

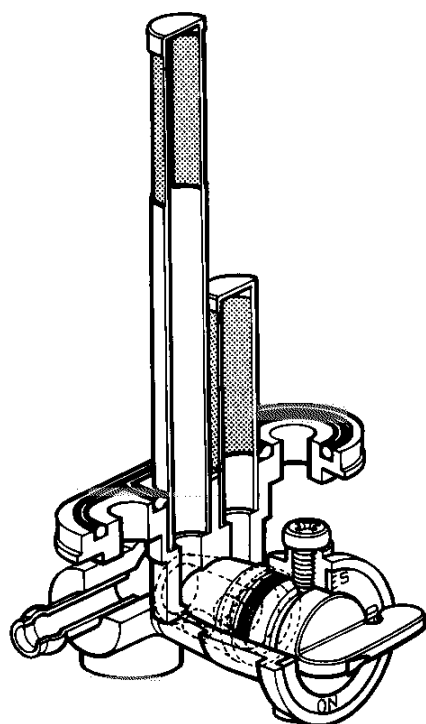
FUEL SYSTEM

CONTENTS

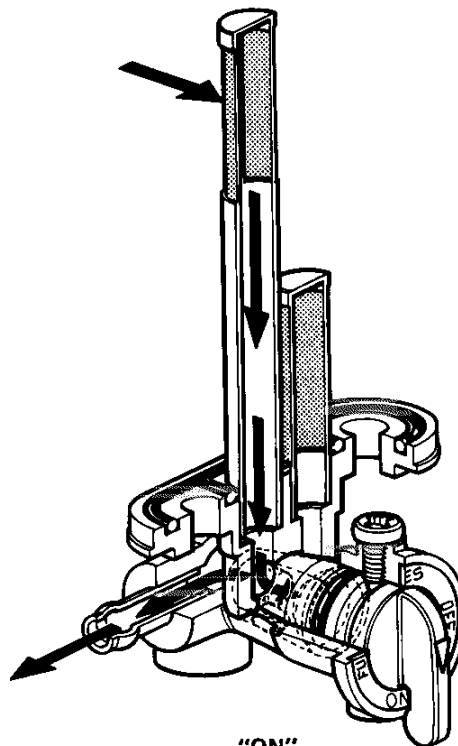
FUEL COCK	5- 1
REMOVAL	5- 2
CLEANING	5- 2
REMOUNTING	5- 3
CARBURETOR	5- 3
SPECIFICATIONS	5- 4
SETTING TABLE	5- 4
I.D. NO. LOCATION	5- 4
SLOW SYSTEM	5- 5
MAIN SYSTEM	5- 5
STARTER SYSTEM	5- 6
FLOAT SYSTEM	5- 6
REMOVAL AND DISASSEMBLY	5- 7
INSPECTION	5-10
NEEDLE VALVE INSPECTION	5-10
FLOAT HEIGHT ADJUSTMENT	5-10
REASSEMBLY AND REMOUNTING	5-11

FUEL COCK

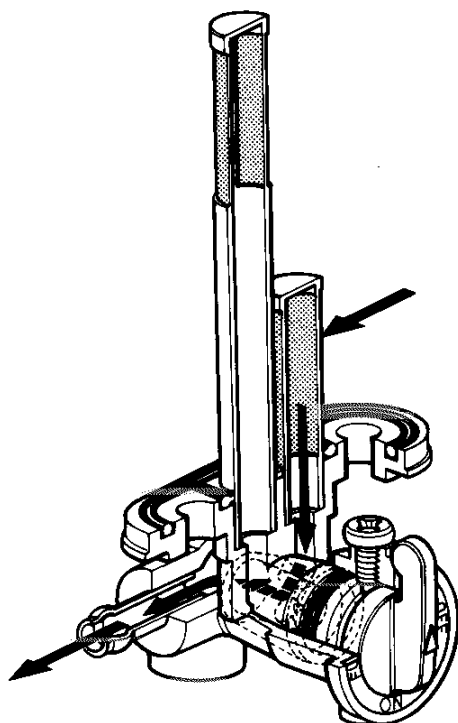
This fuel cock can be switched to three passages "OFF", "ON" and "RES" by the valve operated together with the fuel cock lever as shown below.



"OFF"



"ON"

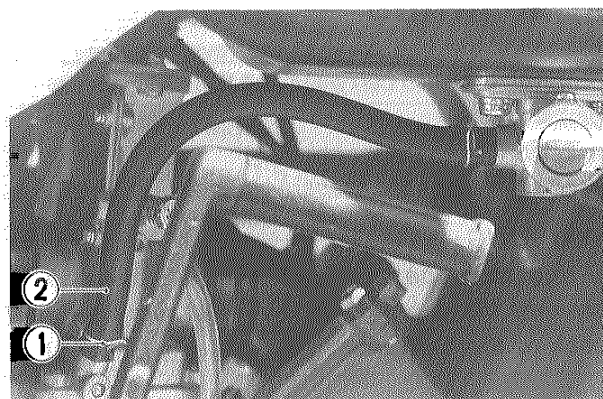


"RES"

← Fuel

REMOVAL

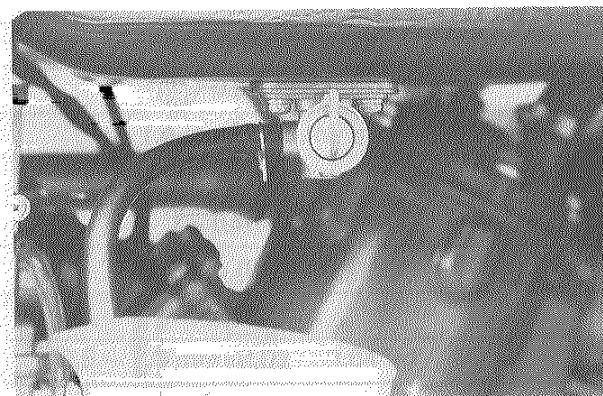
- Turn the fuel cock to "OFF" position.
- Slide the clip ① and disconnect the fuel hose ② from the carburetor.



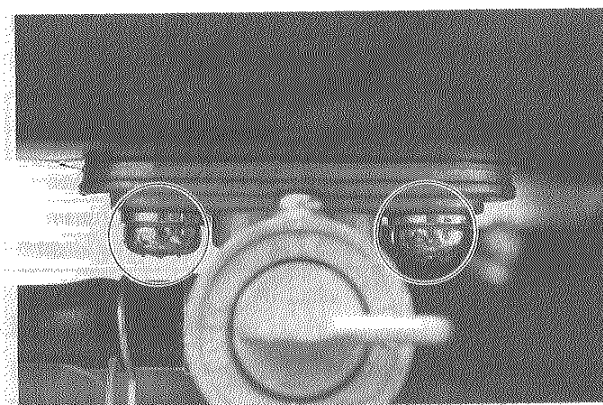
- Turn the fuel cock to "RES" position and drain fuel completely to a clean container.

WARNING:

Gasoline is evry explosive. Extreme care must be taken.



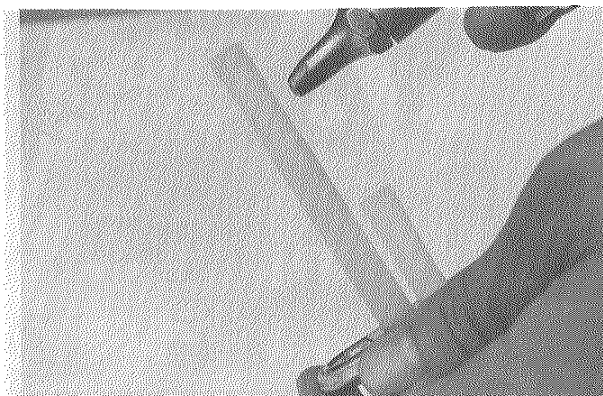
- Remove the two screws and remove the fuel cock assembly.



CLEANING

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

Wash the strainer with non-flammable cleaning solvent and blow compressed air through it to dry off solvent.



REMOUNTING

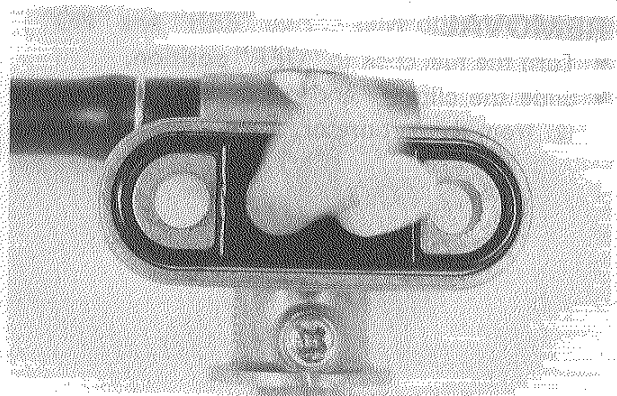
Remount the fuel cock in the reverse order of the removal, and also carry out the following steps.

NOTE:

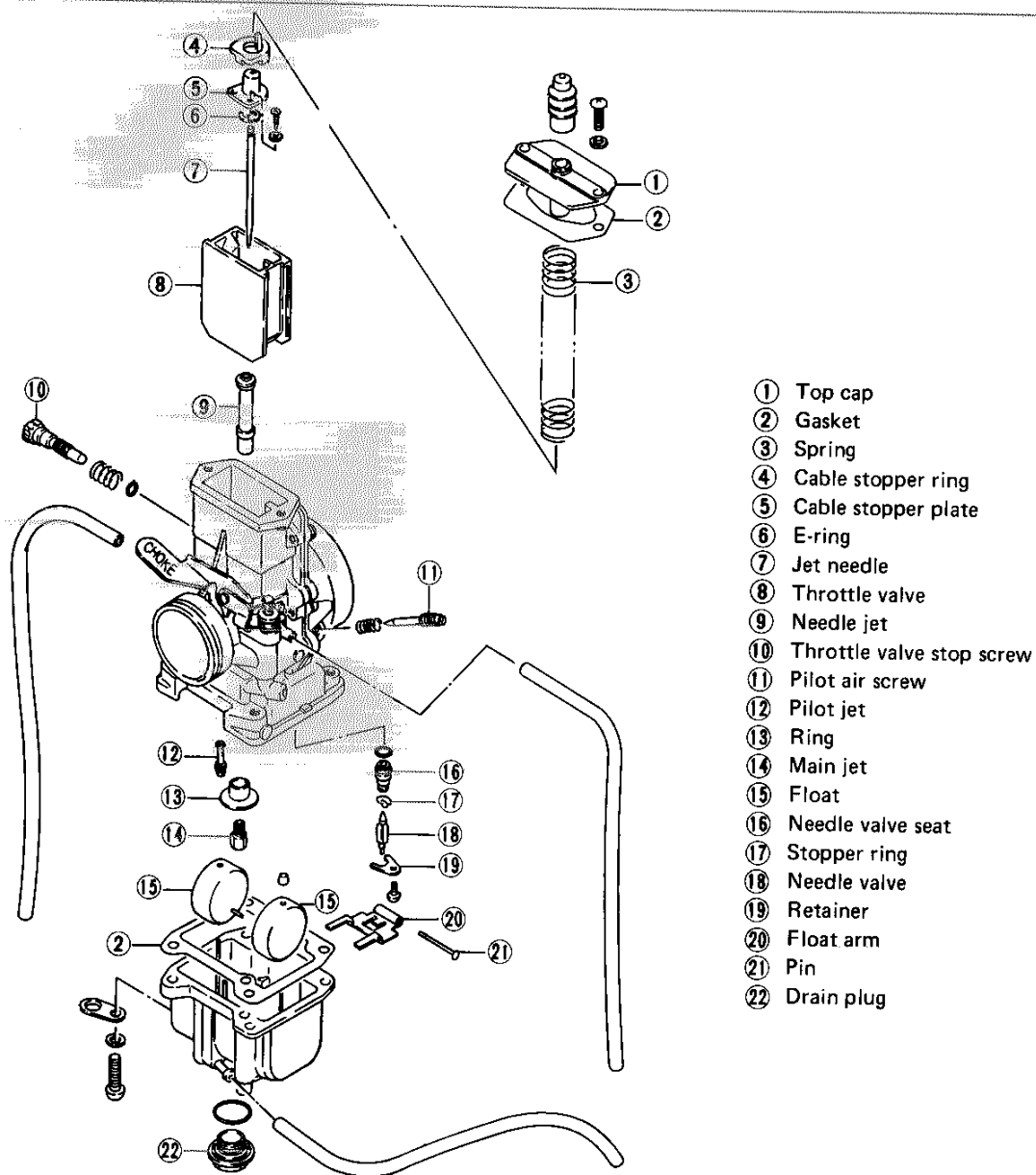
Route the fuel hose properly. (Page 5-2)

WARNING:

O-ring must be replaced with a new one to prevent fuel leakage when reinstalling the fuel cock to the fuel tank.



CARBURETOR



SPECIFICATIONS

ITEM	SPECIFICATION
Carburetor type	TM38SS
Bore size	38 mm (1.5 in)
I.D. No.	43B00
Idle r/min.	1400 ± 50 r/min.
Float height	11.4 ± 1.0 mm (0.45 ± 0.04 in)
Main jet (M.J.)	# 420 (Spare main jet # 380, 400, 440)
Jet needle (J.N.)	6DH6-3rd
Needle jet (N.J.)	O-6
Cut-away (C.A.)	2.0
Pilot jet (P.J.)	# 30
By pass (B.P.)	1.4 mm (0.06 in)
Pilot outlet (P.O.)	0.7 mm (0.03 in)
Air screw (A.S.)	1½ turn out
Valve seat (V.S.)	3.5 mm (0.14 in)
Starter jet (G.S.)	# 250
Throttle cable play	0.5 – 1.0 mm (0.02 – 0.04 in)

SETTING TABLE

TYPICAL CONDITION SETTING

The following table shows the carburetor setting selections by typical conditions which particularly affect the carburetion to a large degree. When adjusting the carburetion, refer to this table for finding suitable jet selections.

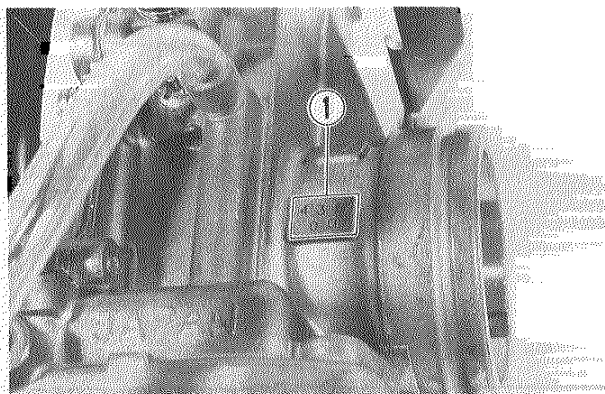
Altitude	Atmospheric temperature	Below 5°C (41°F)	5–25°C (41–77°F)	Above 25°C (77°F)
0–1500 m (0–5000 ft)	Main jet	# 440	# 420	# 400
	Jet needle	6DH6-4th	6DH6-3rd	6DH6-2nd
	Air screw	1 turn out	1½ turn out	1½ turn out
Above 1500 m (5000 ft)	Main jet	# 420	# 400	# 380
	Jet needle	6DH6-3rd	6DH6-2nd	6DH6-1st
	Air screw	1 turn out	1½ turn out	2 turn out

Each one of the main jet is included in the spare parts. The list below is part No. of each main jet.

Part name	Part No.
Main jet # 380	09491-76001
Main jet # 400	09491-80004
Main jet # 420	09491-84001
Main jet # 440	09491-88001

I.D. NO. LOCATION

Each carburetor has I.D. Number ① printed on the carburetor body according to its specifications.

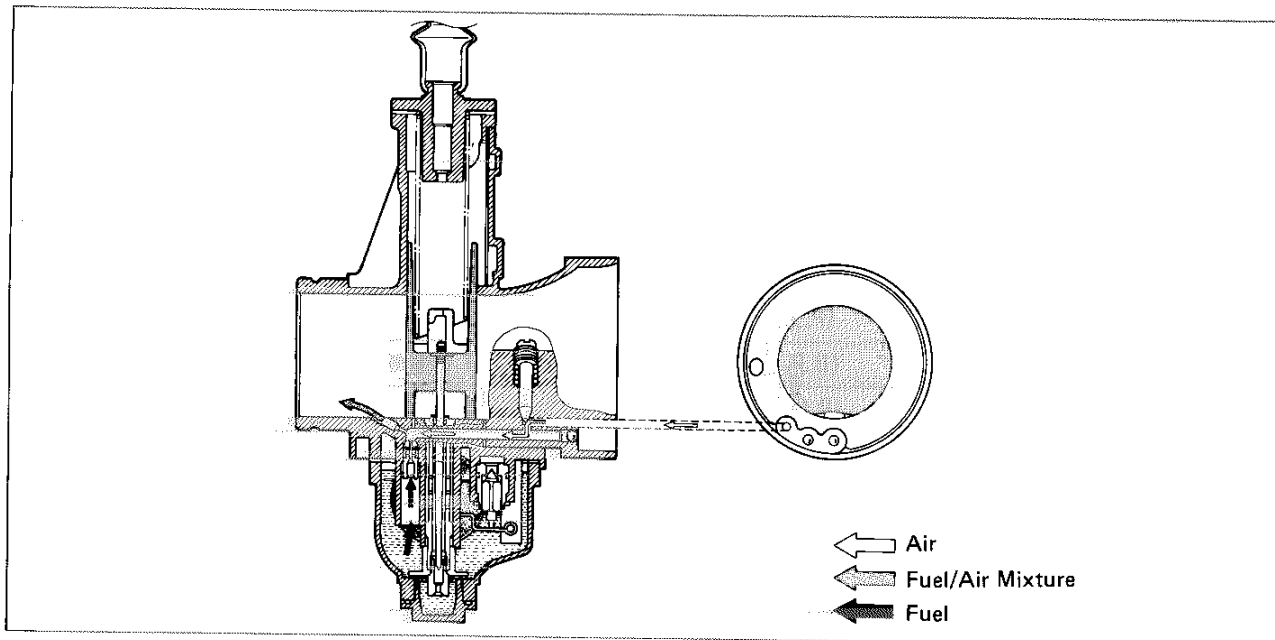


SLOW SYSTEM

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

The fuel 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.

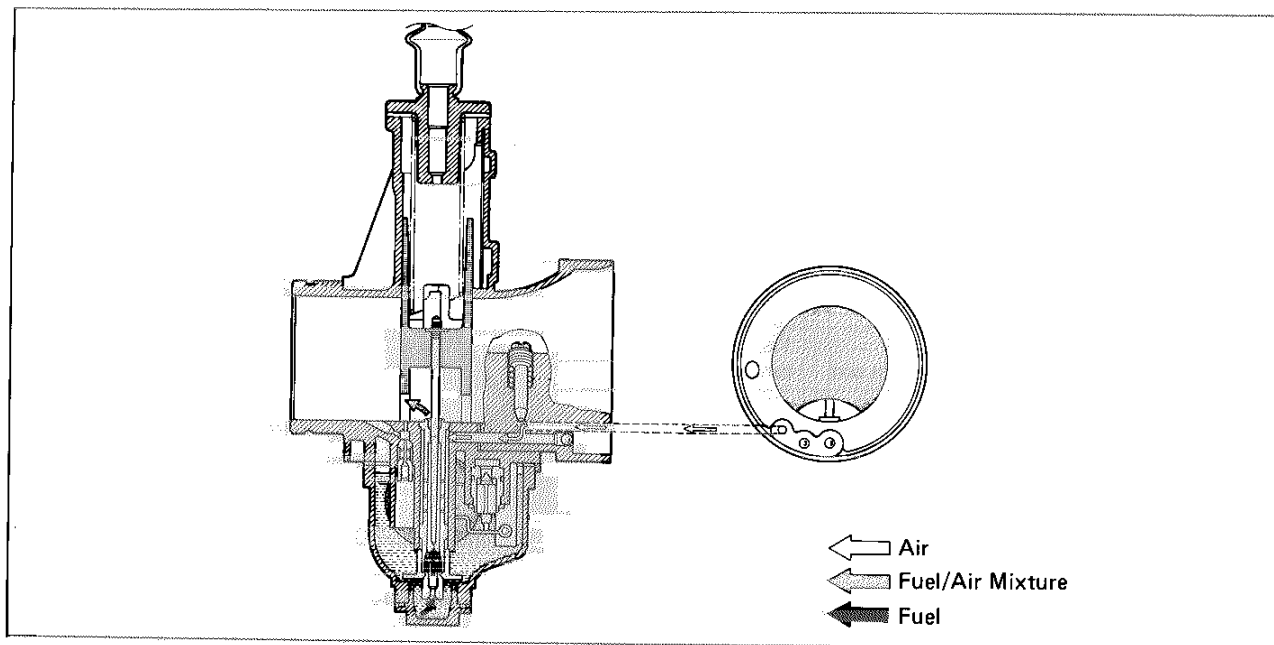
The air screw controls the amount of mixture. When the piston valve opens a little, the mixture jets through the by-pass and the pilot outlet.



MAIN SYSTEM

This system supplies fuel during engine operation when the piston valve is 1/4 — Full open.

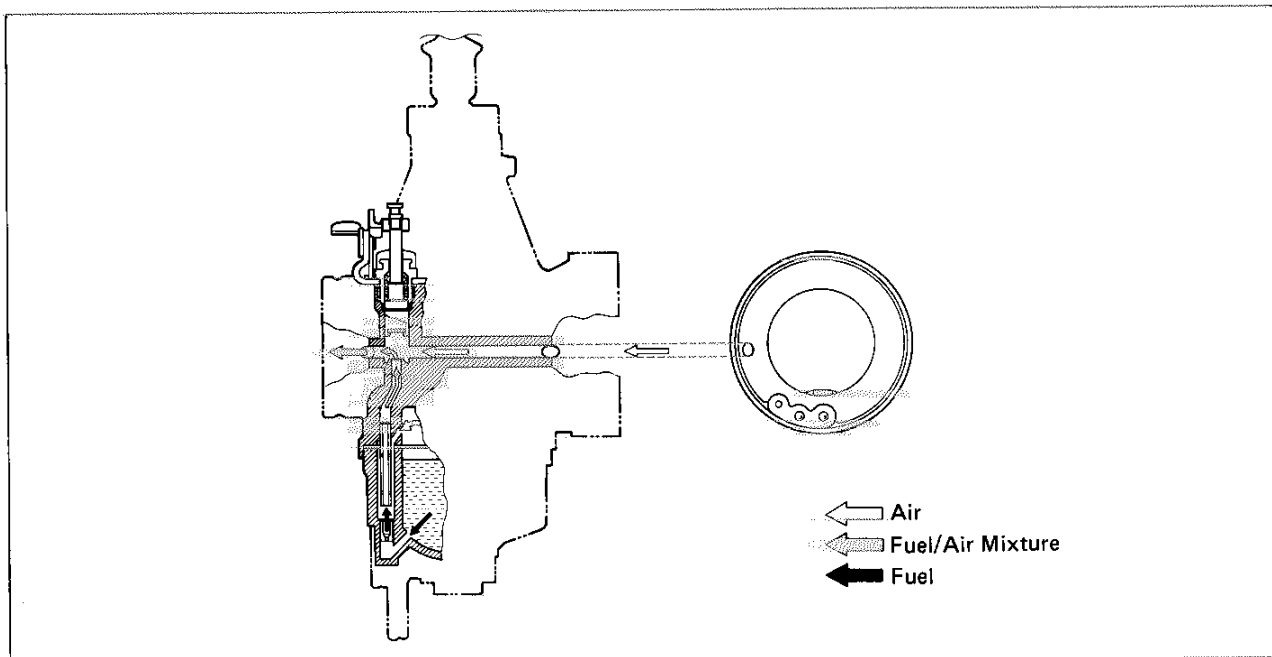
The fuel passes through the main jet and mixes with air metered by the main air jet. The mixture passes by the clearance between the needle jet and jet needle and then exits into the main bore after being metered by the jet needle.



STARTER SYSTEM

When the starter plunger is lifted, 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.

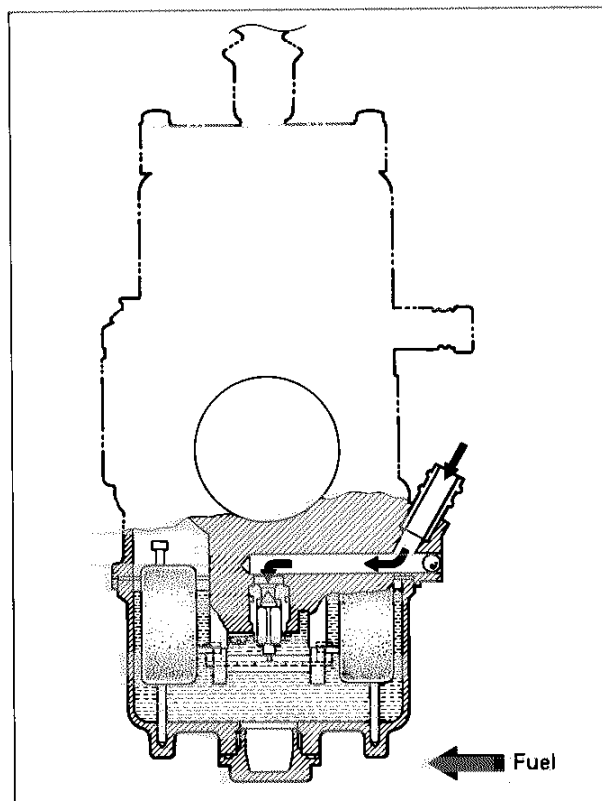
The two successive mixings of fuel with air are such that a proper fuel/air mixture for starting is produced when the mixture is sprayed out through the starter outlet into the main bore.



FLOAT SYSTEM

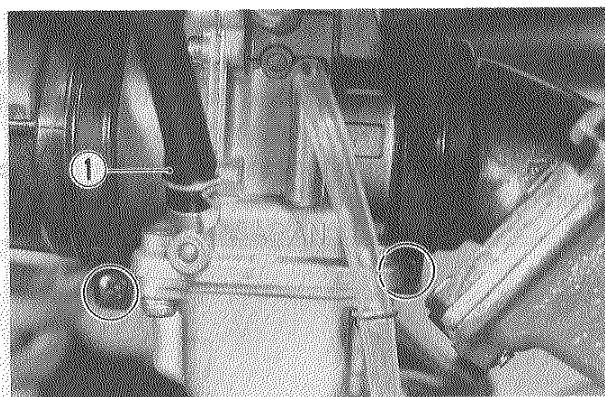
The floats and needle valve are associated with the same mechanism, so that, as the floats move up and down, the needle valve too moves likewise. When the fuel level is up in the float chamber, the floats are up and the needle valve remains pushed up against valve seat. Under this condition, no fuel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

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

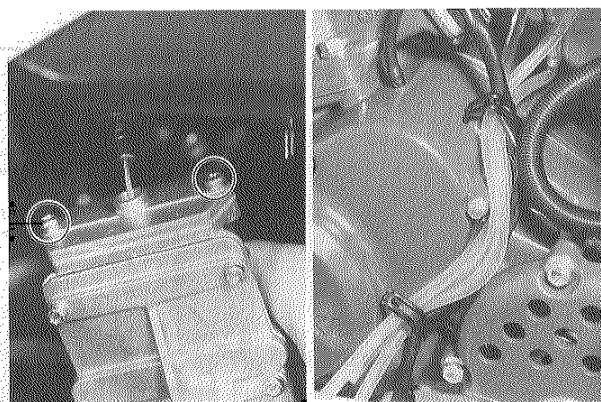


REMOVAL AND DISASSEMBLY

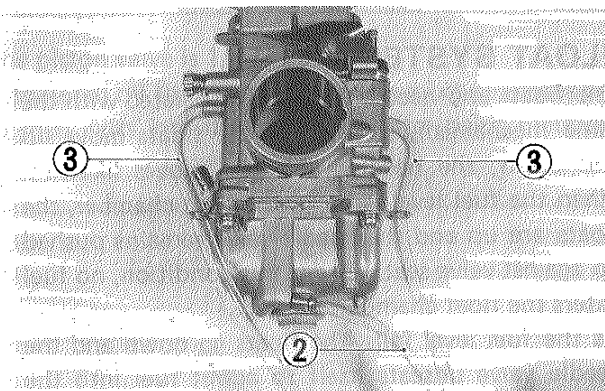
- Turn the fuel cock to "OFF" position.
- Slide the clip and disconnect the fuel hose ①.
- Loosen the two carburetor clamp screws and remove the carburetor.



- Remove the two screws and remove the throttle valve assembly.
- Remove the two clamps and remove the carburetor from the machine.



- Disconnect the overflow pipe ② and breather hoses ③.



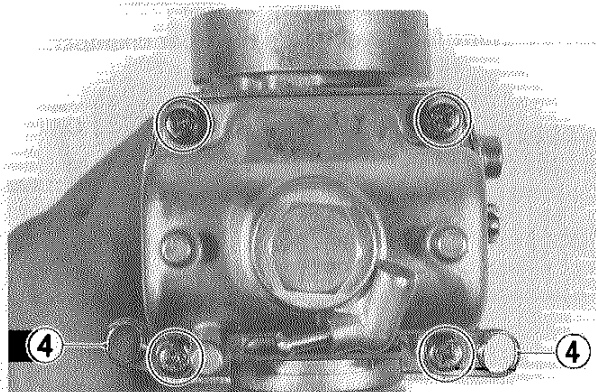
- Remove the screws with the special tool and remove the float chamber body.

09900-09003

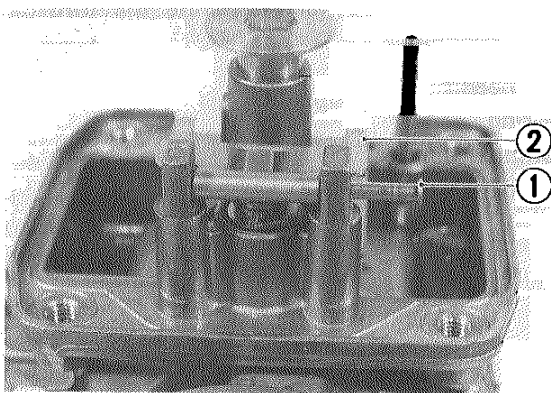
Impact driver set

NOTE:

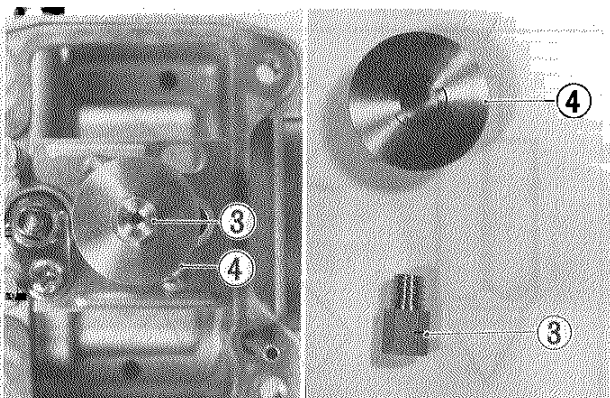
Do not loose the breather hose guides ④.



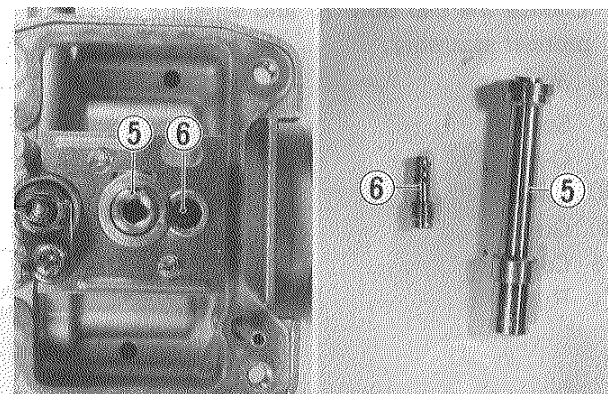
- Pull out the float arm pin ① and remove the float arm ②.



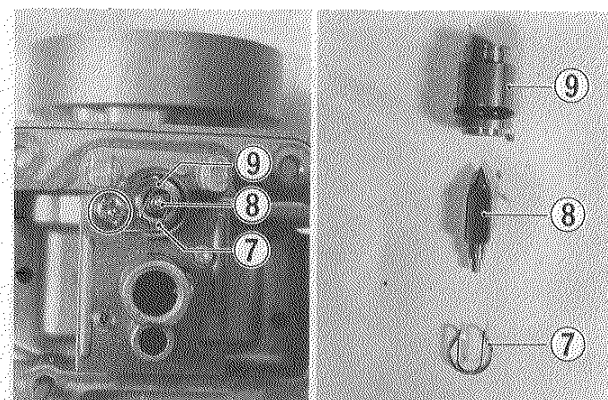
- Remove the main jet ③ and ring ④.



- Remove the jet needle ⑤ and pilot jet ⑥.

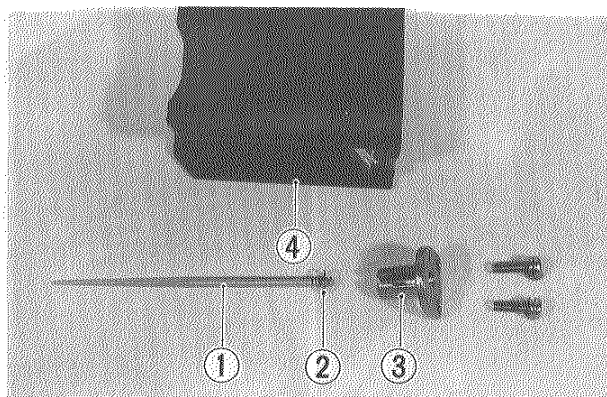
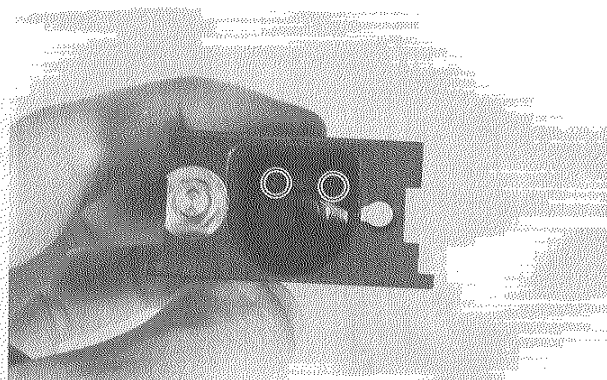


- Remove the screw and remove the stopper ring ⑦, needle valve ⑧ and needle valve seat ⑨.



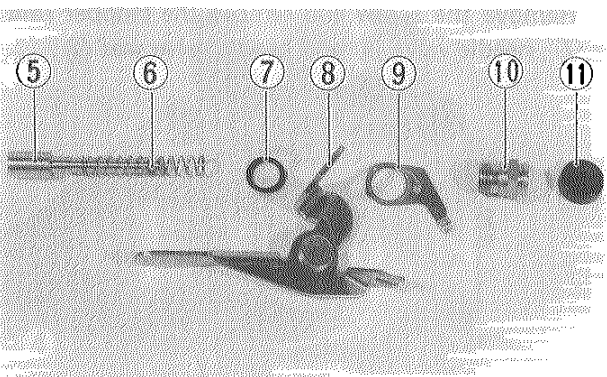
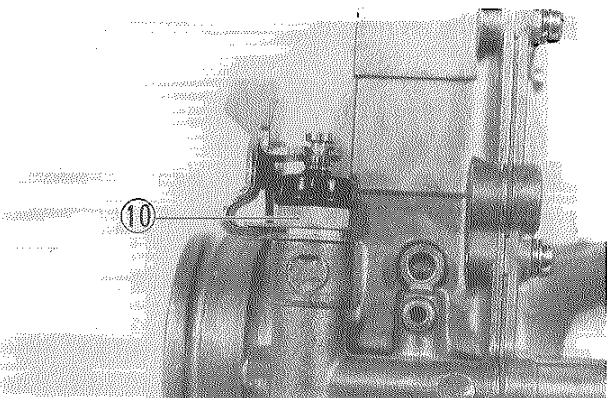
- Remove the screws and separate the throttle valve assembly.

- ① Jet needle
- ② E-ring
- ③ Stopper plate
- ④ Throttle valve



- Loosen the cap bolt ⑩ and separate the starter plunger assembly.

- ⑤ Plunger
- ⑥ Spring
- ⑦ O-ring
- ⑧ Lever
- ⑨ Guide
- ⑩ Cap bolt
- ⑪ Rubber cap



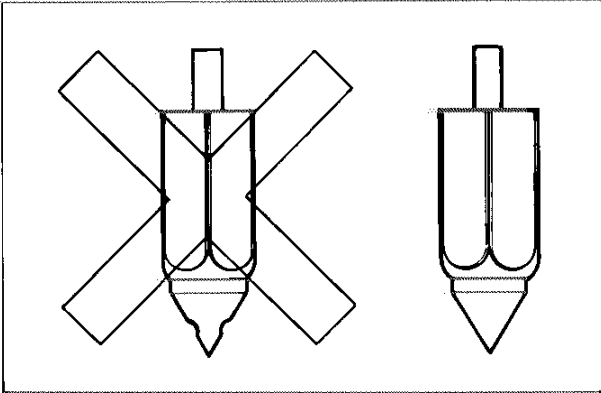
INSPECTION

Check following items for any damage or clogging.

