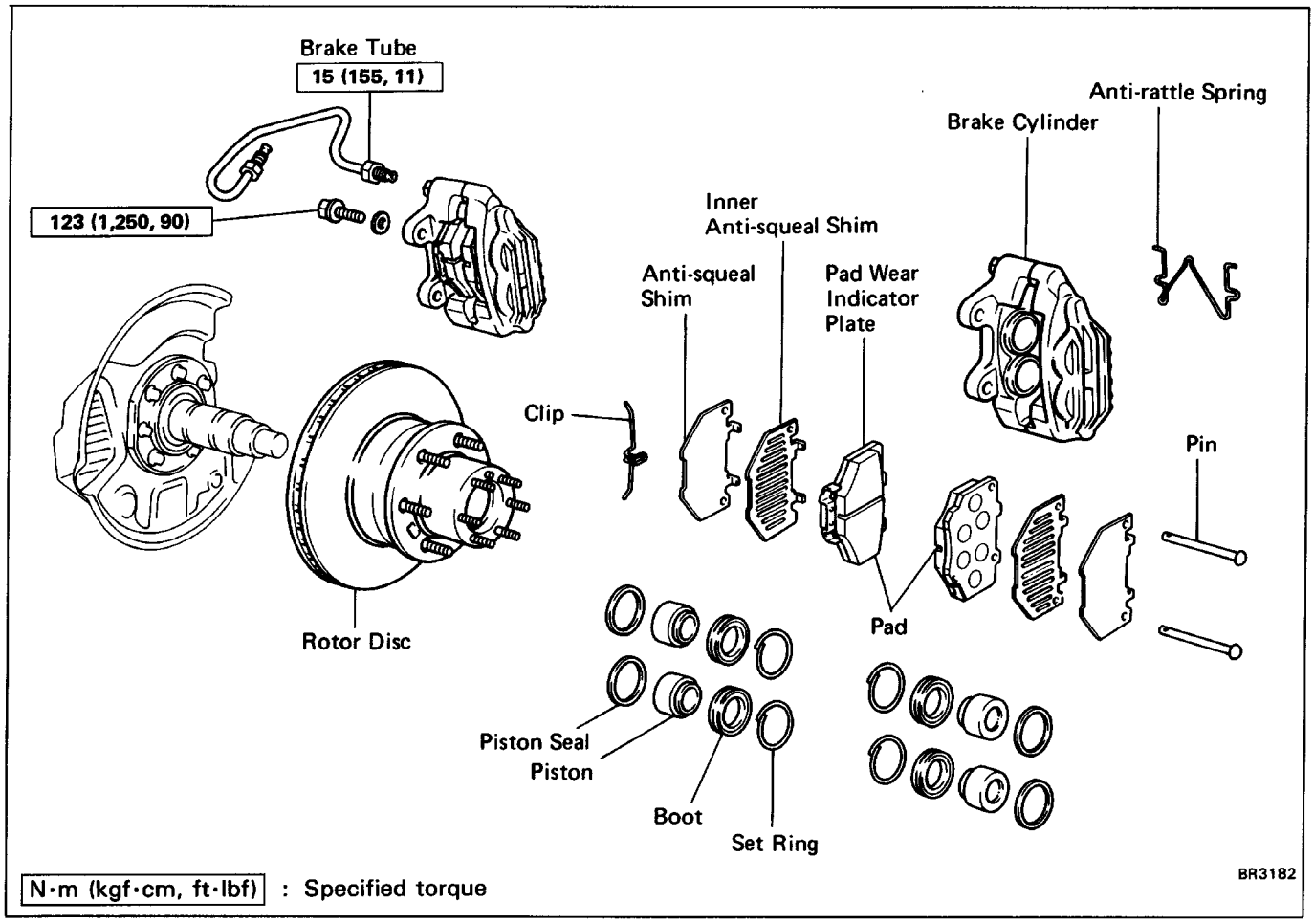
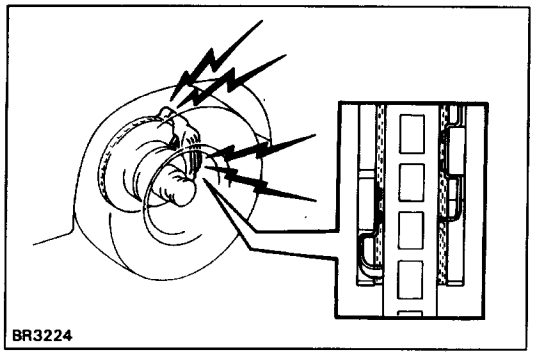
FRONT BRAKE
4WD (S12 + 12 Type Disc)
COMPONENTS

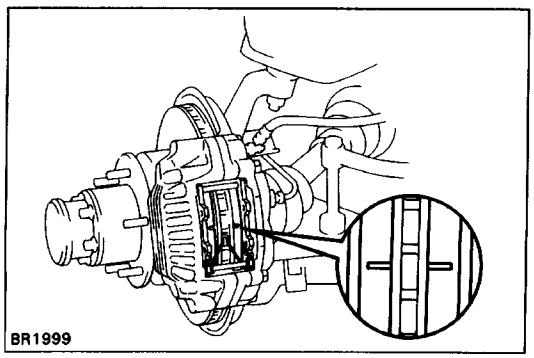




REPLACEMENT OF BRAKE PADS

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.

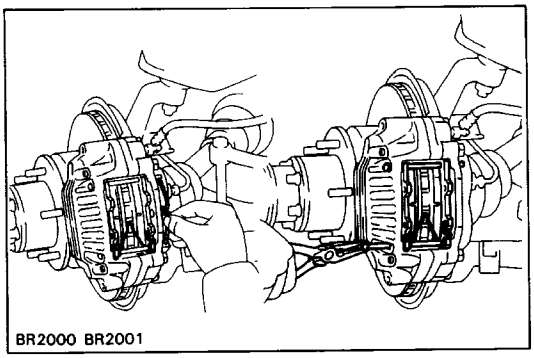
1. REMOVE FRONT WHEEL



2. INSPECT PAD LINING THICKNESS

Check the pad thickness and replace pads if not within specification.

Minimum thickness: 1.0 mm (0.039 in.)



3. REMOVE FOLLOWING PARTS

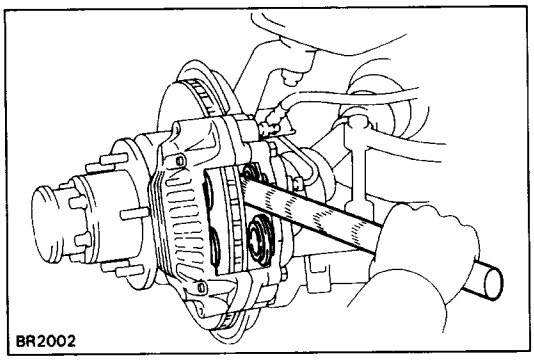
(a) Clip
(b) