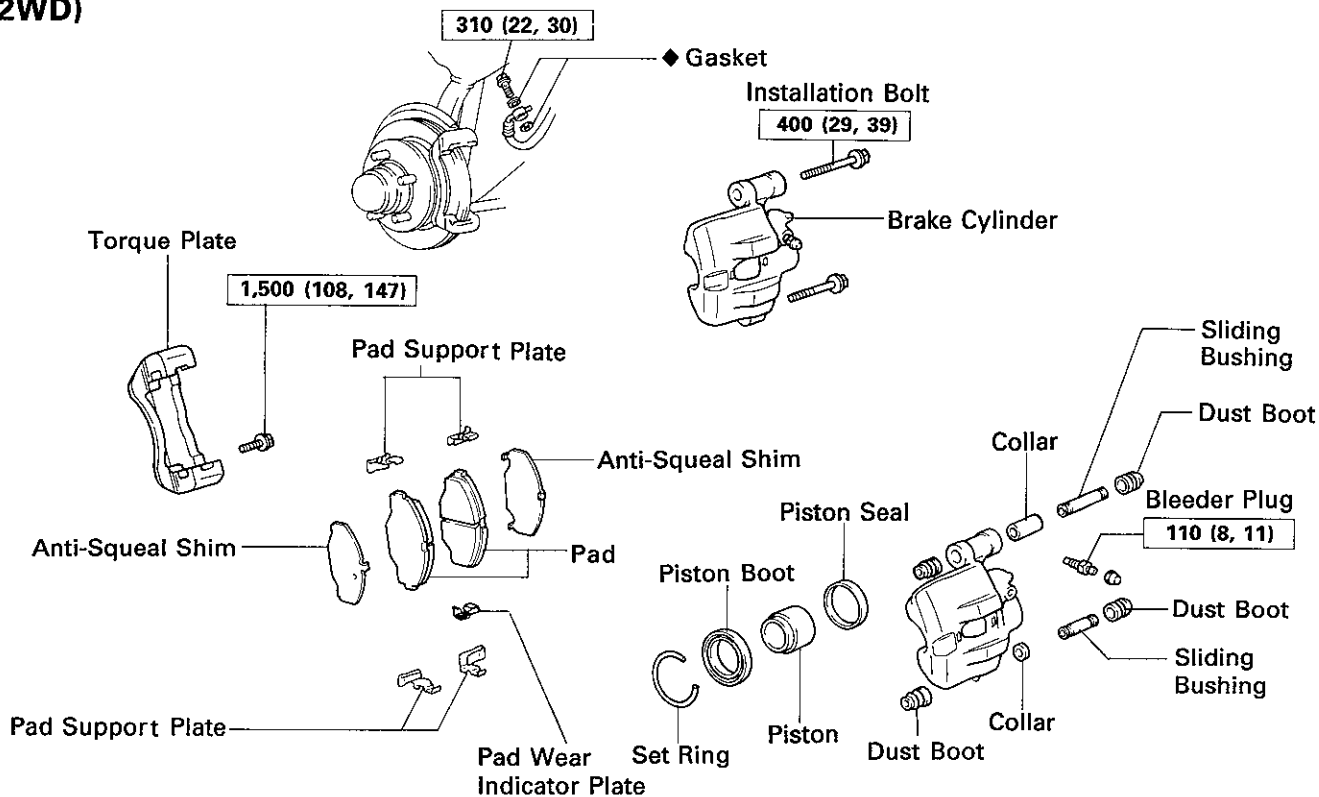
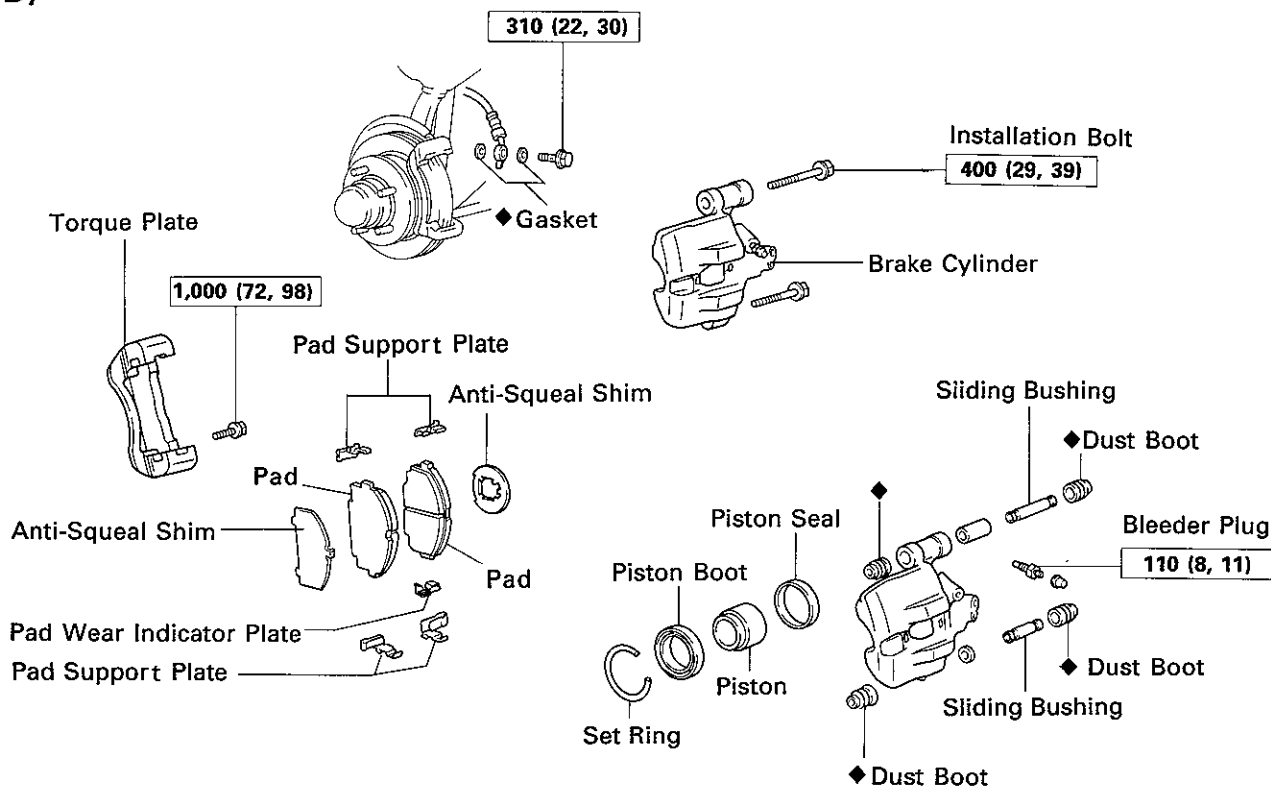


