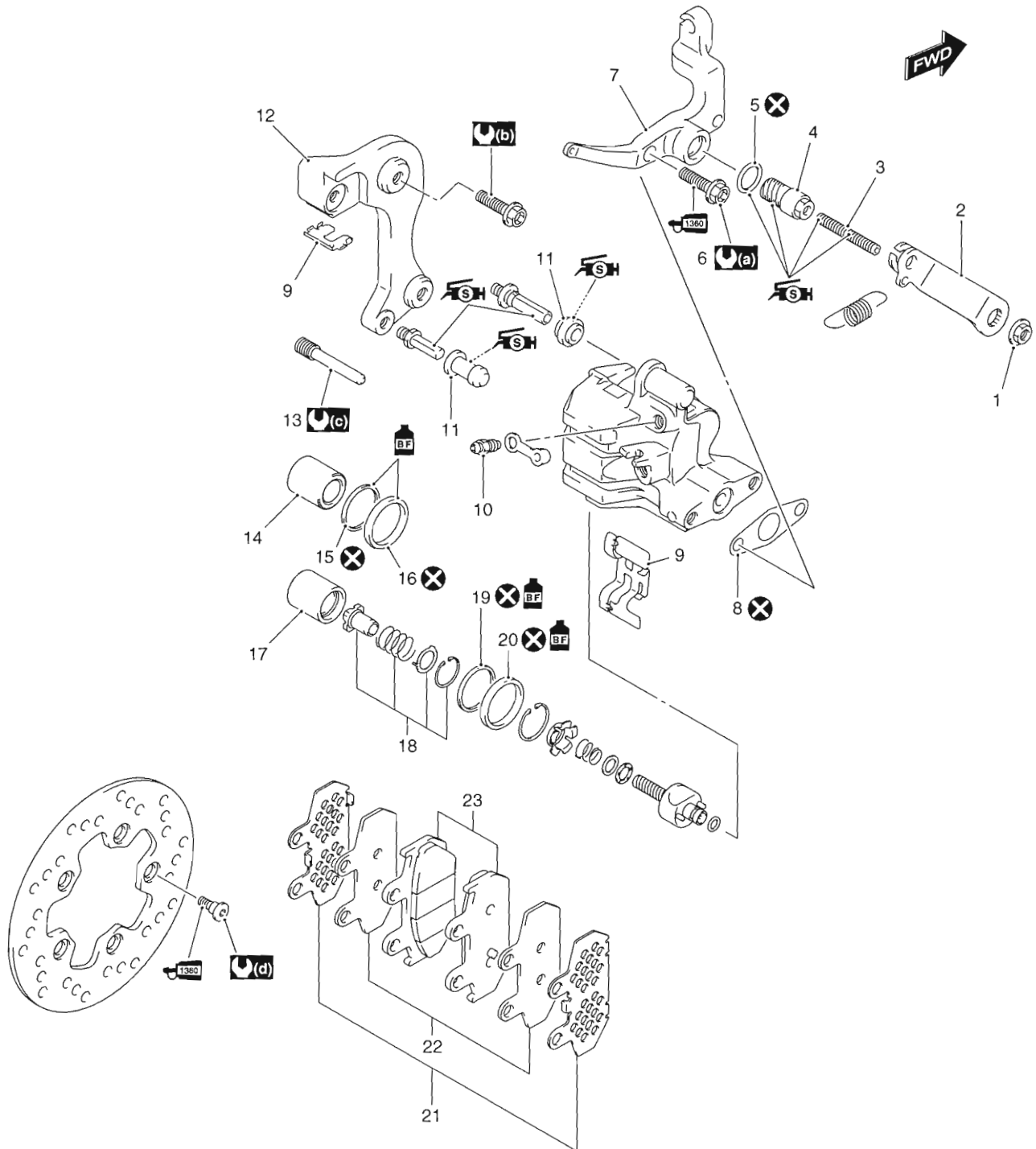


# Rear Brakes

## Repair Instructions

### Rear Brake Components

B705H24306001



I705H1430001-02

|                            |                         |  |
|----------------------------|-------------------------|--|
| 1. Lock-nut                | 12. Bracket             | 23. Brake pad                                  |
| 2. Arm                     | 13. Pad mounting pin    | (a) : 22 N·m (2.2 kgf-m, 16.0 lb-ft)           |
| 3. Adjuster                | 14. Piston (Upper side) | (b) : 23 N·m (2.3 kgf-m, 16.5 lb-ft)           |
| 4. Brake-lock shaft        | 15. Dust seal           | (c) : 18 N·m (1.8 kgf-m, 13.0 lb-ft)           |
| 5. O-ring                  | 16. Piston seal         | (d) : 23 N·m (2.3 kgf-m, 16.5 lb-ft)           |
| 6. Brake-lock housing bolt | 17. Piston (Lower side) | SH : Apply silicone grease to sliding surface. |

|                       |                 |                                     |
|-----------------------|-----------------|-------------------------------------|
| 7. Brake-lock housing | 18. Piston set  | : Apply thread lock to thread part. |
| 8. Gasket             | 19. Dust seal   | : Apply brake fluid.                |
| 9. Pad spring         | 20. Piston seal | : Do not reuse.                     |
| 10. Air bleeder valve | 21. Back plate  |                                     |
| 11. Boot              | 22. Shim        |                                     |

