	
Swingarm pivot shaft runout	———	0.6	

TIRE PRESSURE

COLD INFLATION TIRE PRESSURE	SOLO RIDING			DUAL RIDING		
	kPa	kg/cm²	psi	kPa	kg/cm²	psi
FRONT	200	2.00	29	200	2.00	29
REAR	200	2.00	29	225	2.25	33

FUEL + OIL + COOLANT

ITEM	SPECIFICATION		NOTE
Fuel type	Gasoline used should be graded 85-95 octane or higher. An unleaded or low-lead gasoline type is recommended.		
Fuel tank including reserve	13.0 L		
reserve	1.7 L		
Engine oil type	SUZUKI CCI or SUZUKI CCI SUPER OIL		
Engine oil tank capacity	1.2 L		
Transmission oil type	SAE 20W/40		
Transmission oil capacity	Change	900 ml	
	Overhaul	950 ml	
Front fork oil type	Fork oil #15		
Front fork oil capacity (each leg)	149 ml		
Coolant type	Use an anti-freeze & Summer coolant compatible with aluminum radiator, mixed with distilled water only, at the ratio of 50 : 50.		
Radiator including reserve	1 020 ml		
Brake fluid type	DOT3, DOT4 or SAE J1703		

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