## Disc Brake COMPONENTS

(2WD)

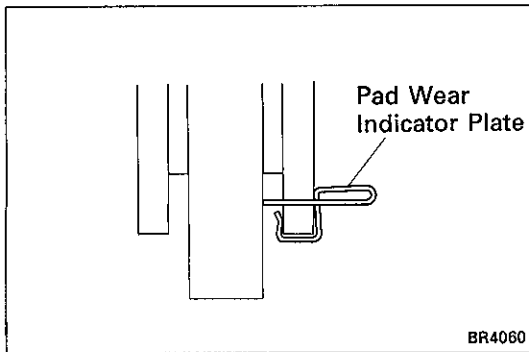


(4WD)



kg-cm (ft-lb, N-m) : Specified torque

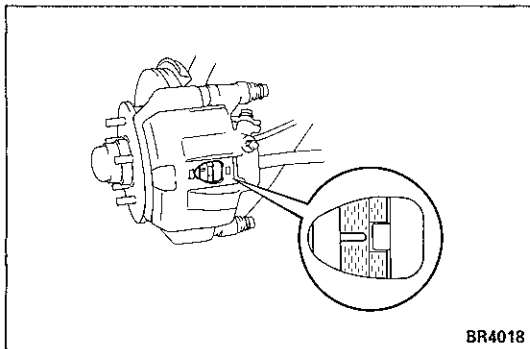
◆ Non-reusable part



## REPLACEMENT OF BRAKE PADS

**HINT:** If a squealing noise occurs from the brakes while driving, check the pad wear indicator plate. If the pad wear indicator plate contacts the rotor disc, the brake pads should be replaced.

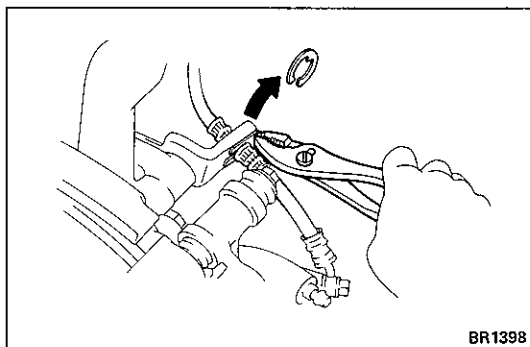
### 1. REMOVE FRONT WHEEL



### 2. INSPECT PAD LINING THICKNESS

Check the pad thickness through the cylinder inspection hole and replace pads if not within specification.

**Minimum thickness: 1.0 mm (0.039 in.)**



### 3. REMOVE CYLINDER FROM TORQUE PLATE

#### (a) (4WD)

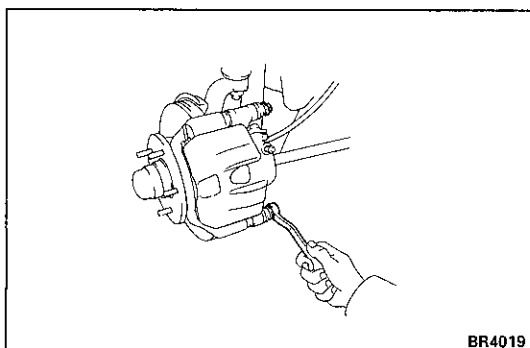
Remove the clip and E-ring from the brake hose connection and set the hose free.

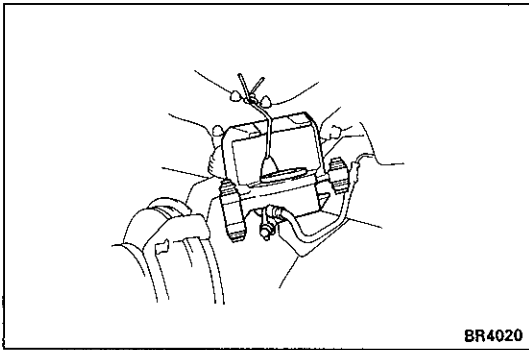
#### (b) (2WD)

Remove the two installation bolts.