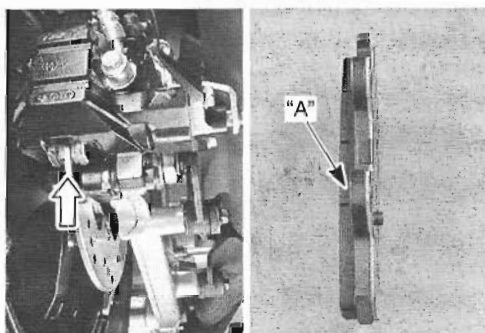
### Rear Brake Pad Inspection

B705H24306002

The extent of brake pad wear can be checked by observing the grooved limit line "A" on the pad. When the wear exceeds the grooved limit line, replace the pads with the new ones. Refer to "Rear Brake Pad Replacement (Page4C-2)".

**⚠ CAUTION**

**Replace the brake pad as a set, otherwise braking performance will be adversely affected.**



I705H1430003-03

### Rear Brake Pad Replacement

B705H24306003

Replace the rear brake pad in the following procedures:

**⚠ CAUTION**

**Do not operate the brake lever and brake-lock lever while dismantling the caliper.**

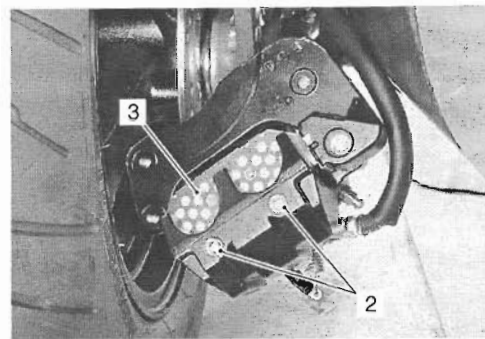
Refer to "Rear Brake Components (Page4C-1)".

- 1) Remove the caliper mounting bolts (1).



I705H1430004-01

- 2) Remove the pad pins (2) and brake pads (3).

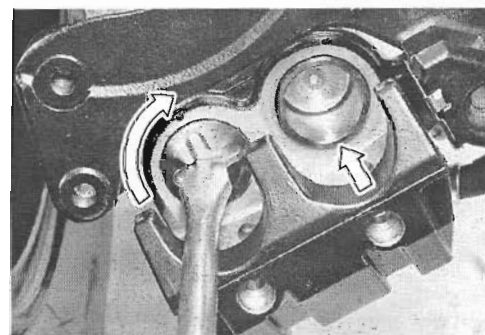


I705H1430005-01

- 3) Clean up the caliper especially around the pistons.
- 4) With the caliper piston (front side) pushed back into the caliper, force the other caliper piston (rear side) also into the caliper by turning it clockwise.

**⚠ CAUTION**

**When pushing on the caliper piston (rear side), keep holding the caliper piston (front side) securely to prevent it from coming out.**



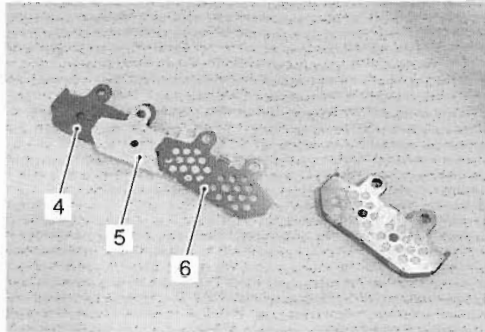
I705H1430006-01

### 4C-3 Rear Brakes:

- 5) Assemble the new pads (4), shims (5) and back plates (6).

#### ⚠ CAUTION

Replace the brake pad as a set, otherwise braking performance will be adversely affected.