- * Pilot jet
- * Main jet
- * Needle jet air bleeding hole
- * Float
- * Needle valve mesh
- * Gasket
- * Throttle valve
- * Pilot outlet and bypass holes

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.

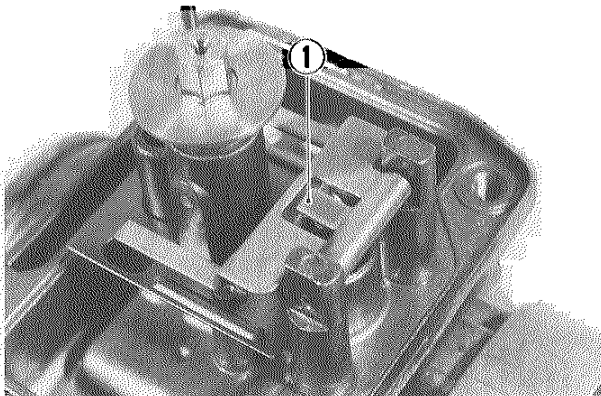
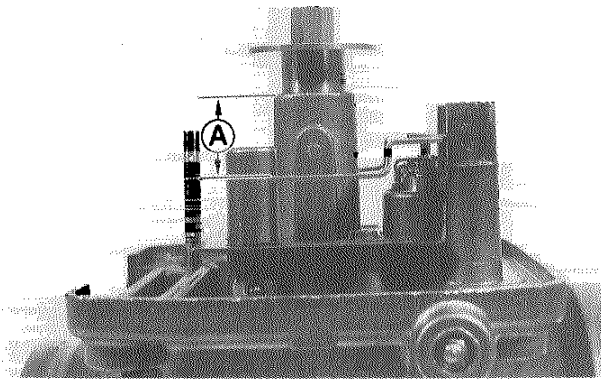


FLOAT HEIGHT ADJUSTMENT

To check the float height, invert the carburetor body, with the float arm kept free, measure the height **A** while float arm is just in contact with needle valve using calipers. Bend the tongue **1** as necessary to bring the height **A** to this value.

Float height	$11.4 \pm 1.0 \text{ mm}$ ($0.45 \pm 0.04 \text{ in}$)
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09900-20102	Vernier calipers Not available in US model
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REASSEMBLY AND REMOUNTING

Reassemble and remount the carburetor in the reverse order of the removal and disassembly. Also, following adjustments are necessary after remounting.

Throttle cable play (Page 2-7).

Engine idling adjustment (Page 2-6).

ELECTRICAL SYSTEM

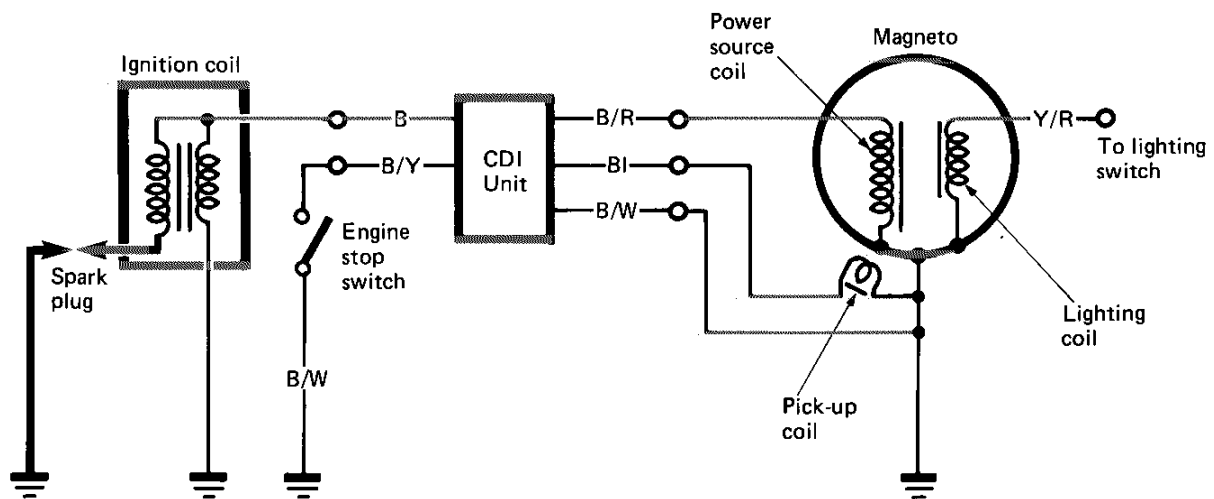
CONTENTS

IGNITION SYSTEM	6- 1
INSPECTION	6- 2
LIGHTING SYSTEM	6- 4
INSPECTION	6- 4
LAMPS	6- 5
INSPECTION	6- 5
SWITCHES	6- 6
INSPECTION	6- 6

IGNITION SYSTEM

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 gap.

IGNITION SYSTEM DIAGRAM



WIRE COLOR

- B : Black
- BI : Blue
- B/Y : Black with Yellow tracer
- B/R : Black with Red tracer
- B/W : Black with White tracer
- Y/R : Yellow with Red tracer

INSPECTION**MAGNETO COIL**

- Remove the fuel tank.
- Disconnect the pick-up and power source lead wires from the magneto.
- Using the pocket tester, measure the resistance between the lead wires in the following table.

09900-25002	Pocket tester
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(Range: x 100 Ω)

Magneto coil resistance	
Pick-up	BI – B/W 175 – 265 Ω
Power source	B/R – B/W 315 – 475 Ω

WIRE COLOR

BI : Blue

B/W : Black with White tracer

B/R : Black with Red tracer

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.

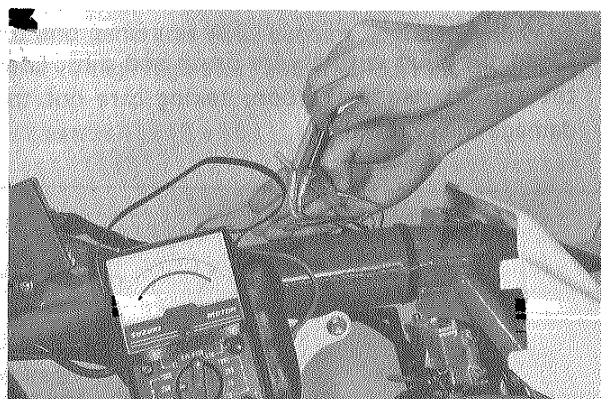
09900-28106	Electro tester
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STD Spark performance	8 mm (0.3 in)
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Checking with pocket tester

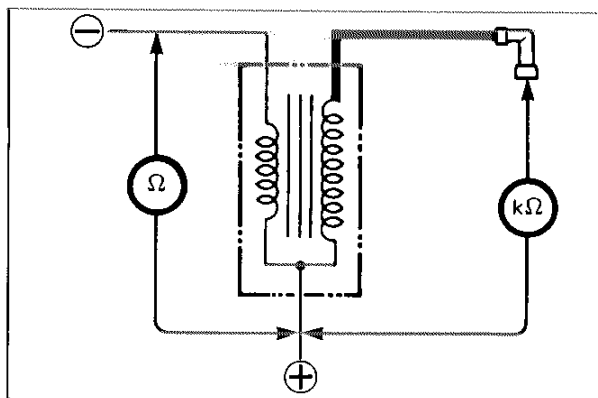
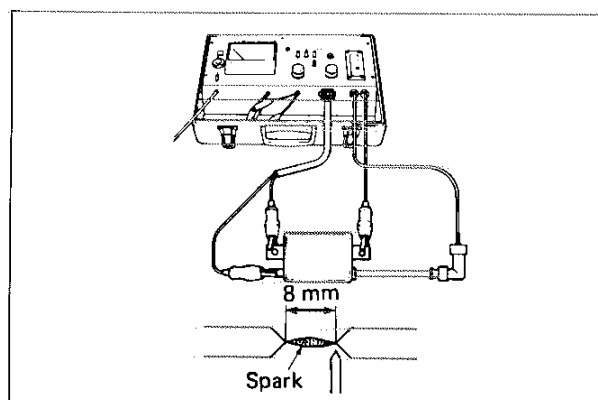
09900-25002	Pocket tester
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Ignition coil resistance	
Primary	⊕ terminal – Ground (Range: x 1 Ω) 0 – 1.0 Ω
Secondary	Plug cap – ⊕ terminal (Range: x 1 k Ω) 3 – 5 k Ω
Secondary (Only for Canada model)	Plug cap – ⊕ terminal (Range: x 1 k Ω) 13 – 15 k Ω

**NOTE:**

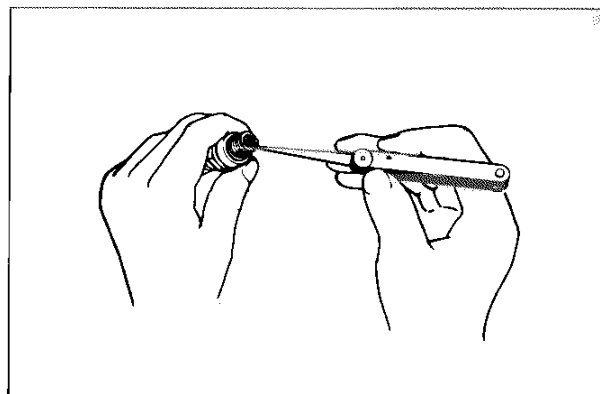
When replacing the magneto coils, apply a small quantity of **THREAD LOCK "1342"** to the threaded parts of screws. (Refer to page 3-40.)

99000-32050	Thread Lock "1342"
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SPARK PLUG

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

**SPARK PLUG GAP**

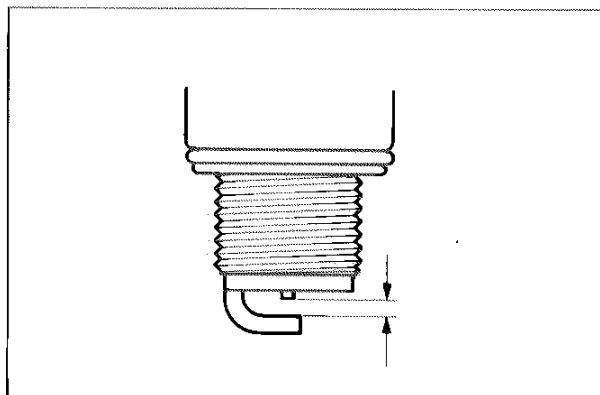
- Check the gap with a thickness gauge.

For U.S. and other models

B8EGV	0.55 – 0.65 mm (0.022 – 0.026 in)
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For Canada model

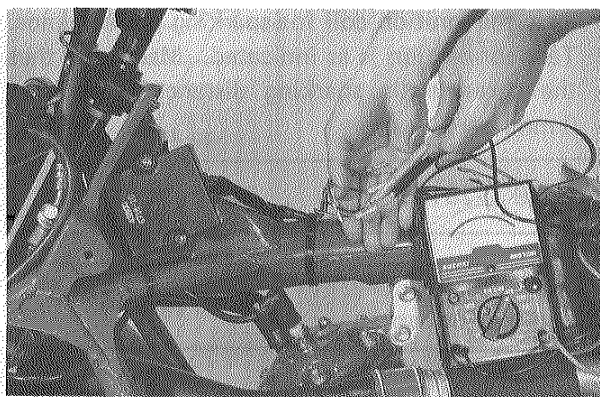
BR8EV	0.5 – 0.6 mm (0.020 – 0.024 in)
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**CDI UNIT**

- Disconnect the lead wire couplers from the CDI unit.
- Using the pocket tester ($\times 1 \text{ k}\Omega$ range), measure the resistance between the lead wires in the following table.

If the resistance checked is incorrect, replace the CDI unit or inspect the magneto coils, ignition coil and spark plug.

09900-25002	Pocket tester
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Unit: Approx. $\text{k}\Omega$

		⊕ Probe of tester to:				
⊖ Probe of tester to:		B/Y	B/W	B/R	B	BI
	B/Y		∞	∞	∞	∞
	B/W	11		3.5	∞	9.5
	B/R	3.0	130		∞	150
	B	35	2.8	10		16
	BI	90	8	15	∞	

CAUTION:

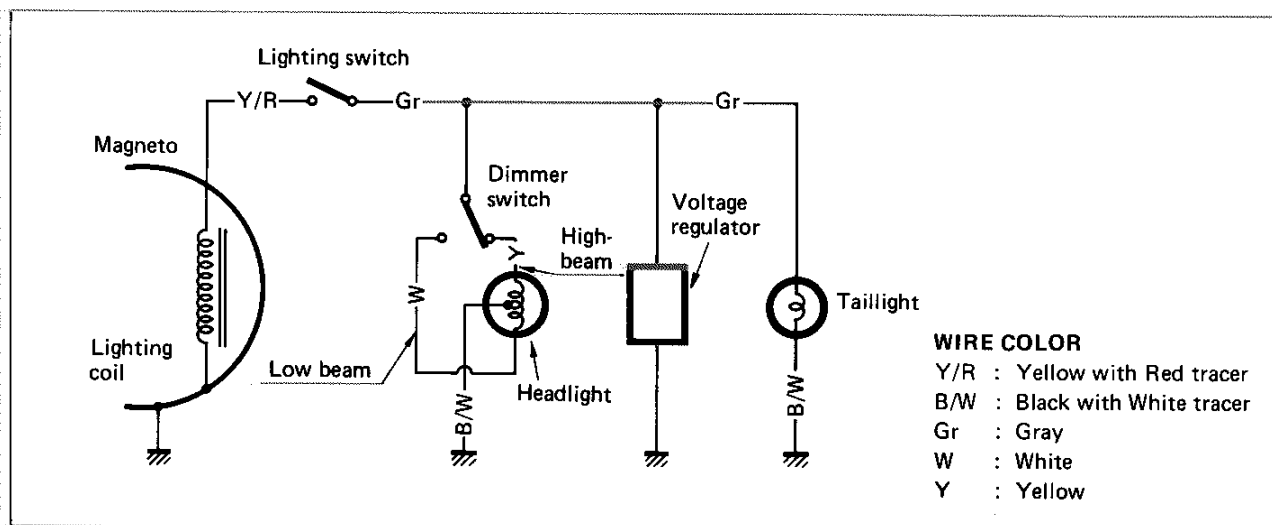
As transistors, capacitors, zener diodes, etc. are used inside this CDI unit, the resistance values will differ when an ohmmeter other than the Suzuki pocket tester is used.

NOTE:

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.

LIGHTING SYSTEM

The lighting coil is mounted on the stator of the magneto and generates A.C. current as the magneto rotor turns. A.C. voltage from the lighting coil is regulated by the voltage regulator, and then current flows to the headlight and taillight.



INSPECTION

REGULATED VOLTAGE

- Start the engine and keep it running at 5 000 r/min with the lighting switch turned ON.
- Using the pocket tester, measure the A.C. voltage between the headlight lead wire and ground.

If the tester reads under 13.0V or over 14.0V the regulator is faulty.

Regulated voltage	13.0 – 14.0V at 5 000 r/min
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09900-25002	Pocket tester
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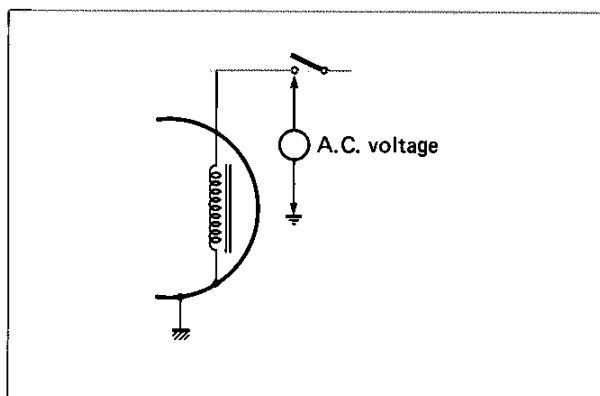
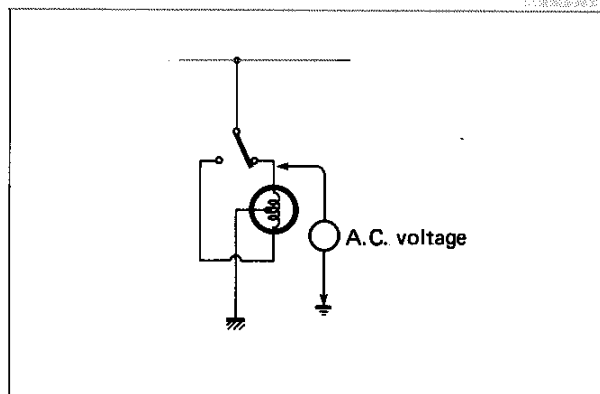
LIGHTING COIL OUTPUT

- Start the engine and keep it running at 3 000 r/min and 8 000 r/min with the lighting switch turned OFF.
- Using the pocket tester, measure the A.C. voltage between lighting coil lead wires (Y/R and B/W). If the A.C. voltage is not within the specification, the lighting coil and/or rotor are faulty.

Lighting coil output

Above 12V at 3 000 r/min Below 18V at 8 000 r/min
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09900-25002	Pocket tester
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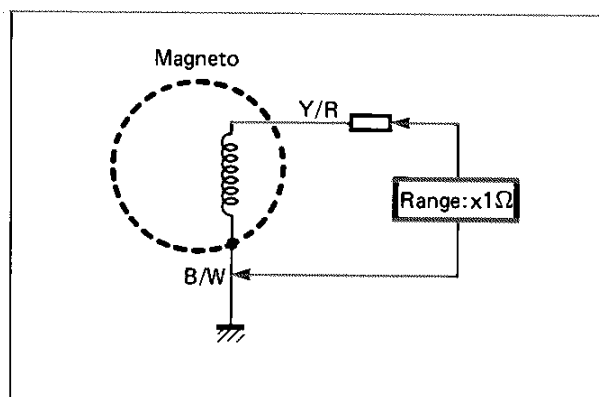


LIGHTING COIL RESISTANCE

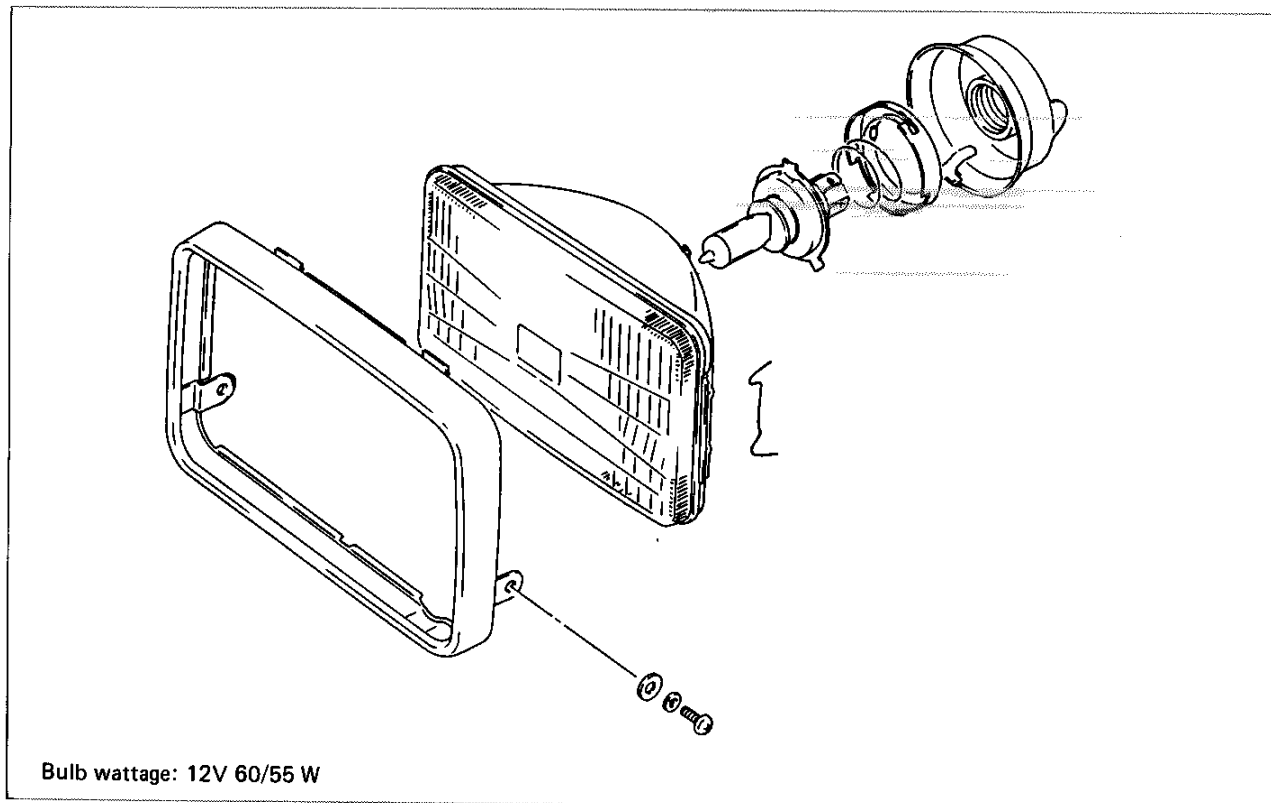
- Using the pocket tester, measure the resistance between the lighting coil lead wires (Y/R and B/W). If the resistance is not within the specification, the lighting coil is faulty.

Lighting coil resistance	Y/R – B/W 0.5 – 1.0 Ω
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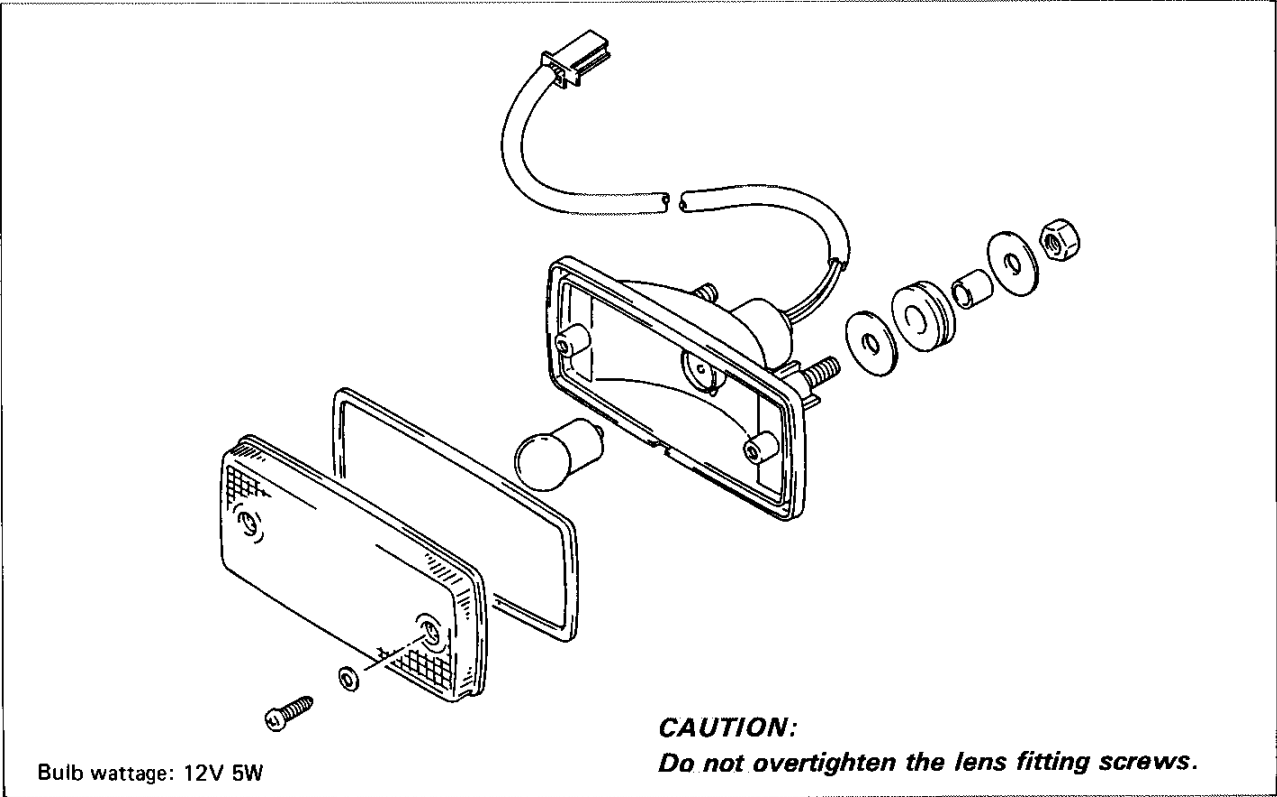
09900-25002	Pocket tester
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**LAMPS****INSPECTION**

After installing a new bulb, check for continuity. If the bulb does not light, inspect the wiring for open or short circuit.

HEADLIGHT

TAILLIGHT



SWITCHES

INSPECTION

Inspect each switch for continuity with the pocket tester referring to the chart. If any abnormality is found, replace the respective switch assemblies with new ones.

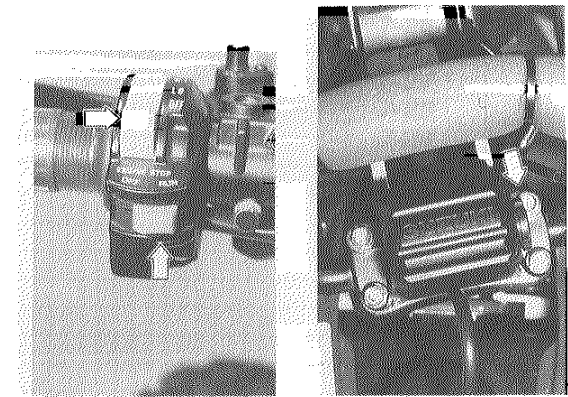
09900-25002	Pocket tester
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LIGHTING/DIMMER SWITCH

	Y/R	Gr	Y	W
HI				
LO				
OFF				

ENGINE STOP SWITCH

	B/Y	B/W
OFF		
RUN		



IGNITION SWITCH

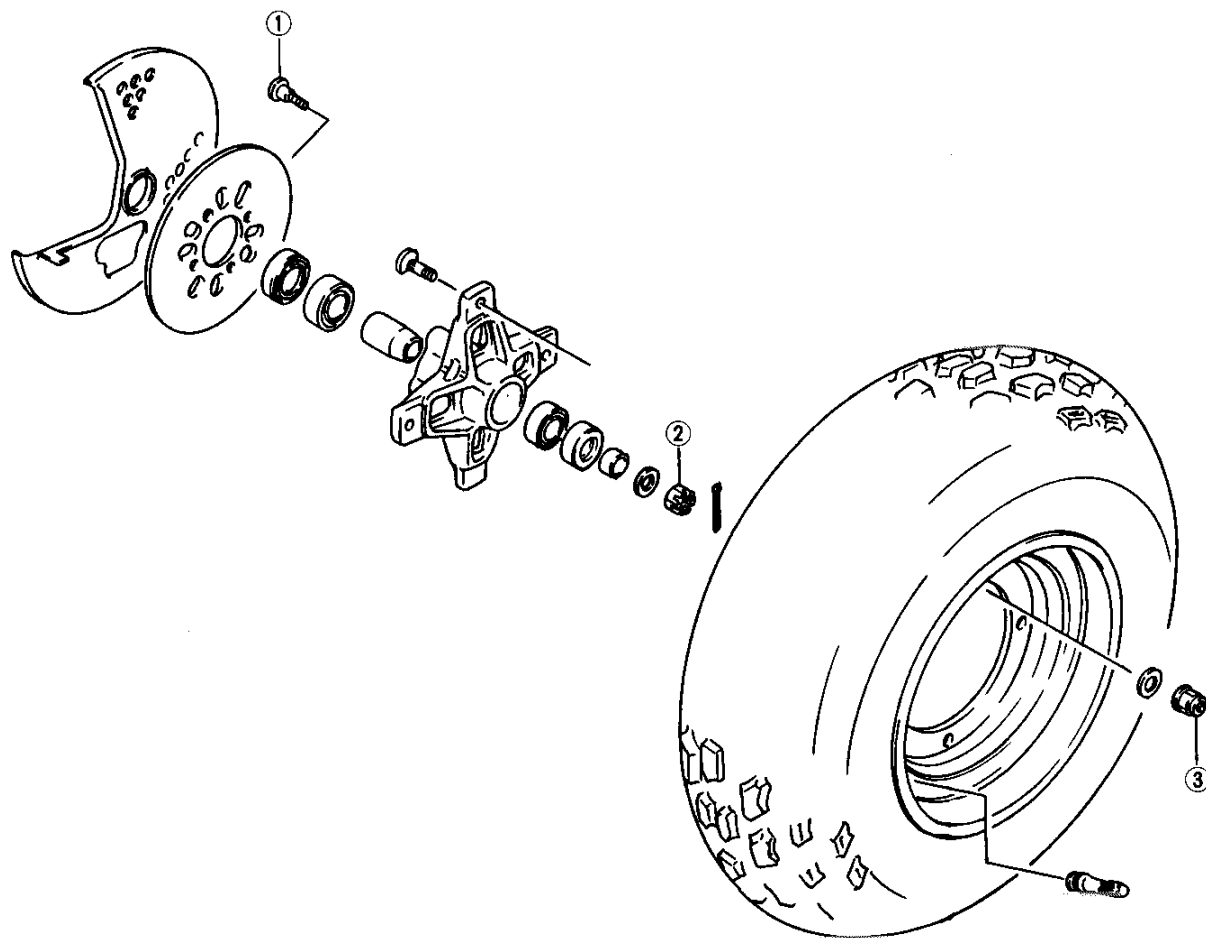
	B/W	B/Y
OFF		
ON		

CHASSIS

CONTENTS

FRONT WHEEL AND FRONT WHEEL HUB	7- 1
REMOVAL	7- 1
INSPECTION AND DISASSEMBLY	7- 3
REASSEMBLY AND REMOUNTING	7- 4
REAR WHEEL AND REAR SPROCKET	7- 6
REMOVAL	7- 6
INSPECTION	7- 7
REMOUNTING	7- 8
TIRES	7- 9
TIRE REPLACEMENT	7- 9
FRONT BRAKE	7-11
BRAKE PAD REPLACEMENT	7-12
CALIPER REMOVAL AND DISASSEMBLY	7-12
CALIPER REASSEMBLY AND REMOUNTING	7-14
DISC SERVICING	7-15
DISC INSPECTION	7-15
MASTER CYLINDER REMOVAL AND DISASSEMBLY	7-15
MASTER CYLINDER INSPECTION	7-17
MASTER CYLINDER REASSEMBLY AND REMOUNTING	7-17
REAR BRAKE	7-18
BRAKE PAD REPLACEMENT	7-19
CALIPER REMOVAL AND DISASSEMBLY	7-19
CALIPER REASSEMBLY AND REMOUNTING	7-21
DISC SERVICING	7-23
DISC INSPECTION	7-23
MASTER CYLINDER REMOVAL AND DISASSEMBLY	7-23
MASTER CYLINDER INSPECTION	7-25
MASTER CYLINDER REASSEMBLY AND REMOUNTING	7-25
CLUTCH/PARKING BRAKE LEVER	7-26
REMOVAL AND DISASSEMBLY	7-26
REASSEMBLY	7-27
FRONT SUSPENSION	7-28
REMOVAL AND DISASSEMBLY	7-29
INSPECTION AND DISASSEMBLY	7-31
REASSEMBLY AND REMOUNTING	7-32
FRONT SUSPENSION ADJUSTMENT	7-34
REASSEMBLING INFORMATION	7-35
STEERING SYSTEM	7-36
REMOVAL AND DISASSEMBLY	7-37
INSPECTION	7-39
REASSEMBLY AND REMOUNTING	7-40
TOE-IN ADJUSTMENT	7-42
REASSEMBLING INFORMATION	7-43
REAR SUSPENSION	7-44
REMOVAL	7-45
INSPECTION AND DISASSEMBLY	7-48
REASSEMBLY AND REMOUNTING	7-51
REAR SUSPENSION ADJUSTMENT	7-53
REASSEMBLING INFORMATION	7-54
REAR AXLE SHAFT AND AXLE HOUSING	7-55
REMOVAL	7-56
INSPECTION	7-57
REASSEMBLY AND REMOUNTING	7-58
REASSEMBLING INFORMATION	7-62
FRONT FENDER AND REAR FENDER	7-63

FRONT WHEEL AND FRONT WHEEL HUB

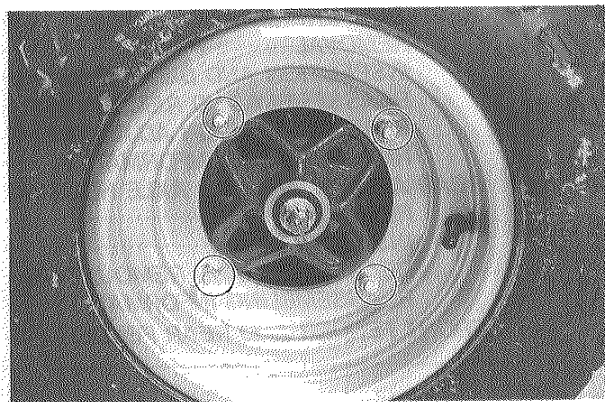


Tightening torque

Item	N·m	kg·m	lb·ft
①	15 – 25	1.5 – 2.5	11.0 – 18.0
②	50 – 80	5.0 – 8.0	36.0 – 58.0
③	20 – 31	2.0 – 3.1	14.5 – 22.5

REMOVAL

- Place the vehicle on level ground.
- Loosen the wheel set nuts.
- Support the vehicle by jack or block.
- Remove the wheel by removing the wheel set nuts.



- Unclamp the brake hose clamp.
- Remove the caliper by removing the caliper mounting bolts.

CAUTION:

Hang the caliper from the Vehicle frame with string, etc., taking care not to bend the brake hose.

NOTE:

Do not operate the brake lever while dismantling the caliper.

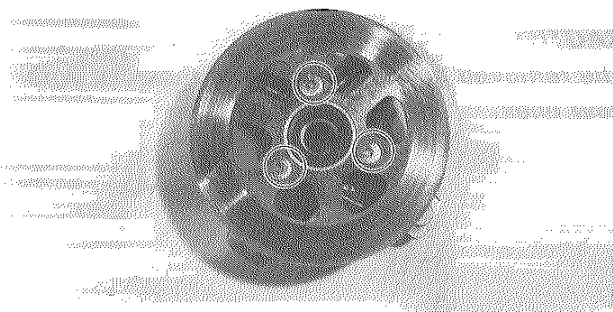
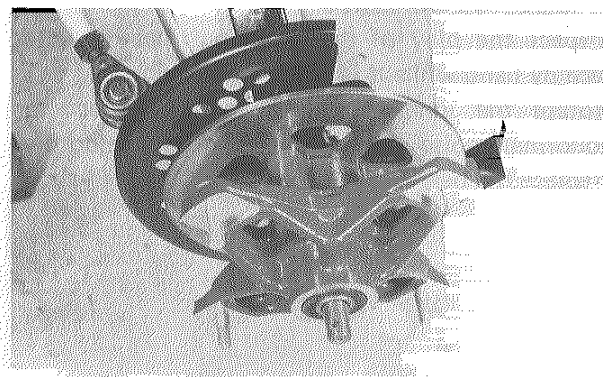
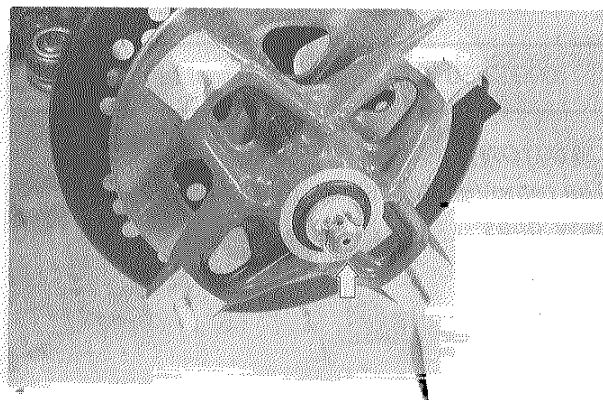
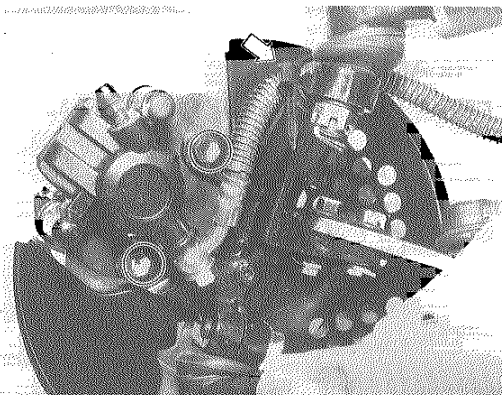
- Pull out the cotter pin and remove the wheel hub nut.

CAUTION:

The removed cotter pin should be replaced with a new one.

- Remove the wheel hub.

- Remove the brake disc plate from the wheel hub.



INSPECTION AND DISASSEMBLY

TIRE AND WHEEL

(Page 2-10, 7-9)

DUST SEAL

Inspect the lip of dust seal for damage.

- Remove the dust seals with the special tool.

09913-50121

Oil seal remover

CAUTION:

The removed dust seals should be replaced with new ones.

