YAMAHA

FZR600RA
FZR600RAC

SUPPLEMENTARY SERVICE MANUAL

LIT-11616-07-36

3HH-28197-12

FOREWORD

This Supplementary Service Manual has been prepared to introduce new service and new data for the FZR600RA/RAC. For complete information on service procedures, it is necessary to use this Supplementary Service Manual together with following manuals:

FZR600W/WC Service Manual (LIT-11616-06-97)

FZR600RA/600RAC
SUPPLEMENTARY
SERVICE MANUAL
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LIT-11616-07-36

NOTICE

This manual was written by the Yamaha Motor Company primarily for use by Yamaha dealers and their qualified mechanics. It is not possible to put an entire mechanic's education into one manual, so it is assumed that persons using this book to perform maintenance and repairs on Yamaha motorcycles have a basic understanding of the mechanical concepts and procedures inherent in motorcycle repair technology. Without such knowledge, attempted repairs or service to this model may render it unfit to use and/or unsafe.

This model has been designed and manufactured to perform within certain specifications in regard to performance and emissions. Proper service with the correct tools is necessary to ensure that the motorcycle will operate as designed. If there is any question about a service procedure, it is imperative that you contact a Yamaha dealer for any service information changes that apply to this model. This policy is intended to provide the customer with the most satisfaction from his motorcycle and to conform with federal environmental quality objectives.

Yamaha Motor Company, Ltd. is continually striving to improve all models manufactured by Yamaha. Modifications and significant changes in specifications or procedures will be forwarded to all Authorized Yamaha dealers and will, where applicable, appear in future editions of this manual.

NOTE:

This Service Manual contains information regarding periodic maintenance to the emission control system for the FZR600RA/RAC. Please read this material carefully.

TECHNICAL PUBLICATIONS
SERVICE DIVISION
MOTORCYCLE GROUP
YAMAHA MOTOR CO., LTD.

HOW TO USE THIS MANUAL

PARTICULARLY IMPORTANT INFORMATION

This material is distinguished by the following notation.

⚠ The Safety Alert Symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

⚠WARNING Failure to follow WARNING instructions could result in severe injury or death to the motorcycle operator, a bystander, or a person inspecting or repairing the motorcycle.

CAUTION: A CAUTION indicates special precautions that must be taken to avoid damage to the motorcycle.

NOTE: A NOTE provides key information to make procedures easier or cleaer.

MANUAL FORMAT

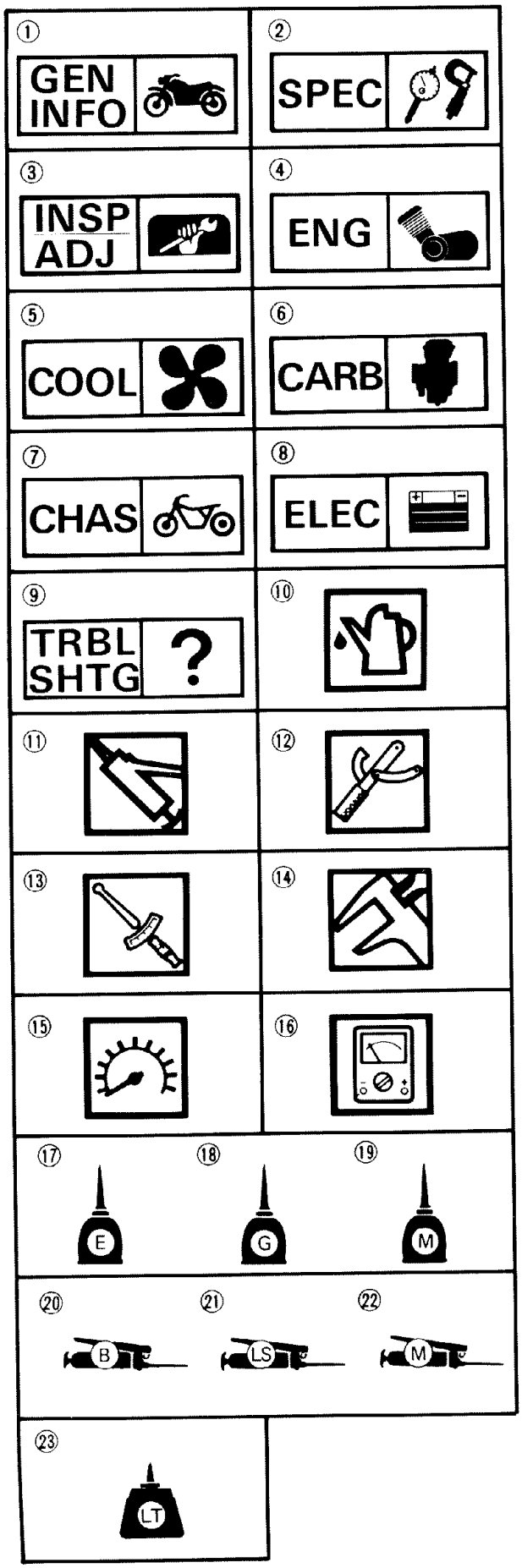
All of the procedures in this manual are organized in a sequential, step-by-step format. The information has been compiled to provide the mechanic with an easy to read, handy reference that contains comprehensive explanations of all disassembly, repair, assembly, and inspection operations.

In this revised format, the condition of a faulty component will precede an arrow symbol and the course of action required will follow the symbol, e.g.,

- Bearings
  Pitting/Damage → Replace.

EXPLODED DIAGRAM

Each chapter provides exploded diagrams before each disassembly section for ease in identifying correct disassembly and assembly procedures.



ILLUSTRATED SYMBOLS (Refer to the illustration)

Illustrated symbols ① to ⑨ are designed as thumb tabs to indicate the chapter's number and content.

① General information
② Specifications
③ Periodic inspection and adjustment
④ Engine
⑤ Cooling system
⑥ Carburetion
⑦ Chassis
⑧ Electrical
⑨ Troubleshooting

Illustrated symbols ⑩ to ⑯ are used to identify the specifications appearing.

⑩ Filling fluid
⑪ Lubricant
⑫ Special tool
⑬ Tightening
⑭ Wear limit, clearance
⑮ Engine speed
⑯ Ω, V, A

Illustrated symbols ⑰ to ㉓ in the exploded diagram indicate grade of lubricant and location of lubrication point.

⑰ Apply engine oil
⑱ Apply gear oil
⑲ Apply molybdenum disulfide oil
⑳ Apply wheel bearing grease
㉑ Apply lightweight lithium-soap base grease
㉒ Apply molybdenum disulfide grease
㉓ Apply locking agent (LOCTITE®)

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VEHICLE IDENTIFICATION NUMBER 1
ENGINE SERIAL NUMBER 1

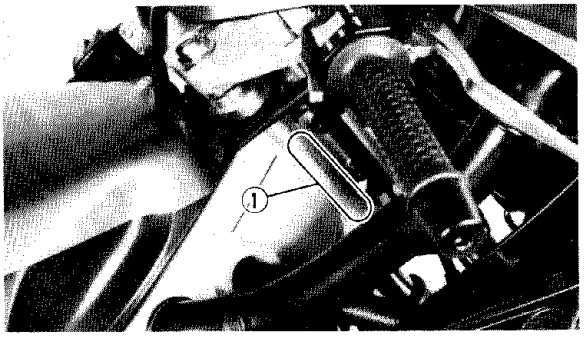
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FZR600RA/RAC WIRING DIAGRAM

GENERAL INFORMATION



MOTORCYCLE IDENTIFICATION

VEHICLE IDENTIFICATION NUMBER

The vehicle identification number ① is stamped into the right side of the steering head.

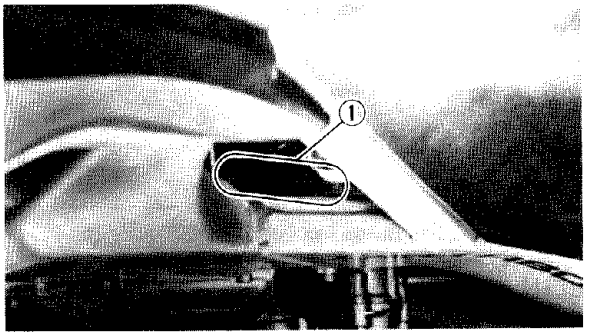
Starting serial number:
FZR600RA (Except for California):
JYA3HHE0 * LA016101
FZR600RAC (For California):
JYA3UUC0 * LA000101

NOTE:

The vehicle identification number is used to identify your motorcycle and may be used to register your motorcycle with the licensing authority in your state.

ENGINE SERIAL NUMBER

The engine serial number ① is stamped into the right side of the engine.



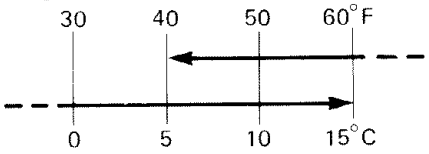
Starting serial number:
FZR600RA (Except for California):
3HH-016101
FZR600RAC (For California):
3UU-000101

NOTE:

- The first three digits of these numbers are for model identifications; the remaining digits are the unit production number.
- Designs and specifications are subject to change without notice.

SPECIFICATIONS

GENERAL SPECIFICATIONS

Model	FZR600RA/RAC	
	FZR600RA	FZR600RAC
Model Code Number	3HH4	3UU1
Vehicle Identification Number	JYA3HHE0 * LA016101	JYA3UUC0 * LA000101
Engine Starting Number	3HH-016101	3UU-000101
Engine Oil Type or Grade:  	YAMALUBE 4 (20W40) or SAE 20W40 type SE/F motor oil YAMALUBE 4 (10W30) or SAE10W30 type SE/F motor oil	
Transmission:		
Primary Reduction System	Spur gear	
Primary Reduction Ratio	82/48 (1.708)	
Secondary Reduction System	Chain drive	
Secondary Reduction Ratio	45/15 (3.000)	
Transmission Type	Constant-mesh, 6-speed	
Operation	Left foot operation	
Gear Ratio 1st	42/15 (2.800)	
2nd	43/22 (1.955)	
3rd	31/20 (1.550)	
4th	28/21 (1.333)	
5th	31/26 (1.192)	
6th	30/27 (1.111)	
Tire:	Front	Rear
Type	Tubeless	Tubeless
Size	110/70 ZR17	140/60 ZR18
Manufacture (Type)	MICHELIN (A59) PIRELLI (MP7)	MICHELIN (M59) PIRELLI (MP7)
Maximum Load*	159 kg (351 lb) 154 kg (340 lb) (FZR600RAC)	
Tire Pressure (Cold tire):	Front	Rear
Up to 90 kg (198 lb) load*	225 kPa (2.25 kg/cm², 32 psi)	250 kPa (2.5 kg/cm², 36 psi)
90 kg (198 lb) ~ Maximum load*	250 kPa (2.5 kg/cm², 36 psi)	290 kPa (2.9 kg/cm², 42 psi)
High speed riding	250 kPa (2.5 kg/cm², 36 psi)	290 kPa (2.9 kg/cm², 42 psi)
*Load is total weight of cargo, rider, passenger, and accessories.		
Shock Absorber:		
Front Shock Absorber	Coil spring, oil damper	
Rear Shock Absorber	Coil-gas spring, gas-oil damper	
Bulb Wattage x Quantity:		
Headlight	12V, 35W/35W x 2	
Tail/Brake Light	12V, 8W/27W x 2	
Front Position Light/ Front Flasher Light	12V, 8W/27W x 2	
Rear Flasher Light	12V, 27W x 2	
Meter Light	12V, 1.7W x 4	

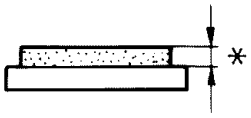
MAINTENANCE SPECIFICATIONS

ENGINE

Model		FZR600RA/RAC	
		FZR600RA	FZR600RAC
Carburetor:			
Type/Manufacture x Quantity		BDST32/MIKUNI x 4	←
I.D. Mark		3HH-01	3UU-00
Main Jet	(M.J.)	#107.5	←
Main Air Jet	(M.A.J.)	#65	←
Jet Needle-Clip Position	(J.N.)	5CFZ7-1	←
Needle Jet	(N.J.)	Y-0	←
Pilot Jet	(P.J.)	#32.5	←
Pilot Outlet Size	(P.O.)	0.8	←
Pilot Air Jet	(P.A.J.)	#132.5	←
Pilot Screw	(P.S.)	Preset	←
Valve Seat Size	(V.S.)	1.2	←
Starter Jet	($G.S_1$)	#52.5	#50
	($G.S_2$)	0.6	0.5
Bypass 1	(B.P. 1)	0.8	←
Bypass 2	(B.P. 2)	0.8	←
Bypass 3	(B.P. 3)	0.8	←
Throttle Valve Size	(Th. V)	#130	←
Fuel Level	(F.L.)	3.8 ~ 4.8 mm (0.15 ~ 0.19 in)	
		Above the float chamber line	
Engine Idle Speed		1,150 ~ 1,250 r/min	
Cooling System:			
Radiator Core Size	Width	350 mm (13.8 in)	
	Height	185 mm (7.3 in)	
	Thickness	32 mm (1.26 in)	
Radiator Cap Opening Pressure		95 ~ 125 kPa (0.95 ~ 1.25 kg/cm², 13.5 ~ 17.8 psi)	
Reservoir Tank Capacity		< 0.28 L (0.25 Imp qt, 0.30 US qt) >	
< To Full Level >			
Water Pump			
Type		Single-suction centrifugal pump	
Reduction Ratio		82/48 x 48/49 (1.673)	

CHASSIS

Model		FZR600RA/RAC
Rear Wheel:		
Type		Cast wheel
Rim Size		MT4.00 x 18
Rim Material		Aluminum
Rim Runout Limit	Radial	2.0 mm (0.08 in)
	Lateral	2.0 mm (0.08 in)