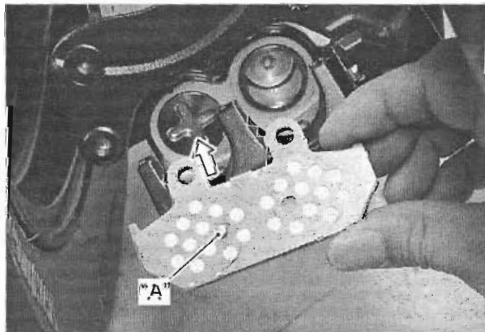


1705H1430038-01

- 6) Locate the projection "A" of the brake pad to the center of caliper piston groove.

#### NOTE

Make sure that the projection of the pad is seated onto the retainer on the caliper bracket.

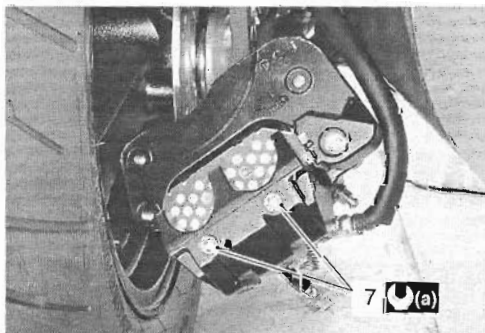


1705H1430034-03

- 7) Tighten the pad mounting pins (7) to the specified torque.

#### Tightening torque

Pad mounting pin (a): 18 N·m (1.8 kgf·m, 13.0 lb-ft)

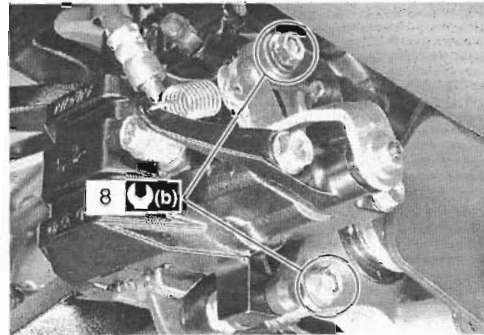


1705H1430007-02

- 8) Tighten the caliper mounting bolts (8) to the specified torque.

#### Tightening torque

Caliper mounting bolt (b): 23 N·m (2.3 kgf·m, 16.5 lb-ft)



1705H1430008-02

#### NOTE

After replacing the brake pads, pump the brake lever several times in order to operate the brake correctly and then check the brake fluid level.

### Rear Brake Caliper Removal and Installation

B705H24306004

#### Removal

- 1) Drain the brake fluid. Refer to "Brake Fluid Replacement in Section 4A (Page4A-5)".
- 2) Remove the brake hose from the caliper by removing the union bolt (1) and catch the brake fluid in a suitable receptacle.

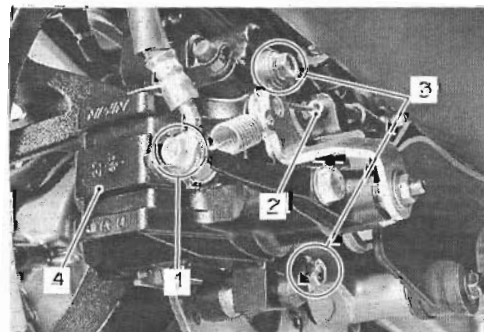
#### ⚠ CAUTION

Place a rag underneath the union bolt on the brake caliper to catch any split brake fluid.

#### NOTE

Slightly loosen the brake pad mounting pins to facilitate later disassembly, if necessary.

- 3) Remove the brake-lock cable (2), caliper mounting bolts (3) and brake caliper (4).



1705H1430009-02

**Installation**

Install the brake caliper in the reverse order of removal. Pay attention to the following points:

**⚠ CAUTION**

The seal washers should be replaced with the new ones to prevent fluid leakage.

- Tighten the caliper mounting bolts (1) to the specified torque.

**Tightening torque**

**Caliper mounting bolt (a): 23 N·m (2.3 kgf-m, 16.5 lb-ft)**

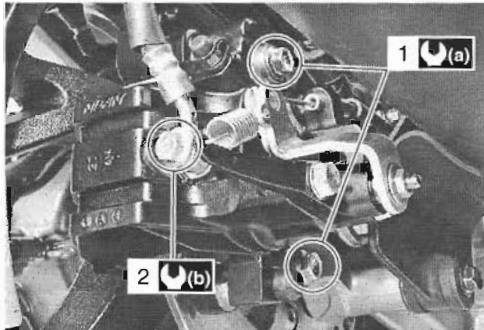
- After setting the brake hose union to the stopper, tighten the union bolt (2) to the specified torque.

**Tightening torque**

**Brake hose union bolt (b): 23 N·m (2.3 kgf-m, 16.5 lb-ft)**

**⚠ CAUTION**

The seal washers should be replaced with the new ones to prevent fluid leakage.