WHEEL HUB BEARING

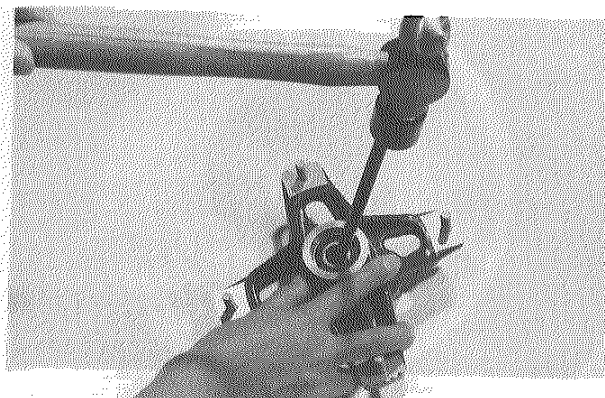
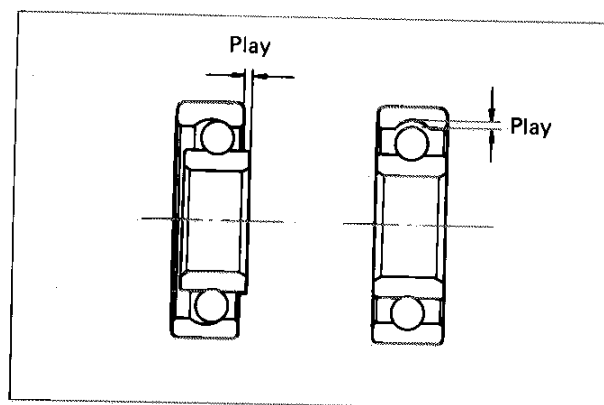
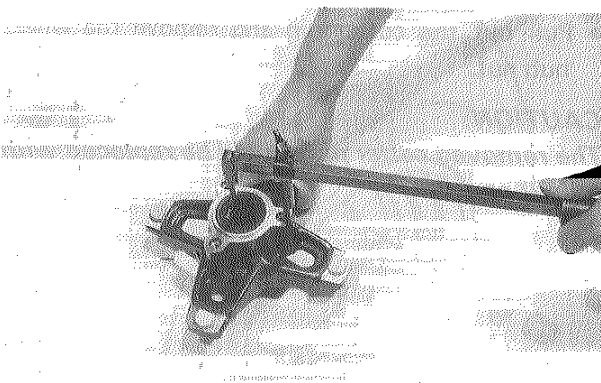
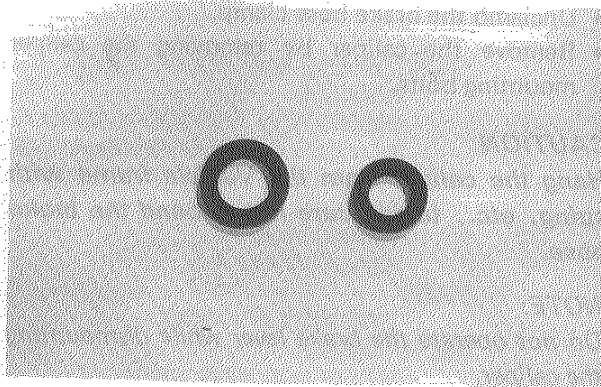
Inspect the play of the wheel hub bearing inner race by hand while it is in the wheel hub.

Rotate the inner race by hand to inspect for abnormal noise occurs and rotating smoothly. Replace the bearing if there is anything unusual.

- Drive out the wheel hub bearings by knocking with appropriate bar.

CAUTION:

The removed bearings should be replaced with new ones.

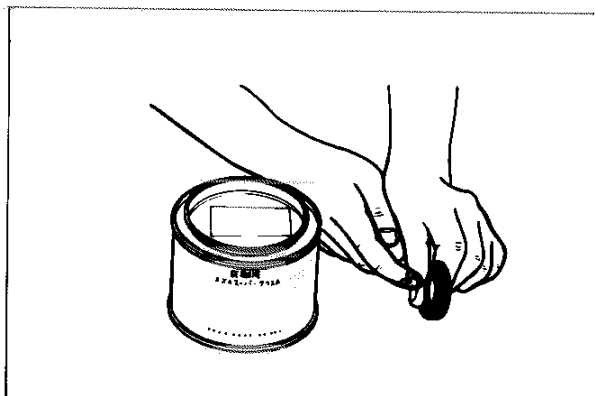


REASSEMBLY AND REMOUNTING

Reassemble and remount the front wheel in the reverse order of disassembly and removal. Pay attention to the following points:

- Apply grease to the bearings and dust seals before installing.

99000-25030 For U.S. model	SUZUKI Super grease "A"
99000-25010 For other models	



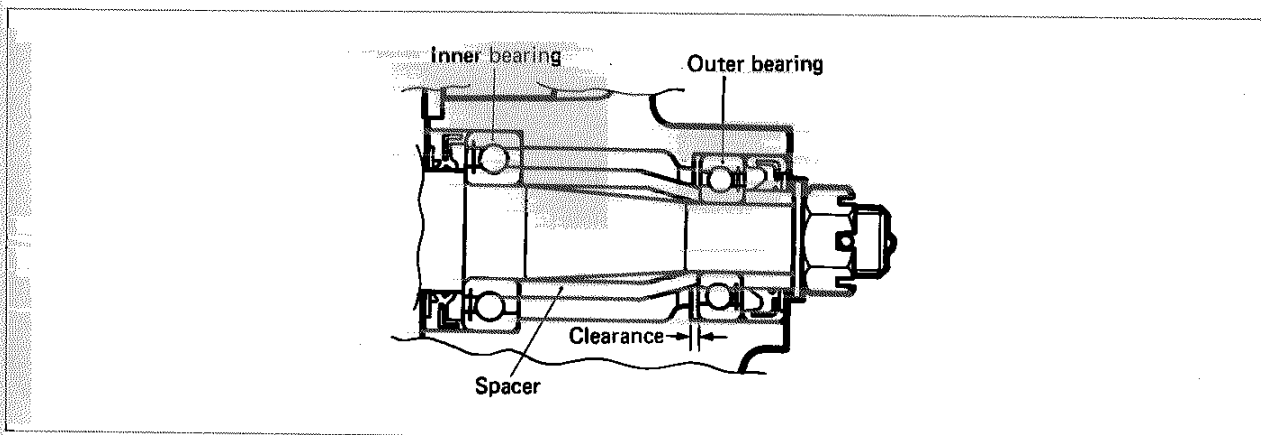
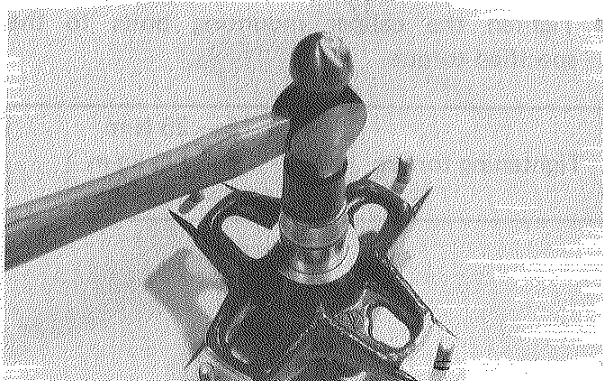
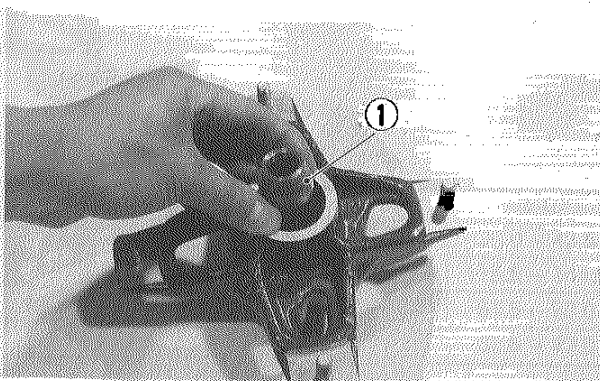
- Install the wheel hub bearings and dust seals with appropriate socket wrench.

NOTE:

First install the inside bearing. The sealed cover on the bearing is positioned outside.

CAUTION:

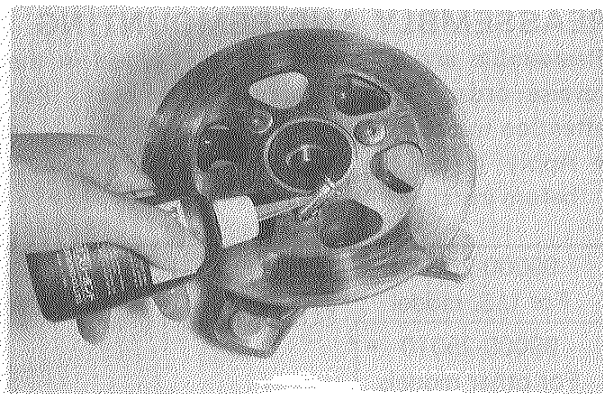
Do not mistake the direction of spacer ①.



- Make sure that the brake disc plate is clean and free of any greasy matter. Apply **THREAD LOCK SUPER "1360"** to the disc mounting bolts and tighten them to the specified torque.

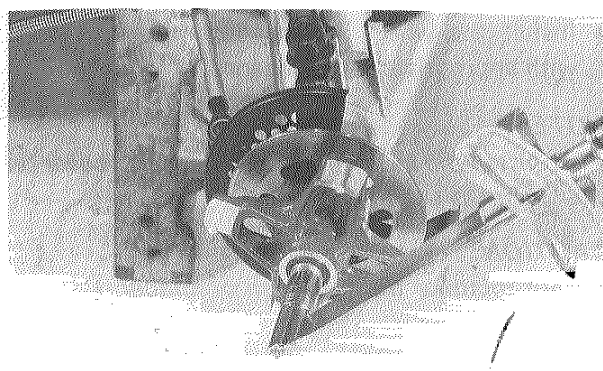
99000-32130	Thread Lock Super "1360"
-------------	--------------------------

Tightening torque	15 – 25 N·m (1.5 – 2.5 kg·m) 11.0 – 18.0 lb·ft
-------------------	--



- Tighten the wheel hub nut to the specified torque.

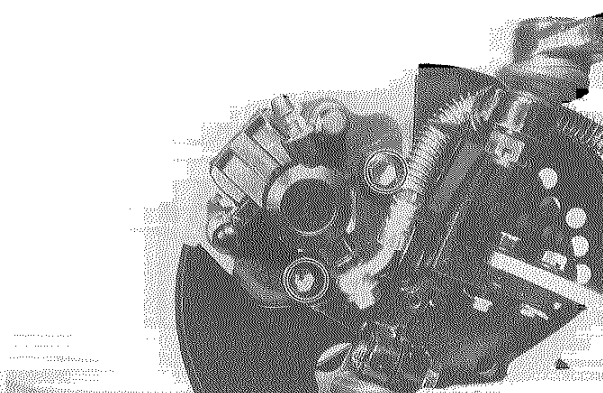
Tightening torque	50 – 80 N·m (5.0 – 8.0 kg·m) 36.0 – 58.0 lb·ft
-------------------	--



- Install a new cotter pin and bend it up positively.

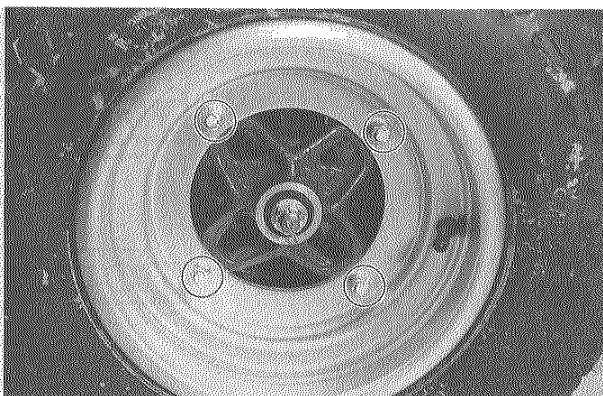
- Tighten the caliper mounting bolts to the specified torque.

Tightening torque	15 – 25 N·m (1.5 – 2.5 kg·m) 11.0 – 18.0 lb·ft
-------------------	--

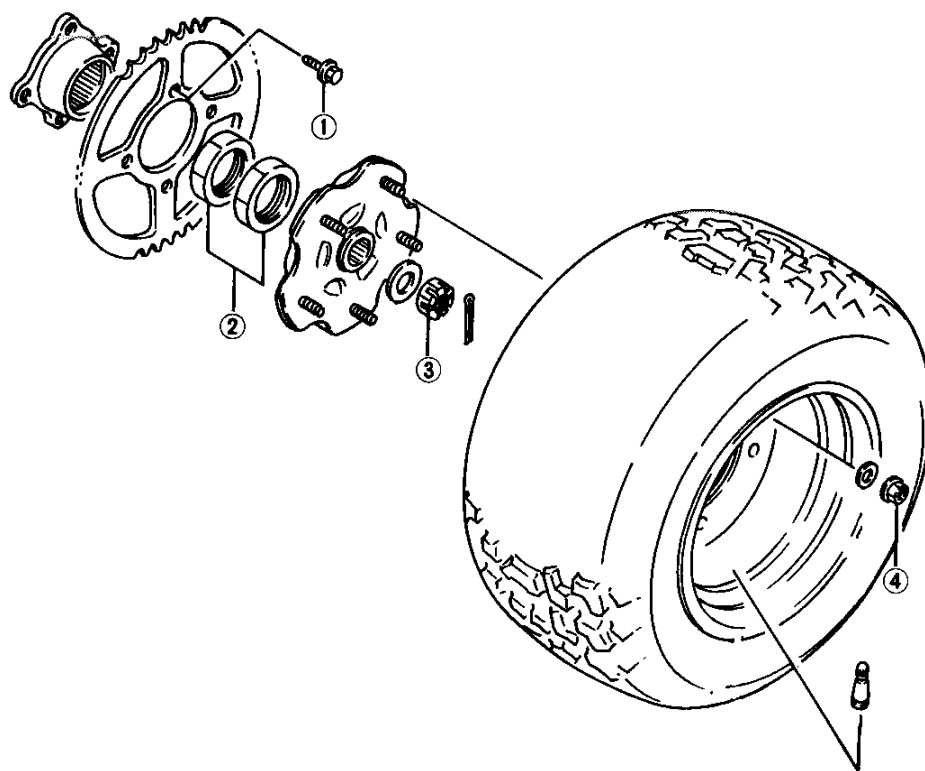


- Tighten the wheel set nuts to the specified torque.

Tightening torque	20 – 31 N·m (2.0 – 3.1 kg·m) 14.5 – 22.5 lb·ft
-------------------	--



REAR WHEEL AND REAR SPROCKET

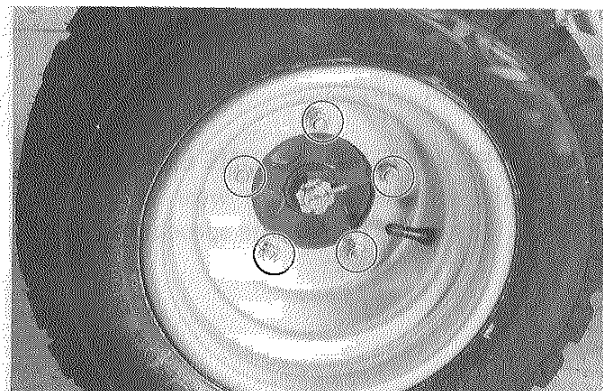


Tightening torque

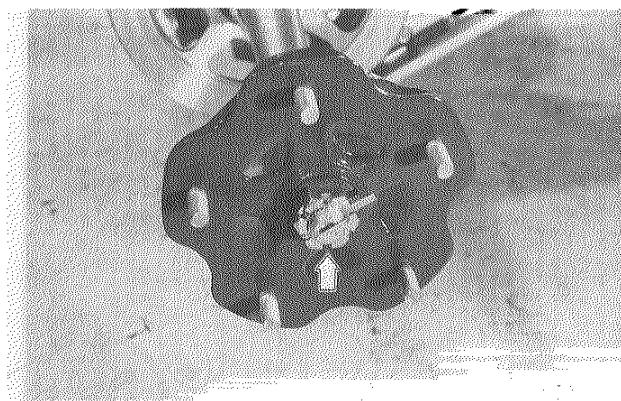
Item	N·m	kg·m	lb·ft
①	40 – 60	4.0 – 6.0	29.0 – 43.5
②	160 – 200	16.0 – 20.0	115.5 – 144.5
③	85 – 115	8.5 – 11.5	61.5 – 83.0
④	45 – 65	4.5 – 6.5	32.5 – 47.0

REMOVAL

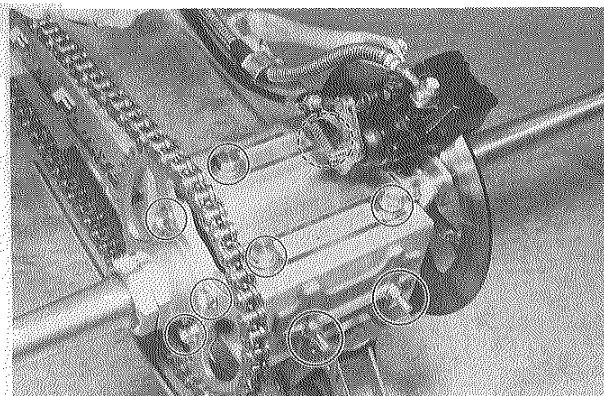
- Place the vehicle on level ground.
- Loosen the wheel set nuts.
- Support the vehicle by jack or block.
- Remove the wheel by removing the wheel set nuts.



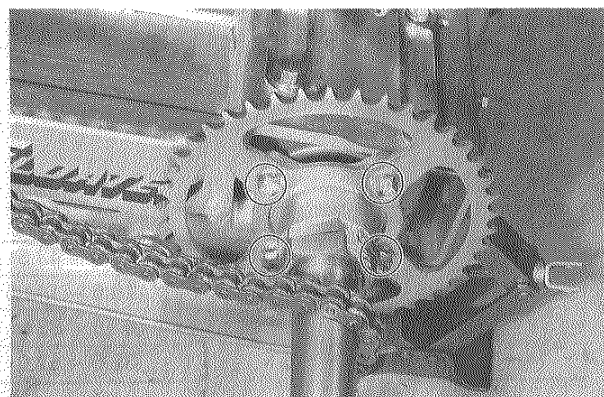
- Pull out the cotter pin and remove the wheel hub by removing the wheel hub nut while depressing the rear brake pedal.



- Loosen the rear sprocket mounting bolts while depressing the rear brake pedal.
- Loosen the drive chain adjusting nuts and rear axle housing mounting bolts.
- Push the rear axle housing forward.



- Disengage the drive chain from the rear sprocket and remove the rear sprocket by removing its mounting bolts.



NOTE:

When removing the rear sprocket flange, refer to page 7-56.

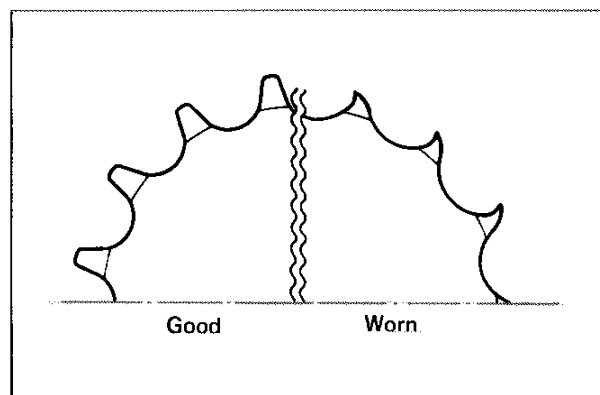
INSPECTION

TIRE AND WHEEL

(Page 2-10, 7-9)

REAR SPROCKET AND ENGINE SPROCKET

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



REMountING

Remount the rear wheel and rear sprocket in the reverse order of removal. Pay attention to the following points:

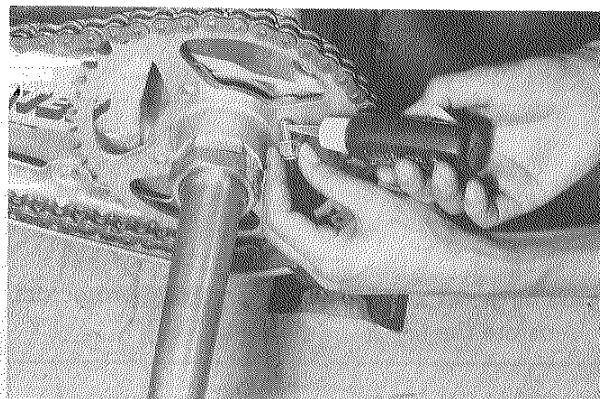
- Apply **THREAD LOCK SUPER "1303"** to the rear sprocket mounting bolts and tighten them to the specified torque.

99000-32030	Thread Lock Super "1303"
-------------	--------------------------

Tightening torque	40 – 60 N·m (4.0 – 6.0 kg·m) (29.0 – 43.5 lb·ft)
-------------------	--

WARNING:

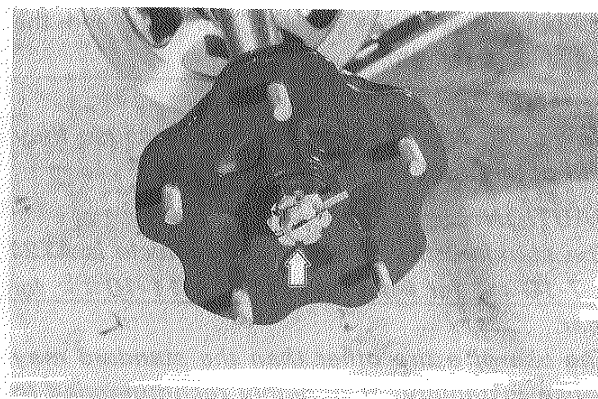
Adjust the drive chain slack after remounting the rear sprocket and rear wheel. (Page 2-4)



- Tighten the wheel hub nut to the specified torque.

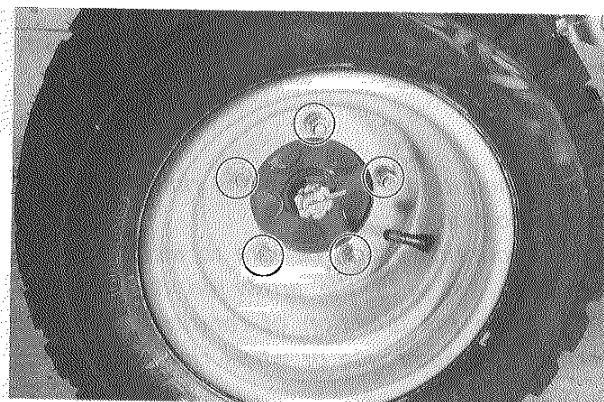
Tightening torque	85 – 115 N·m (8.5 – 11.5 kg·m) (61.5 – 83.0 lb·ft)
-------------------	--

- Install a new cotter pin and bend it up positively.



- Tighten the wheel set nuts to the specified torque.

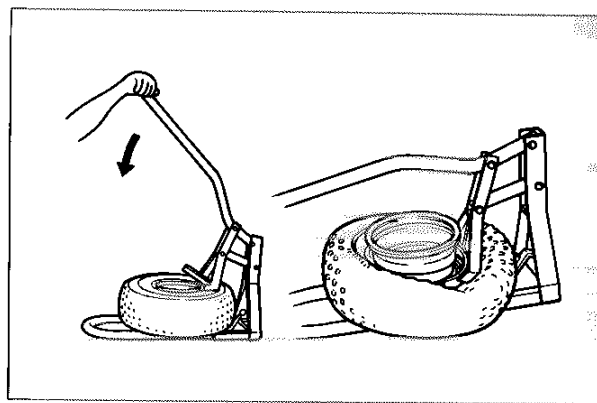
Tightening torque	45 – 65 N·m (4.5 – 6.5 kg·m) (32.5 – 47.0 lb·ft)
-------------------	--



TIRES

TIRE REPLACEMENT

- Remove the front wheel. (Page 7-1)
- Remove the rear wheel. (Page 7-6)
- After removing the air valve cap, release the tire pressure by depressing the nozzle.
- Dismount the bead from the rim completely as shown in the illustration.

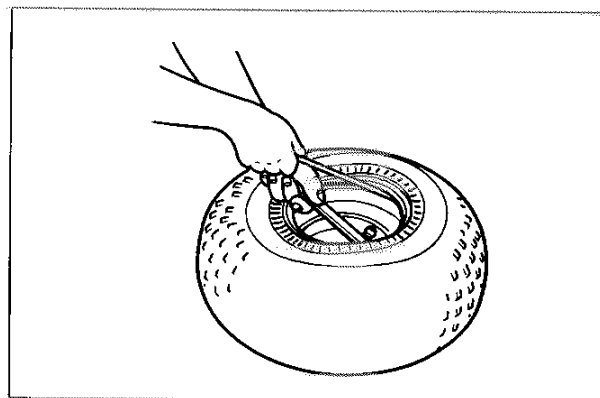


- Using a set of tire levers and rim protectors, separate the tire from the rim.

09941-94510	Rim protector
-------------	---------------

CAUTION:

When using the tire levers, do not scratch or hit the sealing portion (hump) of the wheel or it may cause air-leakage.



- Apply clean water to the tire bead and the flange of the rim.

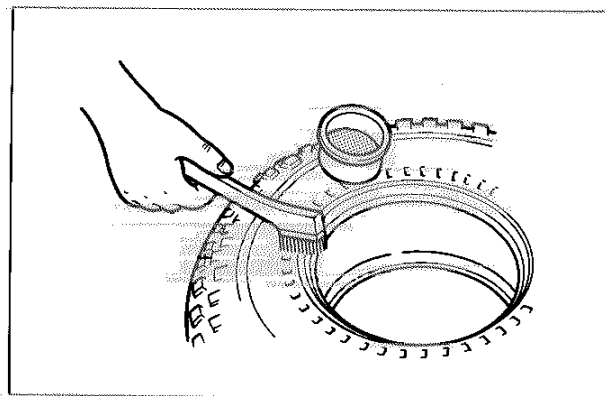
CAUTION:

Never use engine oil or gasoline because they will deteriorate the tire.

CAUTION:

The standard tire fitted on this vehicle is AT21 x 7-10☆☆ for front and AT20 x 11-10☆☆ for rear.

The use of a tire other than the standard may cause instability. It is highly recommended to use a SUZUKI Genuine tire.

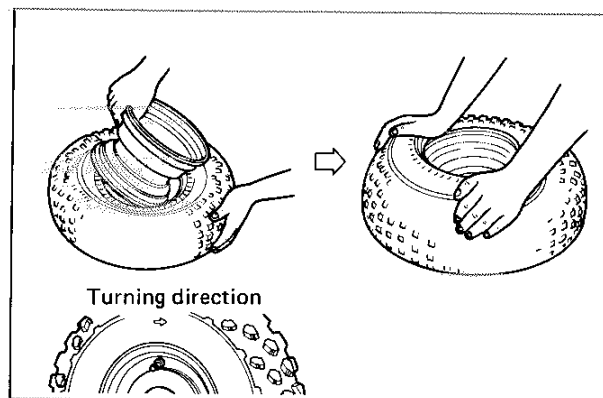


- Mount the tire on the rim by hand as shown in the illustration.

NOTE:

Before mounting the tire on the rim, inspect the sealing portion of rim.

When mounting a tire, be sure to install the tire onto the rim with the arrow on the side wall pointing in the direction of rotation. Also, be certain that outer side of wheel rim faces to the outside.



- Inflate the tire to seat the bead.

MAX. BEAD SEAT PRESSURE	Front	250 kPa (2.5 kg/cm ² , 36 psi)
	Rear	200 kPa (2.0 kg/cm ² , 29 psi)

CAUTION:

Place the tire under a protective tire cage or similar protective covering before inflating the tire. To minimize the possibility of tire damage when seating the bead, never exceed the MAX. BEAD SEAT PRESSURE rating shown on the tire.

NOTE:

Check the "rim line" cast on the tire side walls. It must be equally spaced from the wheel rim all the way around. If the distance between the rim line and the wheel rim varies, this indicates that the bead is not properly seated. If this is so, deflate the tire completely, and unseat the bead for the both sides. Coat the bead with clean water, and try again.

- As soon as the bead is seated, deflate the tire and reinflate it to the proper operating pressure.

COLD INFLATION TIRE PRESSURE	kPa	kg/cm ²	psi	NOTE
FRONT	30	0.3	4.4	LOAD CAPACITY UP TO 80 kg (175 lbs)
REAR	25	0.25	3.6	
FRONT	35	0.35	5.1	LOAD CAPACITY 80 – 120 kg (175 – 265 lbs)
REAR	35	0.35	5.1	

VEHICLE LOAD CAPACITY LIMIT: 120 kg (265 lbs)

CAUTION:

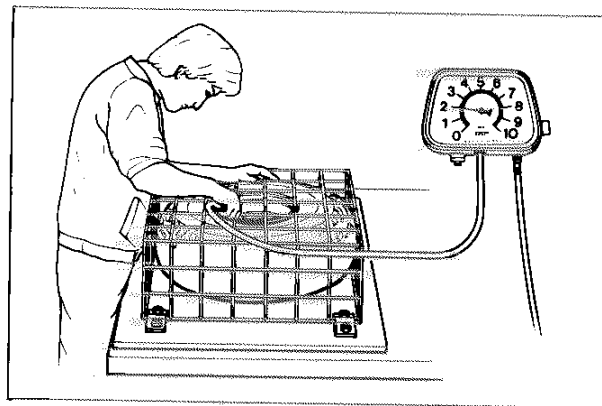
Before inflating the tire, check the MAX. OPERATING PRESSURE rating of the tire. This is indicated by a "☆" following the tire size shown on the side-wall. The number of "☆" on the tire indicates the max. operating pressure as shown right.

NOTE:

For inspecting the tire refer to the page 2-10.

NOTE:

Before installing the valve core, inspect the core.

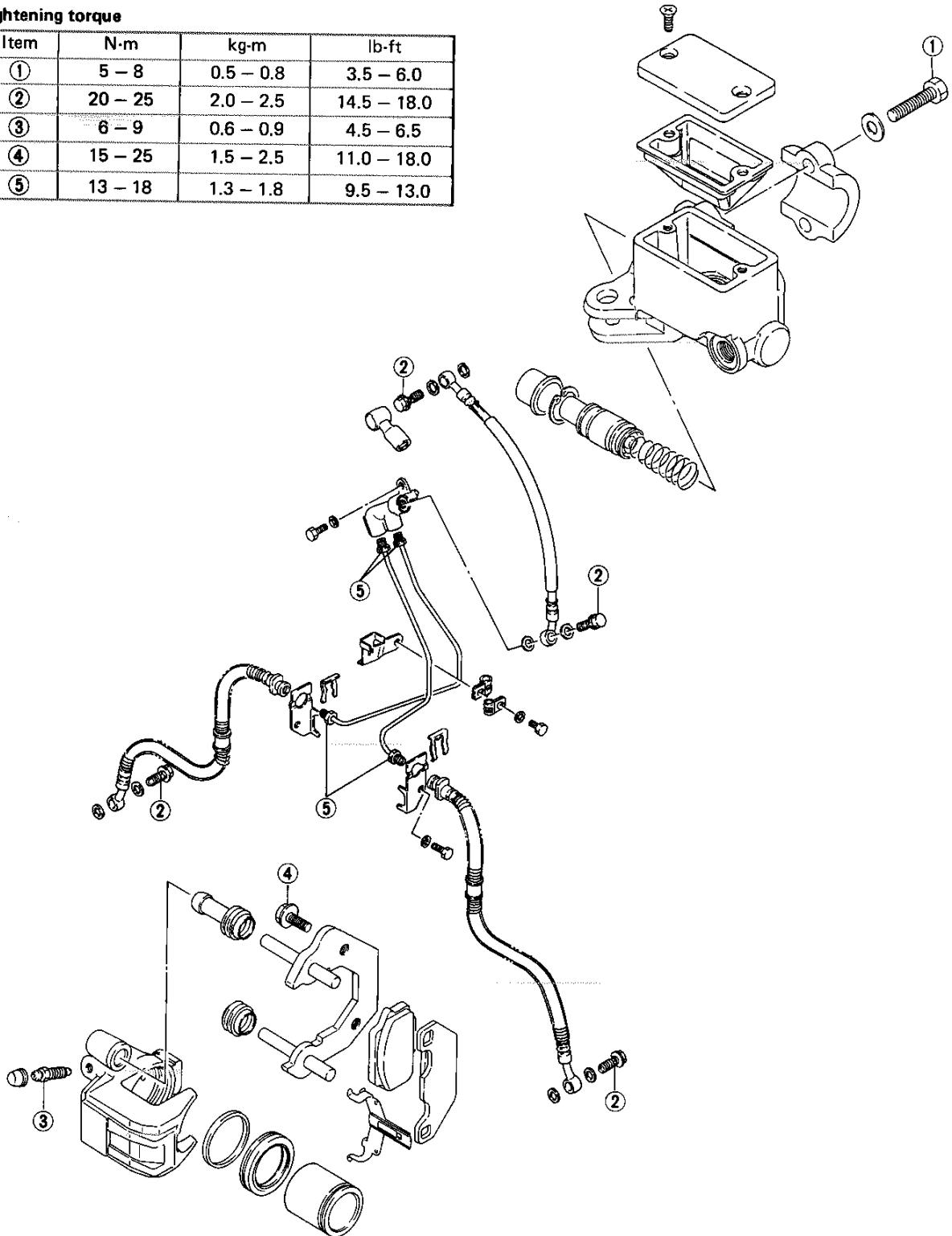


	MAX. OPERATING PRESSURE		
	kPa	kg/cm ²	psi
☆	25	0.25	3.6
☆☆	35	0.35	5.1
☆☆☆	45	0.45	6.5

FRONT BRAKE

Tightening torque

Item	N-m	kg-m	lb-ft
①	5 - 8	0.5 - 0.8	3.5 - 6.0
②	20 - 25	2.0 - 2.5	14.5 - 18.0
③	6 - 9	0.6 - 0.9	4.5 - 6.5
④	15 - 25	1.5 - 2.5	11.0 - 18.0
⑤	13 - 18	1.3 - 1.8	9.5 - 13.0



WARNING:

If remove or replace the brake hose or brake pipe, make sure to secure the brake hose or brake pipe by clamp.

BRAKE PAD REPLACEMENT

- Remove the front wheel. (Page 7-1)
- Remove the caliper by removing the caliper mounting bolts ①.

Tightening torque

Caliper mounting bolt ①	15 – 25 N·m (1.5 – 2.5 kg·m) (11.0 – 18.0 lb·ft)
-------------------------	--

- Remove the brake pads out of the caliper.

CAUTION:

- * *Do not operate the brake lever while dismantling the brake pads.*
- * *Replace the brake pads as a set, otherwise braking-performance will be adversely affected.*

NOTE:

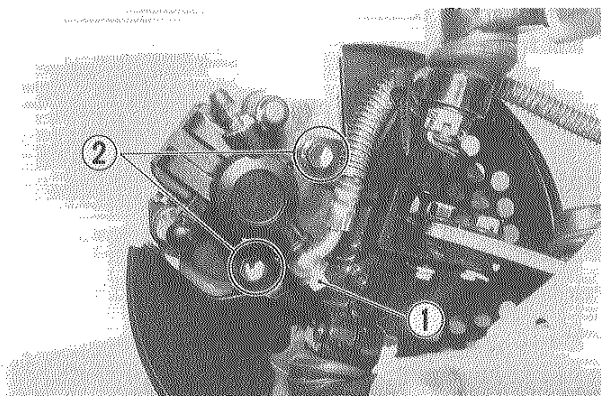
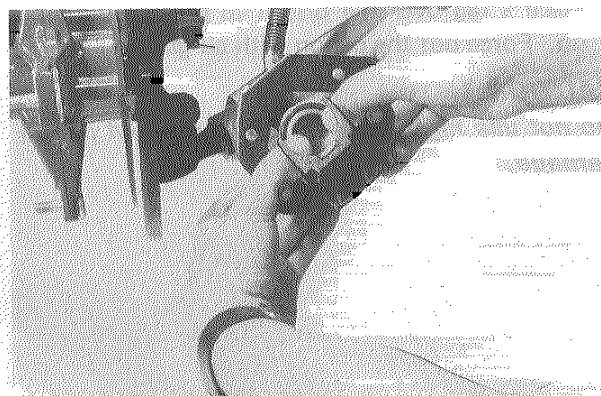
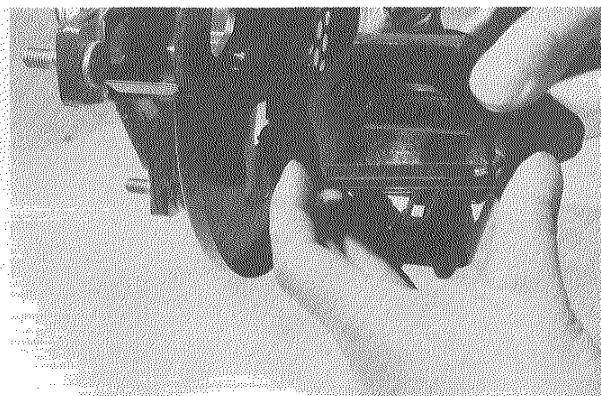
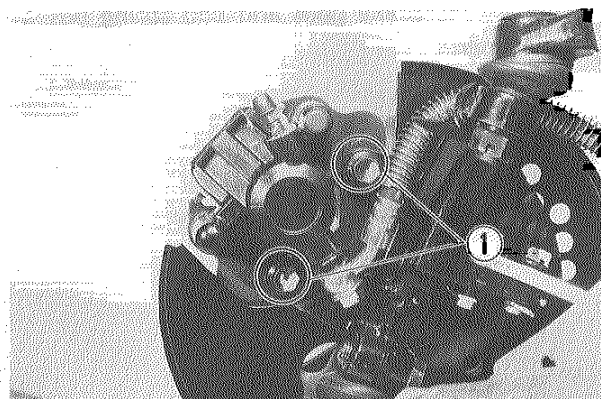
Push in the piston all the way into the caliper when remounting the brake pads.