Model	FZR600RA/RAC
Front Disc Brake:	
Type	Dual
Disc Outside Diameter x Thickness	298 x 4 mm (11.7 x 0.16 in)
< Disc Wear Limit >	< 3.5 mm (0.14 in) >
Pad Thickness Inner	5.0 mm (0.20 in)
< Limit > *	< 0.5 mm (0.02 in) >
Pad Thickness Outer	5.0 mm (0.20 in)
< Limit > *	< 0.5 mm (0.02 in) >
	
Master Cylinder Inside Diameter	15.87 mm (0.62 in)
Caliper Cylinder Inside Diameter	33.96 mm (1.34 in)/30.23 mm (1.19 in)
Brake Fluid Type	DOT # 4 only

ELECTRICAL

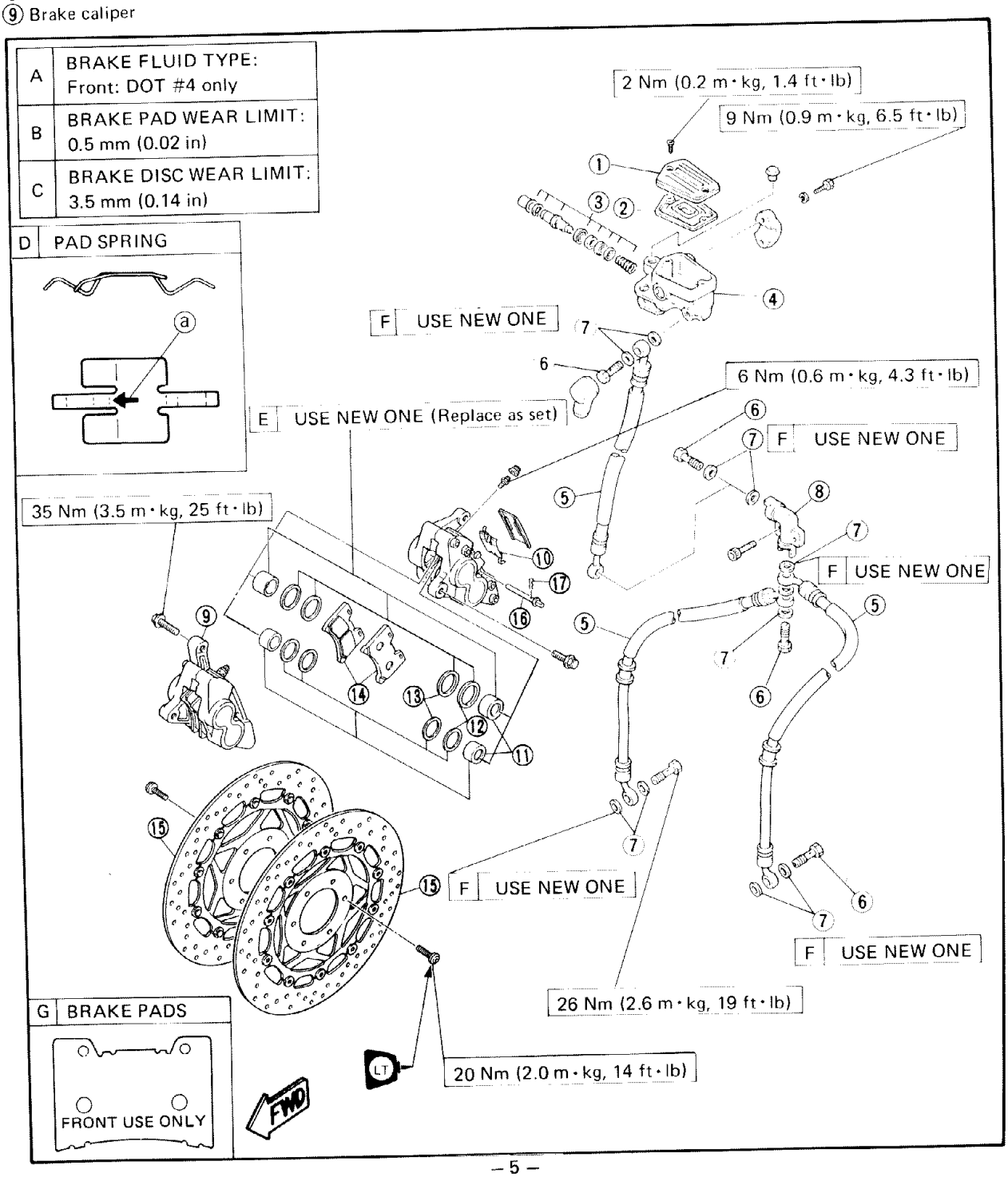
Model	FZR600RA/RAC
Ignition Coil:	
Model/Manufacturr	CM12-39/HITACHI
Minimum Spark Gap	6 mm (0.24 in)
Primary Winding Resistance	1.8 ~ 2.2 Ω at 20°C (68°F)
Secondary Winding Resistance	10.8 ~ 13.2 kΩ at 20°C (68°F)
Spark Plug Cap Resistance	10 kΩ

CHASSIS

FRONT AND REAR BRAKE

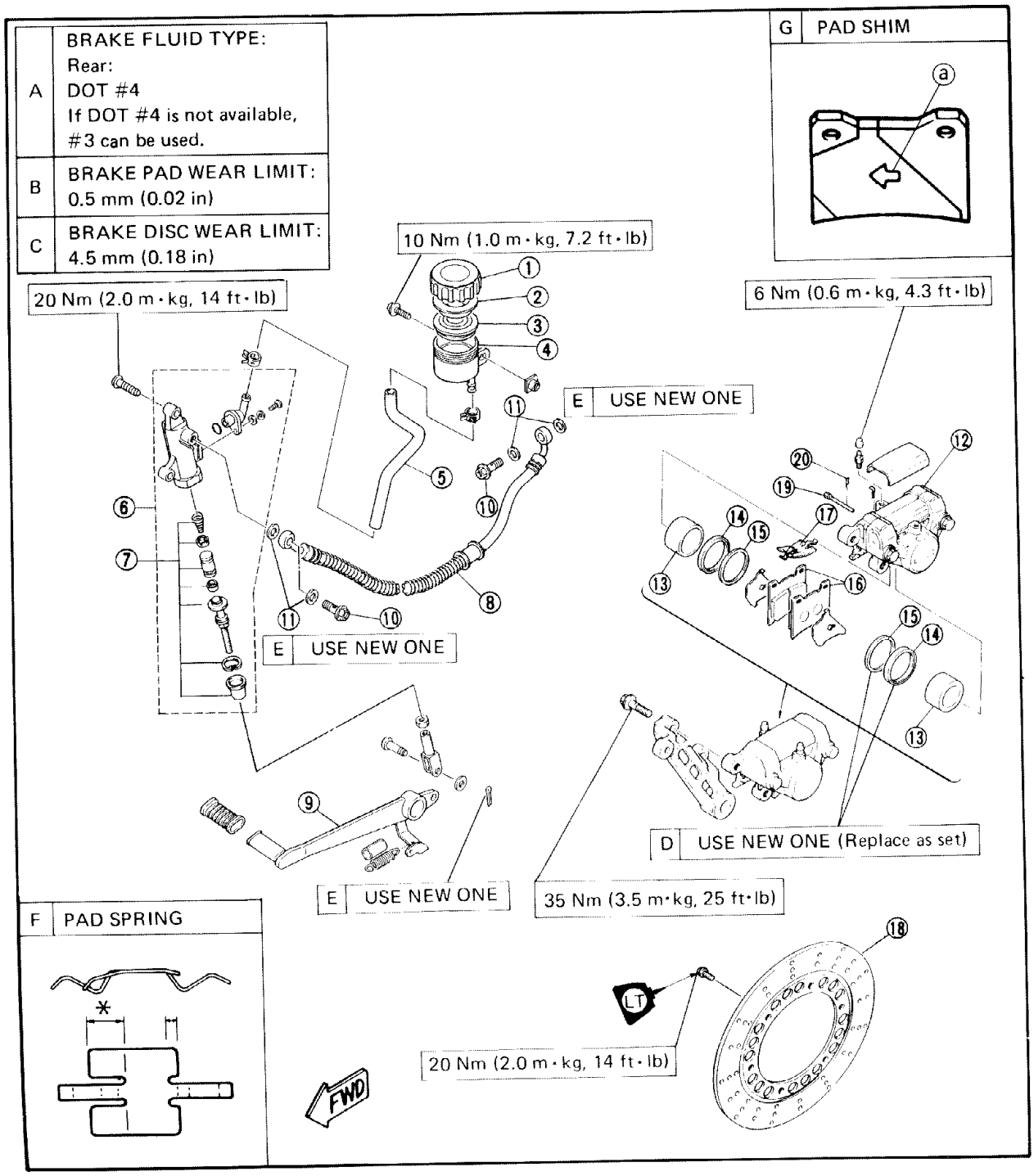
① Master cylinder cap
② Diaphragm
③ Master cylinder kit
④ Master cylinder
⑤ Brake hose
⑥ Union bolt
⑦ Copper washer
⑧ Joint
⑨ Brake caliper
⑩ Pad spring
⑪ Piston
⑫ Piston seal
⑬ Dust seal
⑭ Brake pad assembly
⑮ Brake disc
⑯ Retaining pins
⑰ Retaining clips

[D] The arrow mark ⓐ on the pad spring must pointing the disc rotating direction.
[G] The brake pads with "FRONT USE ONLY" mark should be used for front brake only.



① Reservoir tank cap
② Holder (diaphragm)
③ Diaphragm
④ Reservoir tank
⑤ Reservoir hose
⑥ Master cylinder
⑦ Master cylinder kit
⑧ Brake hose
⑨ Brake pedal
⑩ Union bolt
⑪ Copper washer
⑫ Brake caliper
⑬ Piston
⑭ Piston seal
⑮ Dust seal
⑯ Brake pad
⑰ Pad spring
⑱ Brake disc
⑲ Retaining pins
⑳ Retaining clips

F The longer tangs (✳) of the pad spring must point in the disc rotating direction.
G The allow mark ⓐ on the pad shim must point in the disc rotating direction.



CAUTION:

Disc brake components rarely require disassembly. DO NOT:

- Disassembly components unless absolutely necessary.
- Use solvents on internal brake component.
- Use contaminated brake fluid for cleaning.
- Use only clean brake fluid.
- Allow brake fluid to come in contact with the eyes otherwise eye injury may occur.
- Allow brake fluid to contact painted surfaces or plastic parts otherwise damage may occur.
- Disconnect any hydraulic connection otherwise the entire system must be disassembled, drained, cleaned, and then properly filled and bled after reassembly.

BRAKE PAD REPLACEMENT

NOTE:

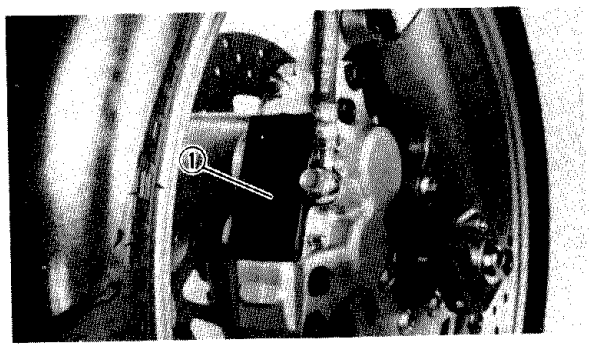
It is not necessary to disassemble the brake caliper and brake hose to replace the brake pads.

⚠WARNING

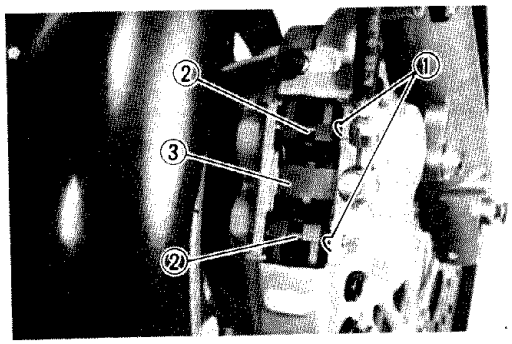
Securely support the motorcycle there is no danger of it falling over.

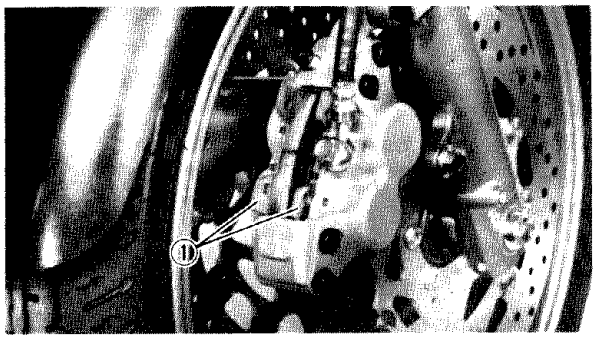
Front Brake

1. Remove:
   - Cover ①



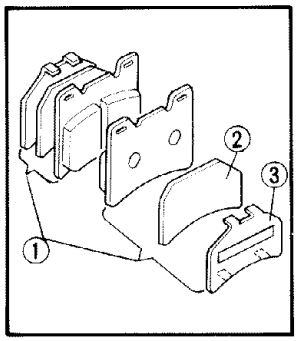
2. Remove:
   - Retaining clips ①
   - Retaining pins ②
   - Pad spring ③

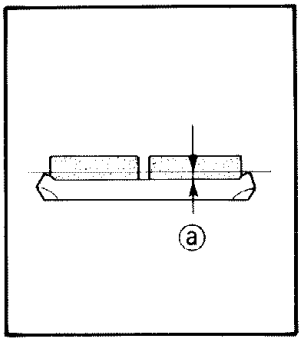




3. Remove:
   • Brake pad assembly ①

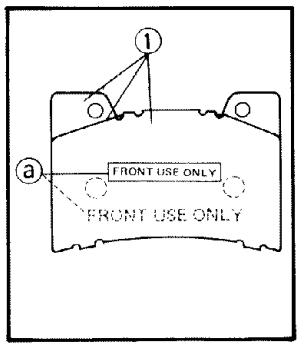
NOTE:
- Replace the pad spring if the pad replacement is required.
- Replace the pad assembly ① if either pad is found to be worn to the wear limit.