I705H1430010-02

- Bleed air from the brake system after installing the caliper. Refer to "Brake System Inspection in Section 0B (Page0B-13)".
- Check the brake fluid leakage and brake operation.

**⚠ WARNING**

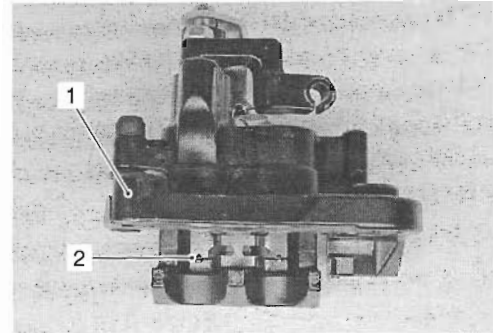
Brake fluid, if it leaks, will interfere with safe running and discolor painted surfaces. Check the brake hose and hose joints for cracks and fluid leakage.

**Rear Brake Caliper Disassembly and Assembly**

B705H24306005

Refer to "Rear Brake Caliper Removal and Installation (Page4C-3)".

- 1) Remove the caliper bracket (1) and pad spring (2).



I705H1430035-01

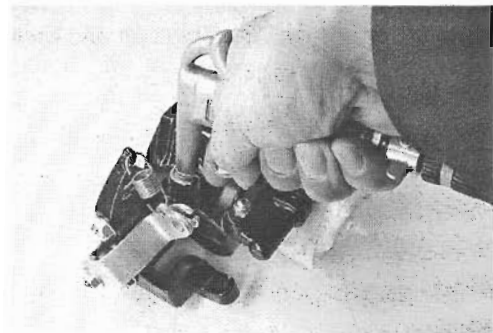
- 2) Place a rag over the piston to prevent it from popping out and then force out the piston (upper side) using compressed air.

**⚠ WARNING**

- Use caution that brake fluid can splash out.
- Do not put your hand under the piston as it may pop out dangerously.
- When blowing compressed air in, hold the caliper securely.

**⚠ CAUTION**

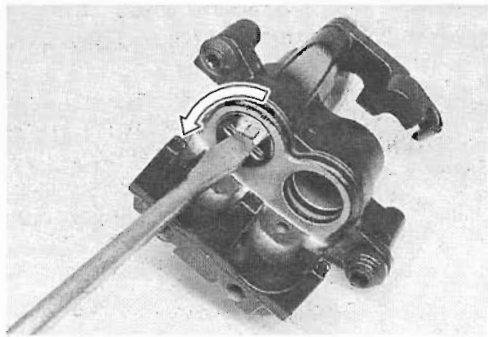
Do not use high pressure air to prevent piston damage.



I705H1430036-01

## 4C-5 Rear Brakes:

- 3) Remove the piston (back side) with turning counterclockwise.

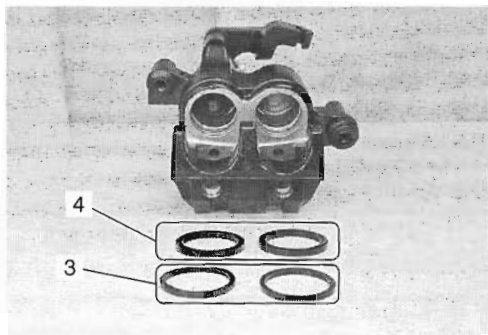


1705H1430011-01

- 4) Remove the dust seals (3) and piston seals (4) from the cylinder.

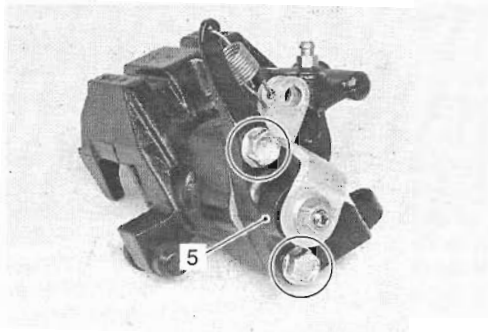
### ⚠ CAUTION

- Use care not to cause scratch on the cylinder bore.
- Do not reuse the piston seal and dust seal that have been removed.



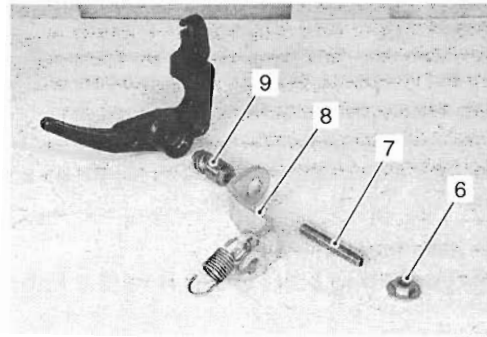
1705H1430012-02

- 5) Remove the brake-lock housing bolt and brake-lock housing (5).