#### (4WD)

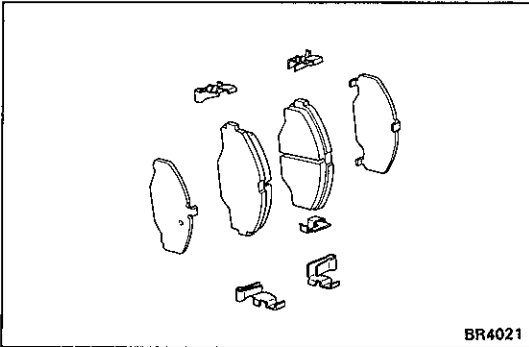
Position the wheels straight ahead and remove the two installation bolts.





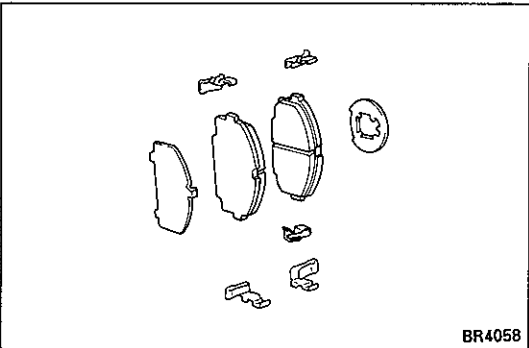
- (c) Remove the brake cylinder and suspend it so the hose is not stretched.

HINT: Do not disconnect the brake hose.



#### 4. REMOVE FOLLOWING PARTS (2WD)

- (a) Two pads
- (b) Two anti-squeal shims
- (c) Pad wear indicator plate
- (d) Four pad support plates



#### (4WD)

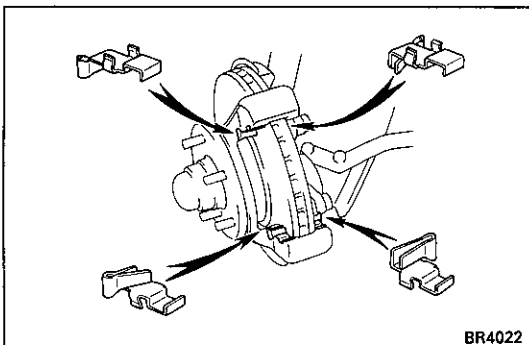
- (a) Two pads
- (b) Two anti-squeal shims
- (c) Pad wear indicator plate
- (d) Four pad support plates

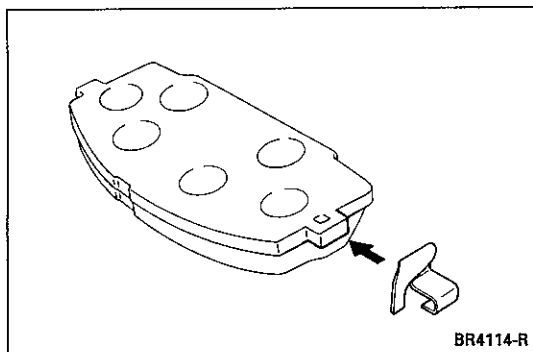
#### 5. CHECK ROTOR DISC THICKNESS (See step 2 on page BR-73)

#### 6. CHECK ROTOR DISC RUNOUT (See step 3 on page BR-73)

#### 7. INSTALL PAD SUPPORT PLATES

Install the four pad support plates to the torque plate.

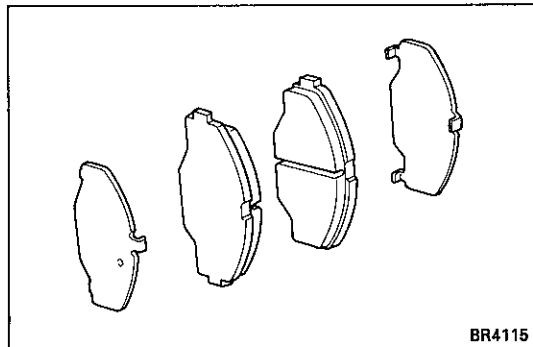




## 8. INSTALL NEW PADS

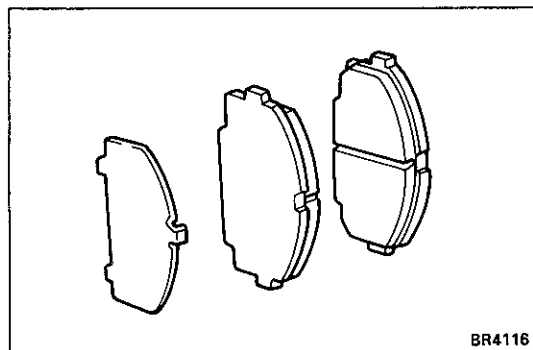
**NOTICE:** Do not allow oil or grease to get on the rubbing face.

(a) Install a pad wear indicator plate to the inside pad.



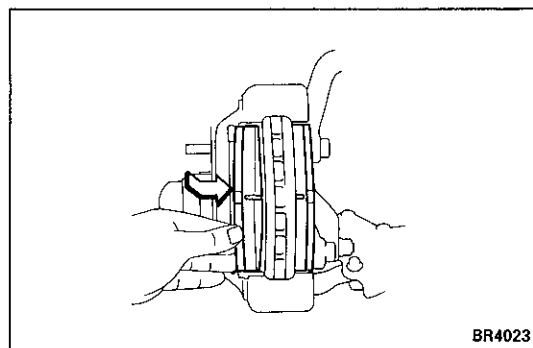
(b) (2WD)

Install the anti-squeal shims toward the backside of the pads.