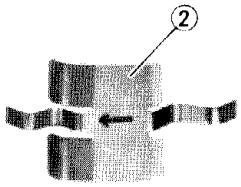




Wear limit ⓐ:
0.5 mm (0.02 in)

② Pad shim
③ Pad shim retainer



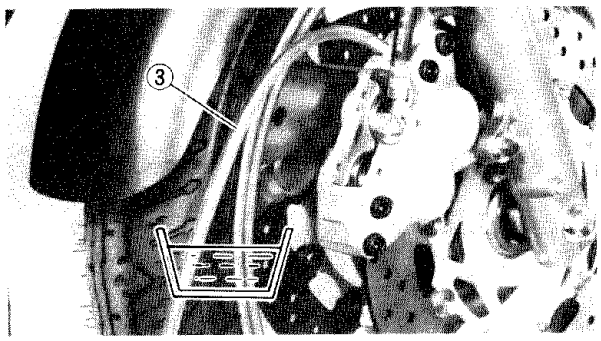


4. Install:
   • Brake pad assembly (new) ①
   • Pad spring (new) ②

NOTE:
The brake pads with "FRONT USE ONLY" mark ⓐ should be used for front brake only.

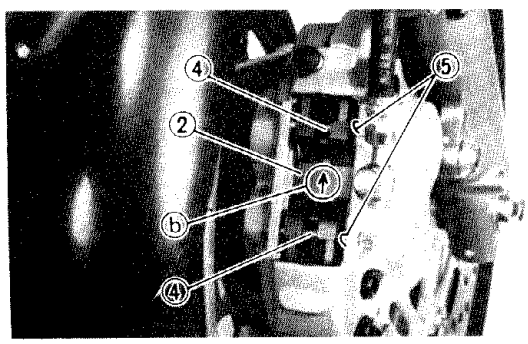
Installation steps:
- Connect a suitable hose ③ tightly to the caliper bleed screw. Then, place the other end of this hose into an open container.
- Loosen the caliper bleed screw and push the piston into the caliper by your finger.
- Tighten the caliper bleed screw.

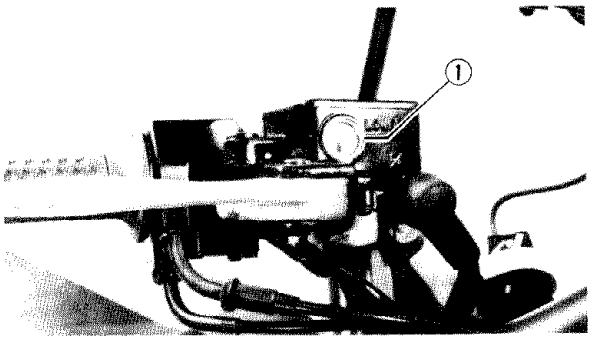
Caliper bleed screw:
6 Nm (0.6 m · kg, 4.3 ft · lb)



- Install the brake pad assembly (new), pad spring (new) ②, retaining pins ④, retaining clips ⑤ and cover.

NOTE:
The arrow mark ⓑ on the pad spring must point in the disc rotating direction.





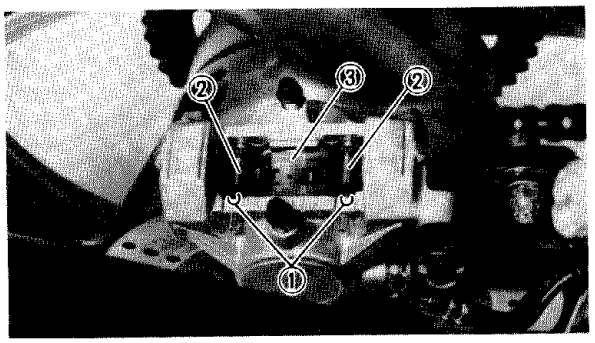
5. Inspect:
   • Brake fluid level
   Refer to the "BRAKE FLUID INSPECTION" section in the CHAPTER 3.

① "LOWER" level line

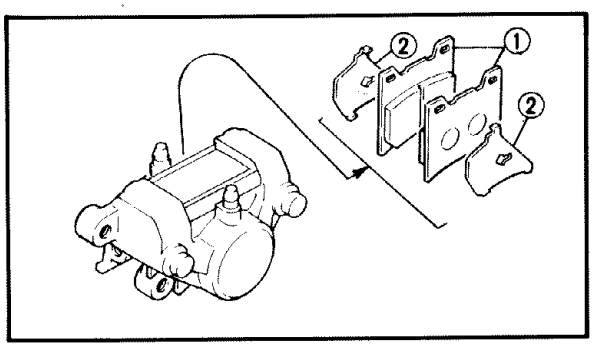
6. Check:
   • Brake lever operation
   A softy or spongy filling → Bleed brake system.
   Refer to the "AIR BLEEDING" section.

Rear Brake

1. Remove:
   • Cover



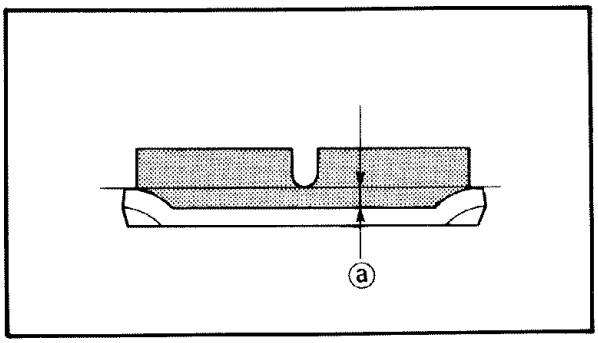
2. Remove:
   • Retaining clips ①
   • Retaining pins ②
   • Pad spring ③



3. Remove:
   • Brake pads ①
   • Pad shims ②

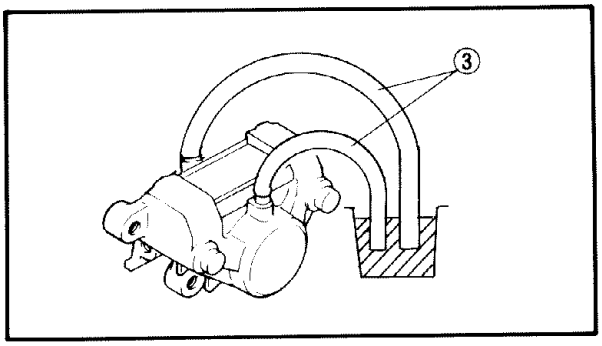
NOTE:

- Replace the pad spring if the pad replacement is required.
- Replace the pads as a set if either is found to be worn to the wear limit.



Wear limit ⓐ :
0.5 mm (0.02 in)

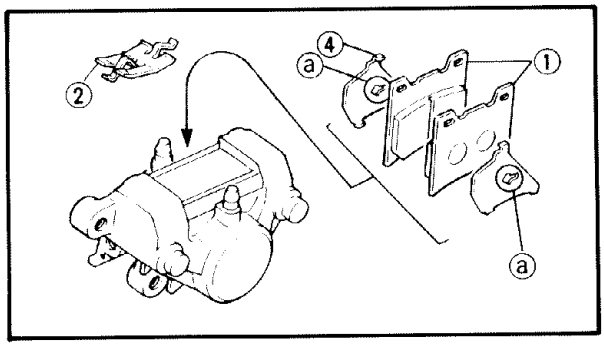
- Replace the pad shim if the pad replacement is required for the rear brake.



4. Install:
   - Brake pads ①
   - Pad springs ②

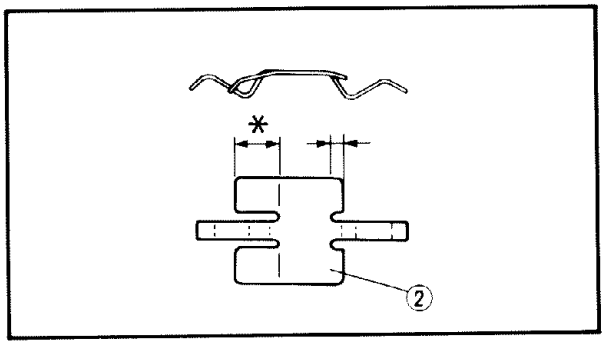
Installation steps:
- Connect a suitable hose ③ tightly to the caliper bleed screw. Then, place the other end of this hose into an open container.
- Loosen the caliper bleed screw and push the piston into the caliper by your finger.
- Tighten the caliper bleed screw.

Caliper bleed screw:
6 Nm (0.6 m · kg, 4.3 ft · lb)



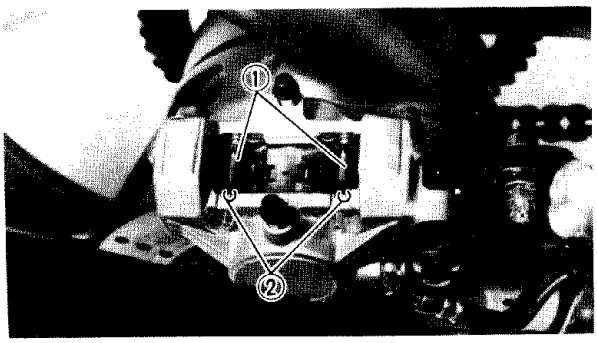
- Install the pad shim (new) ④ to the brake pad (new) ① .

NOTE:
The arrow mark ⓐ on the pad shim must point in the disc rotating direction.

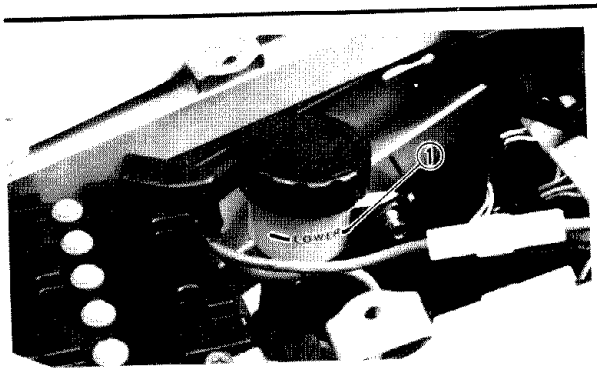


- Install the brake pad (new) and pad spring (new) ② .

NOTE:
The longer tangs (*) of the pad spring must point in the disc rotating direction.



5. Install:
   - Retaining pins ①
   - Retaining clips ②
   - Cover
6. Remove:
   - Seat (front)



7. Inspect:
   • Brake fluid level
   Refer to the "BRAKE FLUID INSPECTION" section in CHAPTER 3.

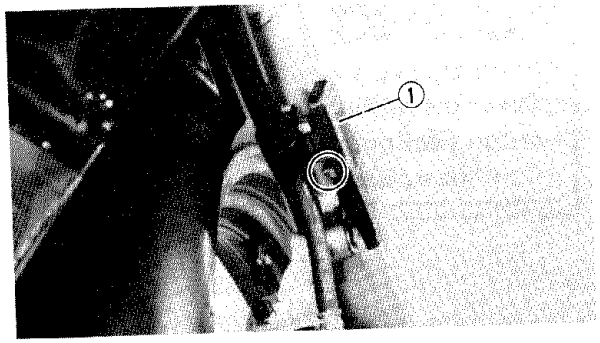
① "LOWER" level line

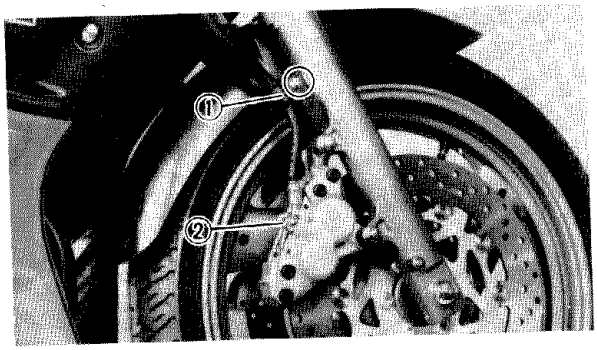
8. Check:
   • Brake pedal operation
   A softy or spongy filling → Bleed brake system.
   Refer to the "AIR BLEEDING" section.
9. Install:
   • Seat (front)
   Refer to the "COWLINGS" section in the CHAPTER 3.

CALIPER DISASSEMBLY

NOTE:
Before disassembling the front brake caliper or rear brake caliper, drain the brake hose, master cylinder, brake caliper and reservoir tank of their brake fluid.

⚠ WARNING
Securely support the motorcycle so there is no danger of it falling over.