1705H1430013-02

- 6) Remove the lock-nut (6), adjuster (7), arm (8) and brake-lock shaft (9).



1705H1430014-01

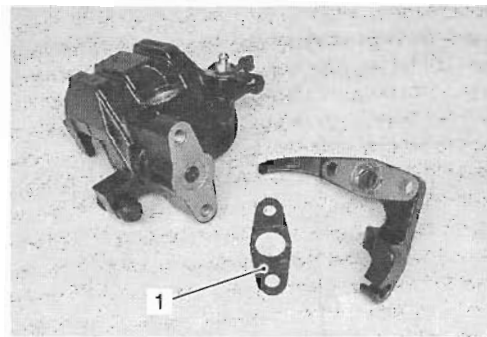
### Assembly

Assemble the caliper in the reverse order of disassembly. Pay attention to the following points:

- Assemble the gasket (1).

### ⚠ CAUTION

Replace the gasket with a new one.



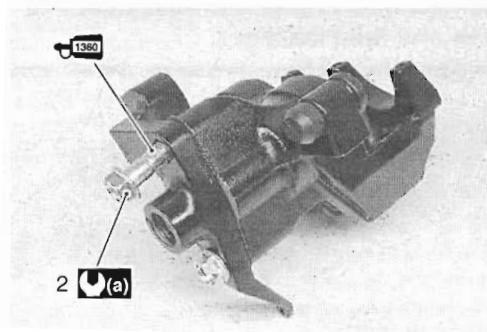
1705H1430015-01

- Apply thread lock to the brake-lock housing bolts (2) and tighten them to the specified torque.

 : Thread lock cement 99000-32130 (THREAD LOCK CEMENT SUPER 1360 or equivalent)


### Tightening torque

Brake-lock housing bolt (a): 22 N·m (2.2 kgf-m, 16.0 lb-ft)



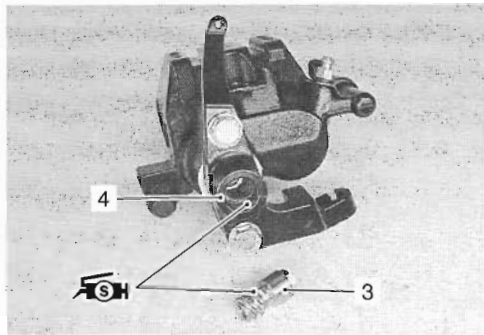
1705H1430017-04

- Apply silicone grease to the brake-lock shaft (3) and O-ring (4).

 : Grease 99000-25100 (SUZUKI Silicone Grease or equivalent)

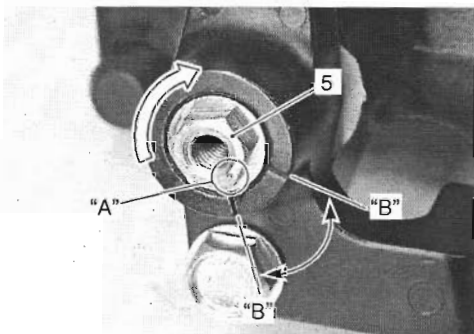
**CAUTION**

Replace the O-ring with a new one.



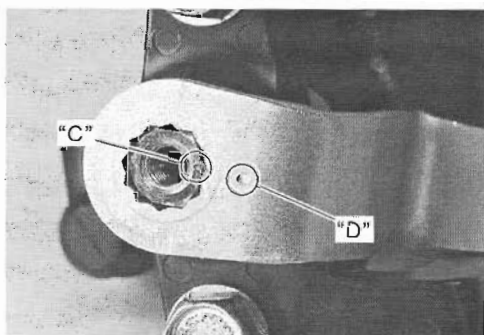
I705H1430016-01

- Install the brake-lock shaft (5) so as the punch mark "A" may position between "B" of housing when tightening (turning clockwise) the brake-lock shaft.




I705H1430018-01

- Align the punch mark "C" on the brake-lock shaft with the punch mark "D" on the brake-lock arm.



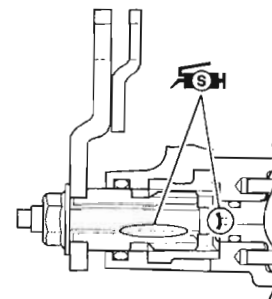
I705H1430019-01

- Apply silicone grease to the tip and thread of brake-lock adjuster, assemble the lock-nut and spring temporarily.