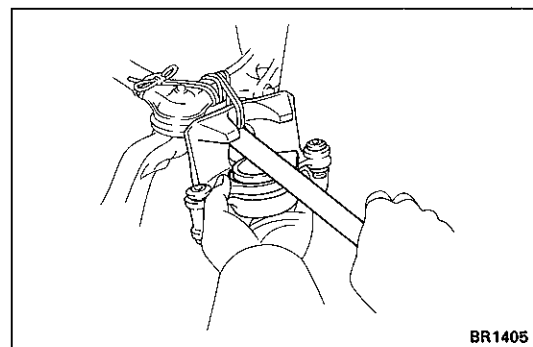


(c) (4WD)

Install the anti-squeal shim toward the backside of the outside pad.



(d) Install the pads onto each support plates.

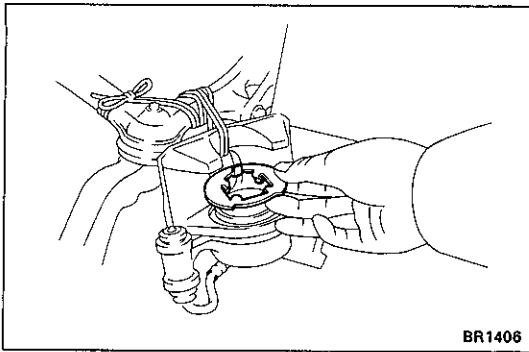


## 9. INSTALL CYLINDER

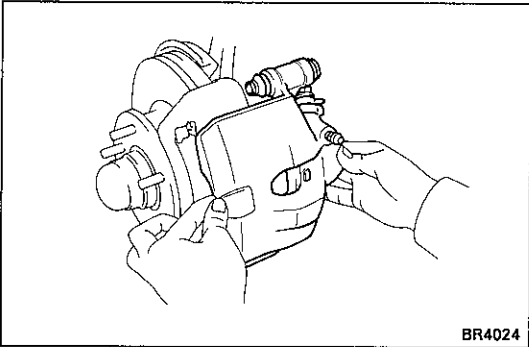
(a) Draw out a small amount of brake fluid from the reservoir.

(b) Press in the piston with a hammer handle or an equivalent.

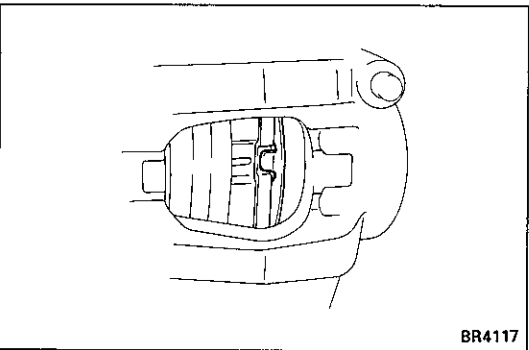
**HINT:** Always change the pads on one wheel at a time as there is possibility of the opposite piston flying out.



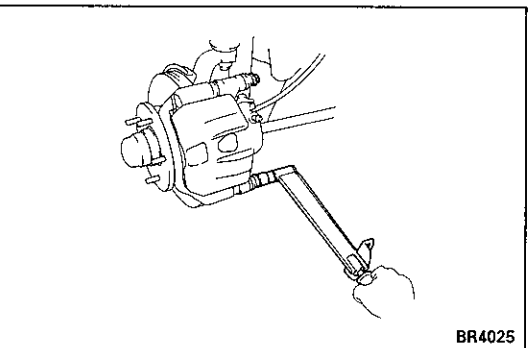
- (c) (4WD)  
Assemble the anti-squeal shim to the piston as shown.



- (d) (2WD)  
Install the brake cylinder carefully so the boot is not wedged.
- (e) (4WD)  
Position the wheels straight ahead and install the brake cylinder carefully so the boot is not wedged.



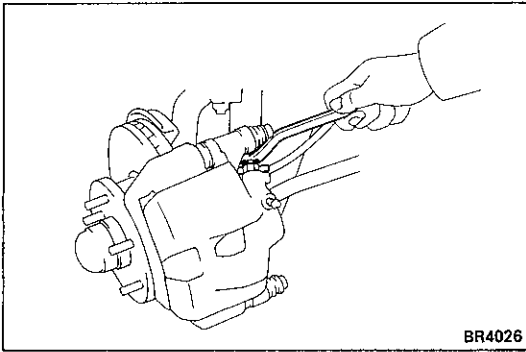
- (f) (4WD)  
Check that the piston side anti-squeal shim is in position.



- (g) Install and torque the two installation bolts.  
**Torque: 400 kg-cm (29 ft-lb, 39 N-m)**

## 10. INSTALL FRONT WHEEL

## 11. CHECK THAT FLUID LEVEL IS AT MAX LINE



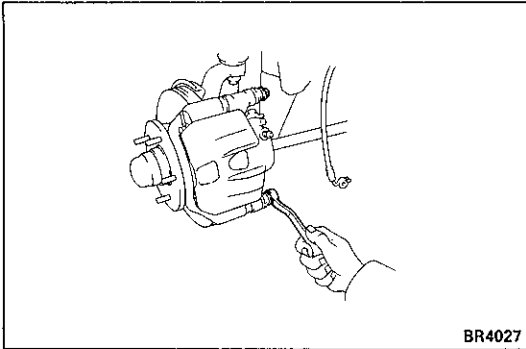
## REMOVAL OF CYLINDER

(See page BR-66)

### 1. DISCONNECT BRAKE HOSE

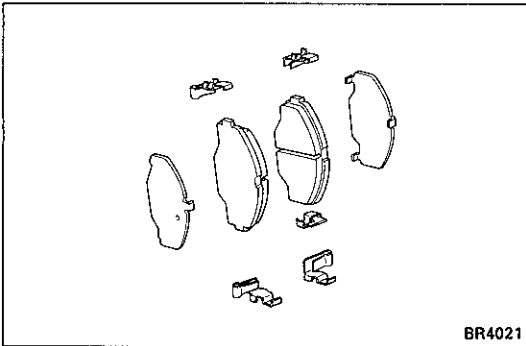
Remove the union bolt and disconnect the brake hose.