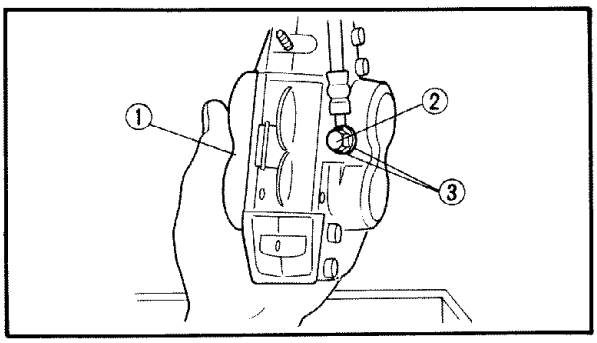




Front Brake

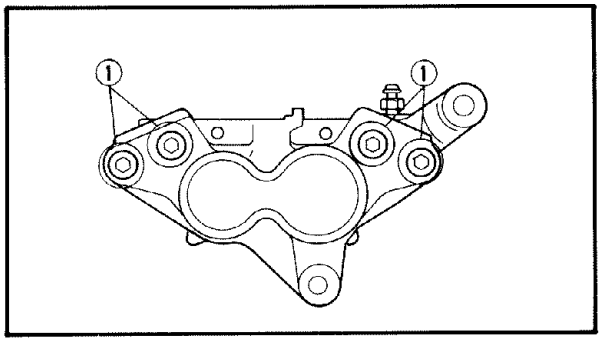
1. Remove:
   • Reflector ①
   • Cover
   • Retaining clips
   • Retaining pins
   • Pad spring
   • Brake pads
   Refer to the "BRAKE PAD REPLACEMENT" section.
2. Remove:
   • Brake hose holder ①
3. Loosen:
   • Union bolt ②

NOTE:
Loosen the union bolt about 1/8 revolution. Do not over turn.

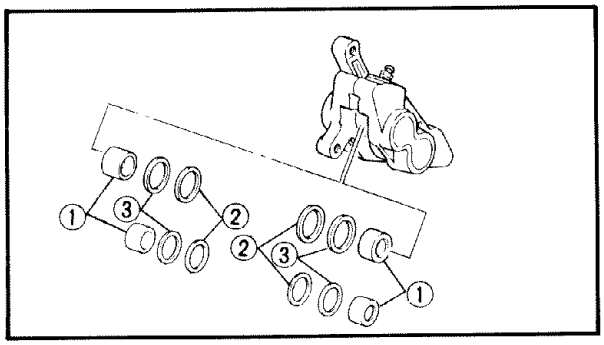


4. Remove:
   - Caliper ①
   - Union bolt ②
   - Copper washers ③

NOTE:
Place the container under the caliper to catch the standing brake fluid.



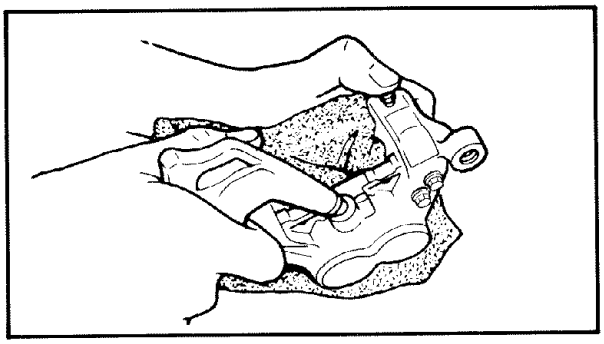
CAUTION:
Do not loosen the bridge bolts ① .



5. Remove:
   - Pistons ①
   - Dust seals ②
   - Piston seals ③

Remove steps:
- Blow compressed air into the tube joint opening to force out the piston from the caliper body.

⚠ WARNING
- **Never try to pry out the piston.**
- **Cover the piston with a rag. Use care so that piston does not cause injury as it is expelled from the cylinder.**



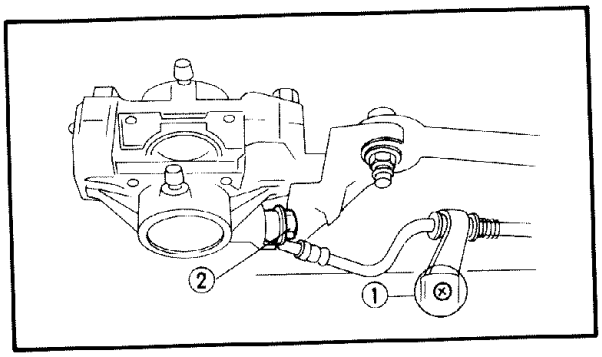
Rear Brake

1. Remove:
   - Seat (front)
   - Side cover (right)

   Refer to the "COWLINGS" section in the CHAPTER 3.

2. Remove:
   - Cover
   - Retaining clips
   - Retaining pins
   - Pad spring
   - Brake pads (with shims)

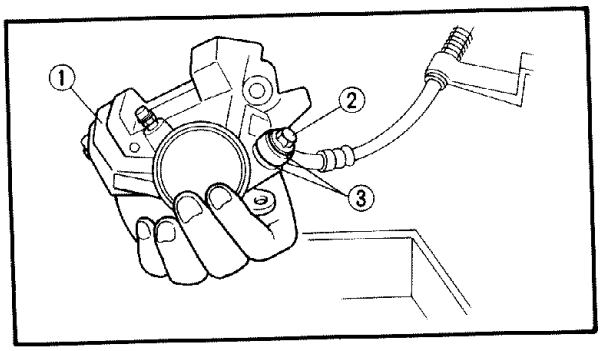
   Refer to the "BRAKE PAD REPLACEMENT" section.



3. Remove:
   - Bolt (brake hose guide) ①

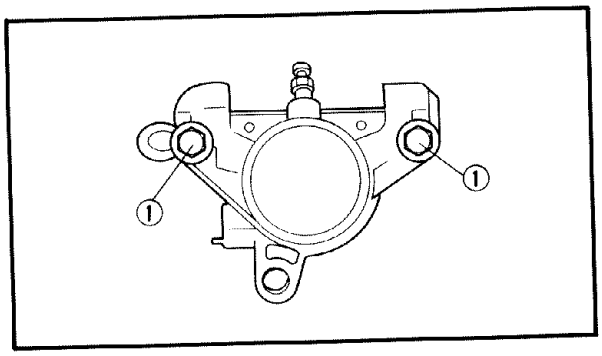
4. Loosen:
   - Union bolt ②

NOTE:
Loosen the union bolt about 1/8 revolution. Do not over turn.

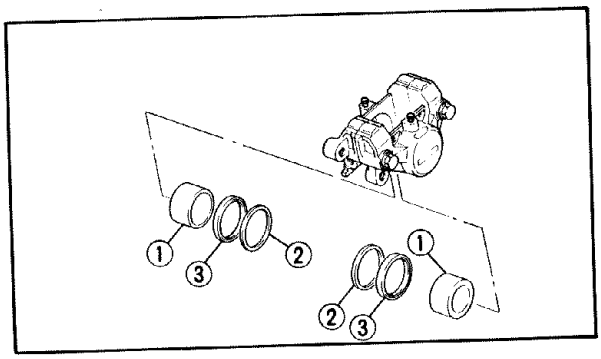


5. Remove:
   - Caliper ①
   - Union bolt ②
   - Copper washers ③

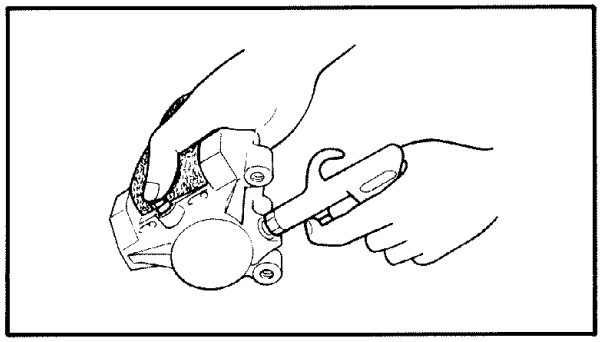
NOTE:
Place the container under the caliper to catch the standing brake fluid.



CAUTION:
Do not loosen the bridge bolts ①.



6. Remove:
   - Pistons ①
   - Dust seals ②
   - Piston seals ③

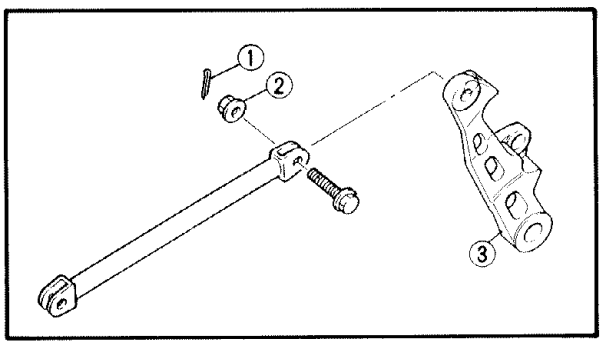


Removal steps:

- Blow compressed air into the tube joint opening to force out the piston from the caliper body.

⚠ WARNING

- **Never try to pry out the piston.**
- **Cover the piston with a rag. Use care so that piston does not cause injury as it is expelled from the cylinder.**



7. Remove:
   - Refer wheel
     Refer to "REAR WHEEL" section.
   - Cotter pin ①
   - Nut (tension bar) ②
   - Caliper bracket ③

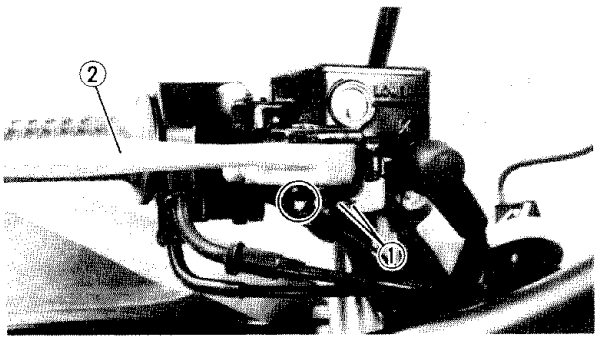
MASTER CYLINDER DISASSEMBLY

NOTE:

Before disassembling the front or rear brake master cylinders, drain the brake hose, master cylinder, brake caliper and reservoir tank of their brake fluid.

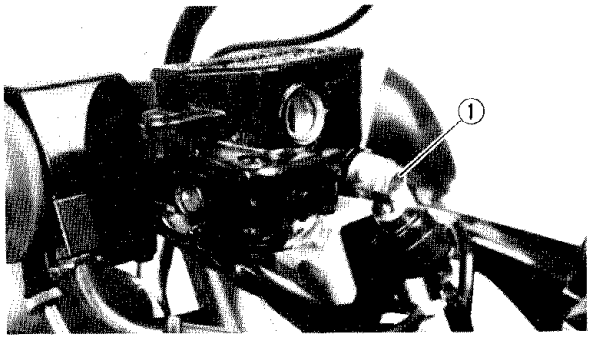
⚠ WARNING

Securely support the motorcycle so there is no danger of it falling over.



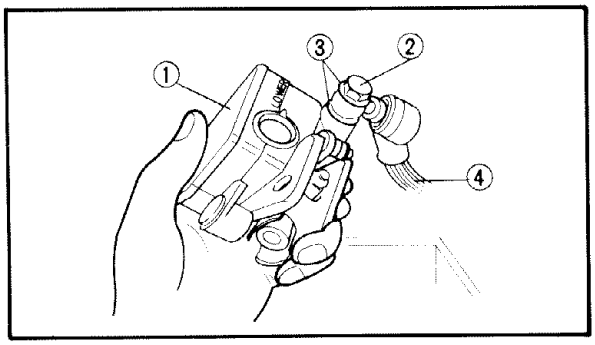
Front Brake

1. Remove:
   - Brake switch leads ①
   - Brake lever ②
   - Return spring (brake lever)



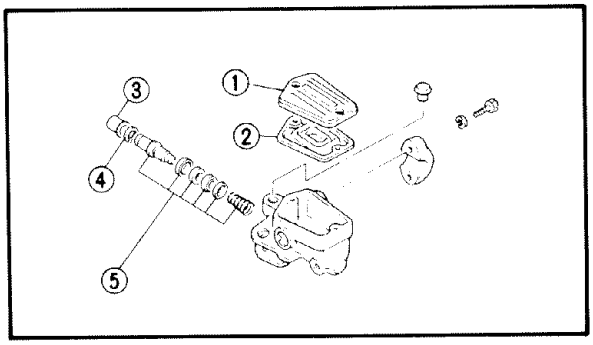
2. Loosen:
   - Union bolt ①

NOTE:
Loosen the union bolt about 1/8 revolution. Do not over turn.



3. Remove:
   - Master cylinder ①
   - Union bolt ②
   - Copper washers ③
   - Brake hose ④

NOTE:
Place the container under the master cylinder to catch the standing brake fluid.



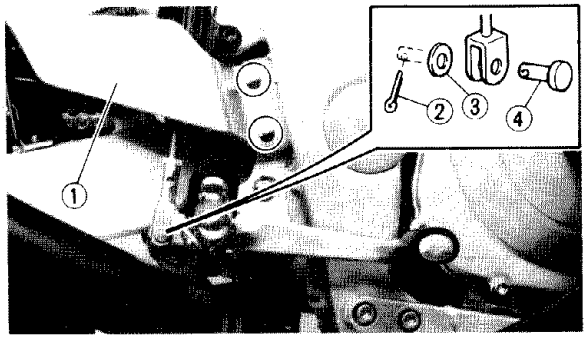
4. Remove:
   - Cap (master cylinder) ①
   - Diaphragm ②
   - Dust boot ③
   - Circlip ④
   - Master cylinder kit ⑤

NOTE:
Place the container under the master cylinder.

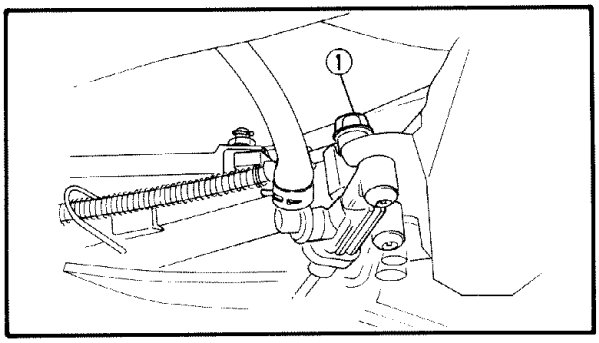
Rear Brake

1. Remove:
   - Seat (front)
   - Side cover (right)

   Refer to the "COWLINGS REMOVAL AND INSTALLATION" section in the CHAPTER 3.