 : Grease 99000-25100 (SUZUKI Silicone Grease or equivalent)



I705H1430020-01



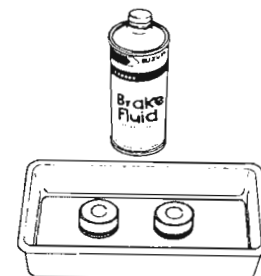
I705H1430021-02

- Wash the bore and piston of the caliper with specified brake fluid. Particularly wash the dust seal groove and piston seal groove.

**BF: Brake fluid (DOT 4)**

**CAUTION**

- Wash the caliper components with fresh brake fluid before reassembly. Never use cleaning solvent or gasoline to wash them.
- Do not wipe the brake fluid off after washing the components.
- When washing the components, use the specified brake fluid. Never use different types of fluid or cleaning solvent such as gasoline, kerosine or the others.



I649G1420012-01

## 4C-7 Rear Brakes:

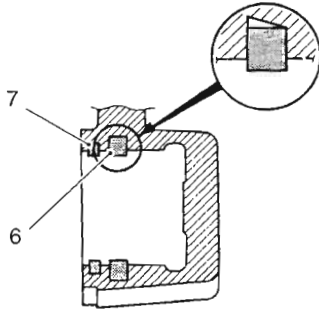
- Apply the brake fluid to piston seal (6) and dust seal (7).

### **⚠ CAUTION**

**Replace the piston seal (6) and dust seal (7) with the new ones.**

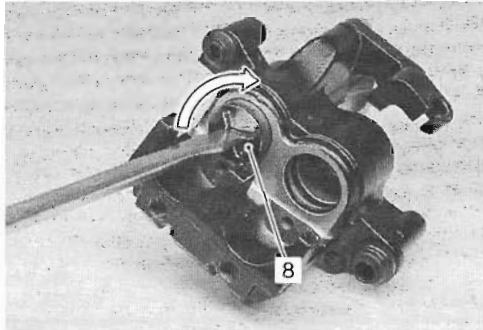
**BF: Brake fluid (DOT 4)**

- Install the piston seals as shown in the figure.



I705H1430039-01

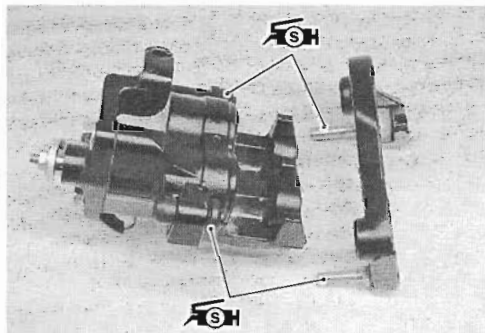
- Set back the rear caliper piston (8) (back side) into the caliper with turning clockwise.



I705H1430022-01

- Apply silicone grease to inside of the boot and caliper bracket pins and install them.

**⚠ SH : Grease 99000-25100 (SUZUKI Silicone Grease or equivalent)**



I705H1430023-01

## Brake Caliper Piston Disassembly and Assembly

B705H24306006

Refer to "Rear Brake Caliper Disassembly and Assembly (Page4C-4)".

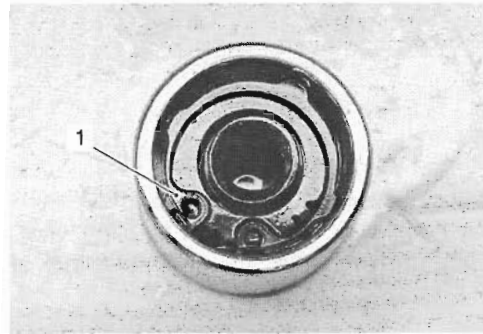
### Disassembly

- 1) Remove the snap ring (1).

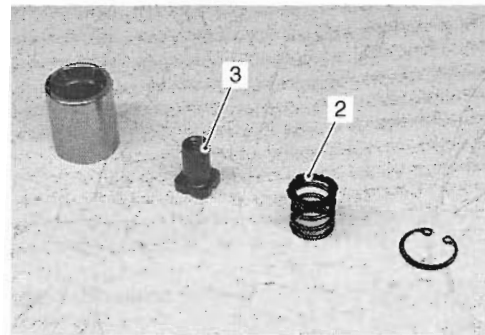
### **⚠ CAUTION**

**Use caution when removing the snap ring as the parts inside may fly out of position.**

- 2) Remove the spring (2) and adjust nut (3).