HINT: Use a container to catch the brake fluid.



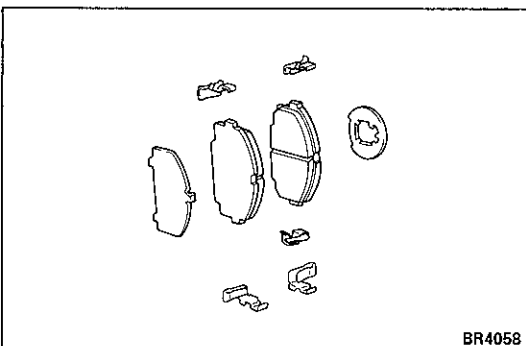
### 2. REMOVE CYLINDER

Remove the two installation bolts and cylinder.



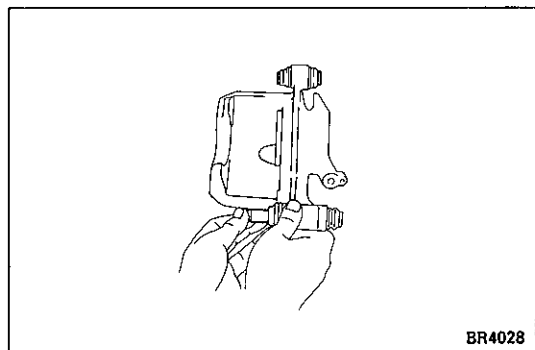
### 3. REMOVE FOLLOWING PARTS (2WD)

- (a) Two pads
- (b) Two anti-squeal shims
- (c) Pad wear indicator plate
- (d) Four pad support plates



### (4WD)

- (a) Two pads
- (b) Two anti-squeal shims
- (c) Pad wear indicator plate
- (d) Four pad support plates

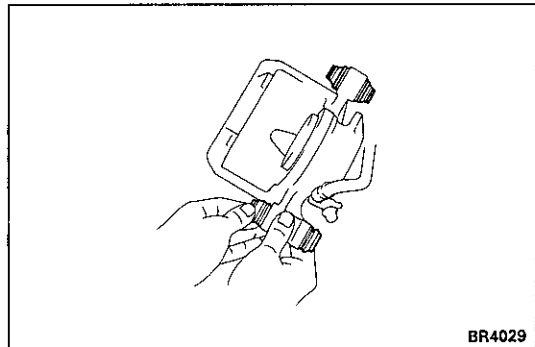


## DISASSEMBLY OF CYLINDER

(See page BR-66)

### 1. REMOVE SLIDING BUSHINGS

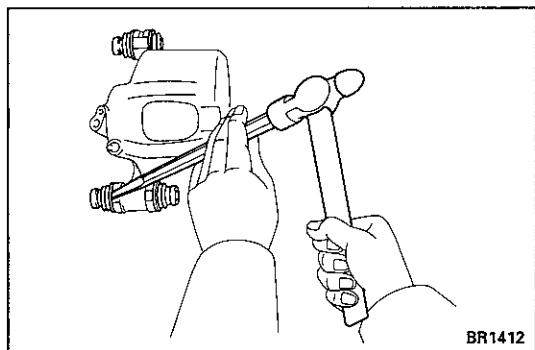
Remove the two sliding bushings from the cylinder.



### 2. REMOVE DUST BOOTS

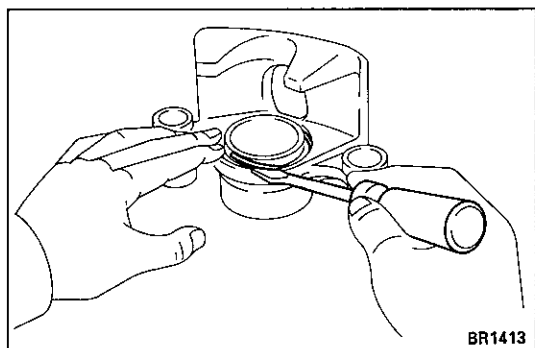
(2WD)

Remove the four dust boots and two collars from the cylinder.



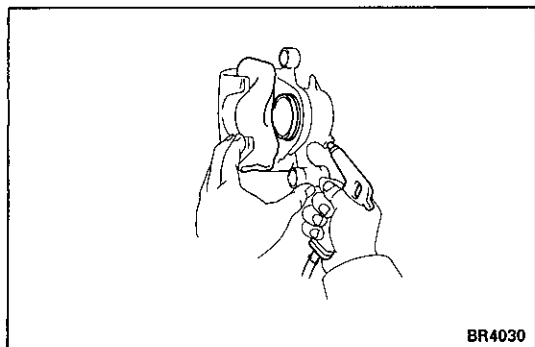
(4WD)

Using a chisel and a hammer, remove the four dust boots from the cylinder.



### 3. REMOVE SET RING AND CYLINDER BOOT

Using a screwdriver, remove the set ring and remove the cylinder boot.