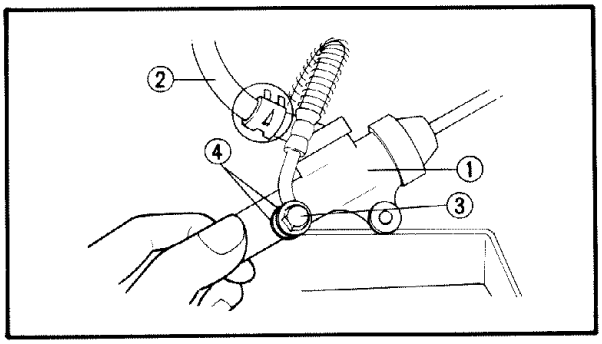


2. Remove:
   - Plate ①
   - Cotter pin ②
   - Washer ③
   - Clevis pin ④



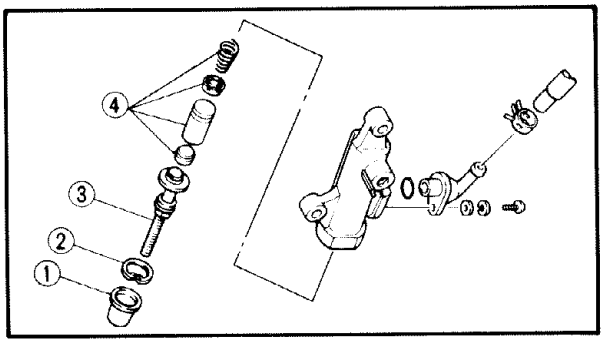
3. Loosen:
   - Union bolt ①

NOTE:
Loosen the union bolt about 1/8 revolution. Do not over turn.



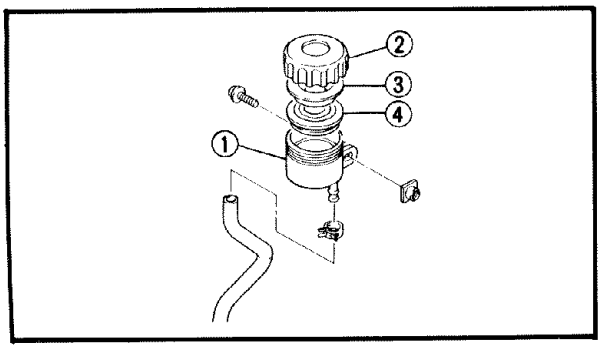
4. Remove:
   - Master cylinder ①
5. Disconnect:
   - Brake hose (reservoir tank — master cylinder) ②
6. Remove:
   - Union bolt ③
   - Copper washers ④

NOTE:
Place the container under the master cylinder to catch the standing brake fluid.



7. Remove:
   - Dust boot ①
   - Circlip ②
   - Push rod ③
   - Master cylinder kit ④

NOTE:
Place the container under the master cylinder.



8. Remove:
   - Reservoir tank ①
     (from flame)
   - Cap (reservoir tank) ②
   - Holder (diaphragm) ③
   - Diaphragm ④

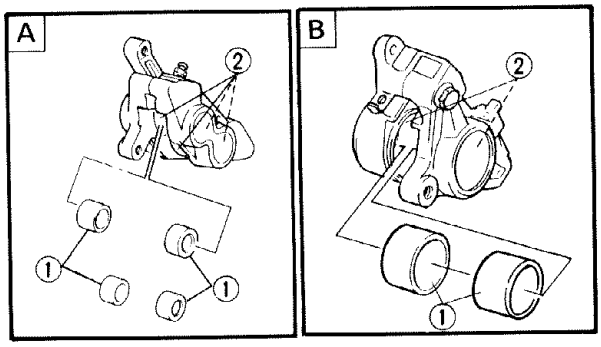
NOTE:
Place the container under the reservoir tank.

INSPECTION AND REPAIR

Recommended brake component replacement schedule:	
Brake pads	As required
Piston seal, dust seal	Every two years
Brake hoses	Every four years
Brake fluid	Replace only when brakes are disassembled

⚠ WARNING

All internal parts should be cleaned in new brake fluid only. Do not use solvents will cause seals to swell and distort.

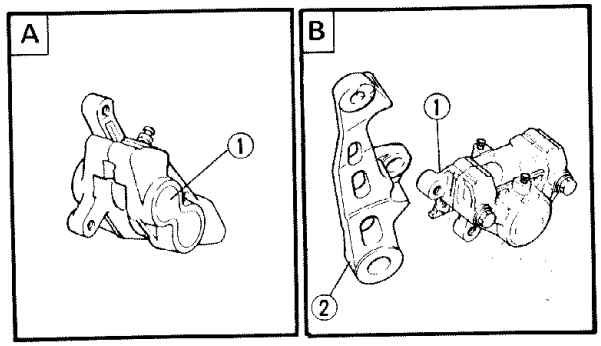


1. Inspect:
   - Caliper piston ①
     Scratches/Rust/Wear → Replace caliper assembly.
   - Caliper cylinder ②
     Wear/Scratches → Replace caliper assembly.

[A] Front
[B] Rear

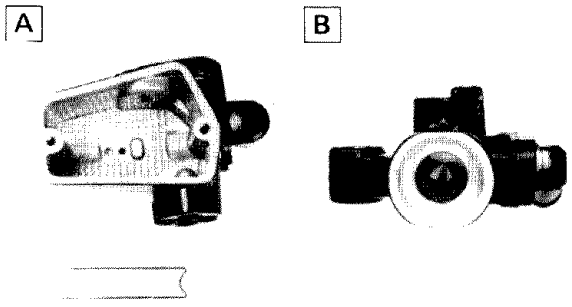
⚠ WARNING

Replace the piston seal and dust seal whenever a caliper is disassembled.



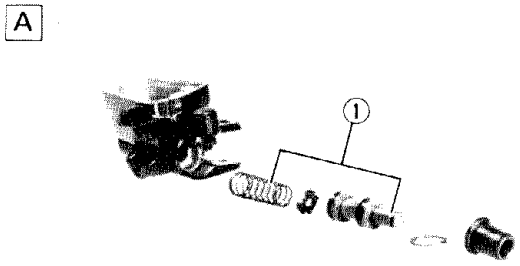
2. Inspect:
   - Caliper body ①
   - Caliper bracket ②
     Cracks/Damage → Replace.
   - Oil delivery passage (caliper body)
     Blow out with compressed air.

[A] Front
[B] Rear

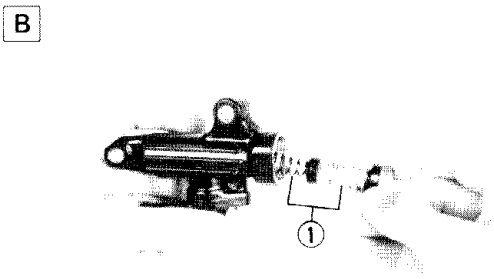


3. Inspect:
   - Master cylinder
     Wear/Scratches → Replace the caliper assembly.
   - Master cylinder body
     Cracks/Damage → Replace.
   - Oil delivery passage (master cylinder body)
     Blow out with compressed air.

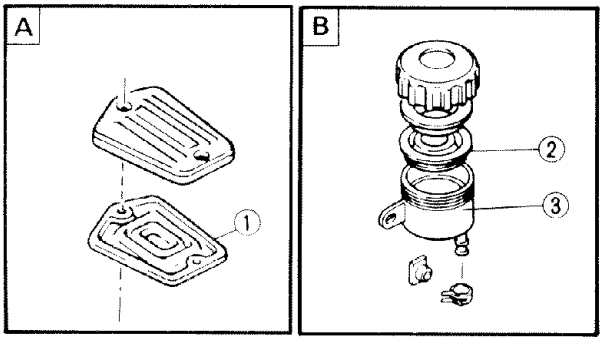
[A] Front
[B] Rear



4. Inspect:
   - Master cylinder kit ①
     Scratches/Wear/Damage → Replace, as a set.

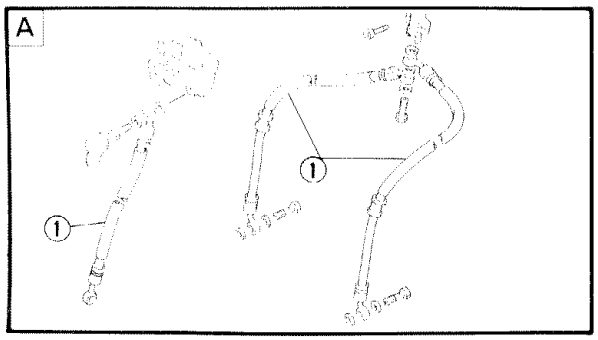


[A] Front
[B] Rear

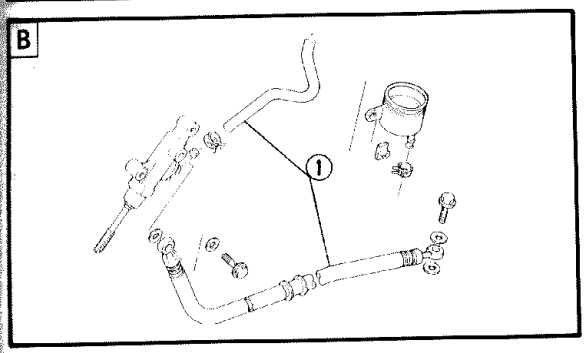


5. Inspect:
   - Diaphragm (front) ①
   - Diaphragm (rear) ②
     Wear/Damage → Replace.
   - Reservoir tank ③
     Cracks/Damage → Replace.

[A] Front
[B] Rear



6. Inspect:
   - Brake hoses ①
     Cracks/Wear/Damage → Replace.

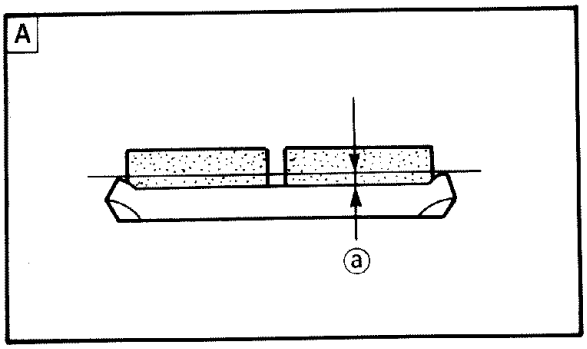


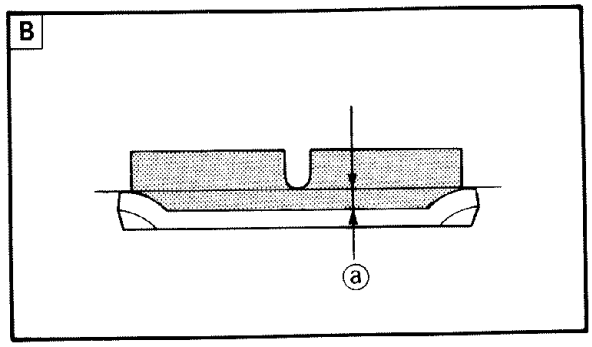
A Front
B Rear

7. Measure:
   • Brake pads (thickness)
   Out of specification → Replace.

Wear limit ⓐ:
0.5 mm (0.02 in)

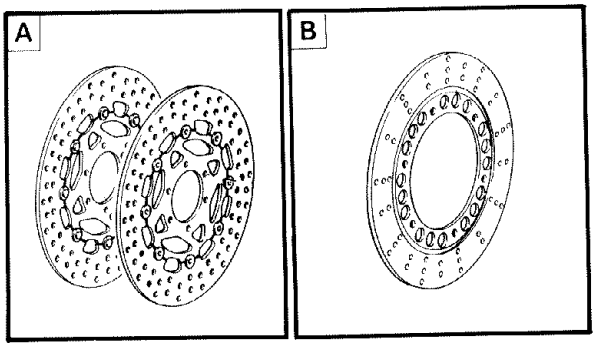
NOTE:
- Replace the pad spring as a set if pad replacement is required.
- Replace the pads as a set if either if found to be worn to the wear limit.



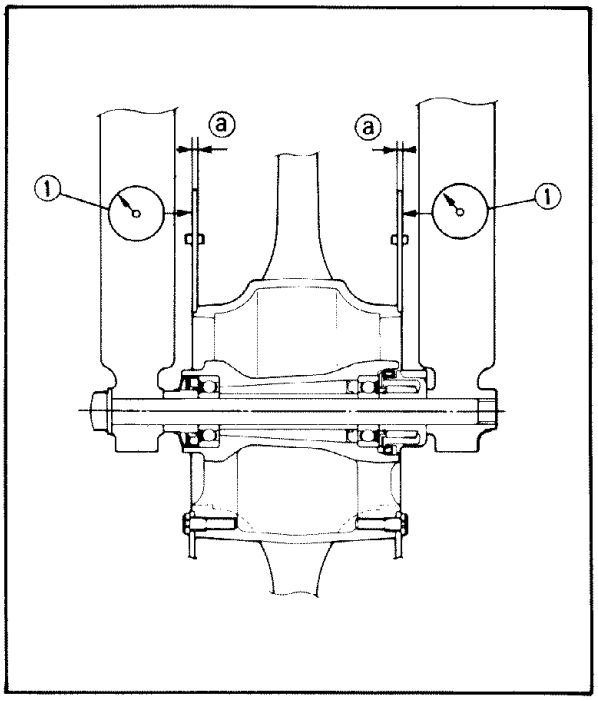


A Front
B Rear

8. Inspect:
   • Brake discs (front and rear)
   Galling/Damage → Replace.



A Front
B Rear



9. Measure:
   - Brake disc deflection
     Out of specification → Inspect wheel runout.
     If wheel runout is in good condition, replace the brake disc(s).