CALIPER REMOVAL AND DISASSEMBLY

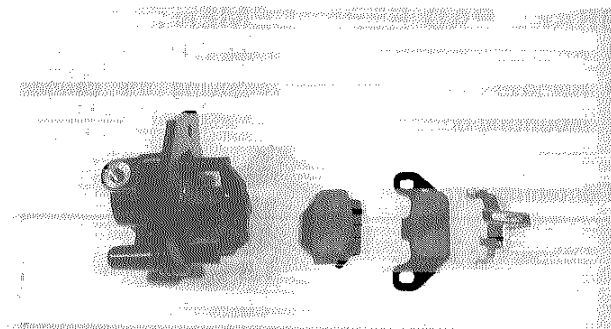
- Remove the front wheel. (Page 7-1)
- Remove the caliper by removing the brake hose union bolt ① and caliper mounting bolts ②.

NOTE:

Catch brake fluid in a suitable receptacle.



- Remove the brake pads and pad spring out of the caliper.



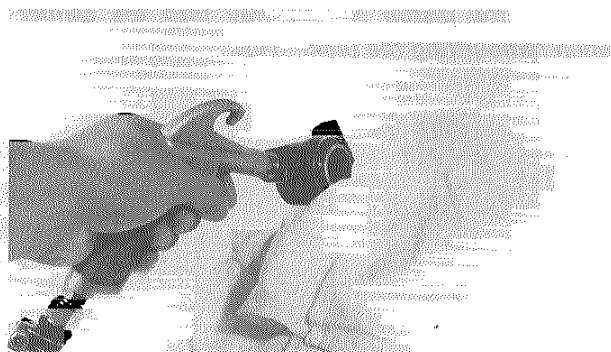
- Remove the caliper holder from the caliper.



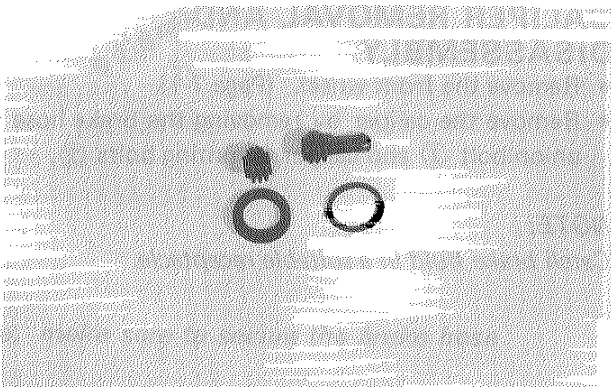
- Place a rag over the piston to prevent popping up. Force out the piston with air gun.

CAUTION:

Do not use high pressure air to prevent piston damage.



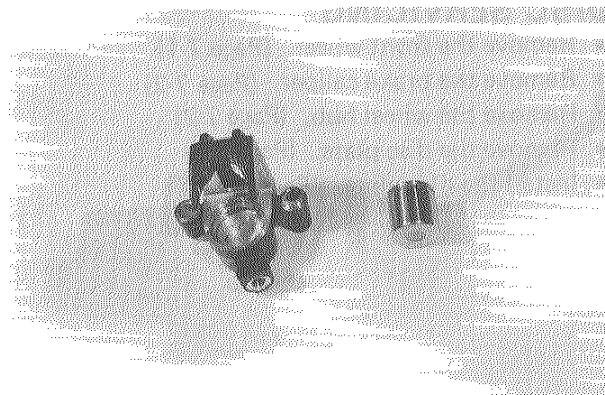
- Remove the rubber boots, piston seal and dust seal from the caliper.



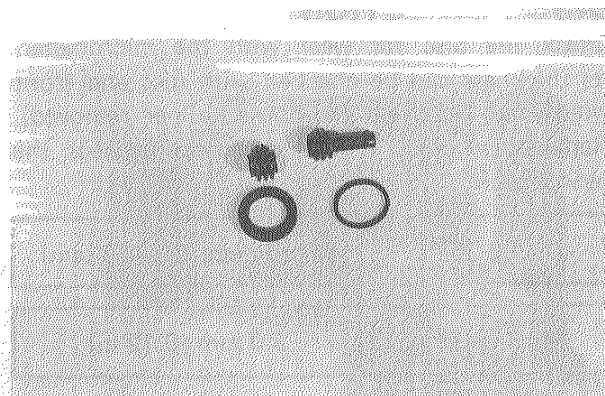
CALIPER INSPECTION

Inspect the caliper bore wall for nicks, scratches or other damage.

Inspect the piston surface for any scratches or other damage.



Inspect the rubber parts for damage and wear.



CALIPER REASSEMBLY AND REMOUNTING

Reassemble and remount the caliper in the reverse order of disassembly and removal. Pay attention to the following points:

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.*

- Apply SUZUKI silicone grease to the caliper axles.
- Tighten the caliper mounting bolts and brake hose union bolt to the specified torque. (Page 7-11)

99000-25100	SUZUKI Silicone grease
-------------	------------------------

WARNING:

Bleed air out of the brake fluid circuit after reassembling the caliper.

(Page 2-12)



DISC SERVICING

- Remove the front wheel. (Page 7-1)
- Remove the brake caliper. (Page 7-2)
- Remove the wheel hub. (Page 7-2)
- Remove the disc plate. (Page 7-2)
- Install the disc plate. (Page 7-5)

DISC INSPECTION

Check the disc for wear with the micrometer. Its thickness can be checked with disc and front wheel hub in place (with the caliper removed). Replace the disc if the thickness exceeds the service limit.

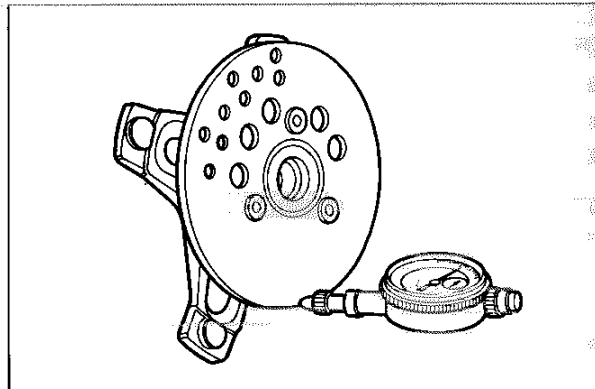
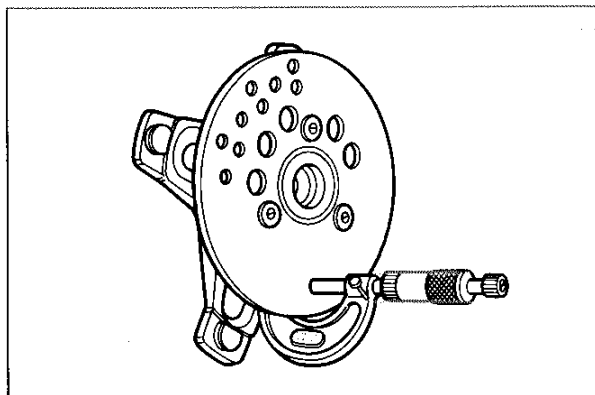
09900-20205	Micrometer (0 – 25 mm)
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Service Limit	3.0 mm (0.12 in)
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With the disc mounted on the front wheel hub, check the disc for face runout with a dial gauge, as shown. Replace the disc if the runout exceeds the service limit.

09900-20606	Dial gauge (1/100 mm)
09900-20701	Magnetic stand Not available in U.S. model

Service Limit	0.30 mm (0.012 in)
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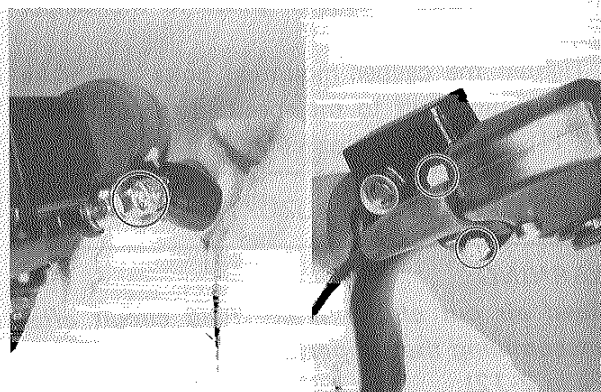
MASTER CYLINDER REMOVAL AND DISASSEMBLY

- Place a rag 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.

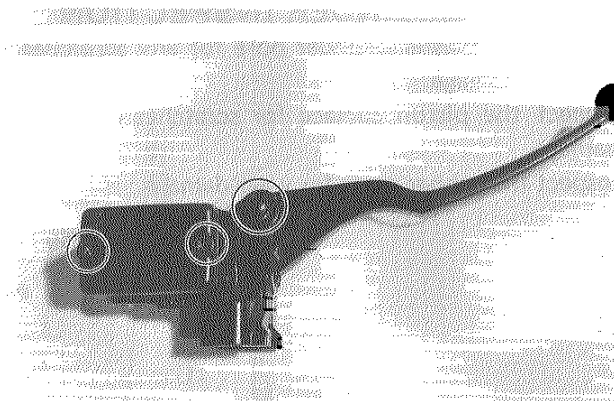
CAUTION:

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

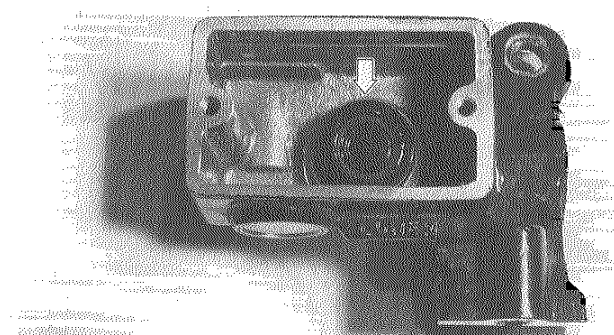
- Remove the master cylinder assembly by removing the two clamp bolts.



- Remove the brake lever by removing the bolt.
- Remove the reservoir cap and diaphragm by removing the two screws.
- Drain brake fluid.



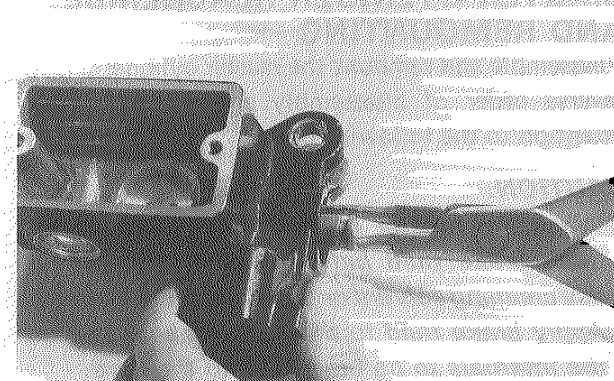
- Remove the brake fluid separator/plate.



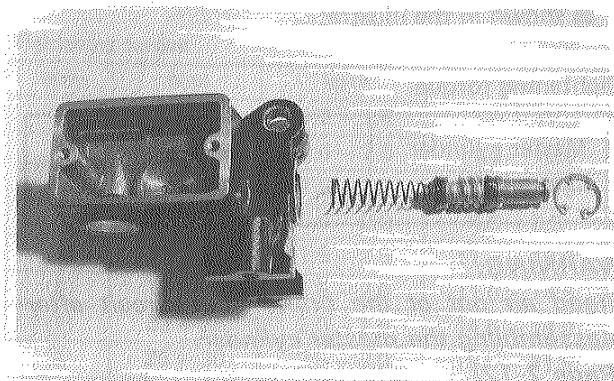
- Remove the dust seal boot.
- Remove the circlip with the snap ring pliers.

09900-06108

Snap ring pliers



- Remove the spring/piston/primary cup/secondary cup out of the master cylinder.

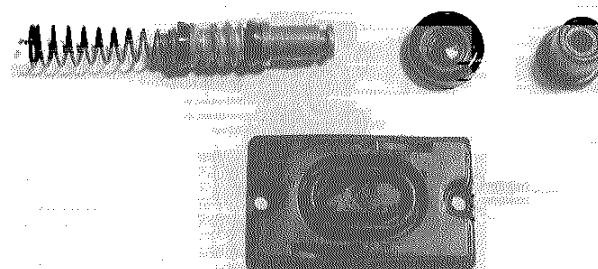
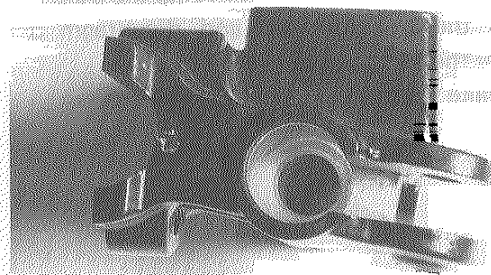


MASTER CYLINDER INSPECTION

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

Inspect the piston surface for scratches or other damage.

Inspect the rubber parts for wear damage.



MASTER CYLINDER REASSEMBLY AND REMOUNTING

Reassemble and remount the master cylinder in the reverse order of disassembly and removal. Pay attention to the following points:

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.

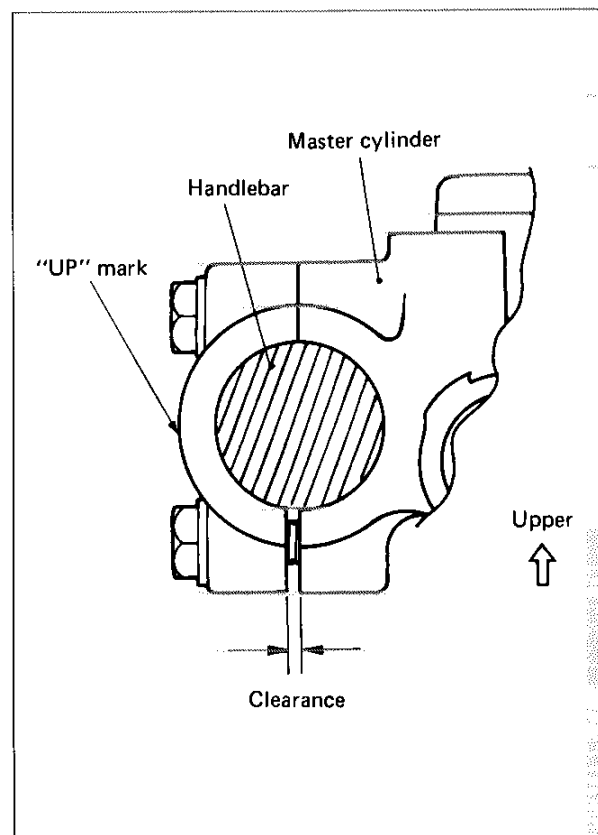
Tightening torque

Master cylinder clamp bolt	5 – 8 N·m (0.5 – 0.8 kg·m) (3.5 – 6.0 lb·ft)
----------------------------	--

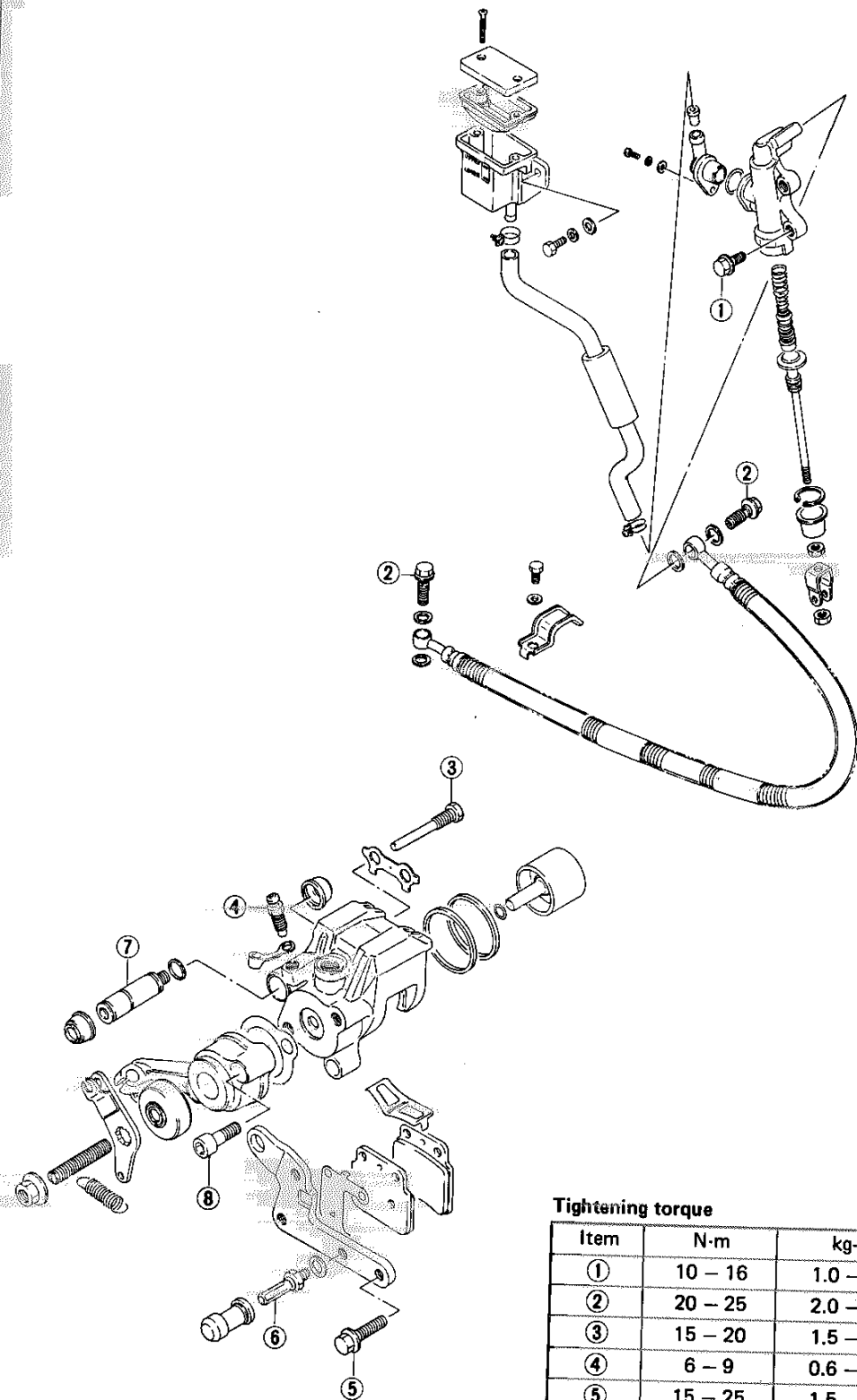
WARNING:

Bleed air out of the brake fluid circuit after reassembling the master cylinder.

(Page 2-12)



REAR BRAKE



Tightening torque

Item	N-m	kg-m	lb-ft
①	10 - 16	1.0 - 1.6	7.0 - 11.5
②	20 - 25	2.0 - 2.5	14.5 - 18.0
③	15 - 20	1.5 - 2.0	11.0 - 14.5
④	6 - 9	0.6 - 0.9	4.5 - 6.5
⑤	15 - 25	1.5 - 2.5	11.0 - 18.0
⑥	15 - 20	1.5 - 2.0	11.0 - 14.5
⑦	20 - 25	2.0 - 2.5	14.5 - 18.0
⑧	25 - 30	2.5 - 3.0	18.0 - 21.5

BRAKE PAD REPLACEMENT

- Lift the caliper assembly by removing the caliper mounting bolts ①.

Tightening torque

Caliper mounting bolt ①	15 – 25 N·m (1.5 – 2.5 kg-m) 11.0 – 18.0 lb-ft)
Brake pad mounting bolt ②	15 – 20 N·m (1.5 – 2.0 kg-m) 11.0 – 14.5 lb-ft)

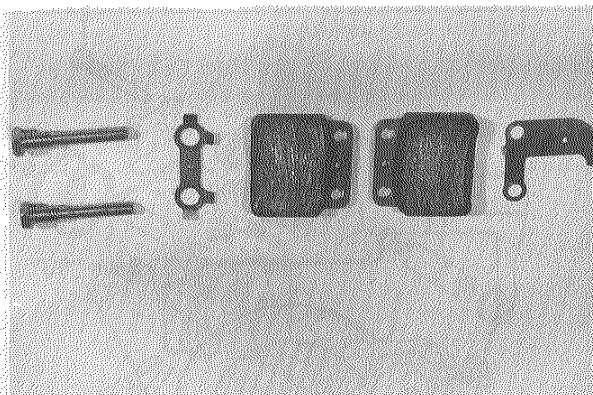
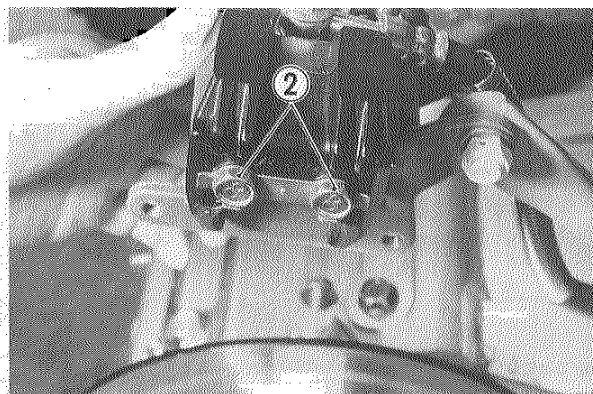
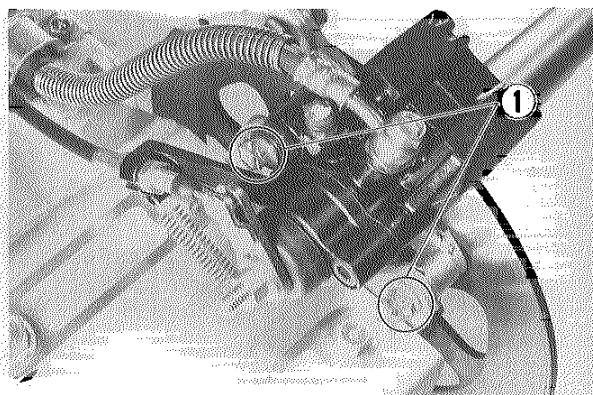
- Flatten the lock portion of the lock washer and remove the brake pad mounting bolts ②, then remove the brake pads with pad shim out of the caliper.

CAUTION:

- * *Do not operate the brake pedal while dismounting the pads.*
- * *Replace the brake pad as a set, otherwise braking-performance will be adversely affected.*

NOTE:

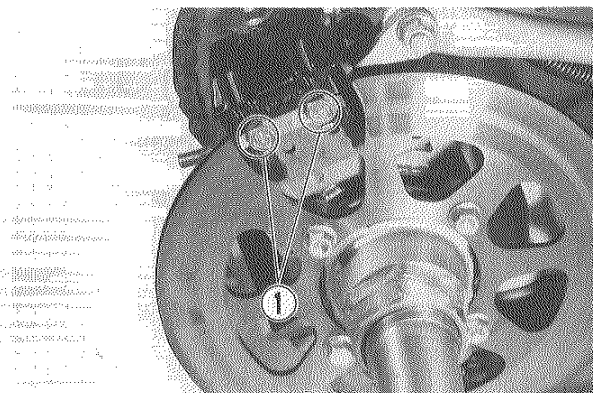
Push in the piston all the way into the caliper when remounting the brake pads.



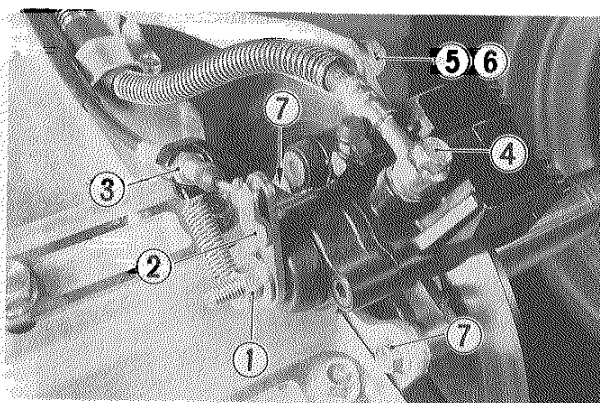
CALIPER REMOVAL AND DISASSEMBLY

NOTE:

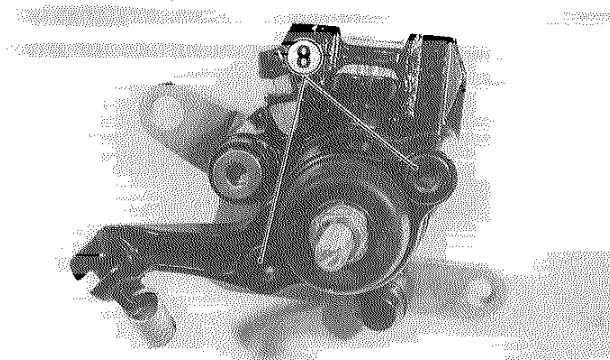
Slightly loosen the brake pad mounting bolts ① to facilitate later disassembly.



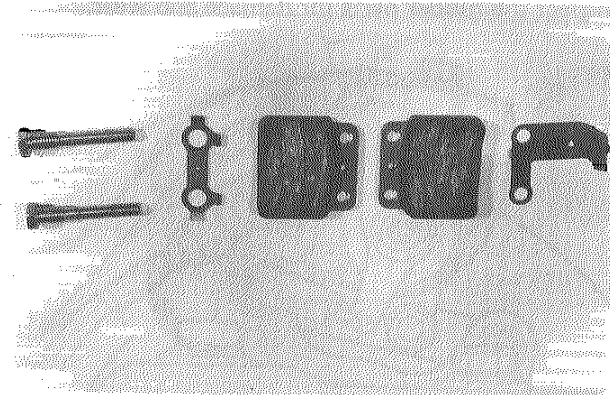
- Disconnect the parking brake cable by removing the lever lock nut ①, lever ② and cable lock nut ③.
- Remove the brake hose union bolt ④ and catch brake fluid in a suitable receptacle.
- Remove the torque link bolt ⑤ and nut ⑥.
- Remove the caliper by removing the caliper mounting bolts ⑦.



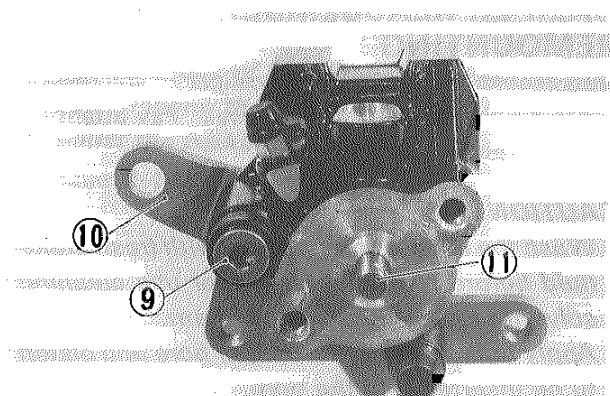
- Remove the parking brake housing by removing the two bolts ⑧.



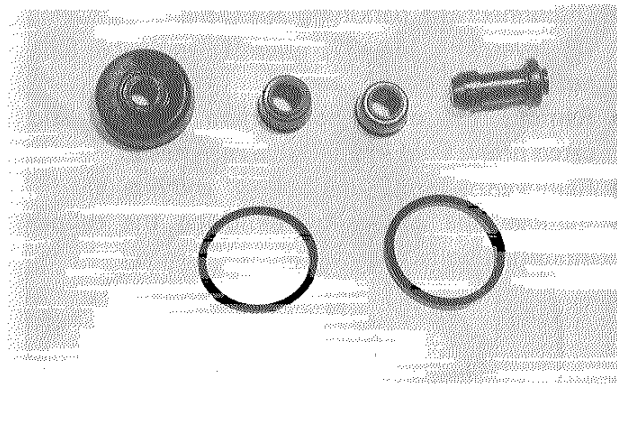
- Remove the brake pads and pad shim by removing the brake pad mounting bolts.



- Remove the caliper axle bolt ⑨, then remove the caliper holder ⑩.
- Remove the piston by pushing the piston/shaft ⑪.

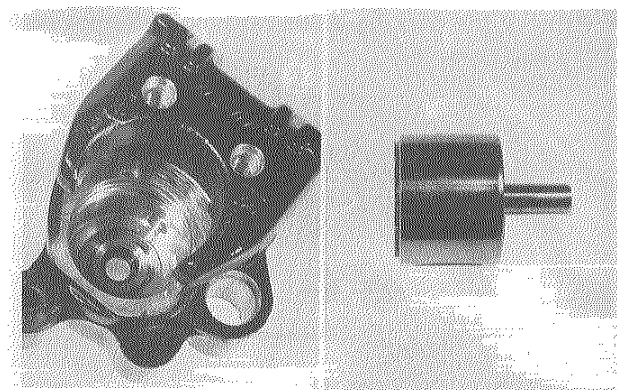


- Remove the rubber boots, piston seal and dust seal from the caliper.

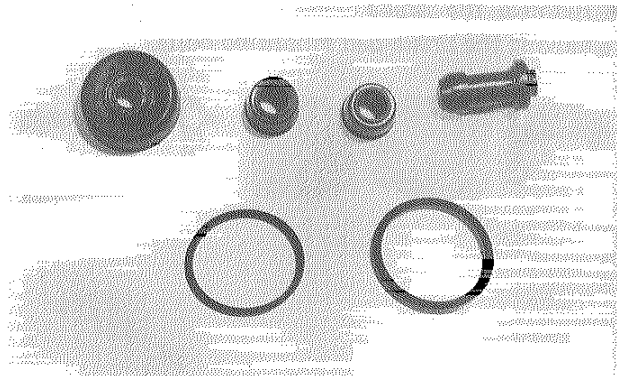


CALIPER INSPECTION

Inspect the caliper bore wall for nicks, scratches or other damage. Inspect the piston surface for any scratches or other damage.



Inspect the rubber parts for damage and wear.



CALIPER REASSEMBLY AND REMOUNTING

Reassemble and remount the caliper in the reverse order of disassembly and removal. Pay attention to the following points:

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.*

- Apply SUZUKI silicone grease to the caliper axles.

99000-25100	SUZUKI Silicone grease
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- Tighten the caliper axle bolt to the specified torque.

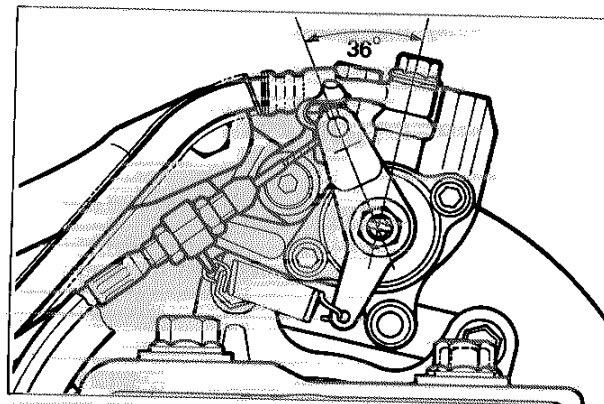
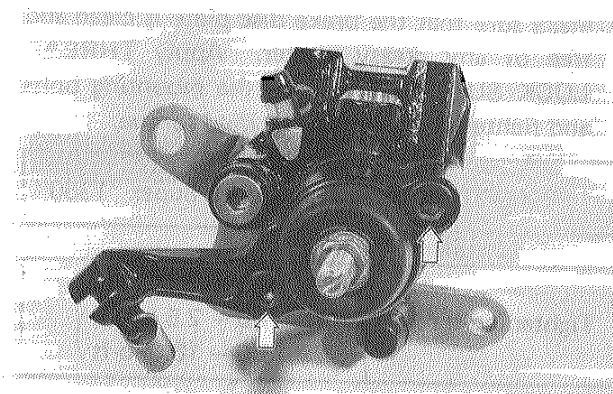
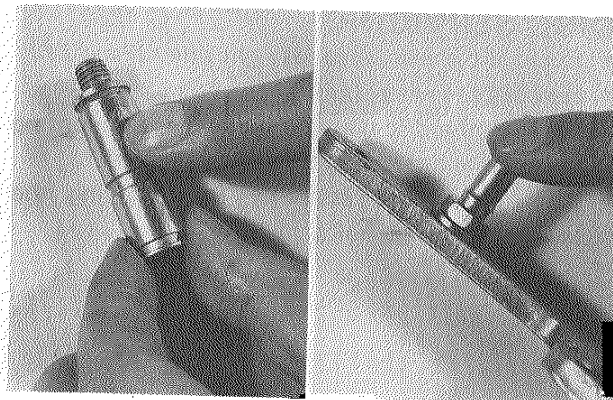
Tightening torque (Front side)	20 – 25 N·m (2.0 – 2.5 kg-m) 14.5 – 18.0 lb-ft
-----------------------------------	--

- Apply THREAD LOCK "1342" to the parking brake housing bolts and tighten them to the specified torque.

99000-32050	Thread Lock "1342"
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Tightening torque	25 – 30 N·m (2.5 – 3.0 kg-m) 18.0 – 21.5 lb-ft
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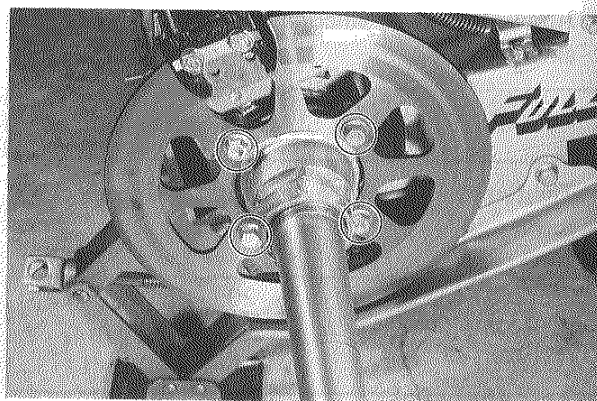
- Be sure to set the parking brake lever to the shaft with specified distance, as shown in the illustration.

**WARNING:**

- * Bleed air out of the brake fluid circuit after reassembling the caliper. (Page 2-12)
- * Adjust the parking brake cable play. (Page 2-14)

DISC SERVICING

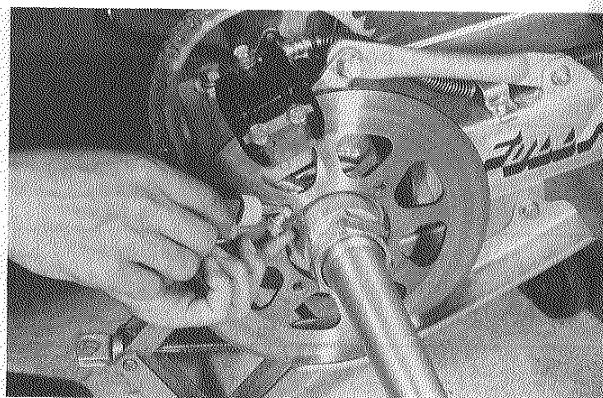
- Remove the rear wheel of right side. (Page 7-6)
- Remove the wheel hub. (Page 7-7)
- Remove the disc plate by removing its mounting bolts while depressing the rear brake pedal.
- Lift the caliper assembly by removing the caliper mounting bolts. (Page 7-19)



- Make sure that the brake disc plate is clean and free of any greasy matter. Apply **THREAD LOCK SUPER "1360"** to the mounting bolts and tighten them to the specified torque.

99000-32130	Thread Lock Super "1360"
-------------	--------------------------

Tightening torque	15 – 25 N·m (1.5 – 2.5 kg-m) (11.0 – 18.0 lb-ft)
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NOTE:

When removing the brake disc flange, refer to page 7-56.

DISC INSPECTION

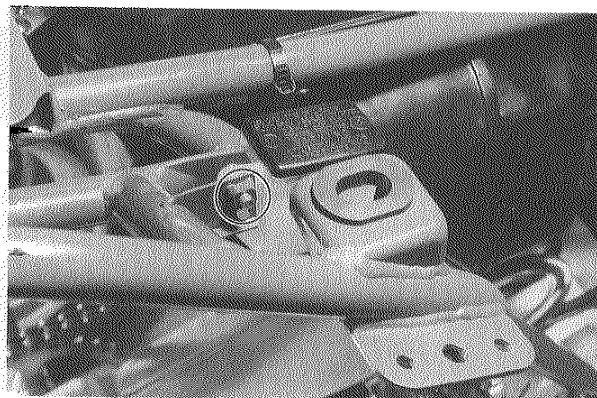
Refer to page 7-15.