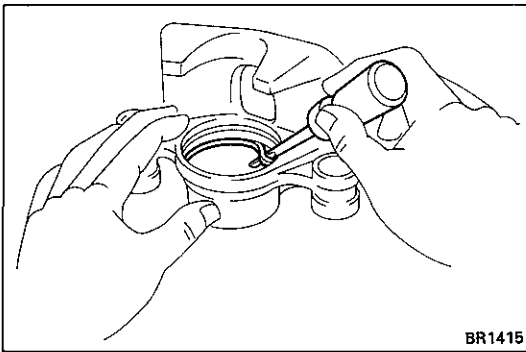


### 4. REMOVE PISTON FROM CYLINDER

(a) Put a piece of cloth or an equivalent between the piston and cylinder.

(b) Use compressed air to remove the piston from the cylinder.

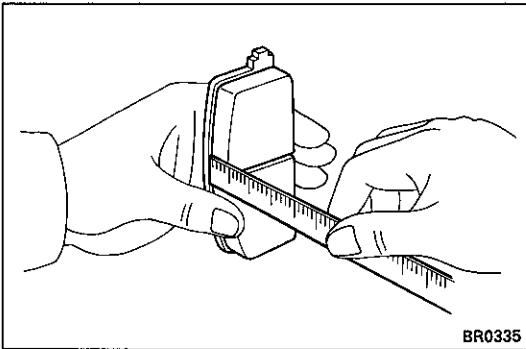
**CAUTION:** Do not place fingers in front of the piston when using compressed air.



BR1415

## 5. REMOVE PISTON SEAL FROM CYLINDER

Using a screwdriver, remove the piston seal.



BR0335

## INSPECTION AND REPAIR OF FRONT BRAKE COMPONENTS

### 1. MEASURE PAD LINING THICKNESS

**Minimum thickness:** 1.0 mm (0.039 in.)

**Standard thickness:** 10.0 mm (0.394 in.)

Replace the pad if the thickness is less than the minimum (the 1.0 mm slit is no longer visible) or if it shows sign of uneven wear.

### 2. MEASURE ROTOR DISC THICKNESS

**Minimum thickness:**

2WD 25.0 mm (0.984 in.)

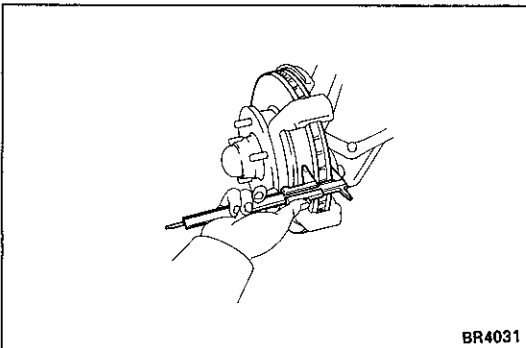
4WD 22.0 mm (0.866 in.)

**Standard thickness:**

2WD 23.0 mm (0.906 in.)

4WD 20.0 mm (0.787 in.)

If the disc is scored or worn, or if thickness is less than minimum, repair or replace the disc.



BR4031

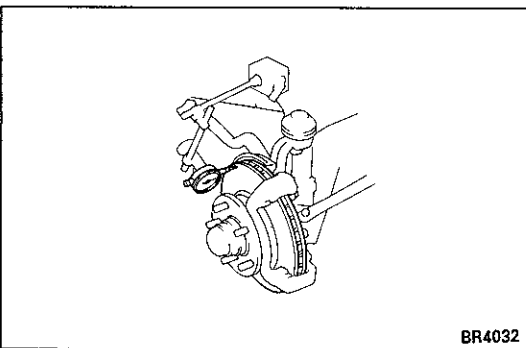
### 3. MEASURE ROTOR DISC RUNOUT

Measure the rotor disc runout at 10 mm (0.39 in.) from the outer edge of the rotor disc.

**Maximum disc runout:** 0.12 mm (0.0047 in.)

If the runout is greater than the maximum, replace the disc.

**HINT:** Before measuring the runout, confirm that the front bearing play is within specification.



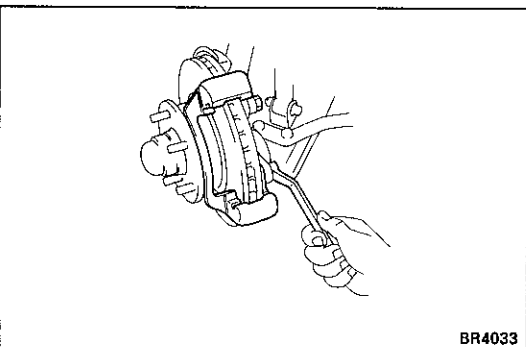
BR4032

### 4. IF NECESSARY, REPLACE ROTOR DISC

(a) Remove the torque plate from the knuckle.

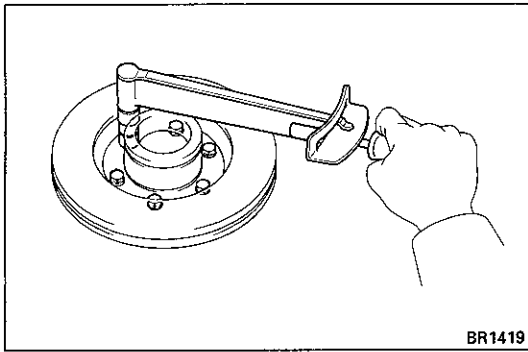
(b) Remove the axle hub.