Maximum deflection:
0.5 mm (0.02 in)

   - Brake disc thickness ⓐ
     Out of specification → Replace.

Minimum thickness:
front: 3.5 mm (0.14 in)
rear: 4.5 mm (0.18 in)

① Dial gauge

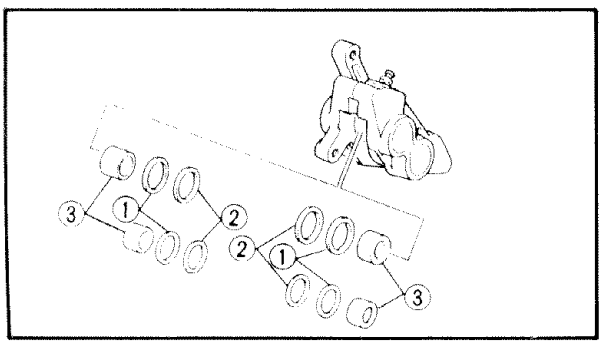
NOTE:
Tighten the bolts (brake disc) in stage using a crisscross pattern.

Bolt (brake disc):
20 Nm (2.0 m · kg, 14 ft · lb)
LOCTITE®

CALIPER ASSEMBLY

⚠ WARNING

- **All internal parts should be cleaned in new brake fluid only.**
- **Internal parts should be lubricated with brake fluid when installed.**
- **Replace the piston seal and dust seal whenever a caliper is disassembled.**

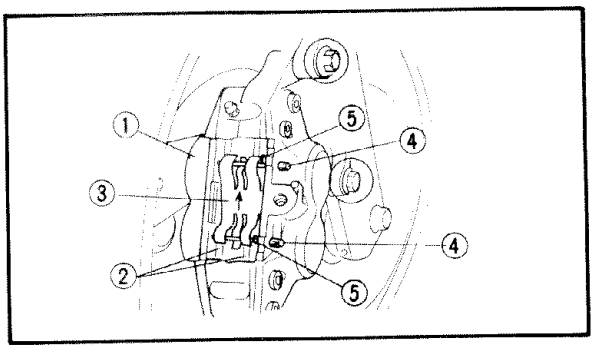


Front brake

1. Install:
   - Piston seal ①
   - Dust seal ②
   - Caliper piston ③

⚠ WARNING

Always use new piston seal and dust seal.

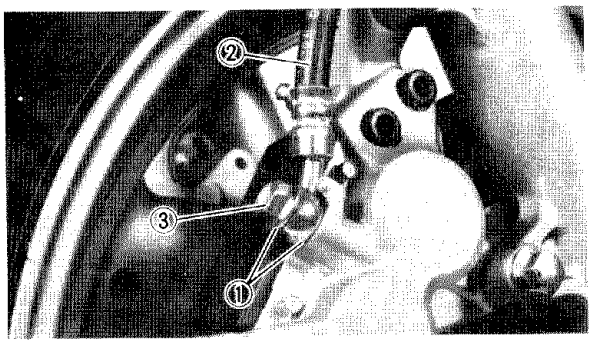


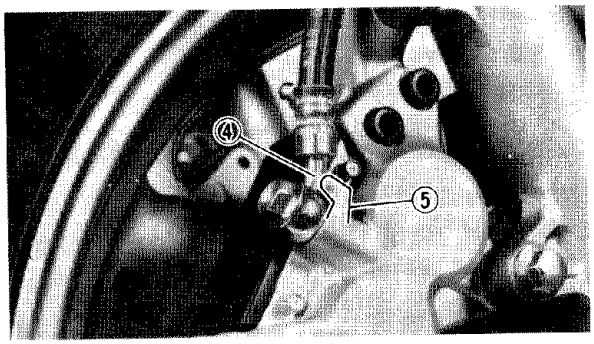
2. Install:
   - Brake calipers ①

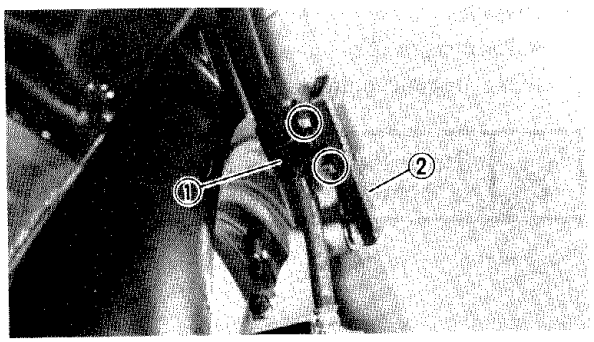
	Bolt (brake caliper): **35 Nm (3.5 m · kg, 25 ft · lb)**

   - Brake pad assembly ②
   - Pad spring ③
   - Retaining pins ④
   - Retaining clips ⑤
   - Cover

   Refer to "BRAKE PAD REPLACEMENT" section.







3. Install:
   - Copper wahsers ①
   - Brake hose ②
   - Union bolt ③

   (onto brake caliper)

	Union bolt: **26 Nm (2.6 m · kg, 19 ft · lb)**

CAUTION:

When installing the brake hose, lightly touch the pipe portion ④ of the brake hose with the projection ⑤ on brake caliper.

⚠ WARNING

- **Proper hose routing is essential to insure safe motorcycle operation. Refer to "CABLE ROUTING".**
- **Always use new copper washers.**

4. Install:
   - Brake hose holder ①
   - Reflector ②

5. Fill:
   - Master cylinder tank

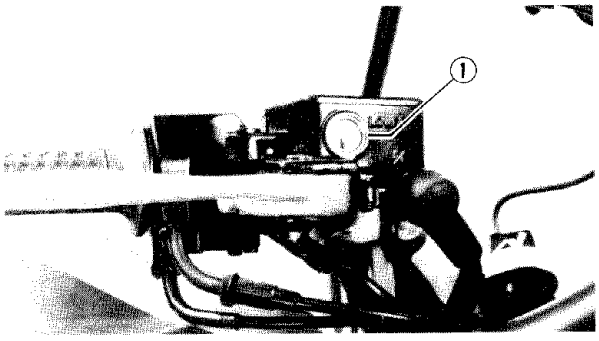
	Recommended brake fluid: DOT #4 only

CAUTION:

Brake fluid may erode painted surfaces or plastic parts. Always clean up spilled fluid immediately.

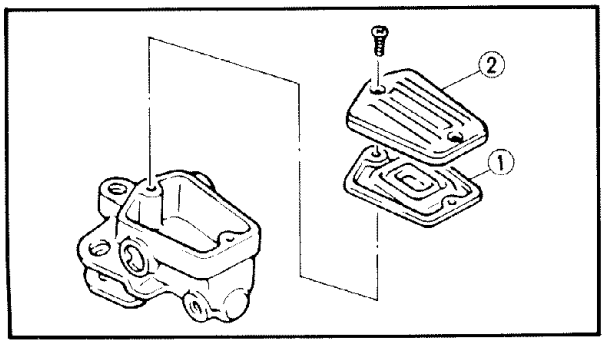
⚠ WARNING

- **Use only the designated quality brake fluid. otherwise, the rubber seals may deteriorate, causing leakage and poor brake performance.**
- **Refill with the same type of brake fluid; mixing fluids may result in a harmful chemical reaction and lead to poor performance.**
- **Be careful that water does not enter the master cylinder when refilling. Water will significantly lower the boiling point of the fluid and may result in vapor lock.**



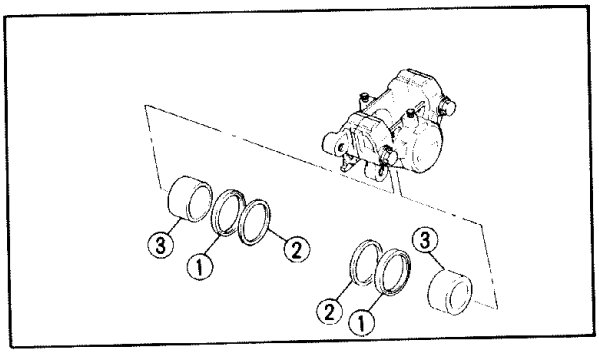
6. Air bleed:
   - Brake system
     Refer to "AIR BLEEDING" section in the CHAPTER 3.
7. Inspect:
   - Brake fluid level
     Refer to the "BRAKE FULID INSPECTION" section in the CHAPTER 3.

① "LOWER" level line



8. Install:
   - Diaphragm ①
   - Cap (master cylinder) ②

	Screw (master cylinder cap): 2 Nm (0.2 m · kg, 1.4 ft · lb)

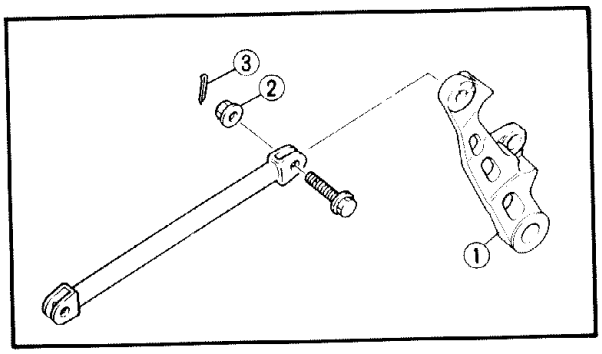


Rear brake

1. Install:
   - Piston seals ①
   - Dust seals ②
   - Pistons ③

⚠ WARNING

Always use new piston seal and dust seal.



2. Install:
   - Caliper bracket ①
   - Nut (tension bar) ②
   - Cotter pin ③

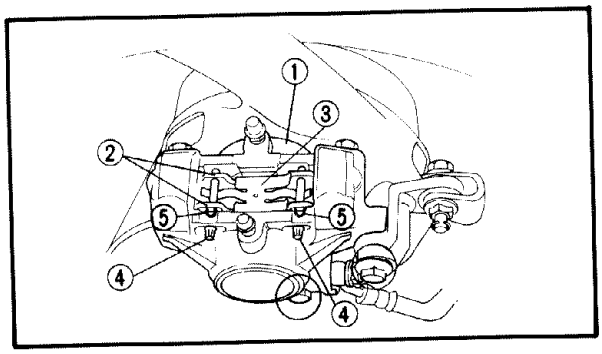
⚠ WARNING

Always use a new cotter pin.

	Nut (tensionbar — caliper bracket): 23 Nm (2.3 m · kg, 17 ft · lb)

3. Install:
   - Rear wheel

   Refer to the "REAR WHEEL" section.

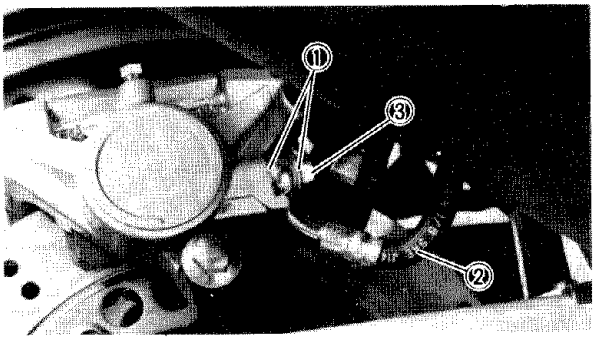


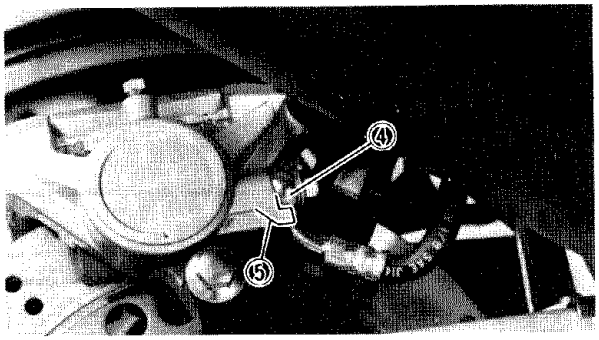
4. Install:
   - Brake caliper (rear) ①

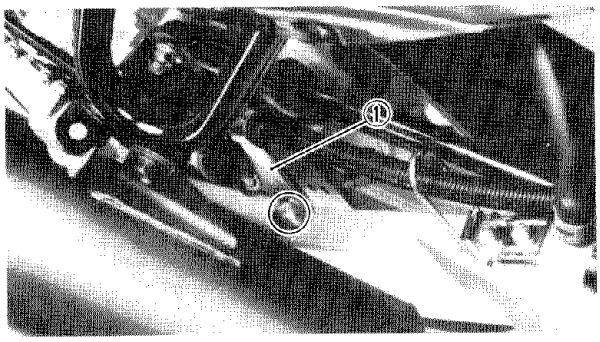
	Brake caliper (rear): 35 Nm (3.5 m · kg, 25 ft · lb)

   - Brake pads (with shims) ②
   - Pad spring ③
   - Retaining pins ④
   - Retaining clips ⑤
   - Cover

   Refer to "BRAKE PAD REPLACEMENT" section.







5. Install:
   - Copper washers ①
   - Brake hose ②
   - Union bolt ③

Union bolts:
26 Nm (2.6 m · kg, 19 ft · lb)

CAUTION:

When installing the brake hose, lightly touch the pipe portion ④ of the brake hose with the projection ⑤ on the brake caliper.

⚠ WARNING

- Proper hose routing is essential to insure safe motorcycle operation. Refer to "CABLE ROUTING".
- Always use new copper washers.