DISC THICKNESS	
Service Limit	4.0 mm (0.16 in)

DISC RUNOUT	
Service Limit	0.30 mm (0.012 in)

MASTER CYLINDER REMOVAL AND DISASSEMBLY

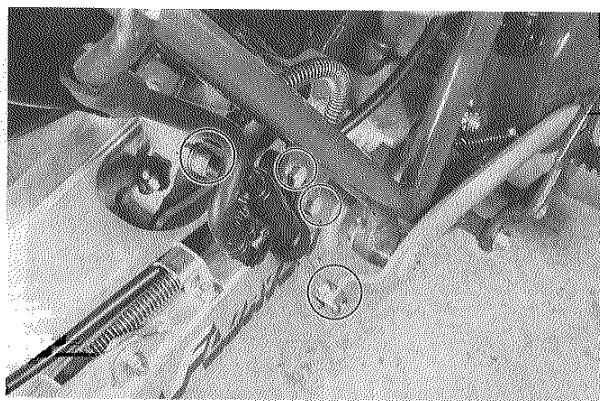
- Remove the rear fender. (Page 7-45)
- Remove the reservoir tank mounting bolt.



- Disconnect the push rod from the rear brake pedal end by removing the cotter pin and pin.
- Place a rag 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.

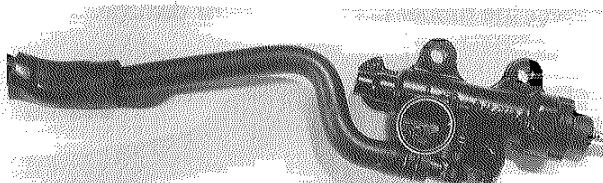
- Remove the master cylinder assembly by removing the two mounting bolts.



CAUTION:

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

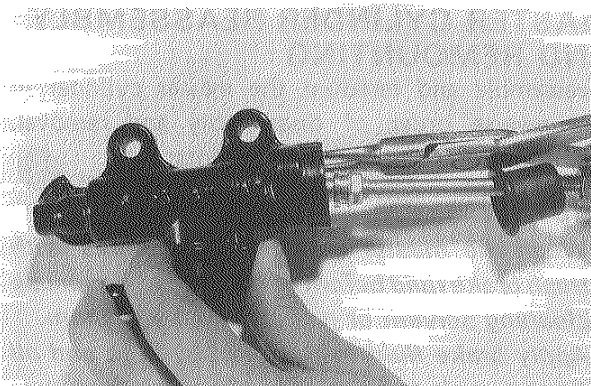
- Disconnect the brake hose from the master cylinder by loosening the clamp screw.



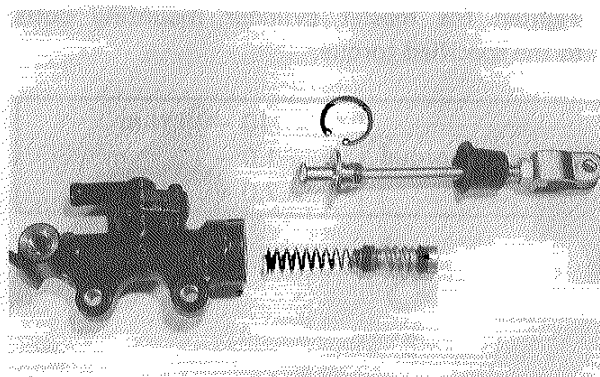
- Remove the dust seal boot.
- Remove the circlip with the snap ring pliers.

09900-06108

Snap ring pliers



- Remove the spring/piston/primary cup/secondary cup out of the master cylinder.



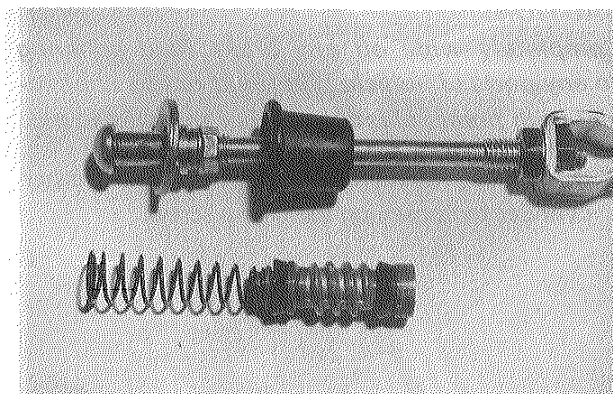
MASTER CYLINDER INSPECTION

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



Inspect the piston surface for scratches or other damage.

Inspect the rubber parts for wear or damage.



MASTER CYLINDER REASSEMBLY AND REMOUNTING

Reassemble and remount the master cylinder in the reverse order of disassembly and removal. Pay attention to the following points:

CAUTION:

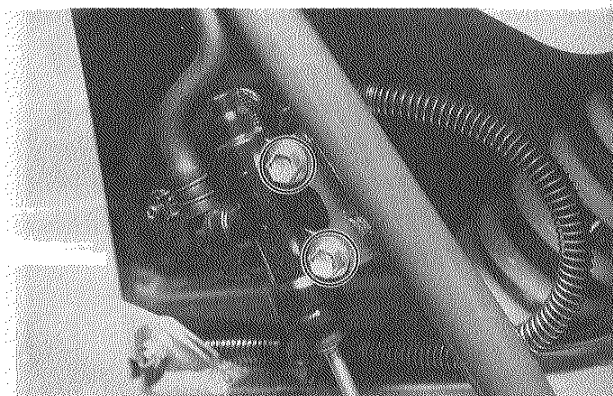
- * Wash the master cylinder components with fresh brake fluid before reassembly. Never use cleaning solvent or gasoline to wash them.
- * Apply brake fluid to the cylinder bore and all the internals to be inserted into the bore.

WARNING:

Bleed air out of the brake fluid circuit after reassembling the master cylinder.
(Page 2-12)

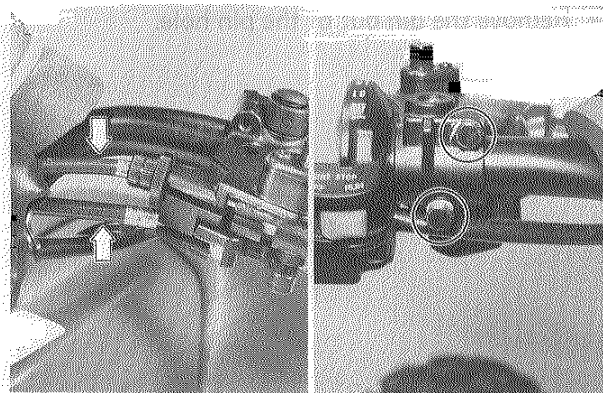
- Tighten the master cylinder mounting bolts to the specified torque.

Tightening torque	10 – 16 N·m (1.0 – 1.6 kg·m) (7.0 – 11.5 lb·ft)
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CLUTCH/PARKING BRAKE LEVER REMOVAL AND DISASSEMBLY

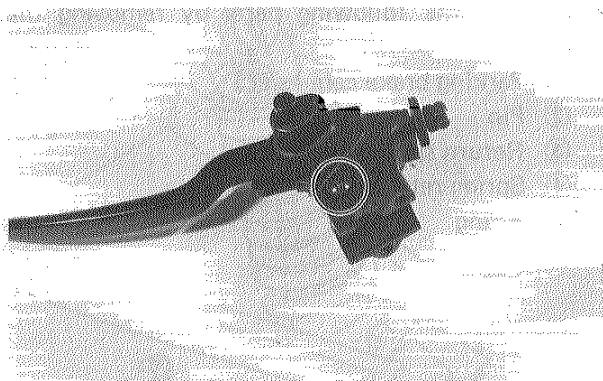
- Disconnect the parking brake cable and clutch cable from the clutch/parking brake lever, then remove its holder mounting bolts.



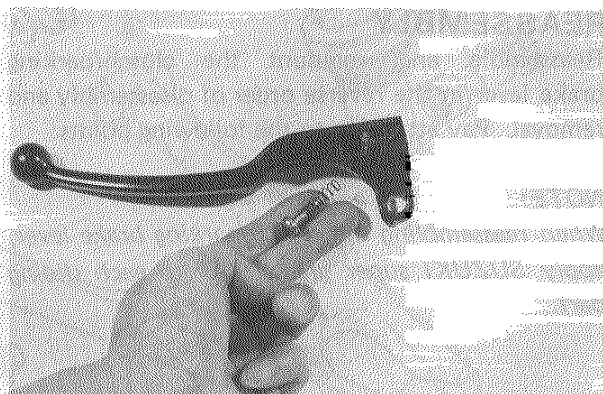
- Remove the clutch/parking brake lever from its holder by removing the bolt.

NOTE:

Wave washer is provided between lever and holder.

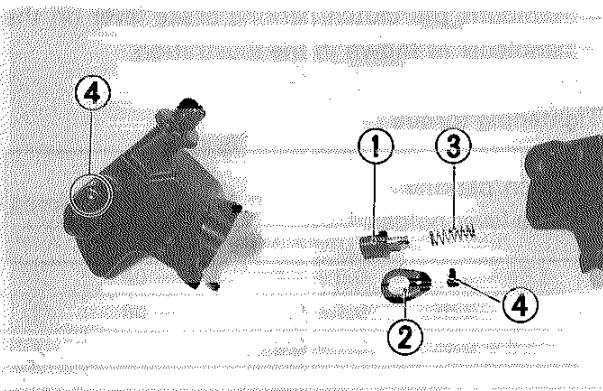


- Remove the pin and spring out of the clutch/parking brake lever.

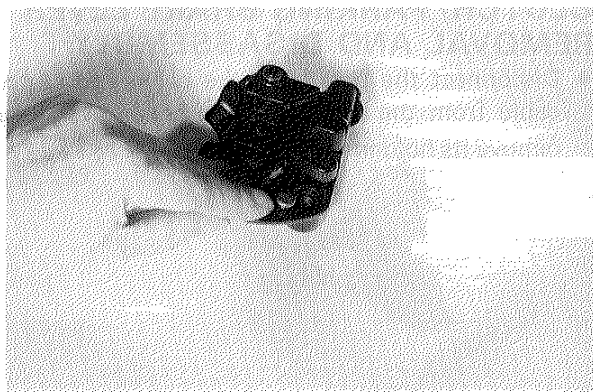


- Remove the following parts by removing the screw.

- ① Parking brake button
- ② Button retainer
- ③ Spring
- ④ Screw

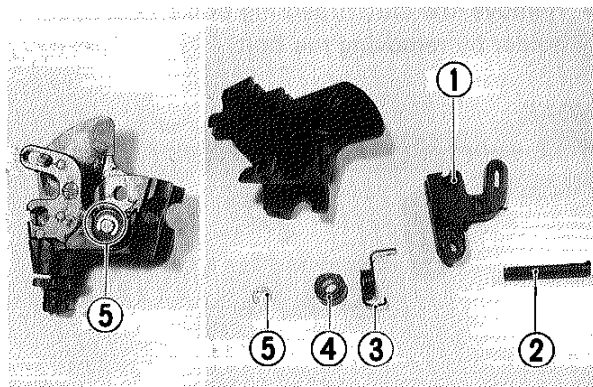


- Remove the pin out of the pin hole.



- Remove the following parts by removing the E-ring.

- ① Parking brake cam lever
- ② Pin
- ③ Return spring
- ④ Spring retainer
- ⑤ E-ring



REASSEMBLY

Reassemble and remount the clutch/parking brake lever in the reverse order of disassembly and removal. Pay attention to the following points:

NOTE:

When reassembling the clutch/parking brake lever, apply **SUZUKI super grease "A"** to each sliding part.

WARNING:

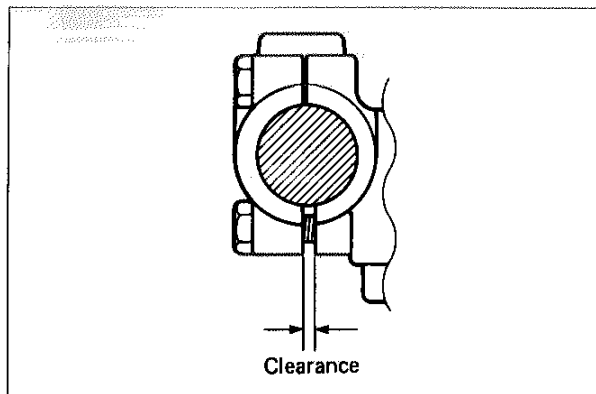
Adjust the clutch cable play and parking brake cable play.

(Page 2-3, 2-14)

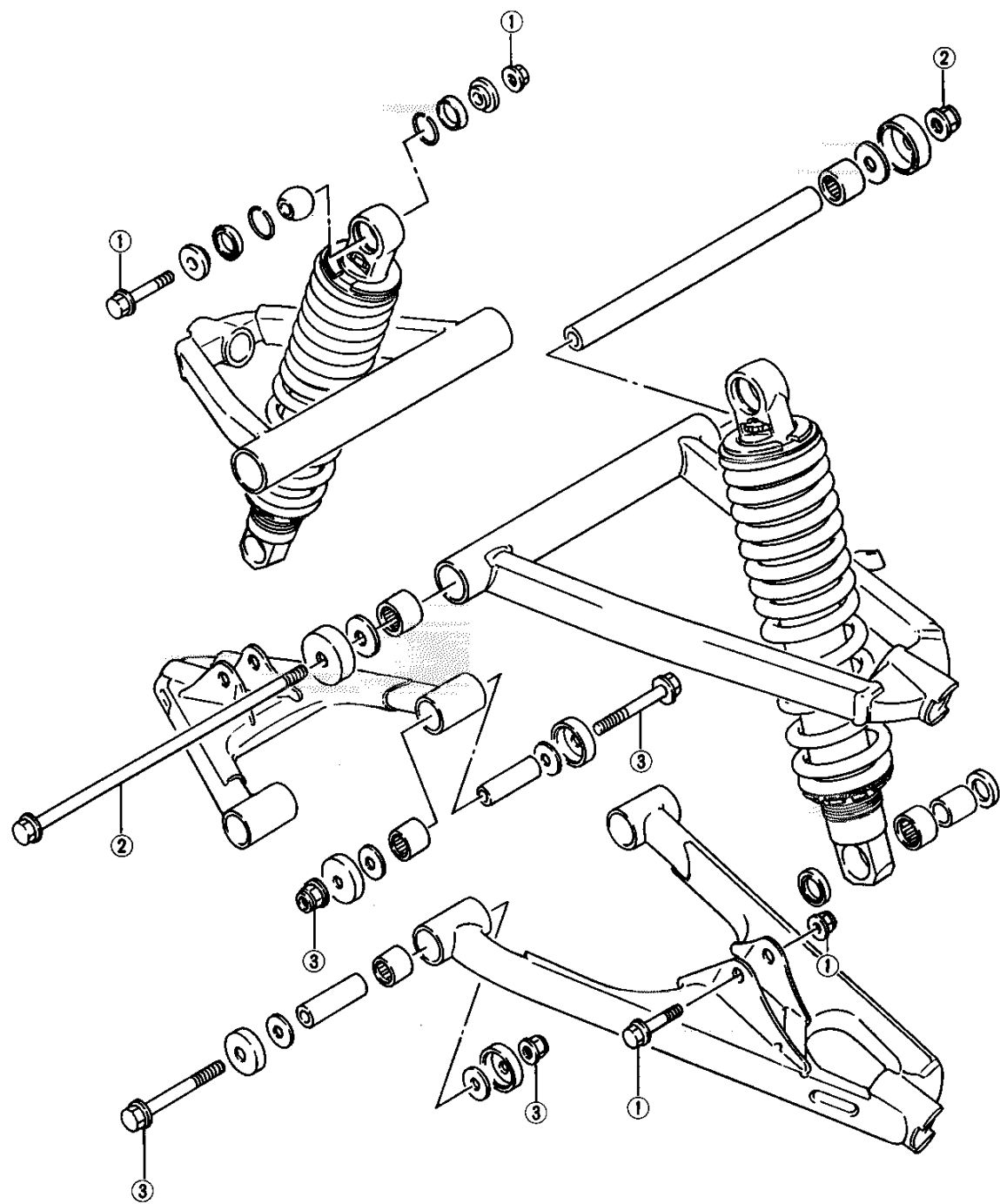
- Remount the clutch/parking brake lever on the handlebar as shown in the illustration.

Tightening torque

Clutch/parking brake lever holder	$6 - 9 \text{ N}\cdot\text{m}$ $(0.6 - 0.9 \text{ kg}\cdot\text{m})$ $4.5 - 6.5 \text{ lb}\cdot\text{ft}$
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FRONT SUSPENSION



Tightening torque

Item	N·m	kg·m	lb·ft
①	40 – 60	4.0 – 6.0	29.0 – 43.5
②	50 – 70	5.0 – 7.0	36.0 – 50.5
③	50 – 70	5.0 – 7.0	36.0 – 50.5

REMOVAL AND DISASSEMBLY

- Remove the front wheel. (Page 7-1)
- Remove the caliper. (Page 7-2)
- Unclamp the brake hose clamp.
- Pull out the cotter pin and remove the wheel hub nut. (Page 7-2)
- Remove the wheel hub. (Page 7-2)
- Pull out the cotter pin and remove the tie-rod end nut.

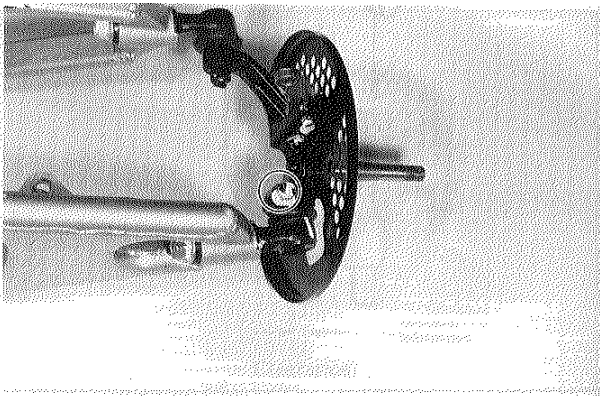
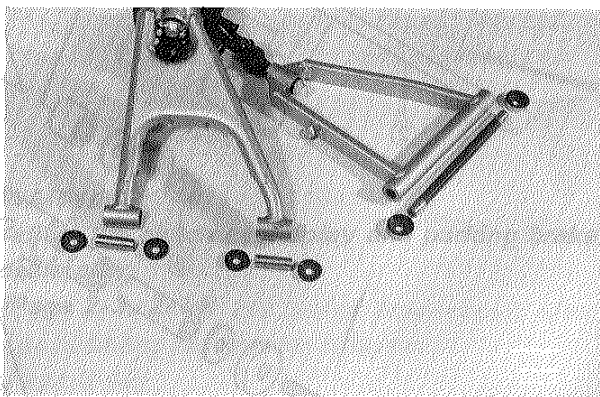
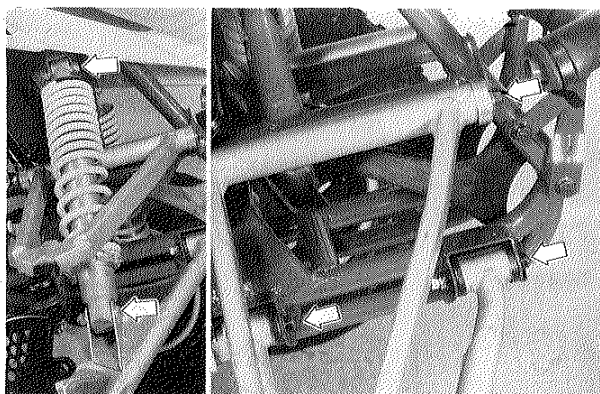
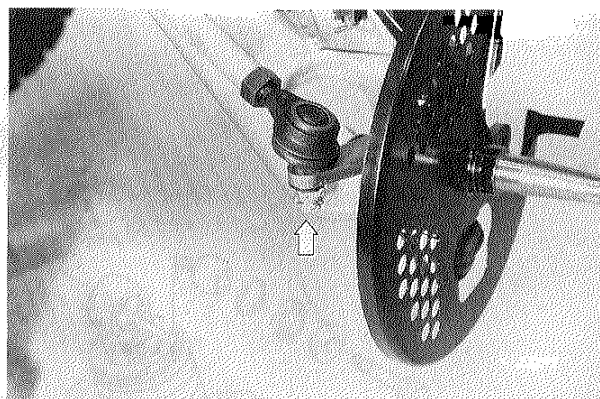
CAUTION:

The removed cotter pin should be replaced with a new one.

- Remove the shock absorber by removing the upper and lower mounting bolts.
- Remove the upper and lower wishbone arm pivot bolts.
- Remove the front suspension from the frame.

- Remove the dust seals and spacers from the wishbone arm pivots.

- Remove the lower wishbone arm by removing its pinch bolt.



- Pull out the cotter pin and remove the upper wishbone arm end nut.

CAUTION:

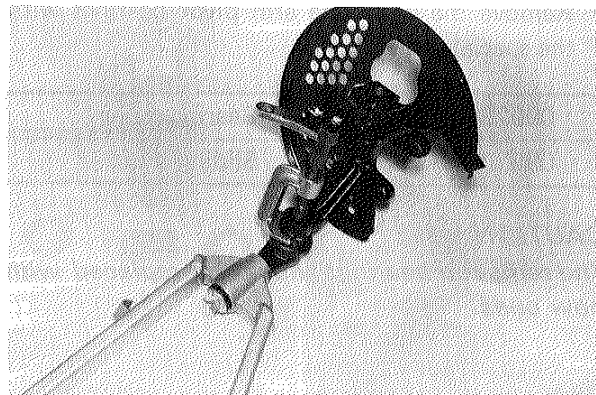
The removed cotter pin should be replaced with a new one.



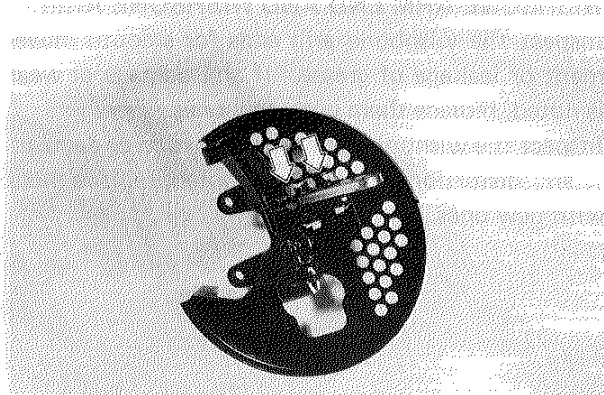
- Separate the upper wishbone arm and steering knuckle with the special tool.

09942-72410

Steering knuckle
arm remover



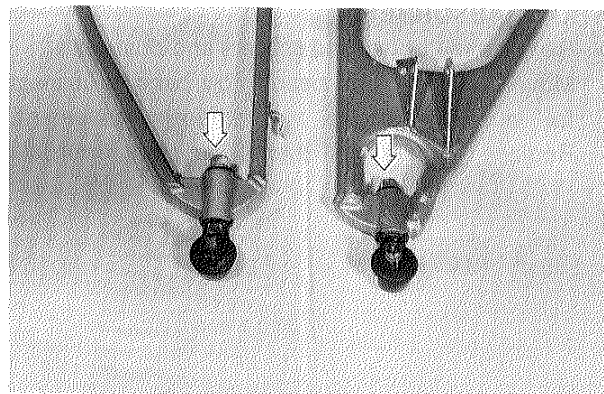
- Pull out the cotter pins and remove the steering knuckle arm bolts.
- Separate the steering knuckle arm and disc guard off the steering knuckle.



- Remove the upper and lower wishbone arm ends by removing each mounting bolt.

CAUTION:

When removing each mounting bolt, clamp the wishbone arm ends with vise. Do not clamp the wishbone arm with vise.



INSPECTION AND DISASSEMBLY WISHBONE ARM PIVOT BEARING

Inspect the wishbone arm pivot bearings by hand while they are in each wishbone arm. Rotate the bearing spacer to inspect for abnormal noise and smooth rotation. Replace the bearing if there is anything unusual.

Inspect each dust seal, if they are found to be damaged, replace them with new ones.

- Remove the wishbone arm pivot bearings with the special tools.

09923-73210	Bearing puller
09930-30102	Sliding shaft

CAUTION:

The removed bearings should be replaced with new ones.

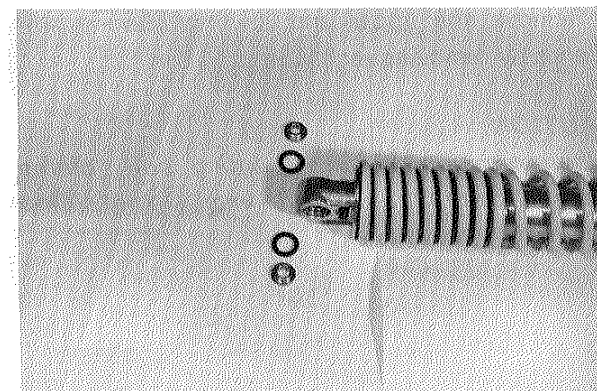
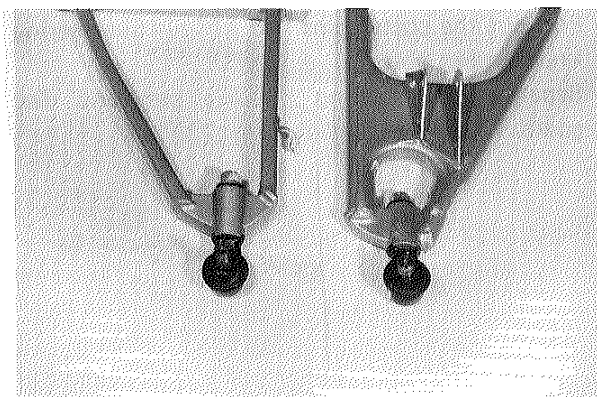
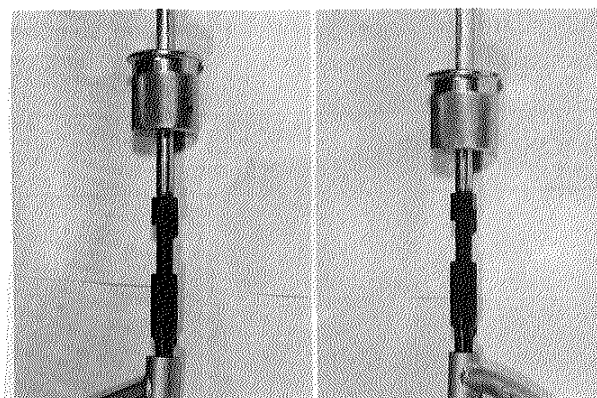
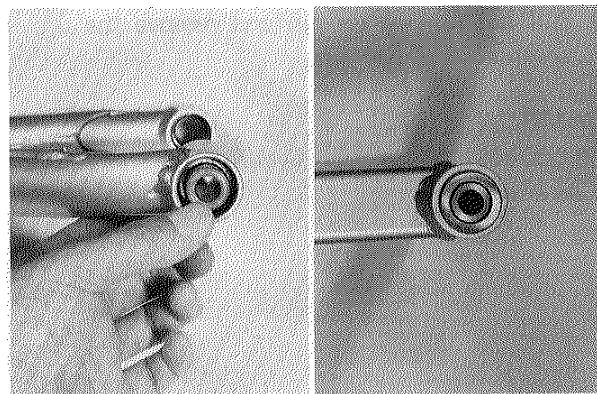
WISHBONE ARM END AND WISHBONE ARM

Inspect the wishbone arm ends for smooth movement or leakage of grease. If any damage or wear is noted, replace them with new ones.

Inspect the wishbone arms for distortion or damage. If any distortion or damage is noted, replace them with new ones.

SHOCK ABSORBER

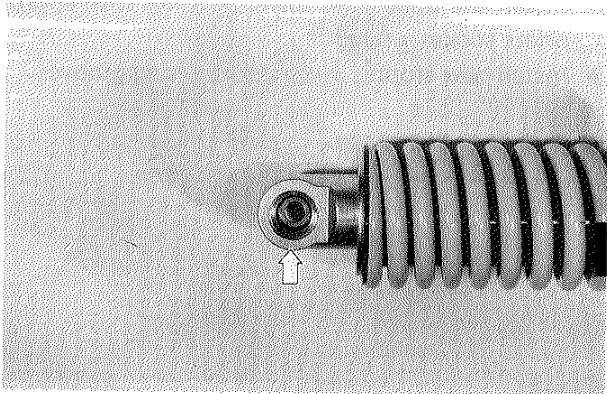
- Remove the upper end spacers and dust seals. Move the upper end bearing by hand to inspect for abnormal noise and smooth movement. Replace the bearing if there is anything unusual.



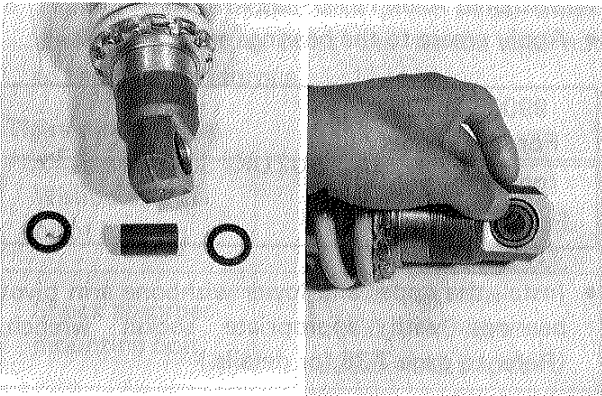
- Remove the stopper rings and drive out the bearing with appropriate socket wrench.

CAUTION:

The removed dust seals, stopper rings and bearing should be replaced with new ones.



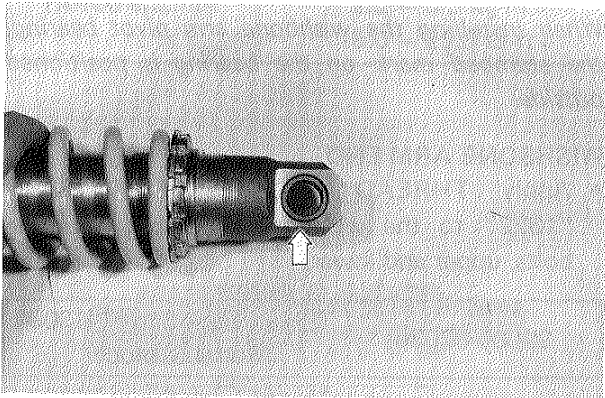
- Remove the lower end dust seals and spacer. Insert the spacer into the lower end bearing and check the bearing for abnormal noise and smooth movement by moving the spacer. Replace the bearing if there is anything unusual.



- Drive out the bearing with appropriate socket wrench.

CAUTION:

The removed dust seals and bearing should be replaced with new ones.



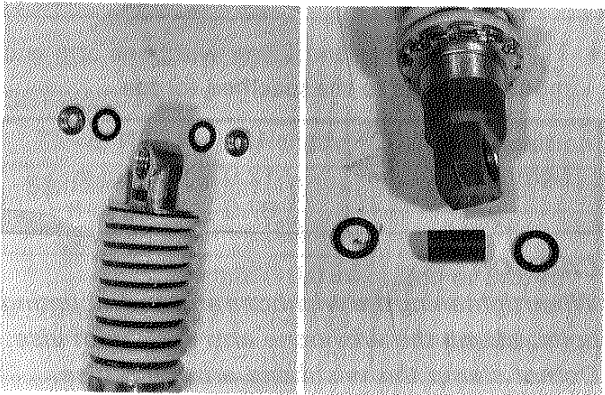
REASSEMBLY AND REMOUNTING

Reassemble and remount the front suspension in the reverse order of disassembly and removal. Pay attention to the following points:

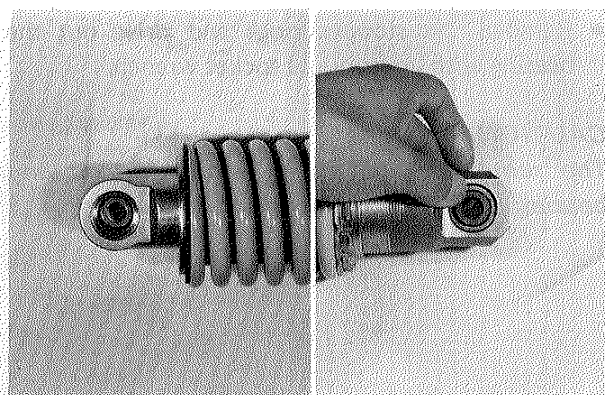
SHOCK ABSORBER

- Apply grease to the bearings and dust seals.

99000-25030 For U.S. model	SUZUKI Super grease "A"
99000-25010 For other models	



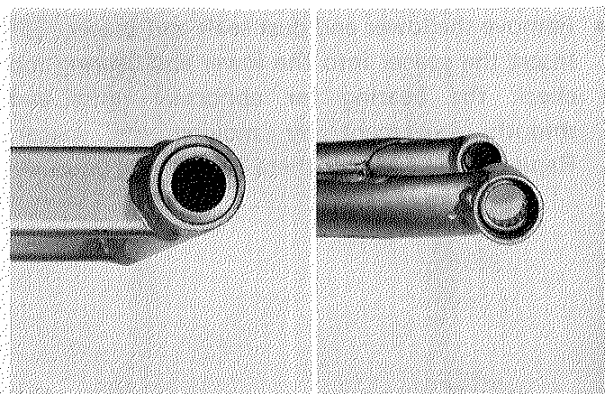
- Install the upper and lower bearings with appropriate socket wrench.
- Install new stopper rings into the ring grooves.



WISHBONE ARM PIVOT BEARING

- Apply grease to the bearings and dust seals.

99000-25030 For U.S. model	SUZUKI Super grease "A"
99000-25010 For other models	



- Install the upper and lower wishbone arm pivot bearings with appropriate socket wrench. (Refer to page 7-35 for details.)

NOTE:

When installing the wishbone arm pivot bearing, the stamped mark on the bearing is positioned outside.

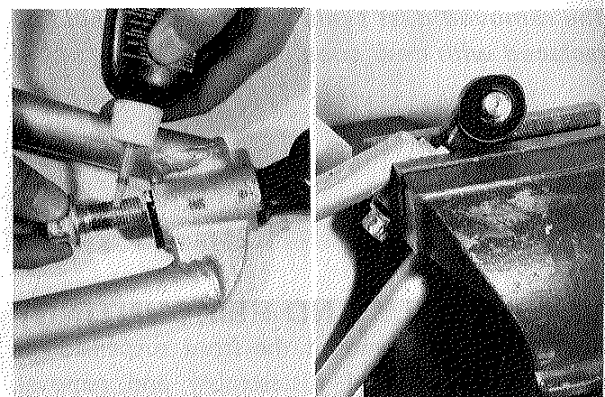
WISHBONE ARM END

- Apply THREAD LOCK SUPER "1303"/"1322" to the wishbone arm end mounting bolts, upper and lower.

99000-32030	Thread Lock Super "1303" For U.S. model
99000-32110	Thread Lock Super "1322" For other models

- Tighten the upper and lower wishbone arm end mounting bolts to the specified torque.

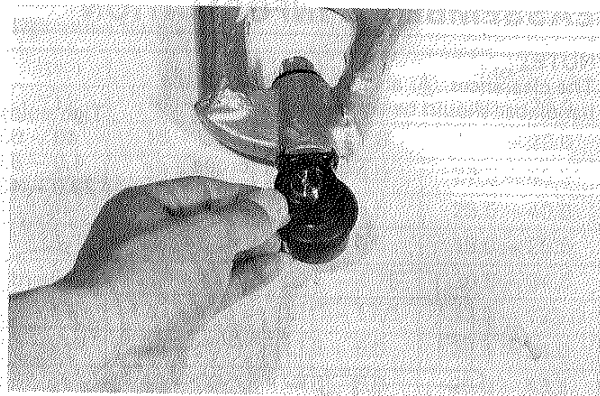
Tightening torque	120 – 170 N·m (12.0 – 17.0 kg·m) (87.0 – 123.0 lb·ft)
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CAUTION:

When tightening the wishbone arm end mounting bolts, clamp the wishbone arm ends with vise. Do not clamp the wishbone arm with vise.

- Locate the washer on the lower wishbone arm end.



- Apply THREAD LOCK SUPER "1303"/"1322" to the lower wishbone arm end pinch bolt.

99000-32030	Thread Lock Super "1303" For U.S. model
99000-32110	Thread Lock Super "1322" For other models

- Tighten the upper wishbone arm end nut, lower wishbone arm end pinch bolt and steering knuckle arm bolts to the specified torque.

Tightening torque

Upper wishbone arm end nut	35 – 50 N·m (3.5 – 5.0 kg·m) (25.5 – 36.0 lb·ft)
Lower wishbone arm end pinch bolt	40 – 60 N·m (4.0 – 6.0 kg·m) (29.0 – 43.5 lb·ft)
Steering knuckle arm bolt	42.5 – 47.5 N·m (4.25 – 4.75 kg·m) (30.5 – 34.5 lb·ft)

FRONT SUSPENSION ADJUSTMENT

Spring pre-load and damping force are adjustable by changing the respective adjusters.

CAUTION:

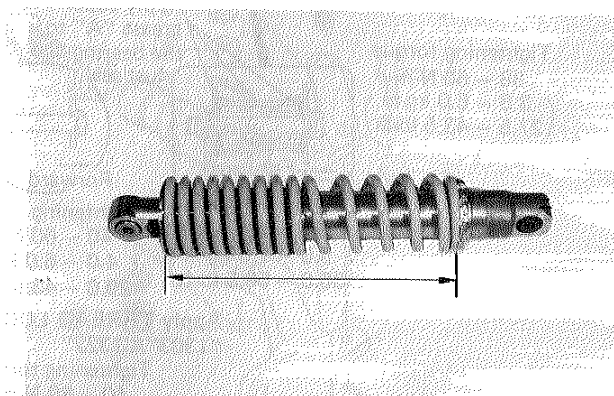
After adjusting the pre-load, tighten the spring adjuster lock ring securely.

09910-60611	Universal clamp wrench
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- Tighten the wishbone arm pivot bolts, shock absorber mounting bolts and tie-rod end nut to the specified torque.

Tightening torque

Wishbone arm pivot bolt	50 – 70 N·m (5.0 – 7.0 kg·m) (36.0 – 50.5 lb·ft)
Shock absorber mounting bolt	40 – 60 N·m (4.0 – 6.0 kg·m) (29.0 – 43.5 lb·ft)
Tie-rod end nut	22 – 35 N·m (2.2 – 3.5 kg·m) (16.0 – 25.5 lb·ft)



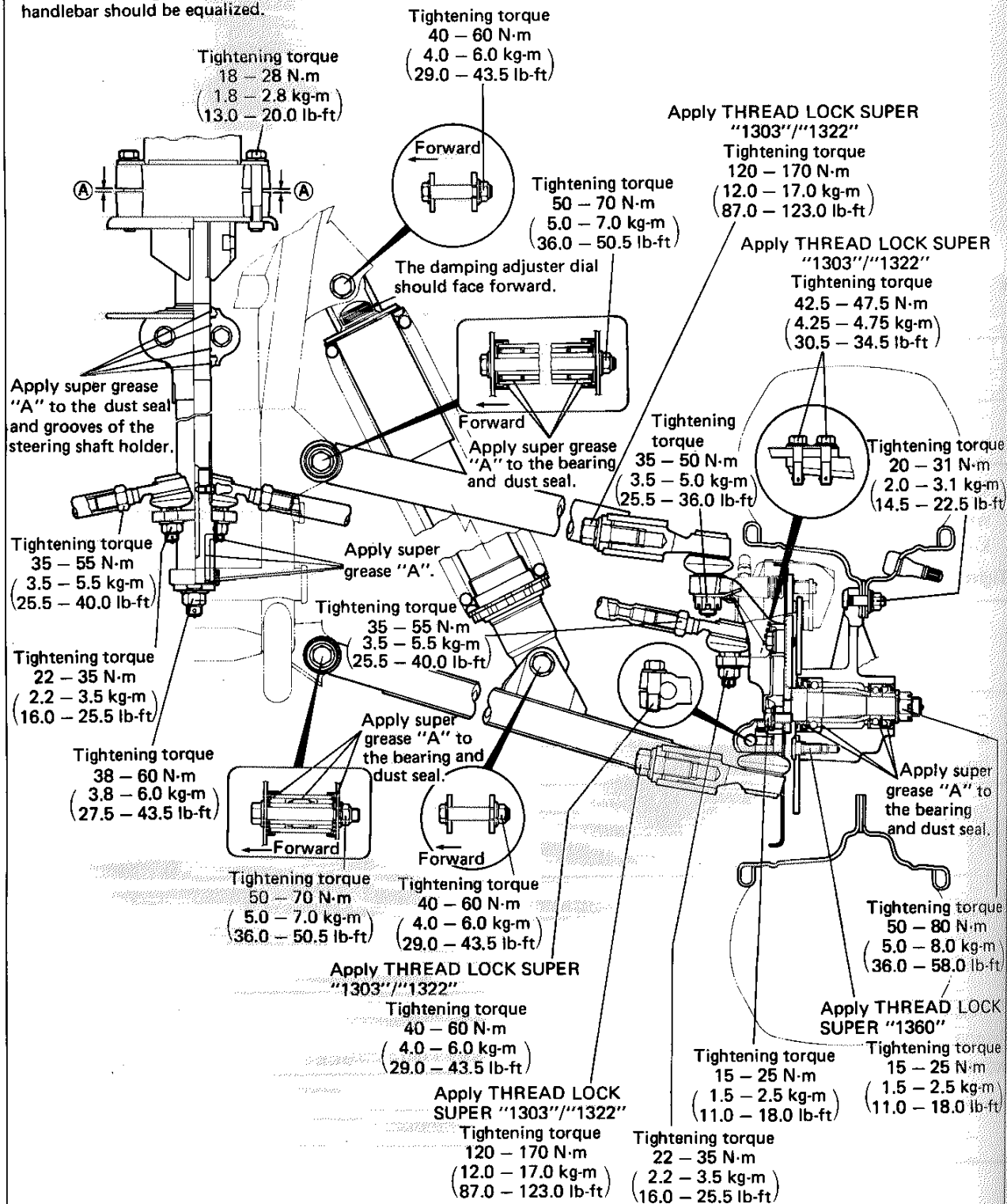
SETTING TABLE

	Spring length	Damping position
Standard	257 mm (10.1 in)	2nd/4th
Softer	257 mm (10.1 in)	1st/4th
Stiffer	254 mm (10.0 in)	2nd or 3rd/4th
	247 – 254 mm (9.7 – 10.0 in)	4th/4th

REASSEMBLING INFORMATION

NOTE:

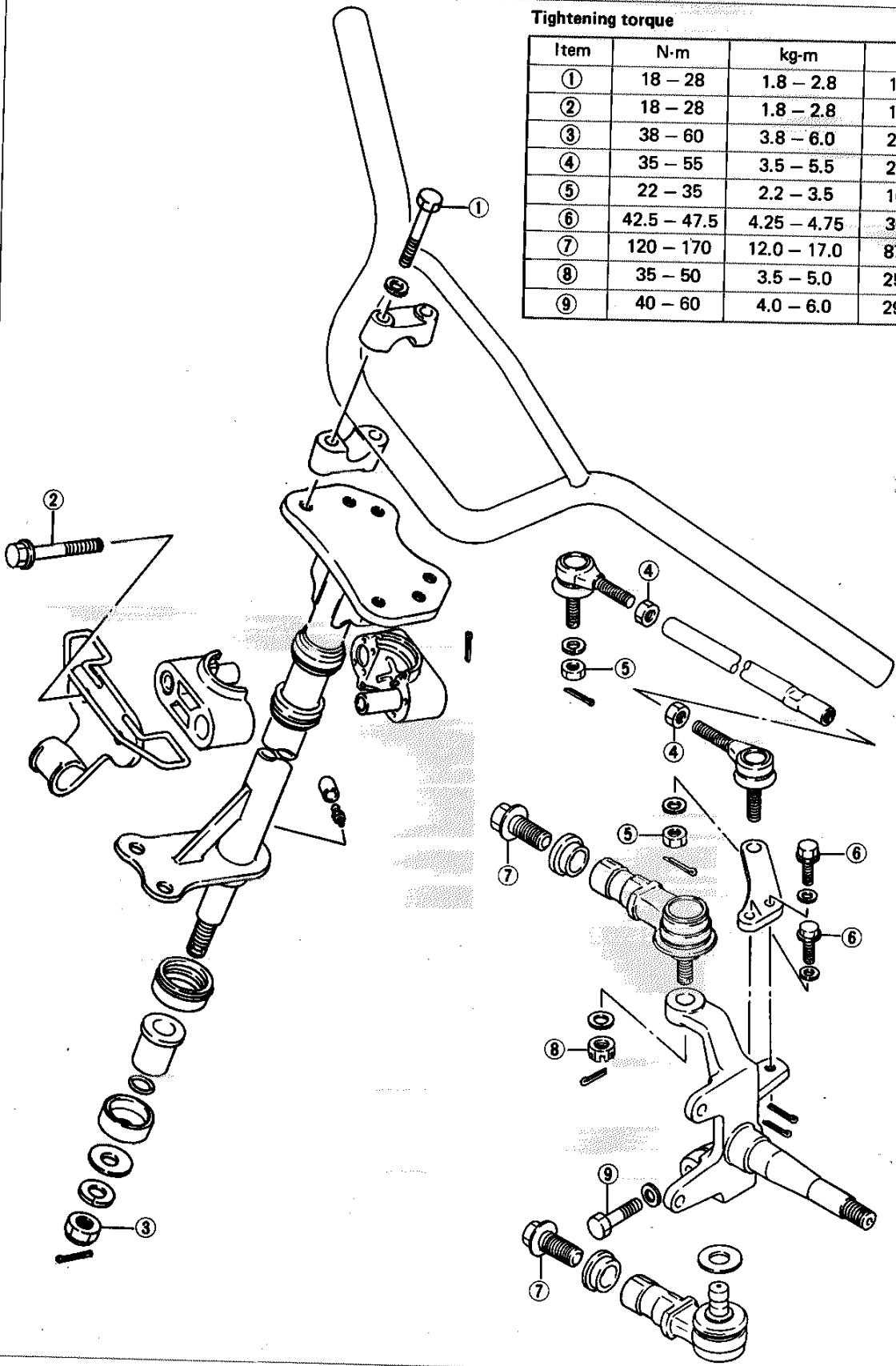
The clearances (A) ahead and behind of the handlebar should be equalized.



STEERING SYSTEM

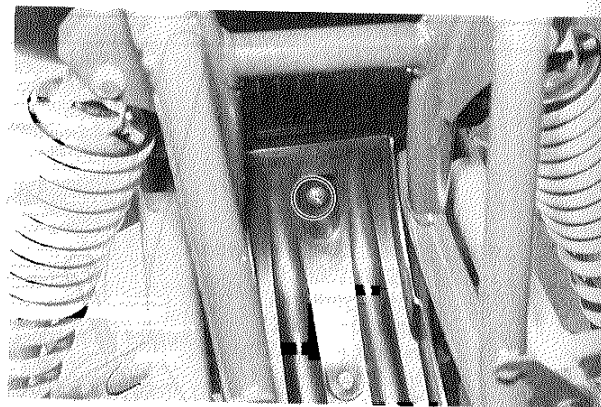
Tightening torque

Item	N·m	kg·m	lb·ft
①	18 - 28	1.8 - 2.8	13.0 - 20.0
②	18 - 28	1.8 - 2.8	13.0 - 20.0
③	38 - 60	3.8 - 6.0	27.5 - 43.5
④	35 - 55	3.5 - 5.5	25.5 - 40.0
⑤	22 - 35	2.2 - 3.5	16.0 - 25.5
⑥	42.5 - 47.5	4.25 - 4.75	30.5 - 34.5
⑦	120 - 170	12.0 - 17.0	87.0 - 123.0
⑧	35 - 50	3.5 - 5.0	25.5 - 36.0
⑨	40 - 60	4.0 - 6.0	29.0 - 43.5

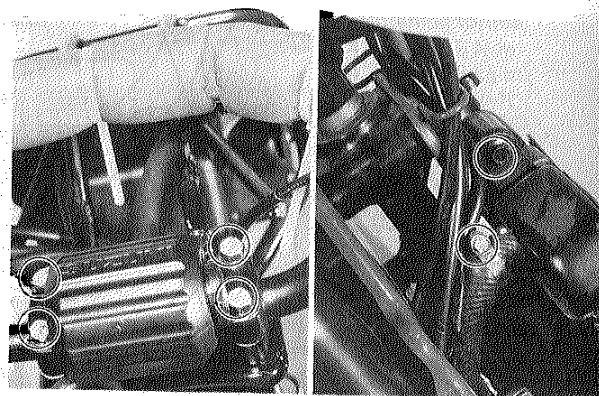


REMOVAL AND DISASSEMBLY

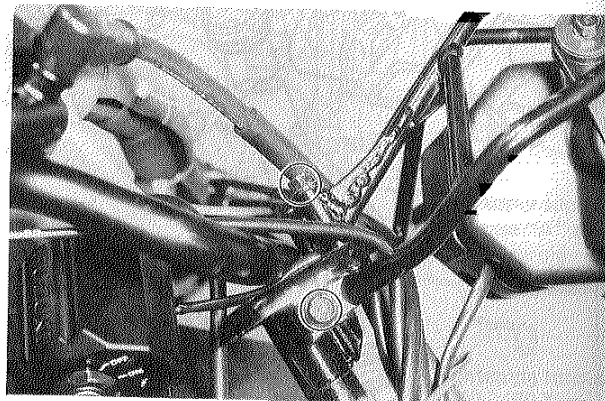
- Remove the center fender and front fender. (Page 4-3)
- Drain coolant. (Page 2-9)
- Remove the radiator cooling air guide by removing screw.



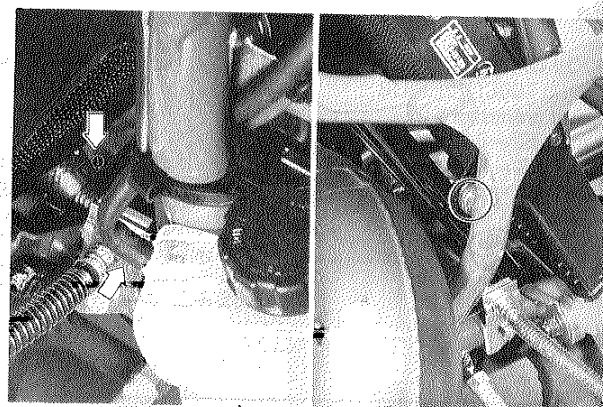
- Remove the handlebar and ignition switch by removing the handlebar clamp bolts.
- Disconnect the radiator upper hose by loosening the clamp screw.
- Remove the radiator upper mounting bolt.



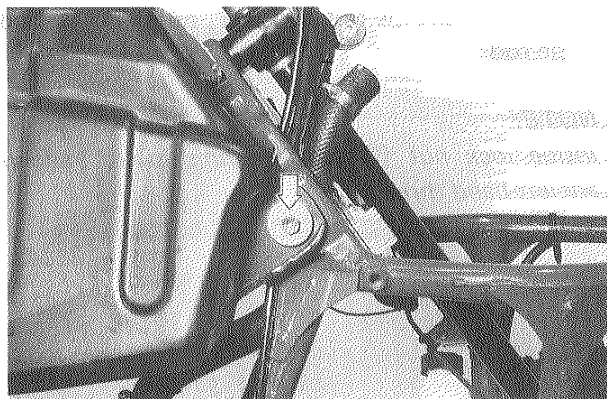
- Remove the headlight by removing the headlight stay mounting bolts, right and left.



- Disconnect the radiator lower hose by loosening the clamp screw.
- Disconnect the reservoir tank hose.
- Remove the radiator lower mounting bolts, right and left, then remove the radiator.



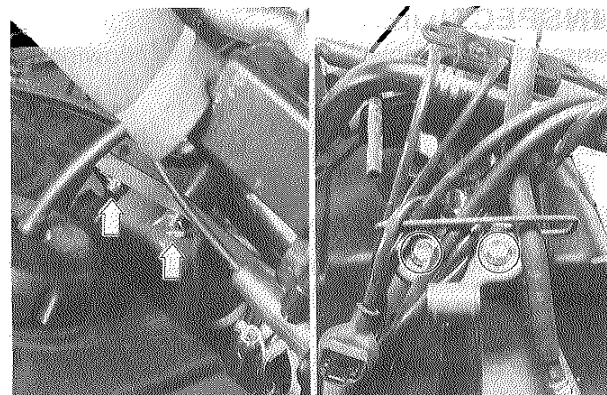
- Remove the fuel tank mounting bolts, right and left, then push the fuel tank backward.



- Pull out the cotter pins and remove the steering shaft holder bolts.

CAUTION:

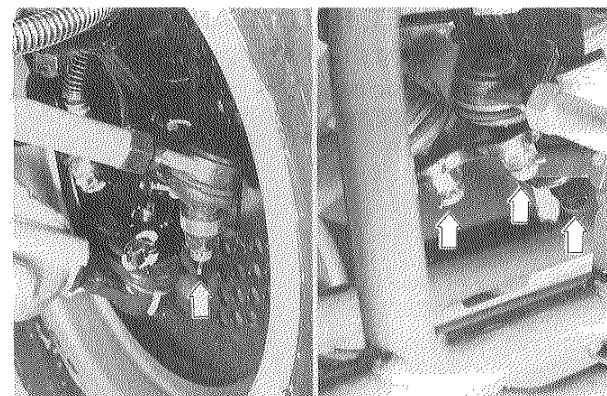
The removed cotter pins should be replaced with new ones.



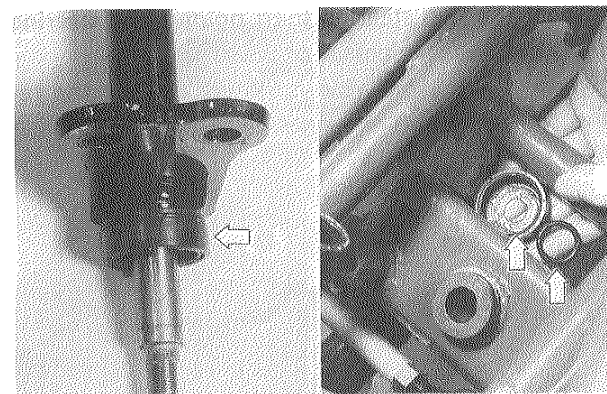
- Pull out the cotter pins and remove the tie-rod end nuts, right and left.
- Pull out the cotter pin and remove the steering shaft lower nut, then remove the steering shaft.

CAUTION:

The removed cotter pins should be replaced with new ones.



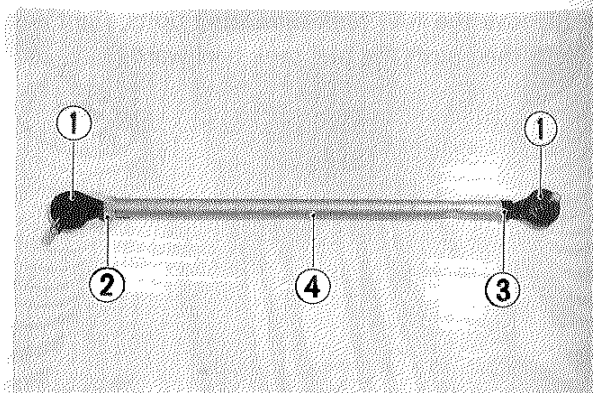
- Remove the clip and dust seal from the steering shaft.
- Remove the dust seal and O-ring from the steering shaft bushing.



- Separate the tie-rod ends ①, nuts ②, ③ and tie-rod ④.

NOTE:

Inside lock nut ② (surface finishing of yellow) are left-hand thread.



INSPECTION

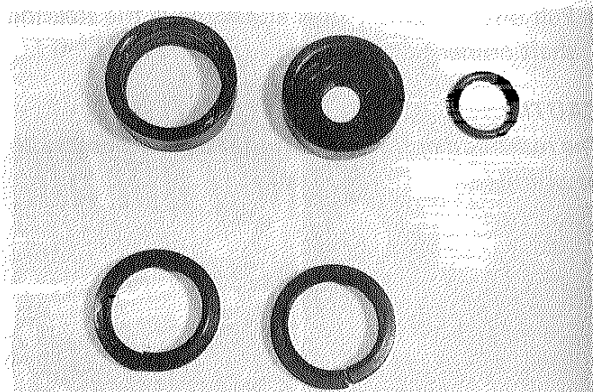
Inspect the removed parts for the following abnormalities.

- * Handlebar distortion
- * Handlebar clamp wear

DUST SEAL AND O-RING

Inspect the dust seals and O-ring for damage or wear.

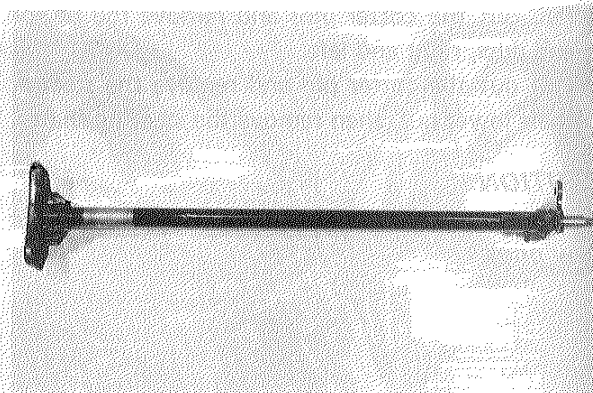
If any damage or wear is noted, replace the respective parts with new ones.



STEERING SHAFT, HOLDER AND BUSHING

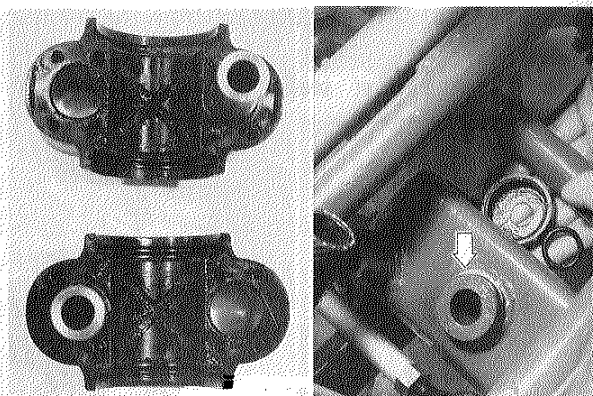
Inspect the steering shaft for distortion or bend.

If the distortion or bend is noted, replace it with a new one.



Inspect the two steering shaft holders and steering shaft bushing for damage or wear.

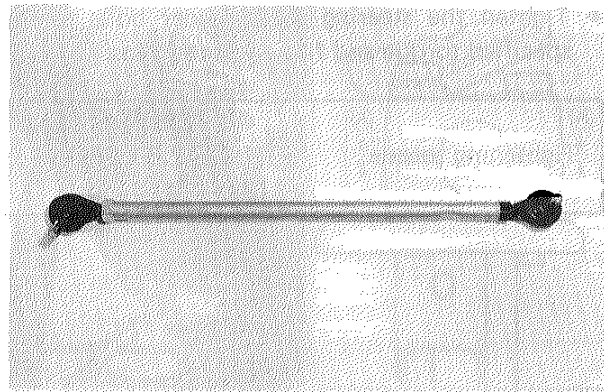
If any damage or wear is noted, replace the respective parts with new ones.



TIE-ROD AND TIE-ROD END

Inspect the tie-rod for distortion or bend. If the distortion or bend is noted, replace it with a new one.

Inspect the tie-rod ends for smooth movement or rubber boot damage. If any damage or wear is noted, replace them with new ones.

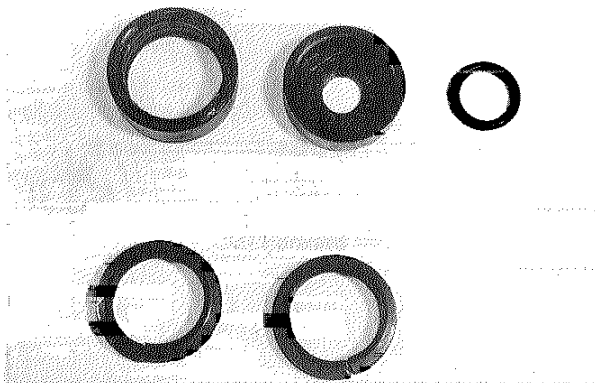


REASSEMBLY AND REMOUNTING

Reassemble and remount the steering system in the reverse order of disassembly and removal. Pay attention to the following points:

DUST SEAL AND O-RING

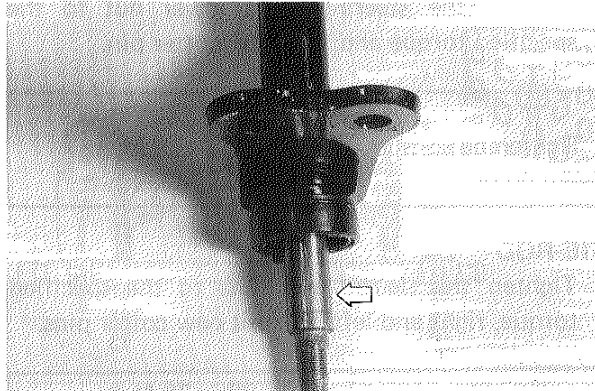
- Apply grease to the dust seals and O-ring.



STEERING SHAFT AND HOLDER

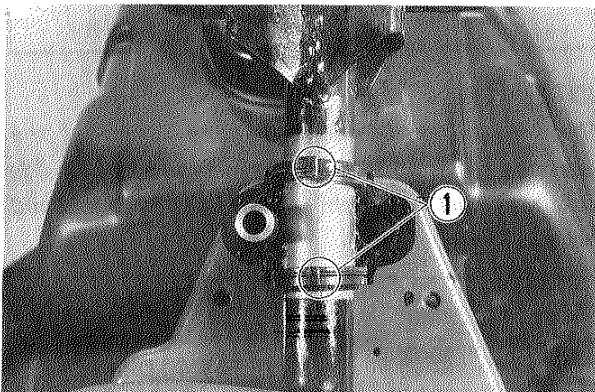
- Apply grease to the steering shaft lower portion.

99000-25030 For U.S. model	SUZUKI Super grease "A"
99000-25010 For other models	



- Apply grease to the steering shaft holders.

99000-25030 For U.S. model	SUZUKI Super grease "A"
99000-25010 For other models	

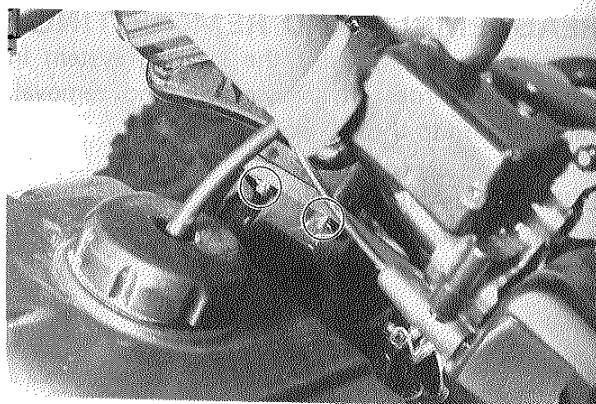
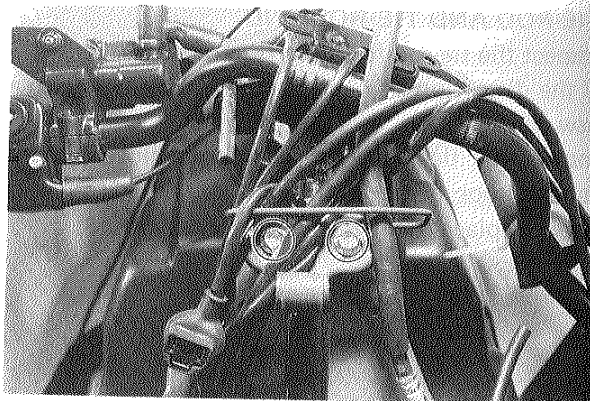


NOTE:

The dust seal end ① should be mounted on the steering shaft facing forward to prevent entry of dirt.

- Tighten the steering shaft holder bolts to the specified torque and fit new cotter pins.

Tightening torque	$18 - 28 \text{ N}\cdot\text{m}$ $(1.8 - 2.8 \text{ kg}\cdot\text{m})$ $13.0 - 20.0 \text{ lb}\cdot\text{ft}$
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- Tighten the steering shaft lower nut to the specified torque and fit a new cotter pin.

Tightening torque	$38 - 60 \text{ N}\cdot\text{m}$ $(3.8 - 6.0 \text{ kg}\cdot\text{m})$ $27.5 - 43.5 \text{ lb}\cdot\text{ft}$
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TIE-ROD

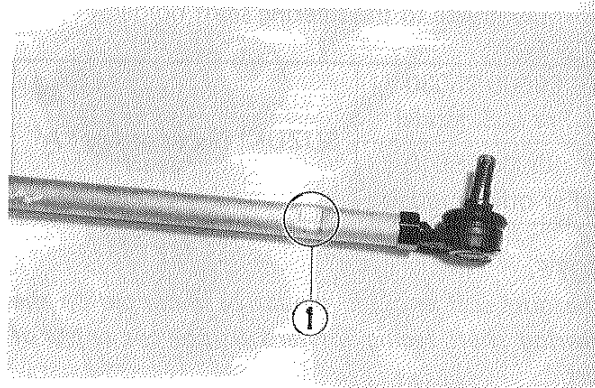
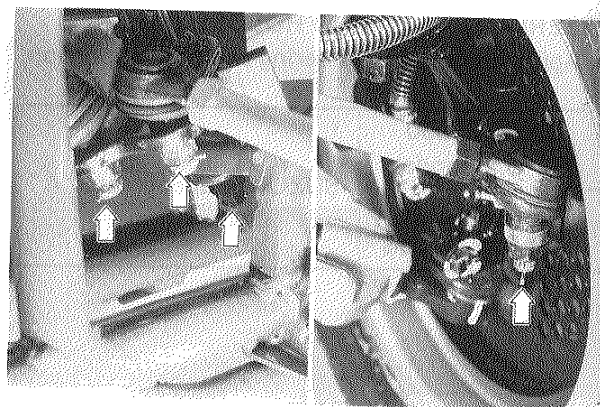
- Tighten the tie-rod end nuts to the specified torque, right and left, then fit new cotter pins.

Tightening torque	$22 - 35 \text{ N}\cdot\text{m}$ $(2.2 - 3.5 \text{ kg}\cdot\text{m})$ $16.0 - 25.5 \text{ lb}\cdot\text{ft}$
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NOTE:

When installing the tie-rod, make sure that the flats side ① of the tie-rod comes outside. Inside lock nuts (surface finishing of yellow) are left-hand thread.

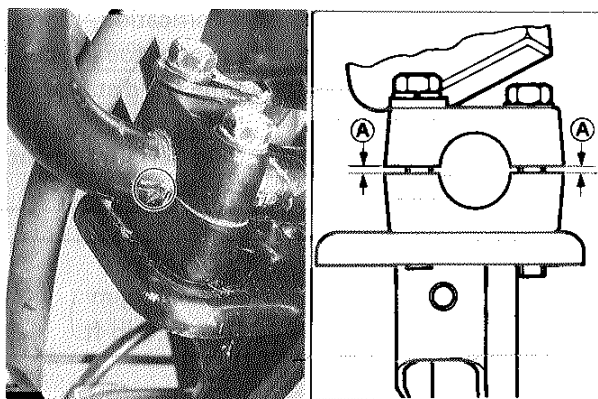
Tie-rod lock nut Tightening torque	$35 - 55 \text{ N}\cdot\text{m}$ $(3.5 - 5.5 \text{ kg}\cdot\text{m})$ $25.5 - 40.0 \text{ lb}\cdot\text{ft}$
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HANDLEBAR

- Set the handlebar to match its punched mark to the mating surface of the handlebar clamp.
- Secure each handlebar clamp in such a way that the clearances **A** ahead and behind of the handlebar should be equalized.

Tightening torque	18 – 28 N·m (1.8 – 2.8 kg-m) (13.0 – 20.0 lb-ft)
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TOE-IN ADJUSTMENT

The procedure for adjusting the toe-in as follows.

- Place the vehicle on level ground and set the handlebar straight.
Make sure that all tires are inflated to the specified pressure. (Page 7-10)
- Loosen the lock nut **①** on each tie-rod.

NOTE:

Lock nuts of yellow surface finishing is left-hand thread.

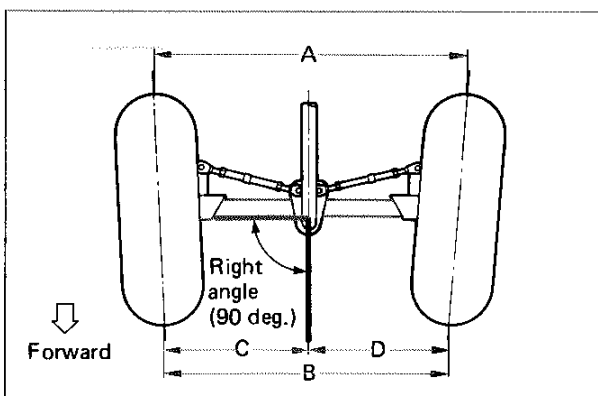
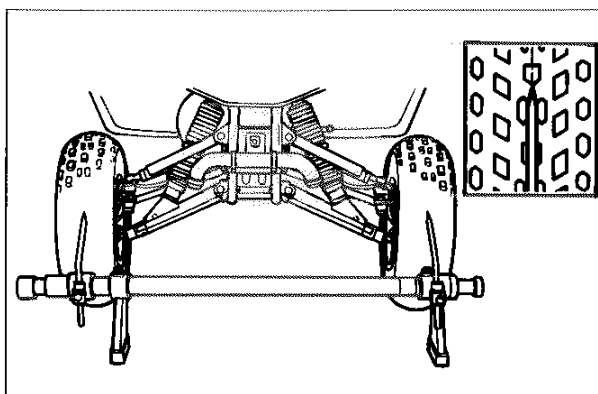
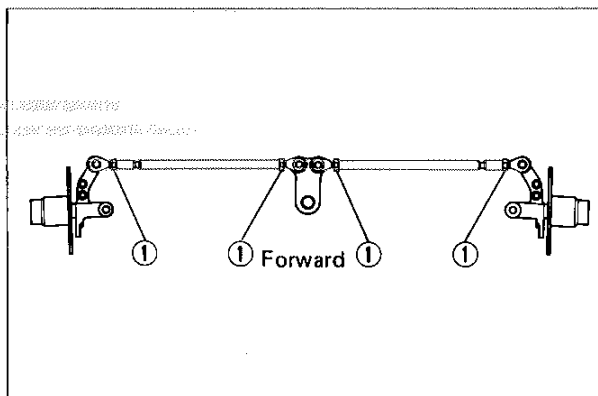
- Measure the distances **A** and **B** of front wheels (in the illustration) and adjust the tie-rods, right and left, to within the specified range.
 $A - B = \text{Toe-in}$

Toe-in	32 – 40 mm (1.3 – 1.6 in)
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NOTE:

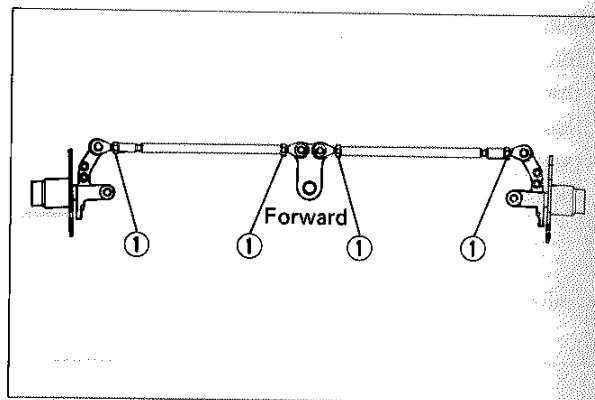
When measuring the distances (**A** and **B**), place the rider or weight (75 kg or 165 lbs) on the seat.

- Temporarily tighten the four lock nuts.
- Check that the distances **C** and **D** (in the illustration) are equal. If the distances **C** and **D** are not equal, readjust the tie-rod, right or left, whichever makes the toe-in value closer to the specification. Check the toe-in again by measuring the distances **A** and **B**.



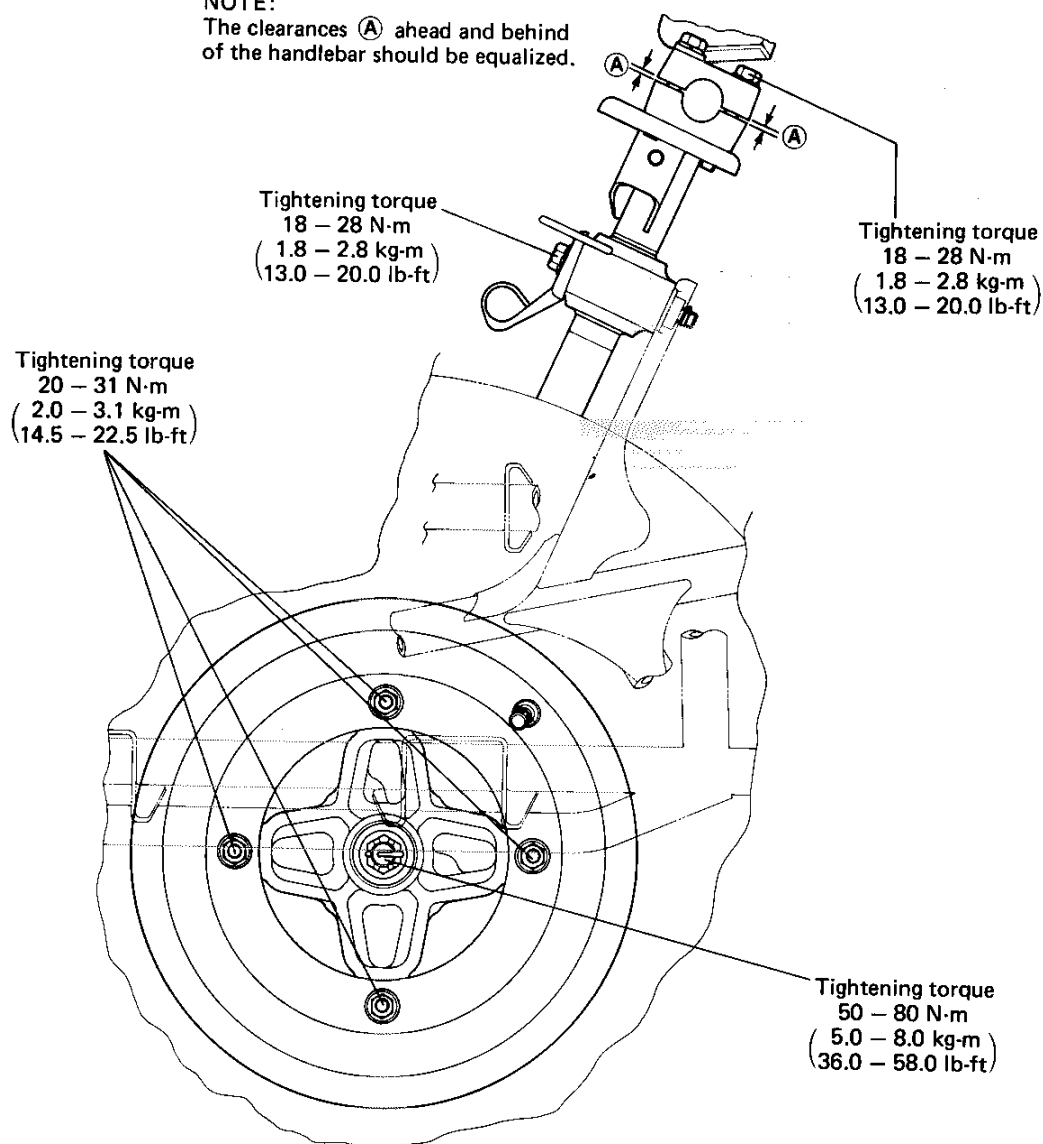
- If the toe-in is not within specification, repeat the adjustment as above until proper toe-in value is obtained and at the same time the distances C and D become equal.
- Tighten the four lock nuts ① after adjustment of toe-in is made.

Tie-rod lock nut	35 – 55 N·m
Tightening torque	(3.5 – 5.5 kg·m) 25.5 – 40.0 lb·ft

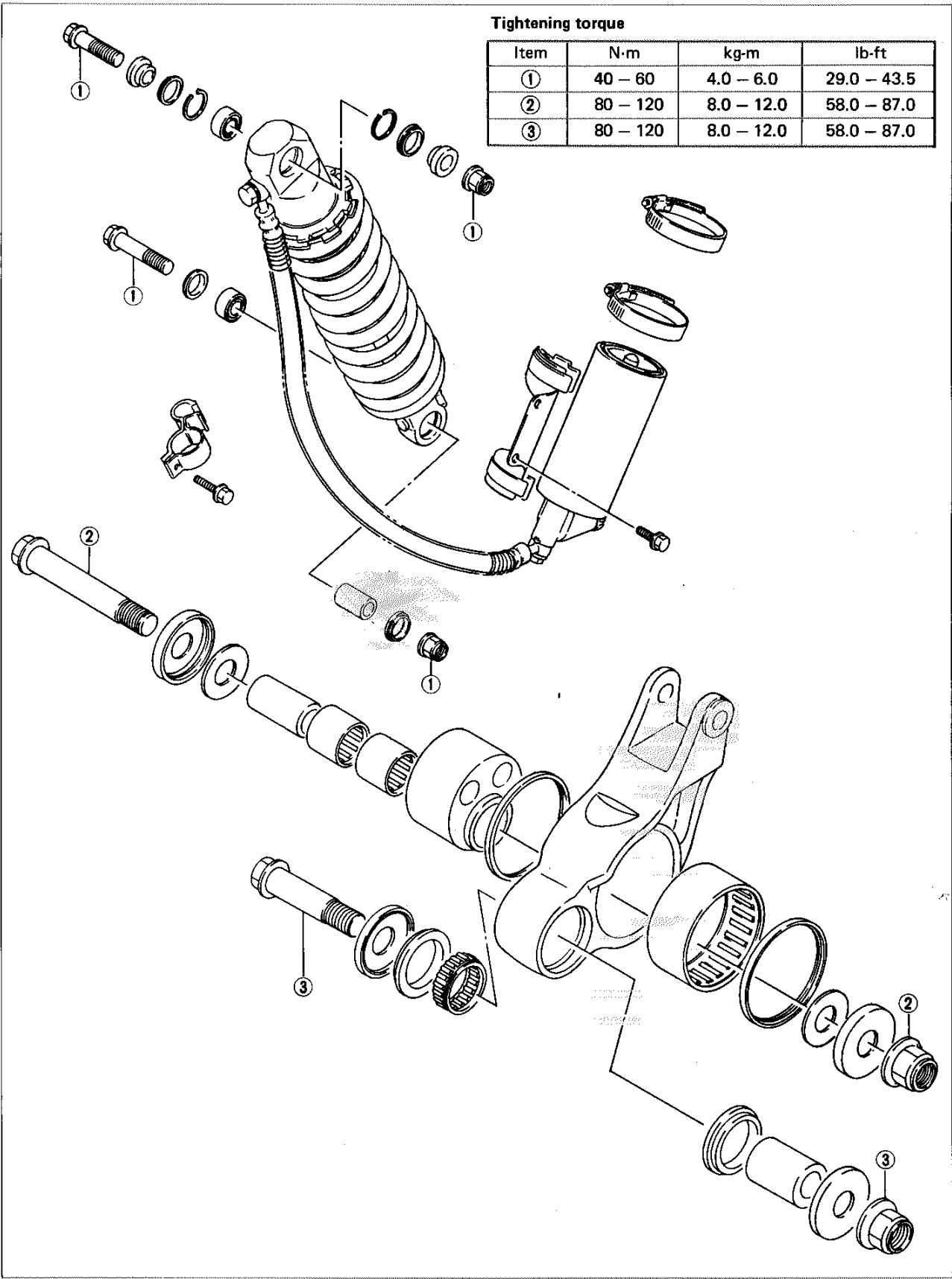


REASSEMBLING INFORMATION

NOTE:
The clearances (A) ahead and behind of the handlebar should be equalized.

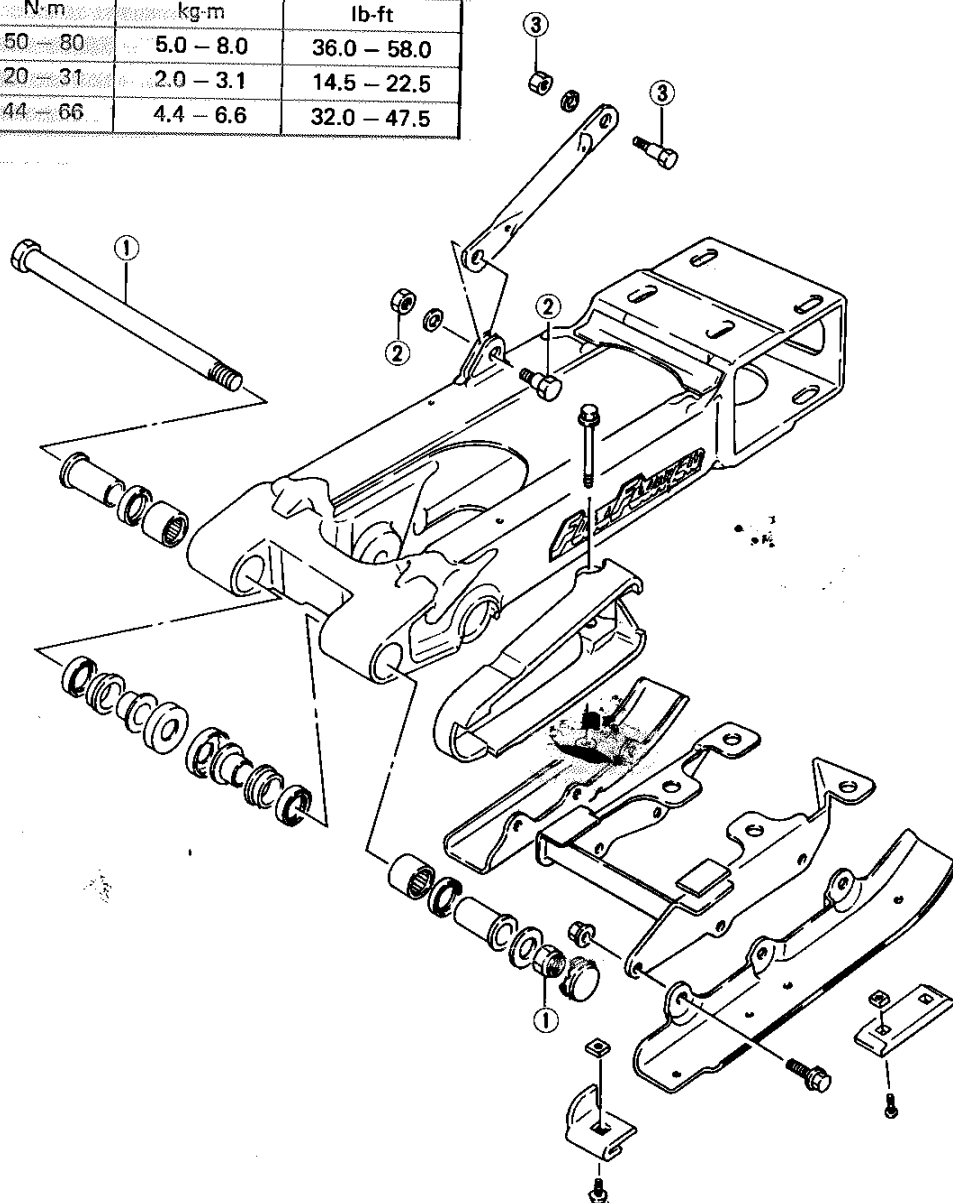


REAR SUSPENSION



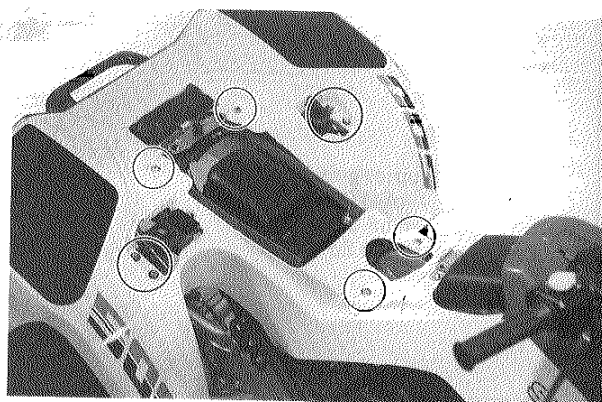
Tightening torque

Item	N·m	kg·m	lb·ft
①	50 – 80	5.0 – 8.0	36.0 – 58.0
②	20 – 31	2.0 – 3.1	14.5 – 22.5
③	44 – 66	4.4 – 6.6	32.0 – 47.5

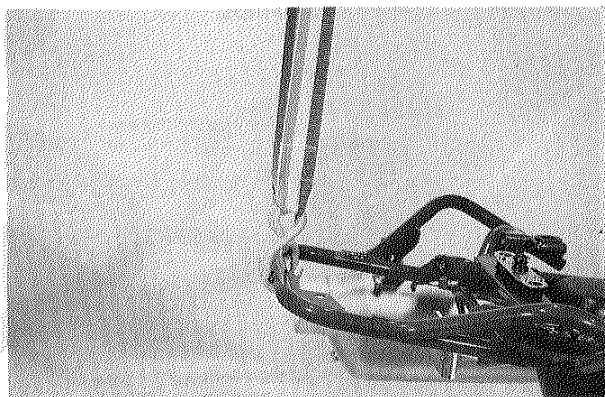


REMOVAL

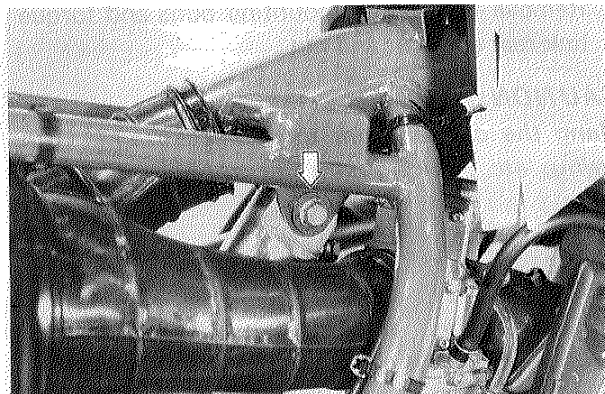
- Remove the rear fender by removing the eight mounting bolts.
- Remove the rear wheels, right and left. (Page 7-6)



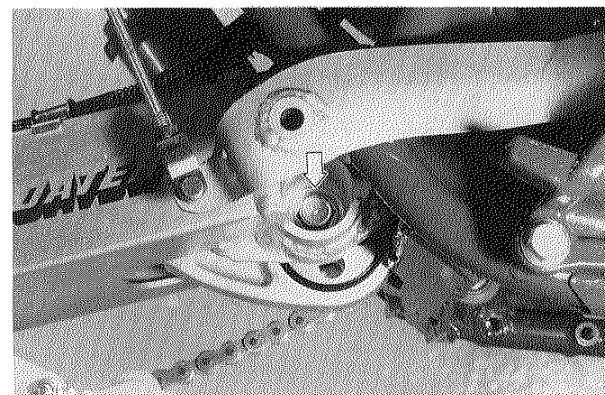
- Hang the rear end of the vehicle frame with chain hoist.



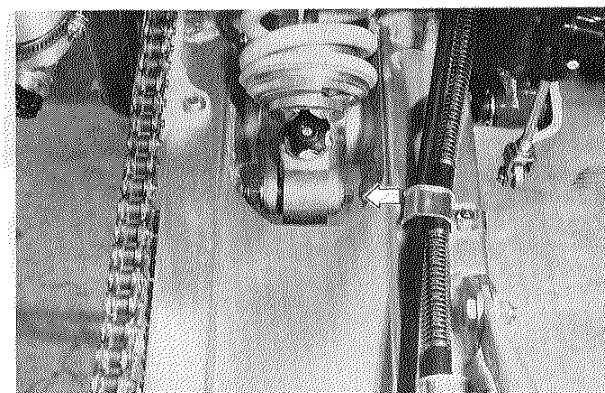
- Remove the shock absorber upper end bolt and nut.



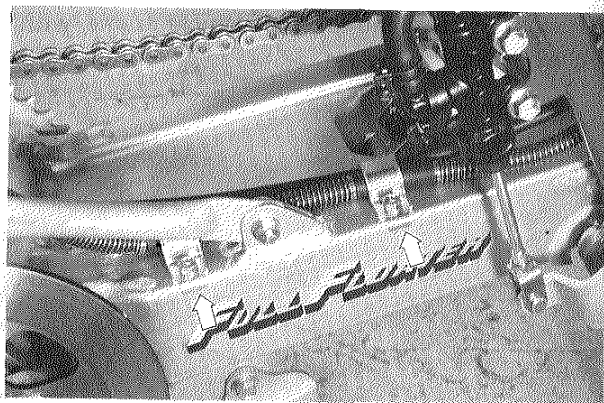
- Remove the cushion lever center shaft and nut.



- Remove the shock absorber lower end bolt and nut.



- Remove the brake hose clamps.

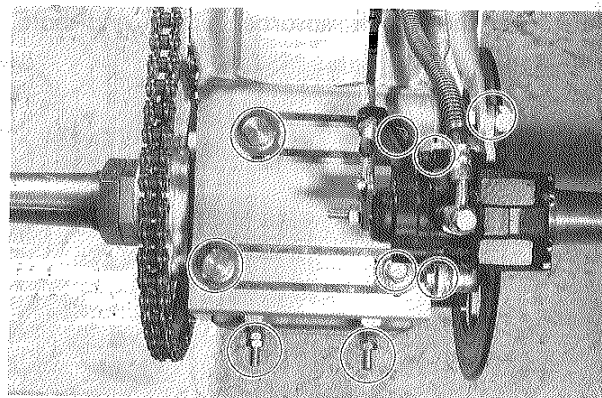


- Remove the caliper mounting bolts and torque link rear end bolt and nut.

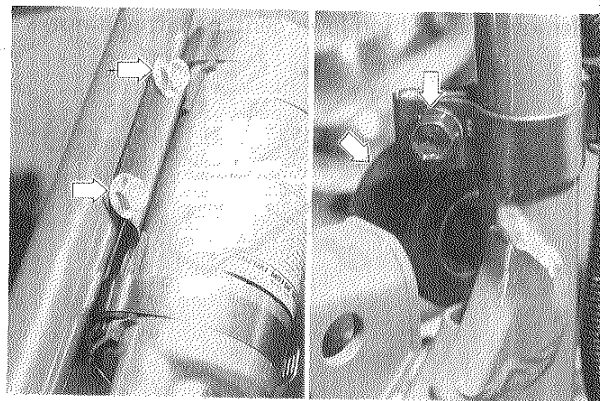
CAUTION:

Hang the caliper from the vehicle frame with string, etc., taking care not to bend the brake hose.

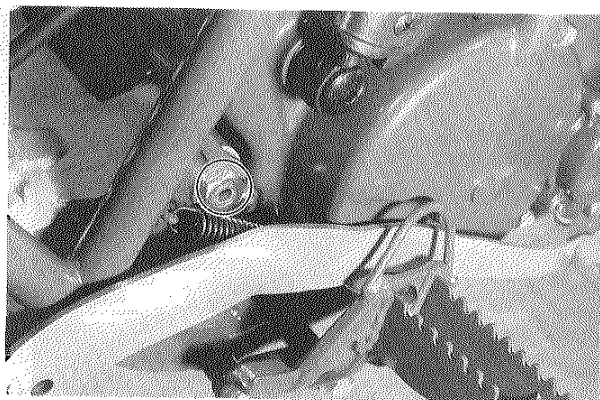
- Loosen the drive chain adjusting nuts and rear axle housing mounting bolts.
- Push the rear axle housing forward and disengage the drive chain from the rear sprocket.



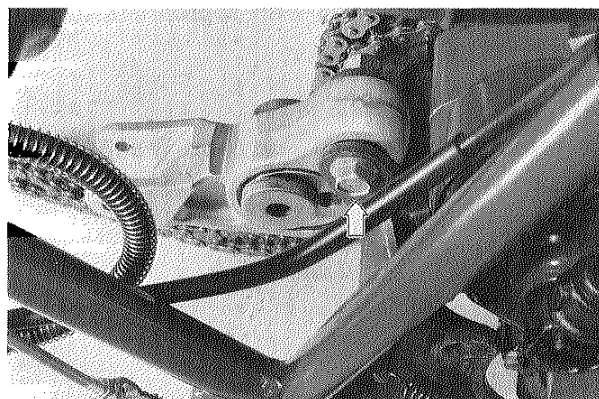
- Remove the shock absorber reservoir tank mounting bolts and hose clamp.
- Remove the drive chain guide roller.



- Remove the swingarm pivot shaft and nut.
- Remove the shock absorber and swingarm along with the rear axle housing assembly.

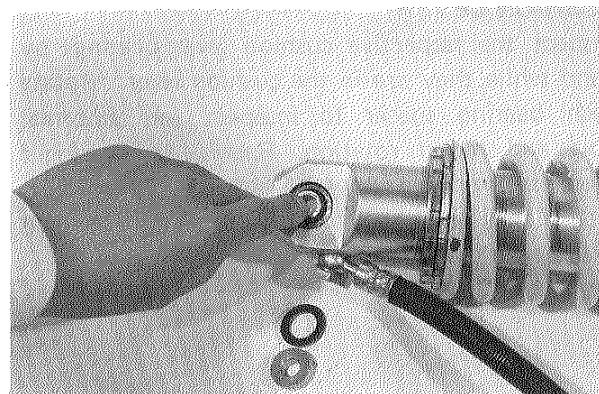


- Remove the cushion lever by removing its pivot bolt and nut.



INSPECTION AND DISASSEMBLY SHOCK ABSORBER

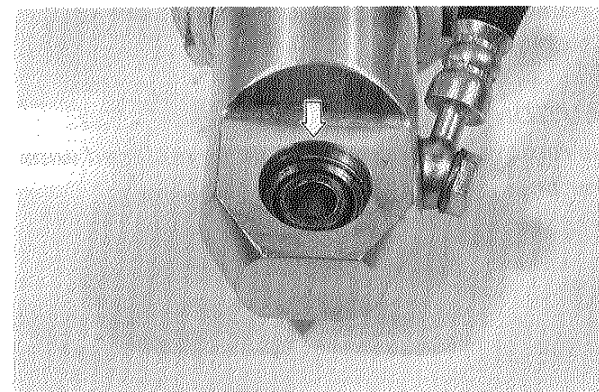
- Remove the upper end spacers and dust seals. Move the upper end bearing by hand to inspect for abnormal noise and smooth movement. Replace the bearing if there is anything unusual.



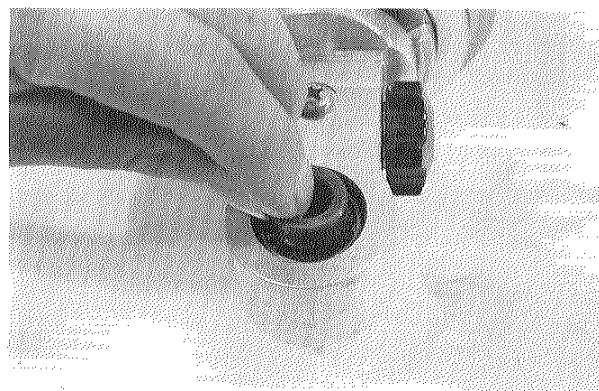
- Remove the stopper rings and drive out the bearing with appropriate socket wrench.

CAUTION:

The removed dust seals, stopper rings and bearing should be replaced with new ones.



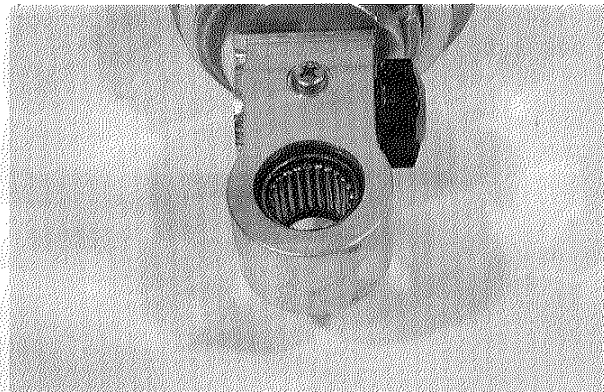
- Remove the lower end dust seals and spacer. Insert the spacer into the lower end bearing and check the bearing for abnormal noise and smooth movement by moving the spacer. Replace the bearing if there is anything unusual.



- Drive out the bearing with appropriate socket wrench.

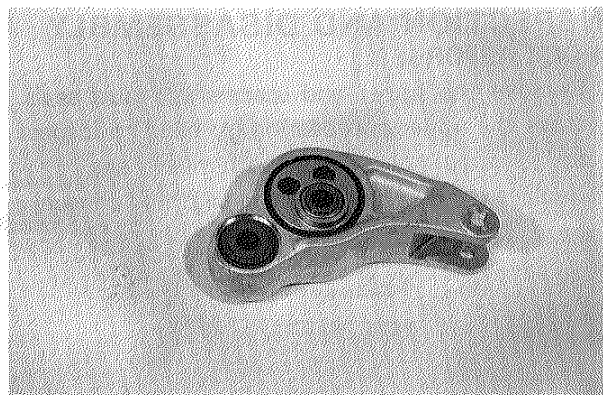
CAUTION:

The removed dust seals and bearing should be replaced with new ones.



CUSHION LEVER

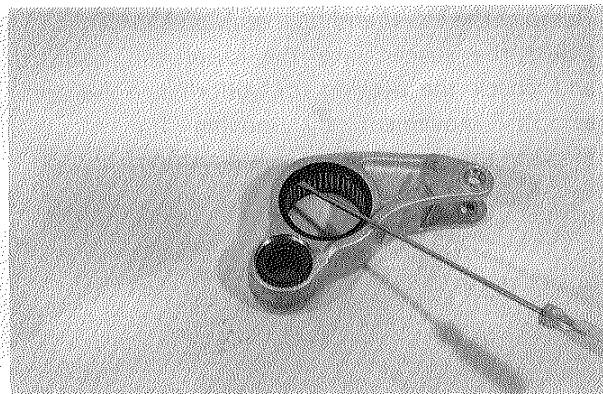
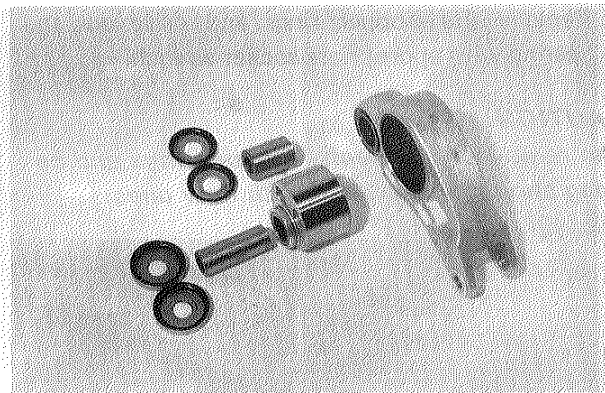
Inspect the respective cushion lever bearings by hand while they are in the cushion lever. Rotate each bearing spacer to inspect for abnormal noise and smooth rotation. Replace the bearing if there is anything unusual. Inspect each dust seal, if they are found to be damage, replace them with new ones.



- Remove the dust seals and spacers out of the cushion lever.

CAUTION:

The removed dust seals should be replaced with new ones.

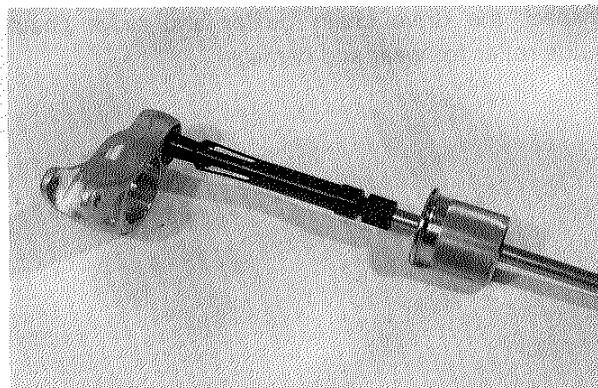
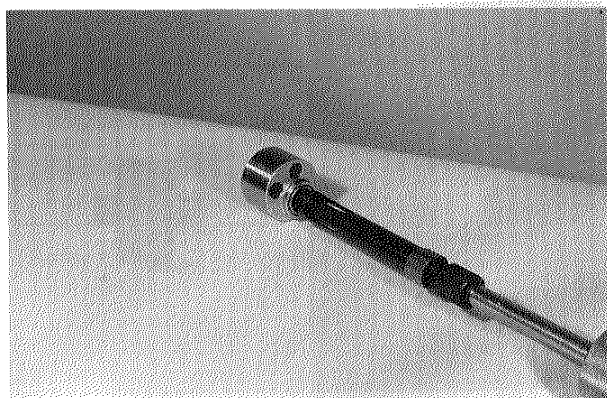
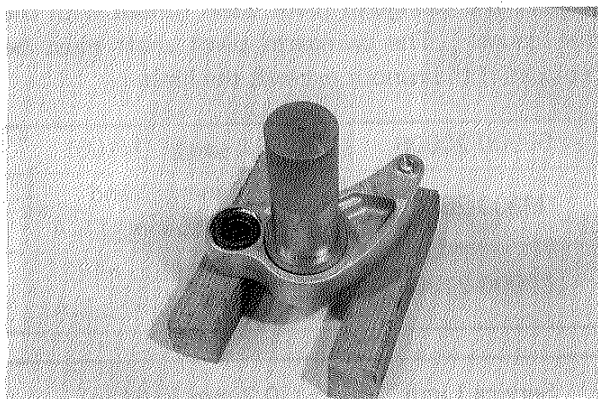


- Remove the cushion lever bearings with the special tools.

09913-85210	Bearing installer/remover
09923-74510	Bearing Puller
09930-30102	Sliding shaft

CAUTION:

The removed bearings should be replaced with new ones.

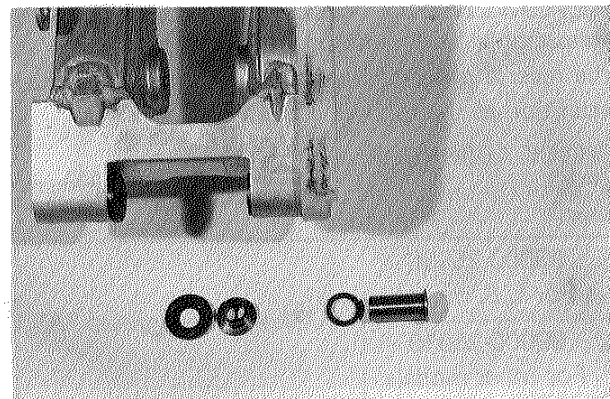


SWINGARM

Inspect the swingarm pivot bearings by hand while they are in the swingarm. Rotate the bearing spacer to inspect for abnormal noise and smooth rotation. Replace the bearing if there is anything unusual.

Inspect the dust seals, if they are found to be damaged, replace them with new ones.

- Remove the dust seals and spacers.
- Remove the swingarm pivot bearings with the special tools.

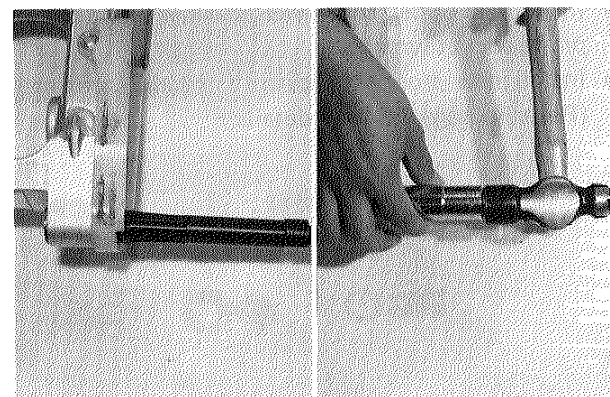


09923-74510	Bearing puller
09930-30102	Sliding shaft

- Drive out the swingarm pivot bushings with appropriate wrench.

CAUTION:

The removed dust seals, bushings and bearings should be replaced with new ones.

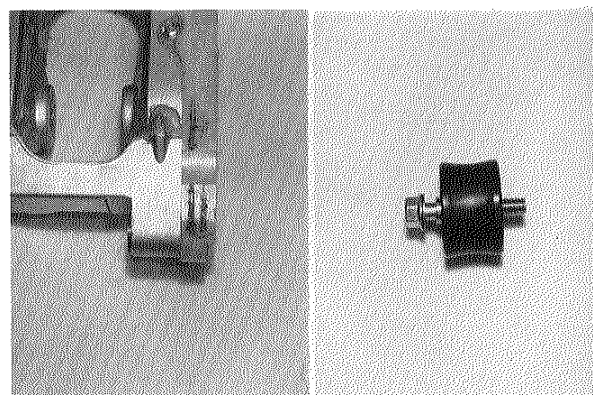
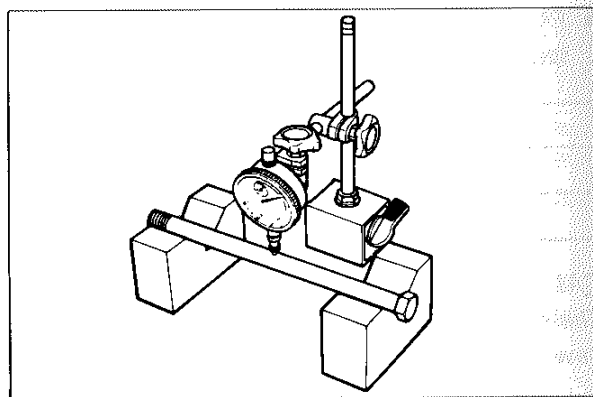


Inspect the swingarm pivot shaft runout with the dial gauge. The swingarm pivot shaft must be replaced if the runout exceeds the limit.

09900-20606	Dial gauge (1/100)
09900-20701	Magnetic stand Not available in U.S.A.
09900-21304	V-block (100 mm) Not available in U.S.A.

Service Limit	0.3 mm (0.01 in)
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Inspect the drive chain buffer and drive chain guide roller for wear and damage.



REASSEMBLY AND REMOUNTING

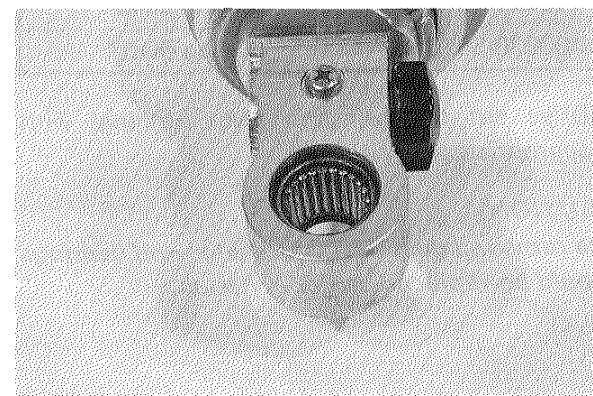
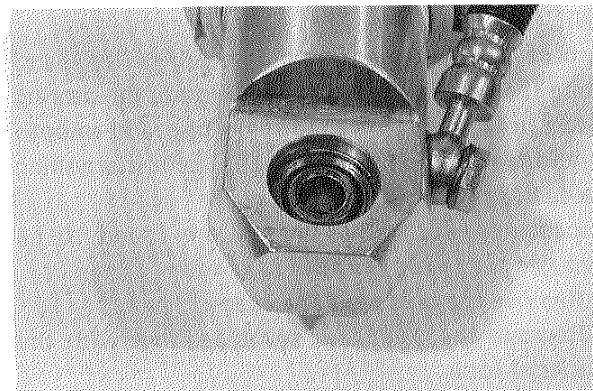
Reassemble and remount the rear suspension in the reverse order of disassembly and removal. Pay attention to the following points:

SHOCK ABSORBER

- Apply grease to the bearings and dust seals.

99000-25030 For U.S. model	SUZUKI Super grease "A"
99000-25010 For other models	

- Install the upper and lower bearings with appropriate socket wrench.
- Install new stopper rings into the ring grooves. (Refer to page 7-54 for details.)

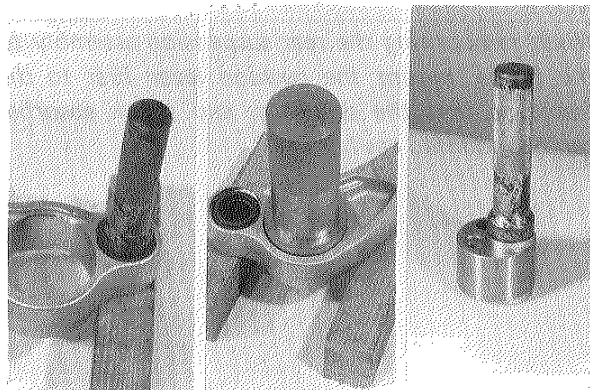


CUSHION LEVER

- Install the cushion lever bearings with the special tools.

09913-75820	Bearing installer/remover
09913-85210	Bearing installer/remover

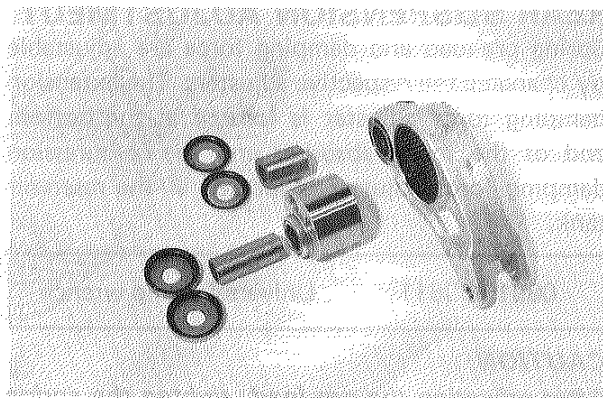
(Refer to page 7-54 for details.)



- Apply grease to the bearings and dust seals.

99000-25030 For U.S. model	SUZUKI Super grease "A"
99000-25010 For other models	

(Refer to page 7-54 for details.)

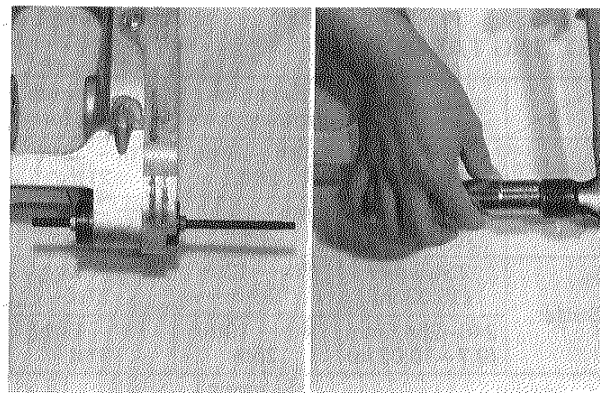
**SWINGARM**

- Install the swingarm pivot bearings and bushings with the special tool and appropriate socket wrench.

09924-84520	Bearing installer
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NOTE:

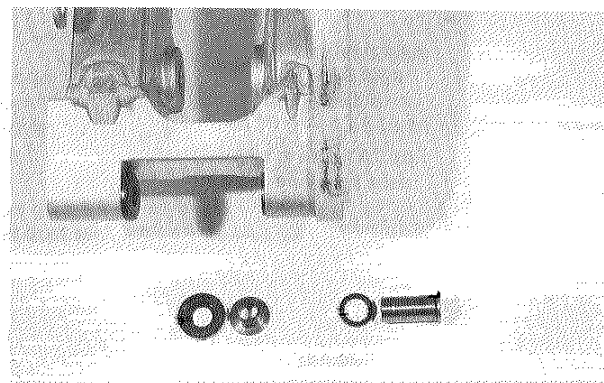
When installing the bearing, the stamped mark on the bearing is positioned outside.