(c) Remove the rotor disc from the axle hub.



BR4033





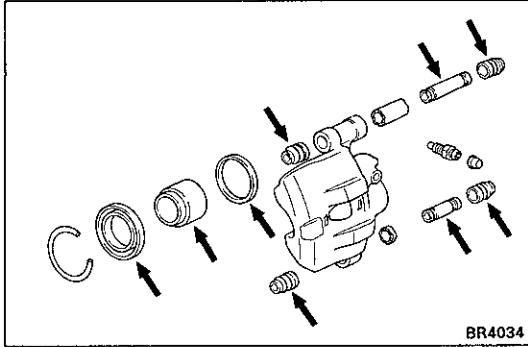
BR1419

- (d) Install a new rotor disc to axle hub. torque the bolts.

**Torque:** 2WD 700 kg-cm (51 ft-lb, 68 N·m)  
 4WD 650 kg-cm (47 ft-lb, 64 N·m)

- (e) Install the torque plate onto the knuckle.

**Torque:** 2WD 1,500 kg-cm (108 ft-lb, 147 N·m)  
 4WD 1,000 kg-cm (72 ft-lb, 98 N·m)



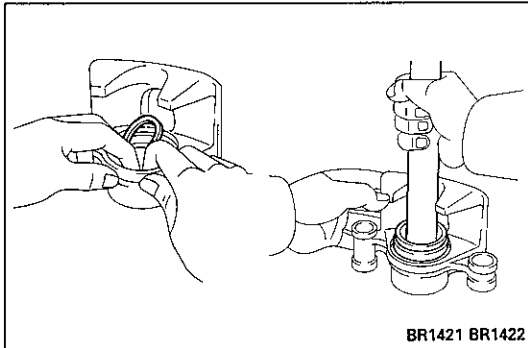
BR4034

## ASSEMBLY OF CYLINDER

(See page BR-66)

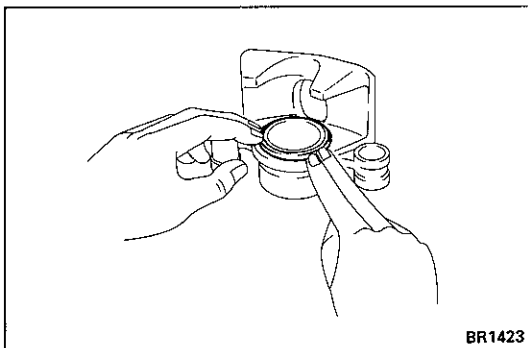
### 1. APPLY LITHIUM SOAP BASE GLYCOL GREASE TO PARTS

Apply lithium soap base glycol grease to the parts indicated with arrows.



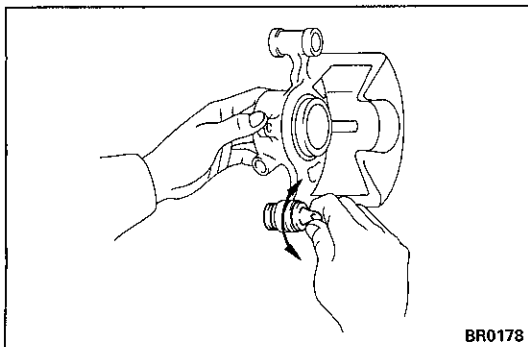
BR1421 BR1422

### 2. INSTALL PISTON SEAL AND PISTON IN CYLINDER



BR1423

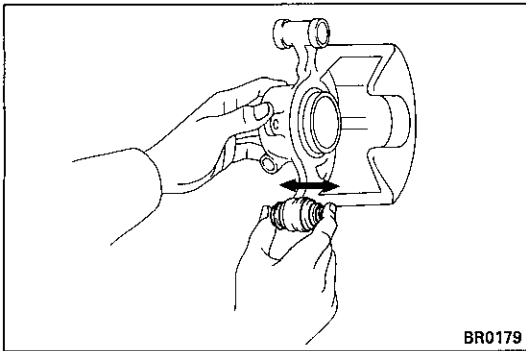
### 3. INSTALL CYLINDER BOOT AND SET RING IN CYLINDER



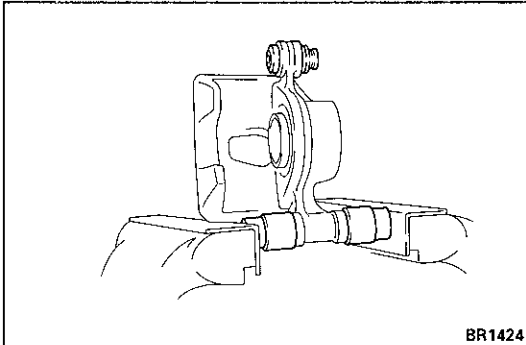
BR0178

### 4. INSTALL DUST BOOTS AND SLIDING BUSHING (2WD)

- (a) Install the two collars and four dust boots into the brake cylinder.
- (b) Insure that the boots are secured firmly to each brake cylinder groove.

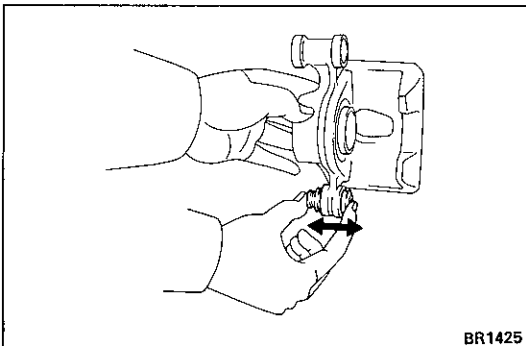


- (c) Install the sliding bushings into the boots.
- (d) Insure that the boots are secured firmly to each bushing groove.

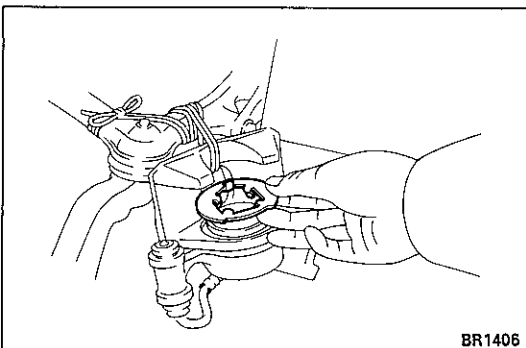
**(4WD)**

- (a) Using two 24 mm socket wrenches, press in the four boots into the cylinder until the boot completely stick to the cylinder.

**HINT:** Be careful not to damage the boot.



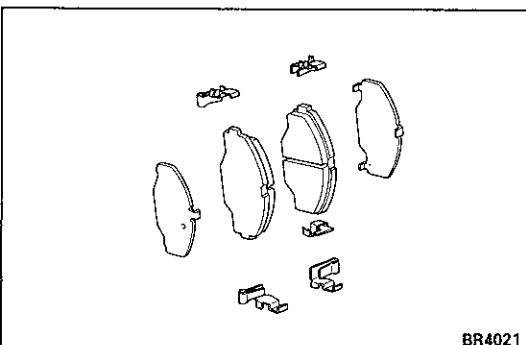
- (b) Install the two sliding bushings to the boots.
- (c) Insure that the boots are secured firmly to each bushing groove.

**INSTALLATION OF CYLINDER**

(See page BR-66)

**1. (4WD)****INSTALL ANTI-SQUEAL SHIM TO PISTON**

Install the anti-squeal shim to the piston as shown.

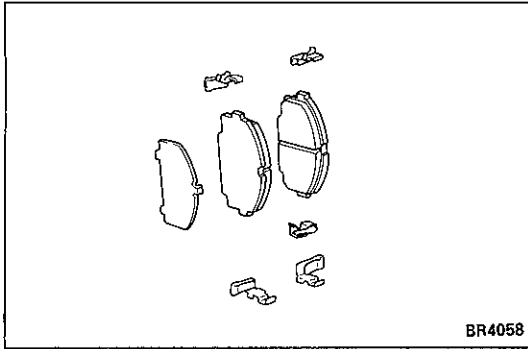
**2. INSTALL PADS**

(See step 7 and 8 on page BR-68)

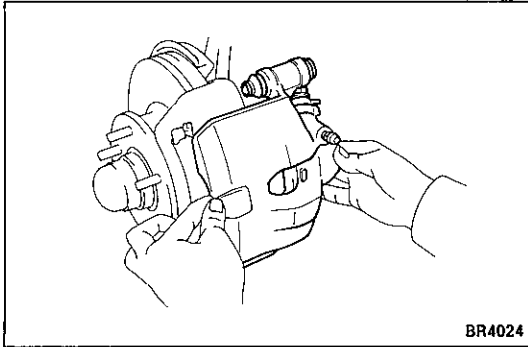
Install the following parts.

**(2WD)**

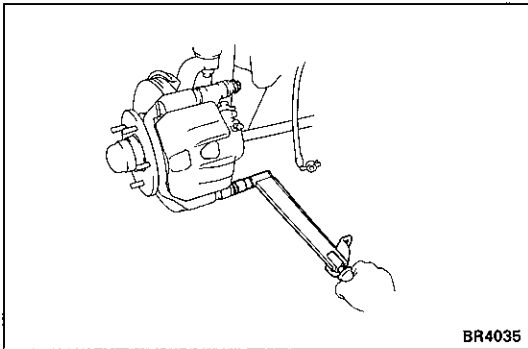
- Four pad support plates
- Pad wear indicator plate (Inside pad)
- Two pads
- Two anti-squeal shims

**(4WD)**

- Four pad support plates
- Pad wear indicator plate (Inside pad)
- Two pads
- Anti-squeal shim

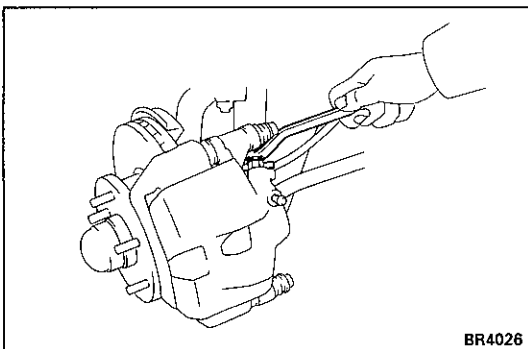
**3. INSTALL CYLINDER**

- (a) Install the brake cylinder.



- (b) Install and torque the two installation bolts.

**Torque: 400 kg-cm (29 ft-lb, 39 N·m)**

**4. CONNECT FLEXIBLE HOSE**

Set the flexible hose and new gaskets in position and install the union bolt.

**Torque: 310 kg-cm (22 ft-lb, 30 N·m)**

**5. FILL BRAKE RESERVOIR WITH BRAKE FLUID AND BLEED BRAKE SYSTEM  
(See page BR-7)****6. CHECK FOR FLUID LEAKAGE**