6. Install:
   - Brake hose holder ①

7. Fill:
   - Reservoir tank

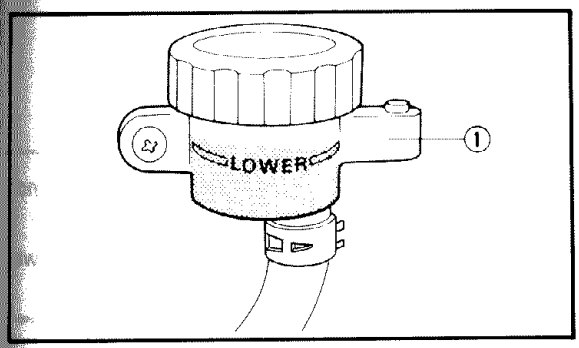
Recommended brake fluid:
DOT #4
If DOT #4 is not available, #3 can be used.

CAUTION:

Brake fluid may erode painted surfaces or plastic parts. Always clean up spilled fluid immediately.

⚠ WARNING

- Use only the designated quality brake fluid: otherwise, the rubber seals may deteriorate, causing leakage and poor brake performance.
- Refill with the same type of brake fluid; mixing fluids may result in a harmful chemical reaction and lead to poor performance.
- Be careful that water does not enter the master cylinder when refilling. Water will significantly lower the boiling point of the fluid and may result in vapor lock.

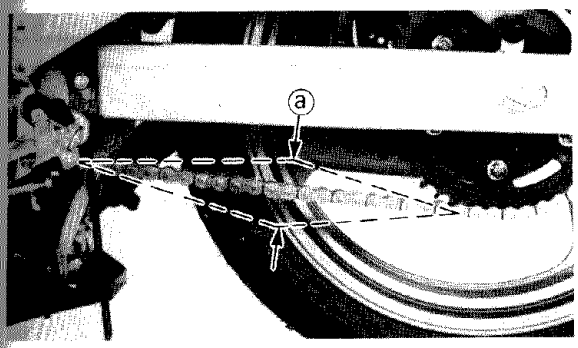


8. Air bleed:
   - Brake system

   Refer to "AIR BLEEDING" section in the CHAPTER 3.
9. Inspect:
   - Brake fluid level

   Refer to the "BRAKE FLUID INSPECTION" section in the CHAPTER 3.

① "LOWER" level line



10. Adjust:
    - Drive chain slack ⓐ

Drive chain slack:
20 ~ 30 mm (0.8 ~ 1.2 in)

Refer to the "DRIVE CHAIN SLACK ADJUSTMENT" section in the CHAPTER 3.

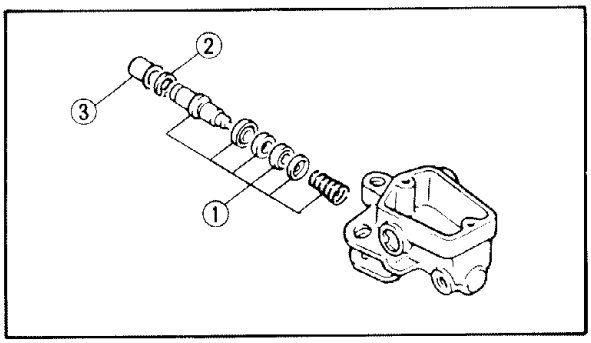
11. Install:
    - Side cover (right)
    - Seat

    Refer to "COVERS" section in the CHAPTER 3.

MASTER CYLINDER ASSEMBLY

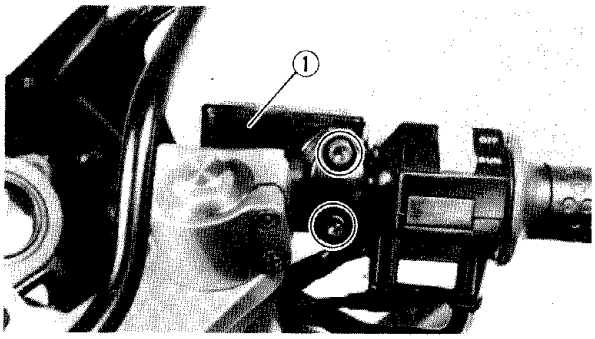
⚠ WARNING

- **All internal parts should be cleaned in new brake fluid only.**
- **Internal parts should be lubricated with brake fluid when installed.**



Front Brake

1. Install:
   - Master cylinder kit ①
   - Circlip ②
   - Dust boot ③

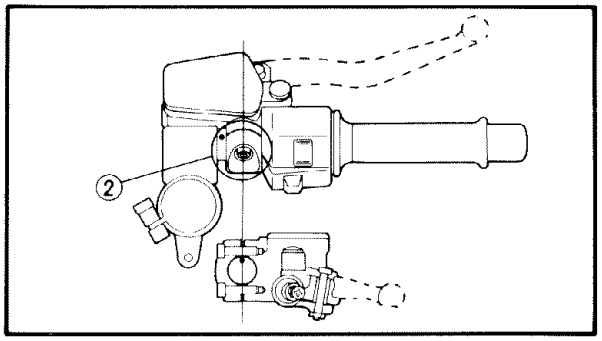


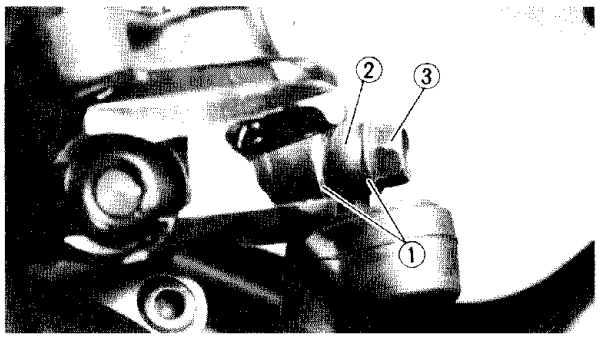
2. Install:
   • Master cylinder ①

CAUTION:

- **Align the end of the holder with the punch mark ② on the handlebar.**
- **Tighten first the upper bolt, then the lower bolt.**

	Bolts (master cylinder holder): 9 Nm (0.9 m · kg, 8.5 ft · lb)



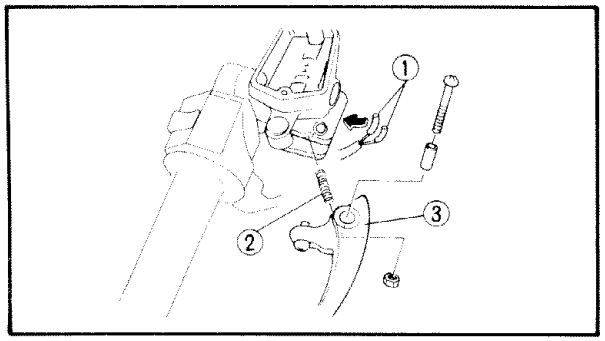


3. Install:
   • Copper washers ①
   • Brake hose ②
   • Union bolts ③

	Union bolts: 26 Nm (2.6 m · kg, 19 ft · lb)

⚠ WARNING

- **Proper hose routing is essential to insure safe motorcycle operation. Refer to the "CABLE ROUTING".**
- **Always use new copper washers.**



4. Connect:
   • Brake switch leads ①
5. Install:
   • Return spring (brake lever) ②
   • Brake lever ③

NOTE:

Apply the lithium soap base grease to the brake lever pivot.

6. Fill:
   - Master cylinder tank

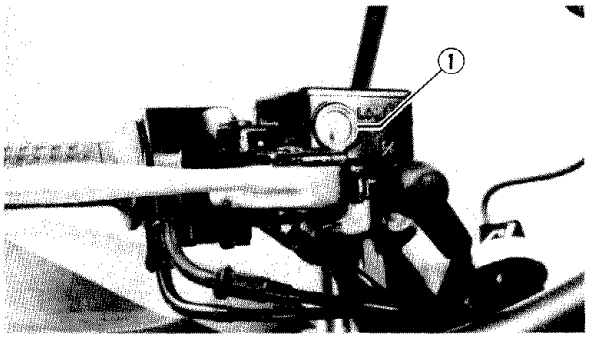
Recommended brake fluid:
DOT #4 only

CAUTION:

Brake fluid may erode painted surfaces or plastic parts. Always clean up spilled fluid immediately.

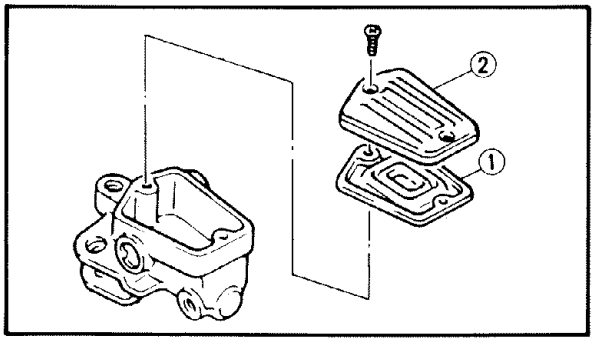
⚠ WARNING

- **Use only the designated quality brake fluid. otherwise, the rubber seals may deteriorate, causing leakage and poor brake performance.**
- **Refill with the same type of brake fluid; mixing fluids may result in a harmful chemical reaction and lead to poor performance.**
- **Be careful that water does not enter the master cylinder when refilling. Water will significantly lower the boiling point of the fluid and may result in vapor lock.**



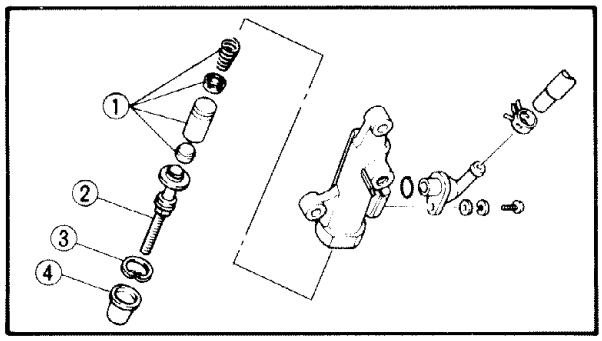
7. Air bleed:
   - Brake system
     Refer to "AIR BLEEDING" section in the CHAPTER 3.
8. Inspect:
   - Brake fluid level
     Refer to the "BRAKE FLUID INSPECTION" section in the CHAPTER 3.

①"LOWER" level line



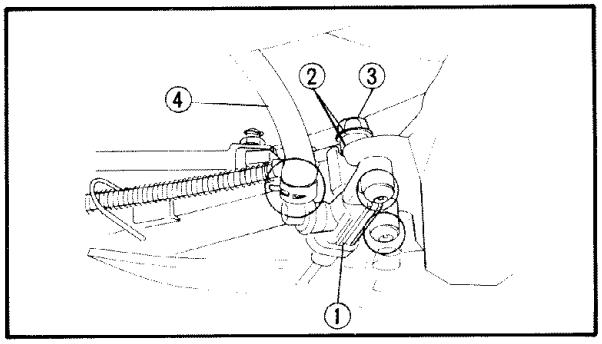
9. Install:
   - Diaphragm ①
   - Cap (master cylinder) ②

Screw (master cylinder cap):
2 Nm (0.2 m · kg, 1.4 ft · lb)



Rear brake

1. Install:
   - Master cylinder kit ①
   - Push rod ②
   - Circlip ③
   - Dust boot ④



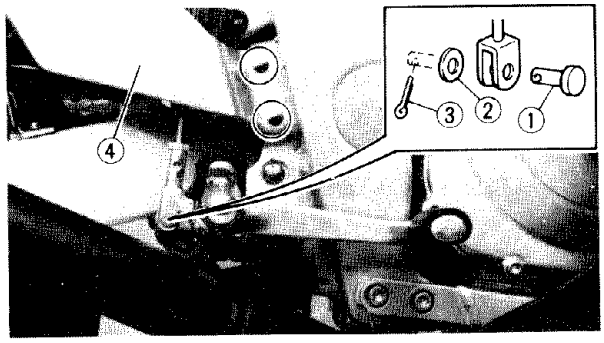
2. Install:
   - Master cylinder ①
   - Copper washers ②
   - Union bolt ③

Bolt (master cylinder):
20 Nm (2.0 m · kg, 14 ft · lb)
Union bolts:
26 Nm (2.6 m · kg, 19 ft · lb)

3. Connect:
   - Brake hose (reservoir tank — master cylinder) ④

⚠ WARNING

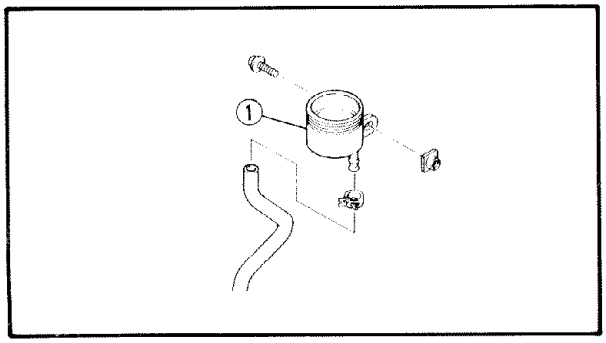
- **Proper hose routing is essential to insure safe machine operation. Refer to "CABLE ROUTING".**
- **Always use new copper washers.**



4. Install:
   - Clevis pin ①
   - Washer ②
   - Cotter pin ③
   - Plate ④

⚠ WARNING

Always use a new cotter pin.



5. Install:
   - Reservoir tank ①
   (to frame)

6. Fill:
   - Reservoir tank

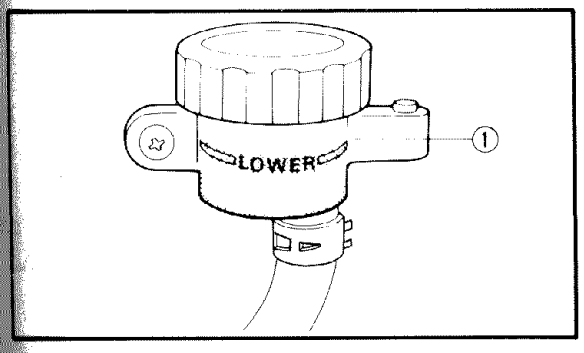
Recommended brake fluid:
DOT #4
If DOT #4 is not available, #3 can be used.