- Apply grease to the bearings and dust seals.

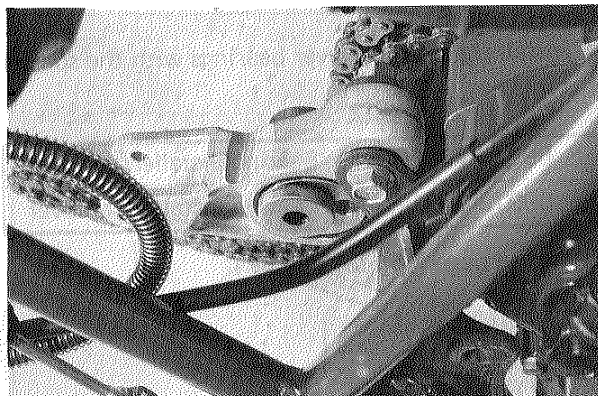
99000-25030 For U.S. model	SUZUKI Super grease "A"
99000-25010 For other models	

(Refer to page 7-54 for details.)



NOTE:

When remounting the rear suspension assembly to the frame, mount the cushion lever first to the frame so that the swingarm and shock absorber can be mounted easily.

**REAR SUSPENSION ADJUSTMENT**

Spring pre-load and damping force are adjustable by changing the respective adjusters. The extension damping force adjuster is located at the bottom end of the shock absorber and the compression damping force adjuster is located at the reservoir tank.

09910-60611

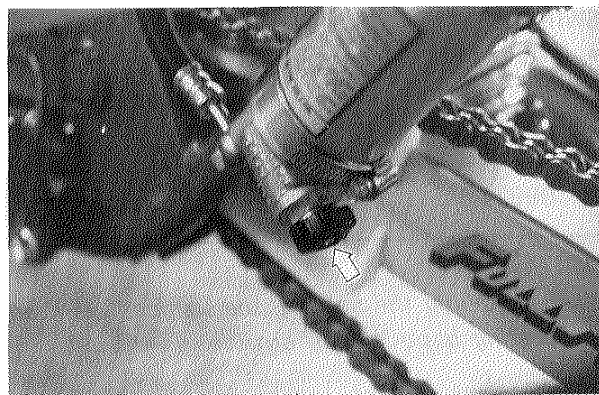
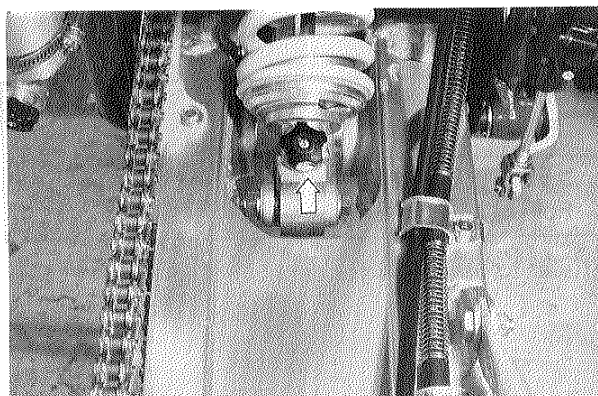
Universal clamp wrench

CAUTION:

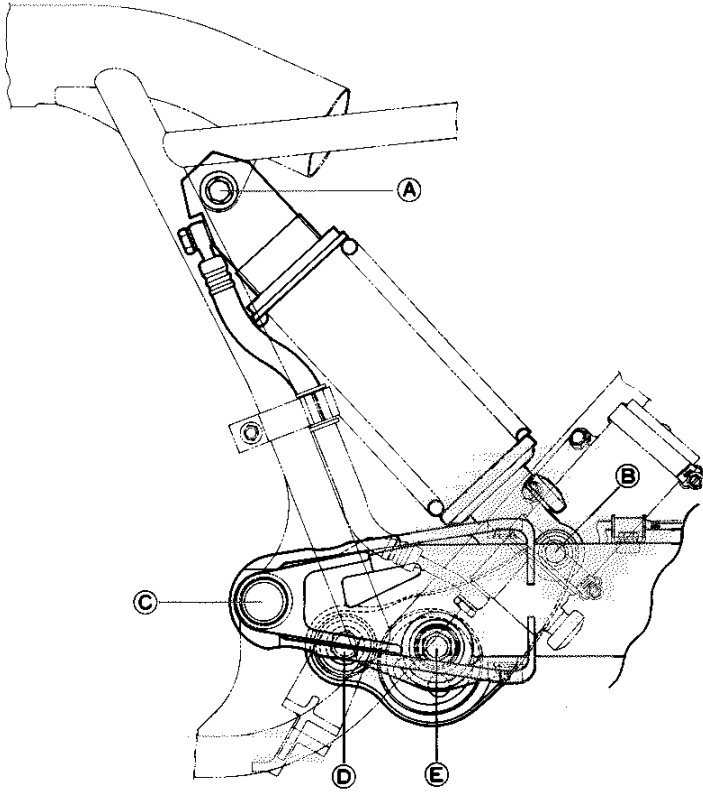
After adjusting the pre-load, tighten the spring adjuster lock ring securely.

SETTING TABLE

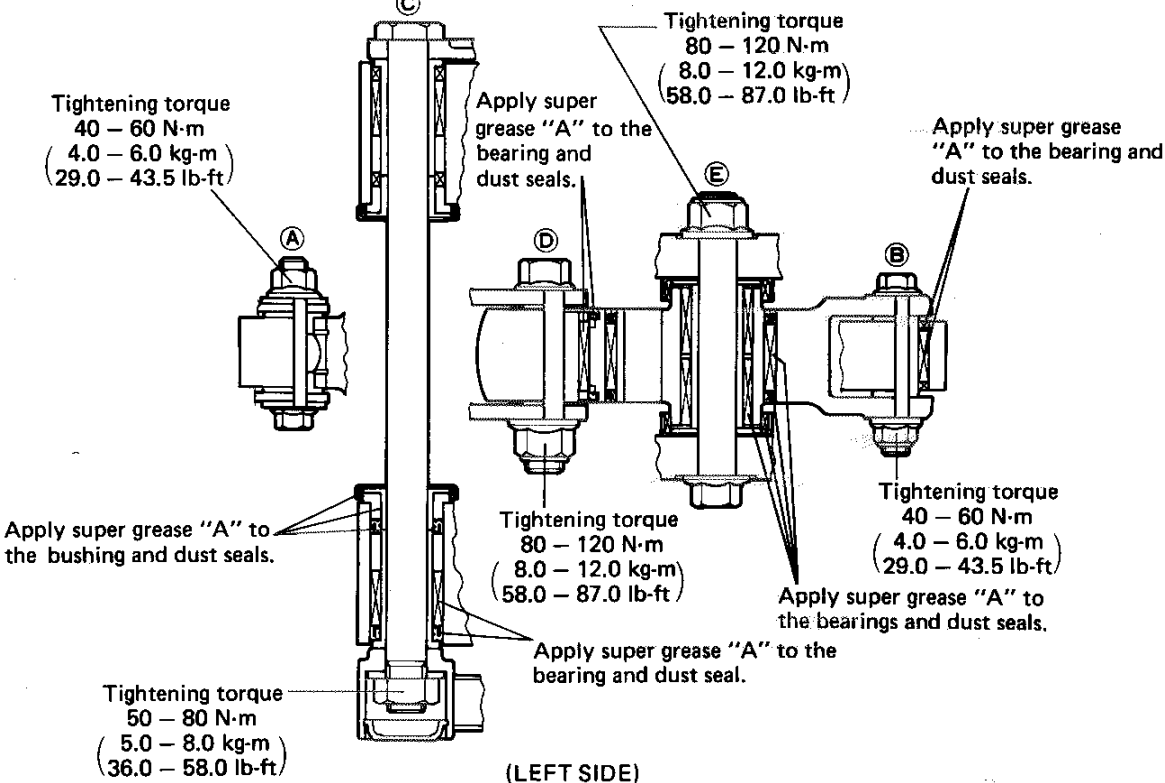
	Spring length	Extension damping force	Compression damping force
Standard	256 mm (10.0 in)	10th – 16th/ 26th	7th – 13th/ 21st
Softer	256 mm (10.0 in)	4th – 10th/ 26th	7th – 13th/ 21st
Stiffer	254.5 mm (10.02 in)	7th – 13th/ 26th	7th – 13th/ 21st
	246–254.5mm (9.7 – 10.02 in)	4th – 10th/ 26th	7th – 13th/ 21st



REASSEMBLING INFORMATION

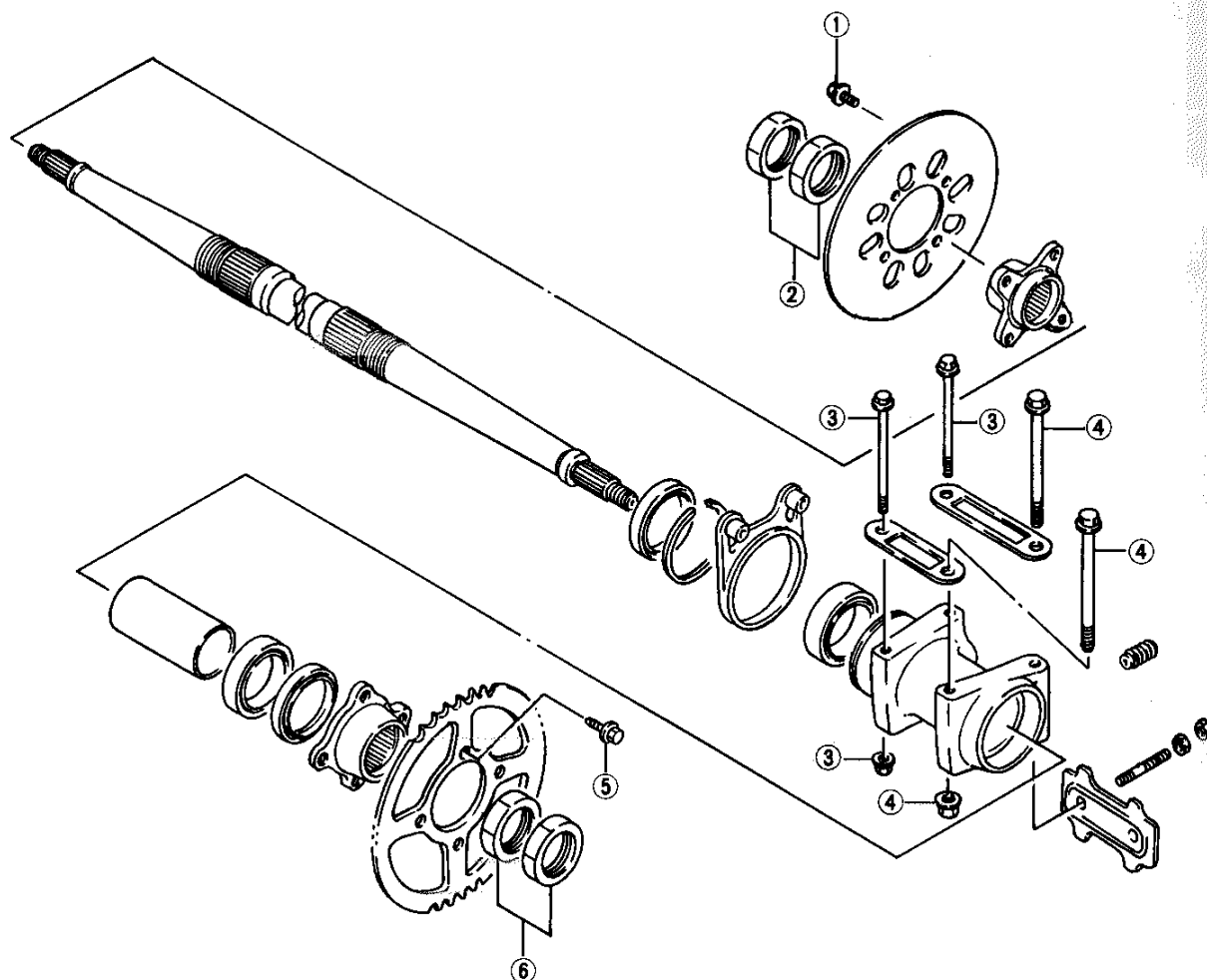


(RIGHT SIDE)



(LEFT SIDE)

REAR AXLE SHAFT AND AXLE HOUSING



NOTE:

Tighten the brake disc flange axle lock nuts (2) to the specified torque before tightening the rear sprocket flange axle nuts (6).

Tightening torque

Item	N·m	kg·m	lb·ft
①	15 – 25	1.5 – 2.5	11.0 – 18.0
②	15 – 25	1.5 – 2.5	11.0 – 18.0
③	70 – 85	7.0 – 8.5	50.5 – 61.5
④	100 – 120	10.0 – 12.0	72.5 – 87.0
⑤	40 – 60	4.0 – 6.0	29.0 – 43.5
⑥	160 – 200	16.0 – 20.0	115.5 – 144.5

REMOVAL

- Remove the rear wheels and wheel hubs. (Page 7-6)
- Loosen the rear sprocket flange part of the axle lock nuts and brake disc flange part of the axle lock nuts with the special tool while depressing the rear brake pedal.

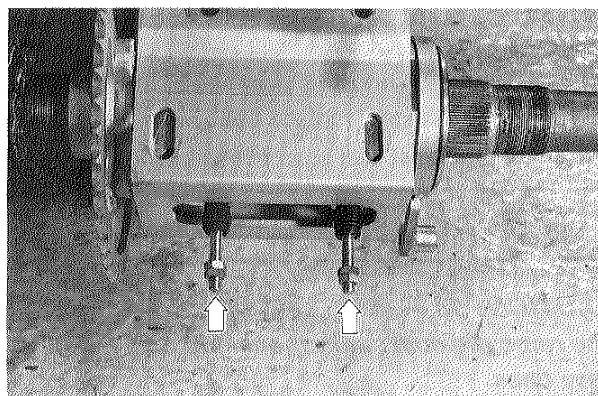
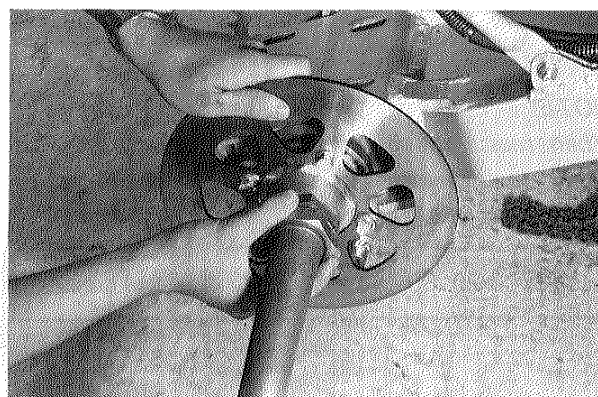
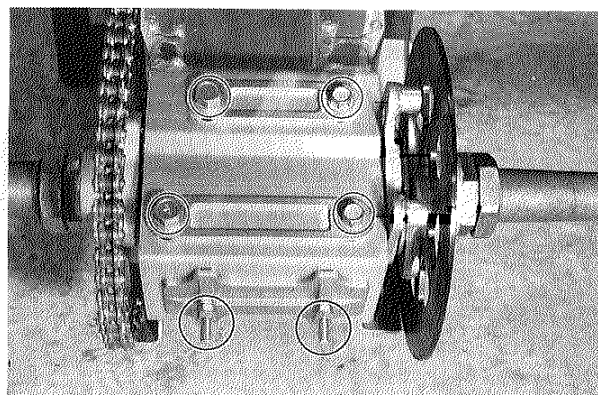
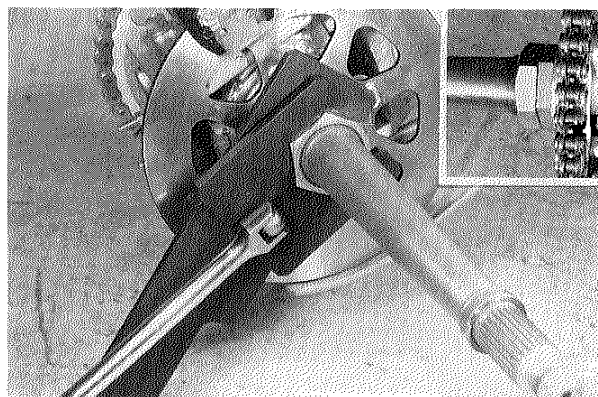
09940-92440

Rear axle nut holder/
remover set

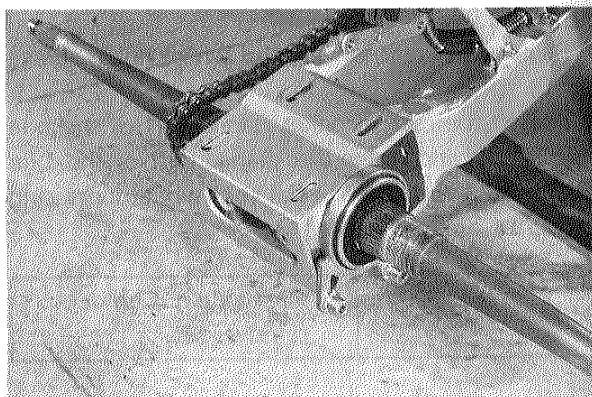
- Lift the caliper assembly by removing the caliper mounting bolts. (Page 7-19)
- Remove the drive chain adjusting nuts.
- Remove the axle housing mounting bolts and nuts.

- Remove the rear sprocket flange and brake disc flange by removing the respective flange axle lock nuts.

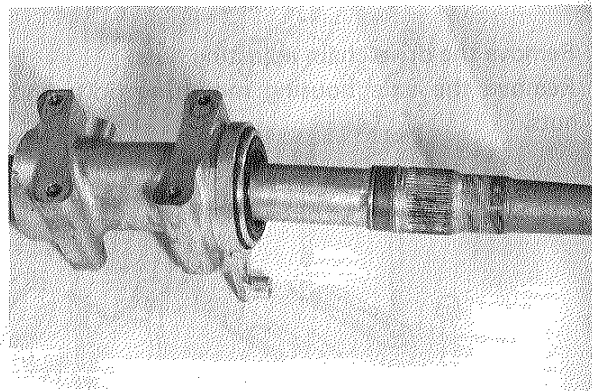
- Remove the drive chain adjusting stud bolts with their nuts or stud extractor.



- Remove the axle shaft and axle housing out of the swingarm.



- Drive out the axle shaft from right side of the axle housing with plastic hammer.



- Remove the caliper mounting bracket by removing the circlip.

NOTE:

When reassembling the caliper mounting bracket, apply small quantity of SUZUKI silicone grease to its inner surface.

99000-25100	SUZUKI Silicone grease
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INSPECTION AND DISASSEMBLY DUST SEAL

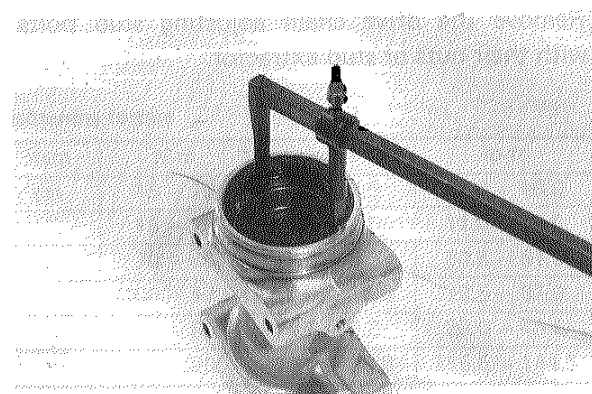
Inspect the axle housing dust seals, if they are found to be damaged, replace them with new ones.

- Remove the dust seal with the special tool.

09913-50121	Oil seal remover
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CAUTION:

The removed dust seals should be replaced with new ones.



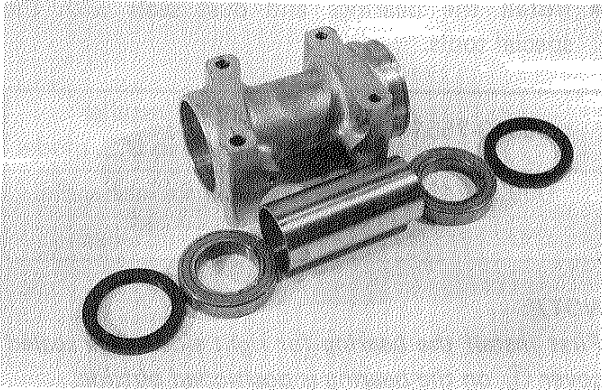
AXLE BEARING

Inspect the axle bearings by hand while they are in the axle housing. Rotate the bearing inner race to inspect for excessive play and smooth rotation. Replace the bearing if there is anything unusual.

- Drive out the bearings with appropriate bar.

CAUTION:

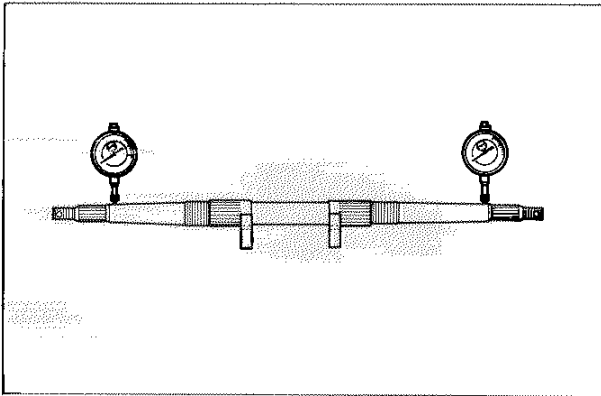
The removed bearings should be replaced with new ones.



AXLE SHAFT

Inspect the axle shaft runout with dial gauge. The axle shaft must be replaced if the runout exceeds the limit.

09900-20606	Dial gauge (1/100)
09900-20701	Magnetic stand Not available in U.S. model
09900-21304	V-block (100 mm) Not available in U.S. model
Service Limit	8.0 mm (0.31 in)



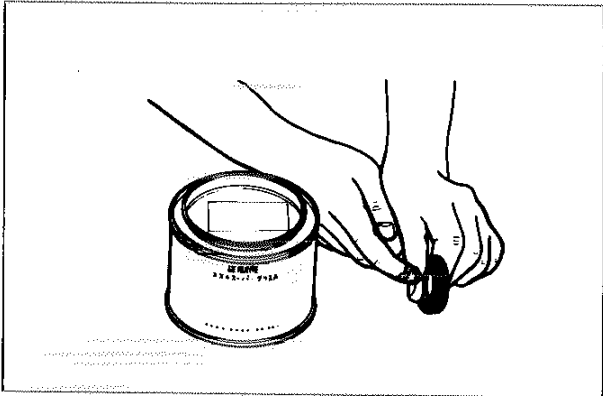
REASSEMBLY AND REMOUNTING

Reassemble and remount the rear axle shaft and rear axle housing in the reverse order of disassembly and removal. Pay attention to the following points:

AXLE BEARING AND DUST SEAL

- Apply grease to the bearings and dust seals.

99000-25030 For U.S. model	SUZUKI Super grease "A"
99000-25010 For other models	

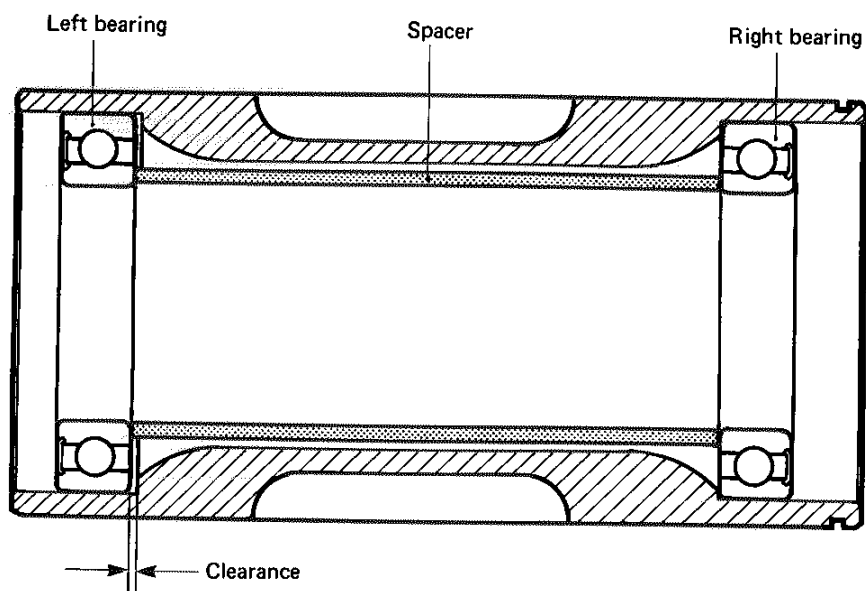
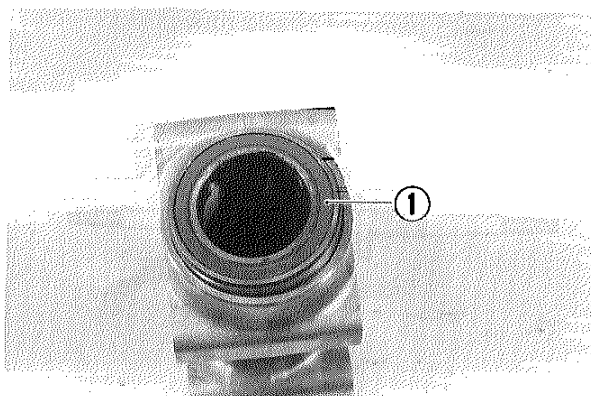
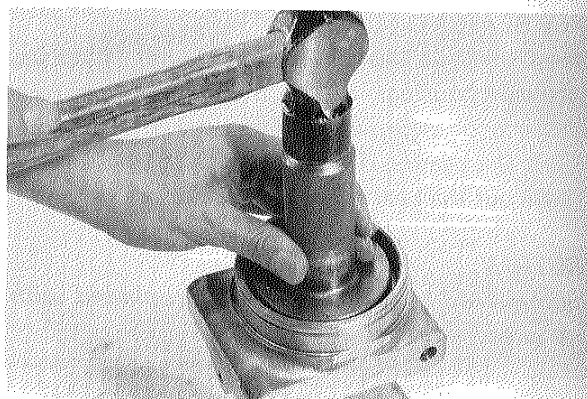


- Install the bearings and dust seals with the special tools.

09913-75510	Bearing installer Not available in U.S. model
09924-74510	Oil seal installer handle
09924-74520	Oil seal installer

NOTE:

First install the bearing for right side. The sealed cover ① on the bearing is positioned outside.



AXLE SHAFT

- When installing the axle shaft into the axle housing, the circlip on the axle shaft is positioned right side.
- After installing the axle shaft and axle housing into the swingarm, mount the sprocket/flange and brake disc/flange onto the axle shaft.

NOTE:

Apply small quantity of grease onto the sprocket flange serration and brake disc flange serration.

99000-25030 For U.S. model	SUZUKI Super grease "A"
99000-25010 For other models	

- Apply SUZUKI Bond NO. 1207B/1215 to the outside end surfaces of the sprocket flange and brake disc flange.

99104-31140	SUZUKI Bond NO. 1207B For U.S. model
99000-31110	SUZUKI Bond NO. 1215 For other models

- Apply THREAD LOCK SUPER "1303"/"1322" to the threaded parts of respective flange axle lock nuts and tighten them to their respective specified torques.

99000-32030	Thread Lock super "1303" For U.S. model
99000-32110	Thread Lock super "1322" For other models

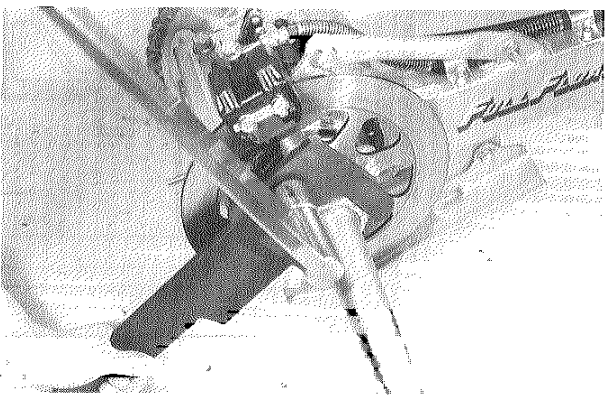
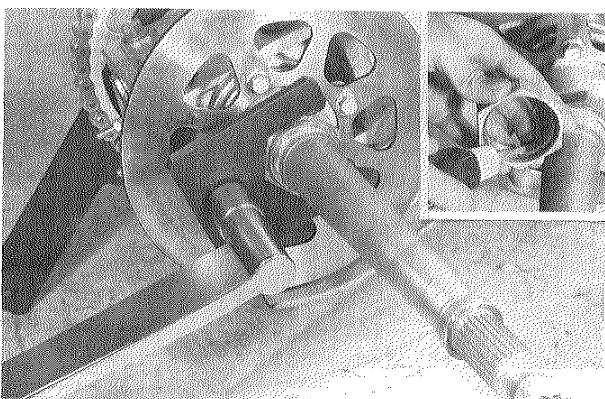
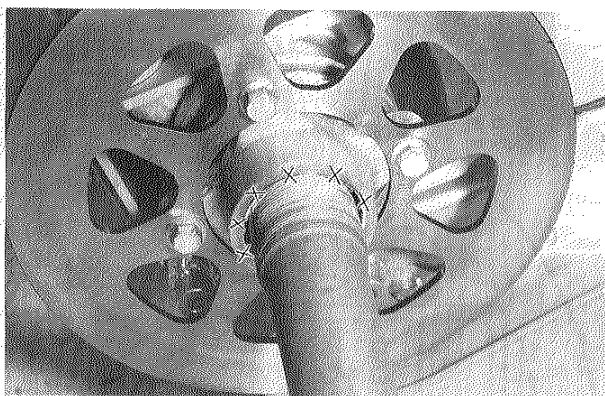
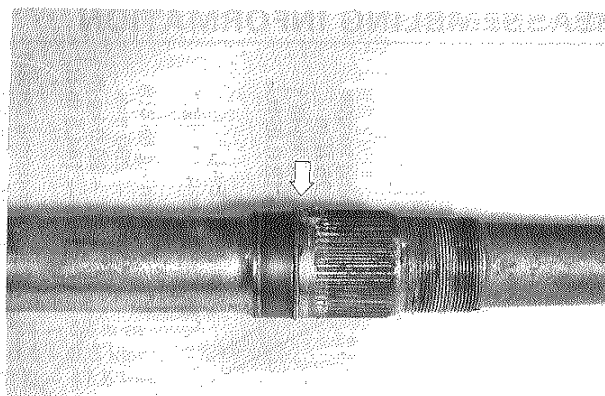
09940-92440	Rear axle nut holder/remover set
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Tightening torque

Brake disc flange axle lock nut	15 – 25 N·m (1.5 – 2.5 kg·m) (11.0 – 18.0 lb·ft)
Rear sprocket flange axle lock nut	160 – 200 N·m (16.0 – 20.0 kg·m) (115.5 – 144.5 lb·ft)

NOTE:

First tighten the brake disc flange axle lock nuts and then the rear sprocket flange axle lock nuts.



Tightening torque
40 - 60 N·m
(4.0 - 6.0 kg·m)
(29.0 - 43.5 lb·ft)

Tightening torque
15 - 25 N·m
(1.5 - 2.5 kg·m)
(11.0 - 18.0 lb·ft)

Tightening torque
15 - 25 N·m
(1.5 - 2.5 kg·m)
(11.0 - 18.0 lb·ft)

Tightening torque
160 - 200 N·m
(16.0 - 20.0 kg·m)
(115.5 - 144.5 lb·ft)

Tightening torque
160 - 200 N·m
(16.0 - 20.0 kg·m)
(115.5 - 144.5 lb·ft)

Tightening torque
15 - 25 N·m
(1.5 - 2.5 kg·m)
(11.0 - 18.0 lb·ft)

Tightening torque
15 - 25 N·m
(1.5 - 2.5 kg·m)
(11.0 - 18.0 lb·ft)

Tightening torque
100 - 120 N·m
(10.0 - 12.0 kg·m)
(72.5 - 87.0 lb·ft)

Tightening torque
70 - 85 N·m
(7.0 - 8.5 kg·m)
(50.5 - 61.5 lb·ft)

Tightening torque
20 - 31 N·m
(2.0 - 3.1 kg·m)
(14.5 - 22.5 lb·ft)

Tightening torque
85 - 115 N·m
(8.5 - 11.5 kg·m)
(61.5 - 83.0 lb·ft)

Apply super grease "A" to the axle shaft serration.

Apply super grease "A" to the bearing and dust seal lip.

Apply super grease "A" to the bearing and dust seal lip.

Apply super grease "A" to the inner surface of the caliper bracket.

Apply Suzuki Bond No. 1207B/1215 to the peripheral of the groove.

Apply Suzuki Bond No. 1207B/1215 to the peripheral of the groove.

Apply super grease "A" to the axle shaft serration.

Apply super grease "A" to the bearing and dust seal lip.

Apply silicone grease to the inner surface of the caliper bracket.

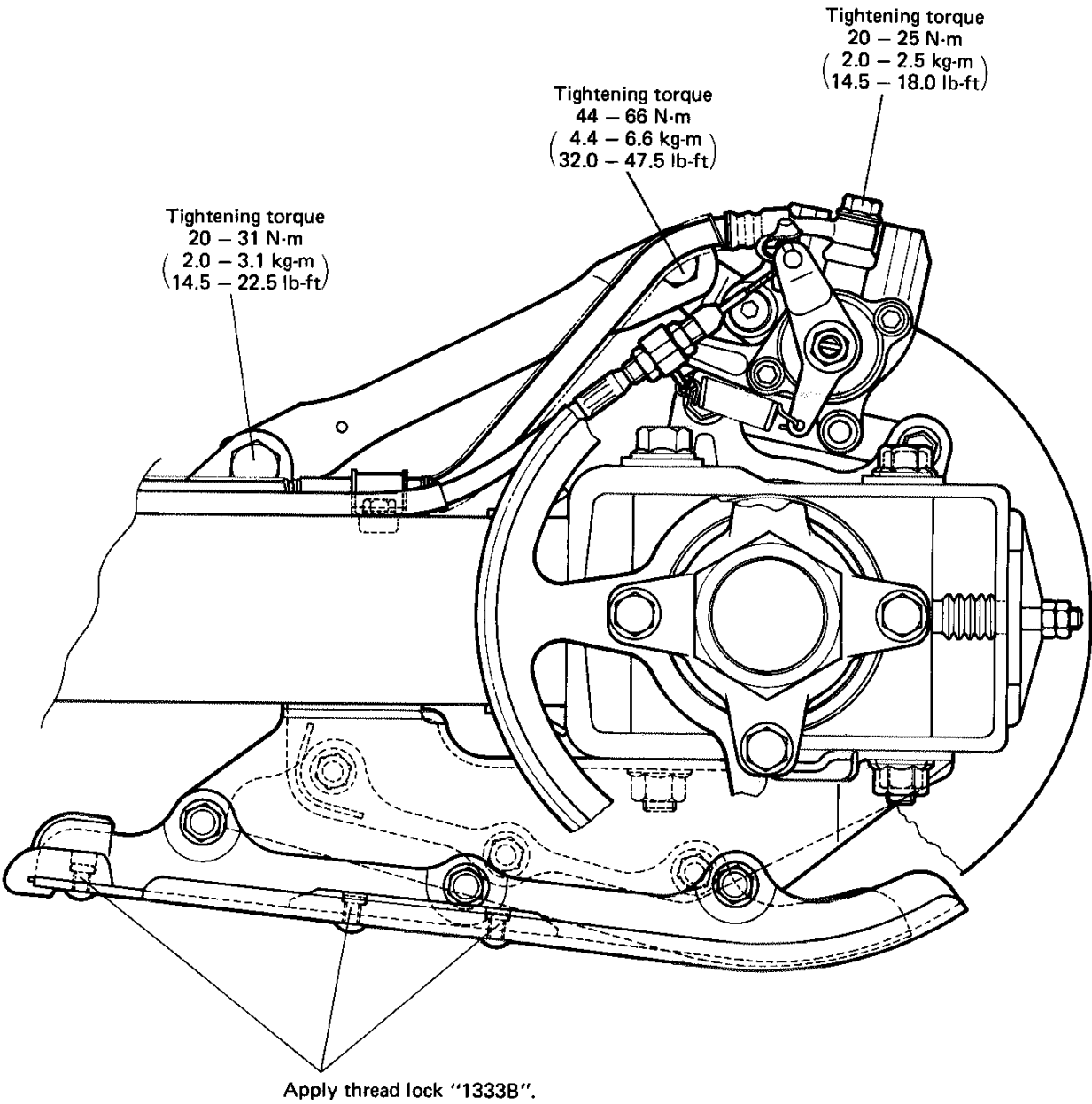
The stamped mark on the brake disc goes toward outside.

The stamped mark on the rear sprocket goes toward outside.

Install the concaved washer as this direction.

NOTE:
Tighten the right side axle lock nuts to the specified torque before tightening the left side axle lock nuts.

Tighten the right side axle lock nuts to the specified torque before tightening the left side axle lock nuts.



FRONT FENDER AND REAR FENDER