I705H1430024-01

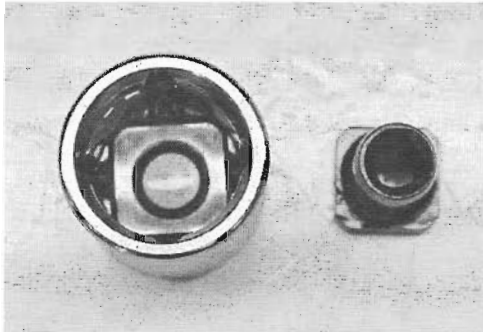


I705H1430025-02

**Assembly**

Assemble the brake caliper piston (bottom side) in the reverse order of disassembly. Pay attention to the following point:

- When assembling, position the adjust nut so as to fit to the seat inside the piston.



I705H1430026-01

**⚠ CAUTION**

**When installing the snap ring, use the utmost care not to allow the internal parts to pop out.**

**Rear Brake Caliper Parts Inspection**

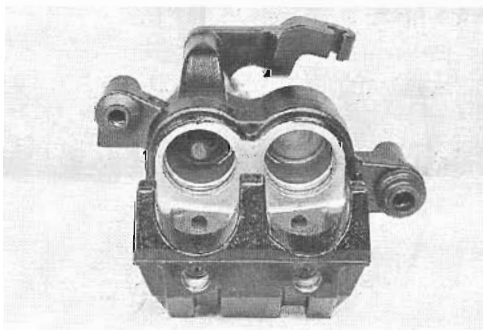
B705H24306007

Refer to "Rear Brake Caliper Removal and Installation (Page4C-3)".

Inspect the following parts.

**Brake Caliper Cylinder**

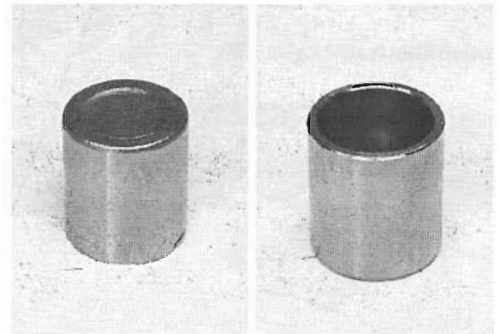
Inspect the brake caliper cylinder sliding face and oil seal groove for wear or other damage. If any damage is found, replace the caliper with a new one.



I705H1430027-01

**Brake Caliper Piston**

Inspect the brake caliper piston sliding face for any scratches or other damage. If any damage is found, replace the piston with a new one.

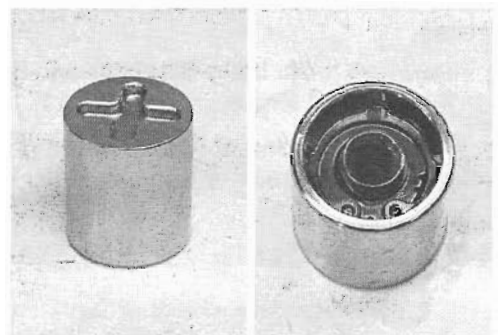


I705H1430028-01

**Brake Caliper Piston**

Inspect the brake caliper piston sliding face and oil seal groove of the seal for wear or damage. If any damage is found, replace the piston with a new one.

Inspect the adjust nut, spring or snap ring for any scratches or other damage. If any damage is found, replace the piston with a new one.



I705H1430029-01



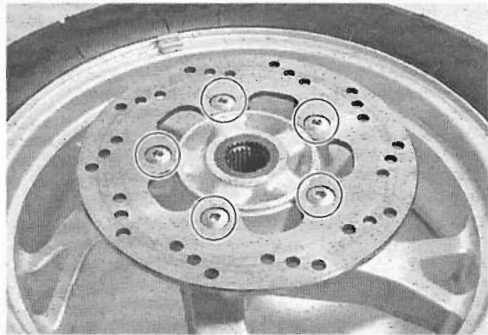
## 4C-9 Rear Brakes:

### Rear Brake Disc Removal and Installation

B705H24306008

#### Removal

- 1) Remove the rear wheel. Refer to "Rear Wheel Assembly Removal and Installation in Section 2D (Page2D-9)".
- 2) Remove the rear brake disc.




I705H1430037-01

#### Installation

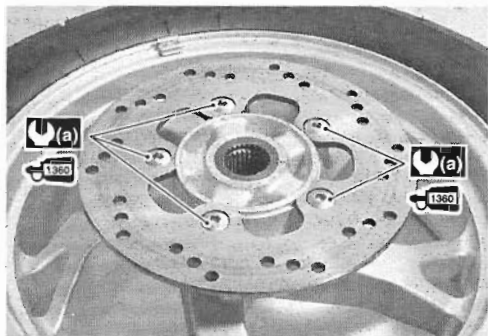
Refer to "Rear Brake Disc Inspection (Page4C-9)". Install the rear brake disc in the reverse order of removal. Pay attention to the following points:

- Make sure that the brake discs are clean and free of any grease.
- Apply thread lock to the brake disc bolts and tighten them to the specified torque.