CAUTION:

Brake fluid may erode painted surfaces or plastic parts. Always clean up spilled fluid immediately.

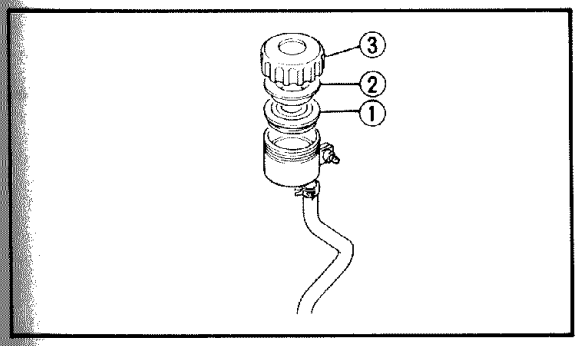
⚠ WARNING

- Use only the designated quality brake fluid: otherwise, the rubber seals may deteriorate, causing leakage and poor brake performance.
- Refill with the same type of brake fluid; mixing fluids may result in a harmful chemical reaction and lead to poor performance.
- Be careful that water does not enter the master cylinder when refilling. Water will significantly lower the boiling point of the fluid and may result in vapor lock.

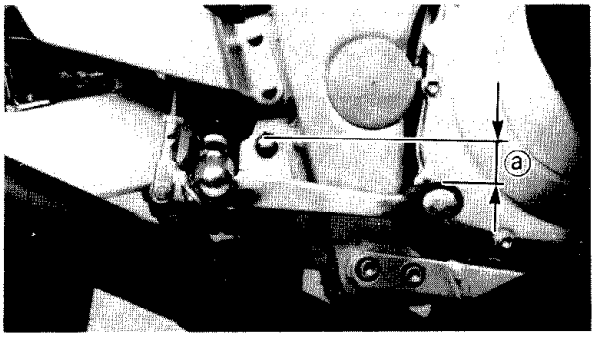


7. Air bleed:
   - Brake system
     Refer to "AIR BLEEDING" section in the CHAPTER 3.
8. Inspect:
   - Brake fluid level
     Refer to the "BRAKE FLUID INSPECTION" section in the CHAPTER 3.

① "LOWER" level line



9. Install:
   - Diaphragm ①
   - Holder (diaphragm) ②
   - Cap (reservoir tank) ③



10. Adjust:
    - Rear brake pedal height ⓐ

Pedal height:
44 mm (1.73 in)
Below top of footrest

Refer to the "REAR BRAKE ADJUSTMENT" section in the CHAPTER 3.

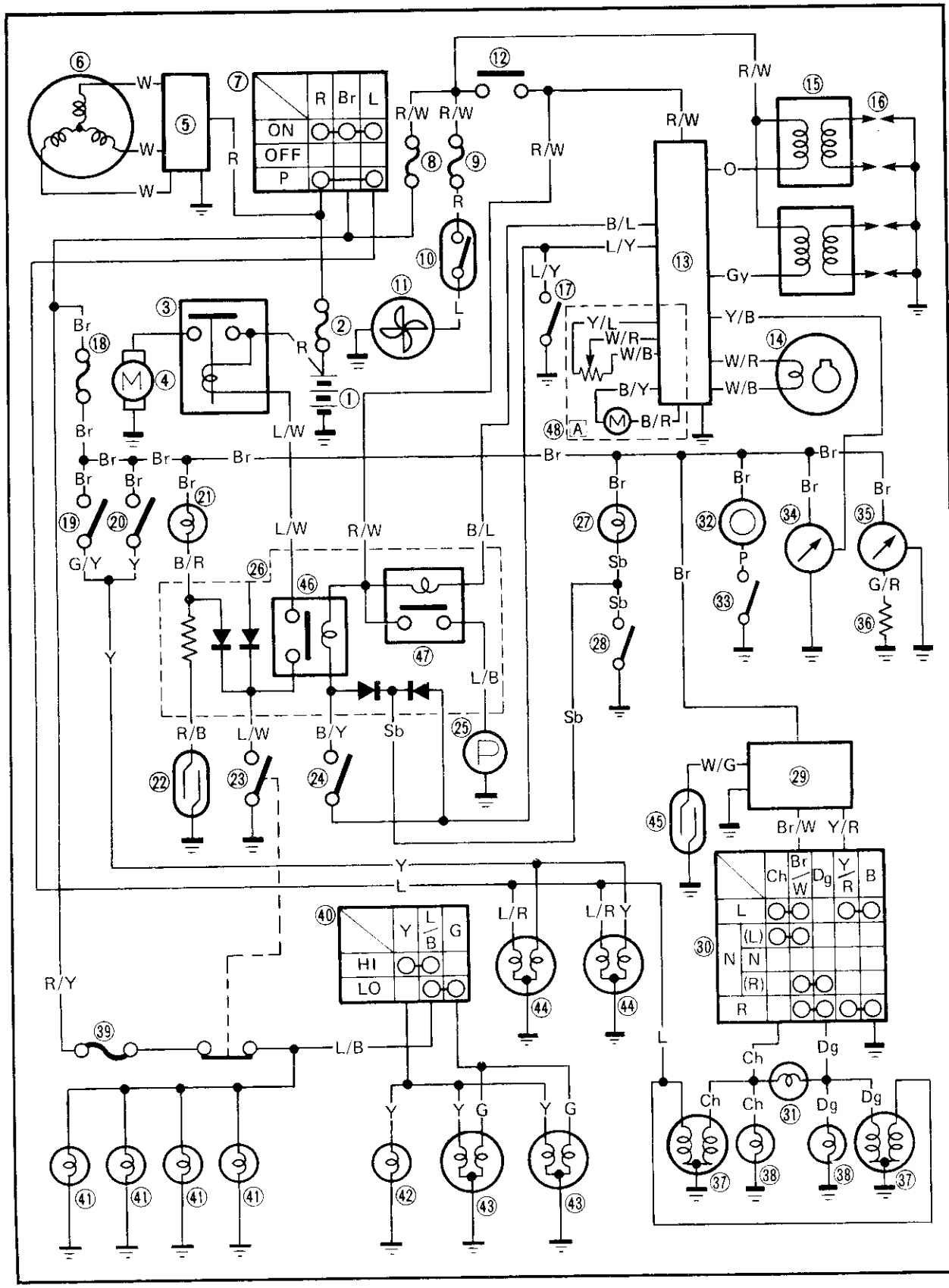
11. Install:
    - Side cover (right)
    - Seat

    Refer to "COVERS" section in the CHAPTER 3.

— MEMO —

ELECTRICAL

CIRCUIT DIAGRAM



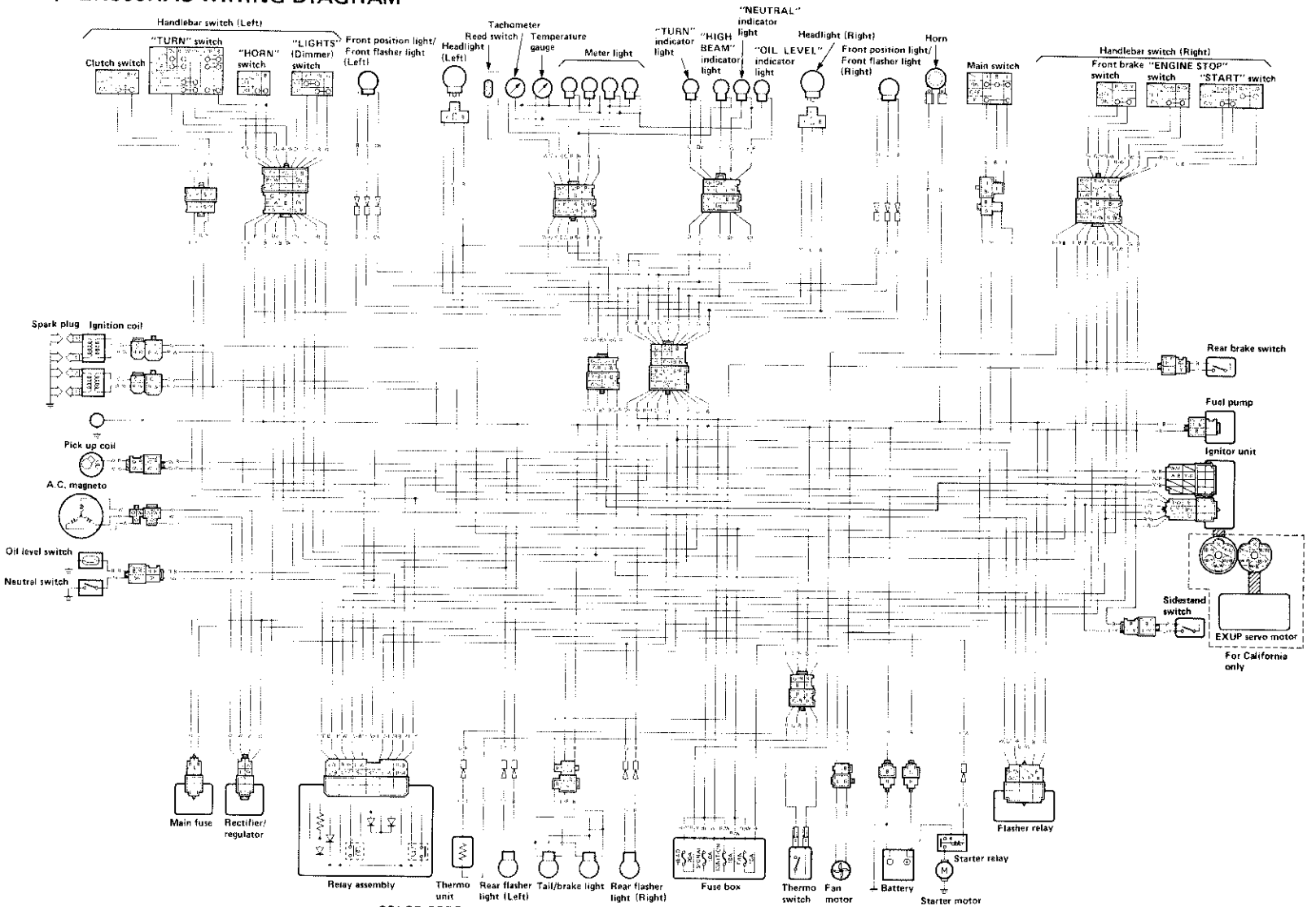
① Battery
② Fuse (main)
③ Starter relay
④ Starter motor
⑤ Rectifier/Regulator
⑥ A.C. generator
⑦ Main switch
⑧ Fuse (ignition)
⑨ Fuse (fan)
⑩ Thermo switch
⑪ Fan motor
⑫ "ENGINE STOP" switch
⑬ Ignitor unit
⑭ Pickup coil
⑮ Ignition coil
⑯ Spark plug
⑰ Side stand switch
⑱ Fuse (signal)
⑲ Front brake switch
⑳ Rear brake switch
㉑ "OIL LEVEL" indicator light
㉒ Oil level switch
㉓ "START" switch
㉔ Clutch switch
㉕ Fuel pump
㉖ Relay assembly
㉗ Neutral indicator light
㉘ Neutral switch
㉙ Flasher relay
㉚ "TURN" switch
㉛ "TURN" indicator light
㉜ Horn
㉝ "HORN" switch
㉞ Tachometer
㉟ Engine temperature gauge
㊱ Thermo unit
㊲ Front position light/Front flasher light
㊳ Rear flasher light
㊴ Fuse (head)
㊵ "LIGHTS" (dimmer) switch
㊶ Meter light
㊷ "HIGH BEAM" indicator light
㊸ Headlight
㊹ Tail/brake light
㊺ Reed switch
㊻ Starting circuit cut-off relay
㊼ Fuel pump relay
㊽ "EXUP" servo motor

[A] For California only

COLOR CODE

B	Black	Sb	Sky blue	L/R	Blue/Red
R	Red	Dg	Dark green	L/Y	Blue/Yellow
L	Blue	W	White	L/W	Blue/White
G	Green	B/R	Black/Red	G/R	Green/Red
O	Orange	B/L	Black/Blue	G/Y	Green/Yellow
Y	Yellow	B/Y	Black/Yellow	Y/R	Yellow/Red
P	Pink	R/Y	Red/Yellow	Br/W	Brown/White
Br	Brown	R/B	Red/Black	W/G	White/Green
Ch	Chocolate	R/W	Red/White	W/R	White/Red
Gy	Gray	L/B	Blue/Black	W/B	White/Black

FZR600RA/FZR600RAC WIRING DIAGRAM



COLOR CODE

B . . . . . .Black	P . . . . . .Pink	Sb . . . . . .Sky blue	B/R . . . . .Black/Red	G/R . . . . .Green/Red	Br/W. . . . .Brown/White
L . . . . . .Blue	O. . . . . .Orange	Dg . . . . . .Dark green	L/B. . . . . .Blue/Black	Y/R . . . . .Yellow/Red	W/B . . . . .White/Black
G . . . . . .Green	Br. . . . . .Brown	W. . . . . .White	L/Y . . . . . .Blue/Yellow	R/B . . . . .Red/Black	W/G . . . . .White/Green
Y . . . . . .Yellow	Ch . . . . . .Chocolate	B/L. . . . . .Black/Blue	L/W . . . . .Blue/White	R/Y . . . . .Red/Yellow	W/R . . . . .White/Red
R . . . . . .Red	Gy . . . . . .Gray	B/Y . . . . .Black/Yellow	G/Y . . . . .Green/Yellow	R/W . . . . .Red/White	