 : Thread lock cement 99000-32130 (Thread Lock Cement Super 1360 or equivalent)

#### Tightening torque

Brake disc bolt (a): 23 N·m (2.3 kgf-m, 16.5 lb-ft)



I705H1430033-01

### Rear Brake Disc Inspection

B705H24306009

#### Brake Disc Thickness

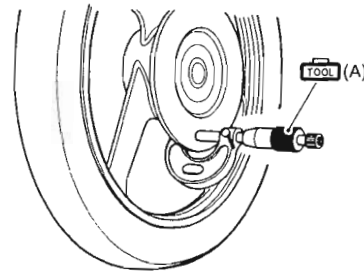
Check the brake disc for damage or cracks and measure the thickness using the micrometer. Replace the brake disc if the thickness is less than the service limit or if defect is found.

#### Special tool

 (A): 09900-20205 (Micrometer (0 – 25 mm))

#### Brake disc thickness

Service limit (Rear): 4.5 mm (0.18 in)





I649G1430027-02

#### Brake Disc Runout

- 1) Remove the rear brake caliper. Refer to "Rear Brake Caliper Removal and Installation (Page4C-3)".
- 2) Measure the runout using the dial gauge. Replace the disc if the runout exceeds the service limit.

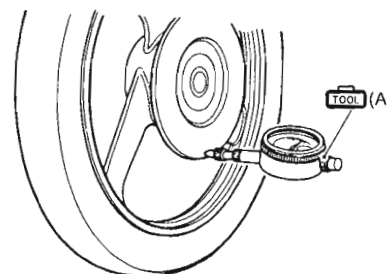
#### Special tool

 (A): 09900-20607 (Dial gauge (1/100 mm, 10 mm))

 : 09900-20701 (Magnetic stand)

#### Brake disc runout

Service limit: 0.30 mm (0.012 in)



I649G1430028-02

- 3) Install the rear brake caliper. Refer to "Rear Brake Caliper Removal and Installation (Page4C-3)".

## Specifications

### Tightening Torque Specifications

B705H24307001

| Fastening part          | Tightening torque |       |       | Note                           |
|-------------------------|-------------------|-------|-------|--------------------------------|
|                         | N-m               | kgf-m | lb-ft |                                |
| Pad mounting pin        | 18                | 1.8   | 13.0  | ☞ (Page4C-3)                   |
| Caliper mounting bolt   | 23                | 2.3   | 16.5  | ☞ (Page4C-3) /<br>☞ (Page4C-4) |
| Brake hose union bolt   | 23                | 2.3   | 16.5  | ☞ (Page4C-4)                   |
| Brake-lock housing bolt | 22                | 2.2   | 16.0  | ☞ (Page4C-5)                   |
| Brake disc bolt         | 23                | 2.3   | 16.5  | ☞ (Page4C-9)                   |

#### NOTE

The specified tightening torque is also described in the following.  
“Rear Brake Components (Page4C-1)”

#### Reference:

For the tightening torque of fastener not specified in this section, refer to “Tightening Torque Specifications in Section 0C (Page0C-7)”.

## Special Tools and Equipment

### Recommended Service Material

B705H24308001


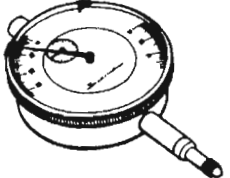
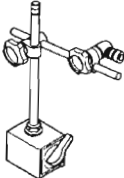
| Material           | SUZUKI recommended product or Specification |                    | Note                                       |
|--------------------|---|--------------------|--|
| Brake fluid        | DOT 4                                       | —                  | ☞ (Page4C-6) / ☞ (Page4C-7)                |
| Grease             | SUZUKI Silicone Grease or equivalent        | P/No.: 99000-25100 | ☞ (Page4C-6) / ☞ (Page4C-6) / ☞ (Page4C-7) |
| Thread lock cement | THREAD LOCK CEMENT SUPER 1360 or equivalent | P/No.: 99000-32130 | ☞ (Page4C-5) / ☞ (Page4C-9)                |

#### NOTE

Required service material is also described in the following.  
“Rear Brake Components (Page4C-1)”

### Special Tool

B705H24308002

|   |   |
|---|---|
| 09900-20205<br>Micrometer (0 – 25 mm)<br>☞ (Page4C-9)  | 09900-20607<br>Dial gauge (1/100 mm, 10 mm)<br>☞ (Page4C-9)  |
| 09900-20701<br>Magnetic stand<br>☞ (Page4C-9)          |   |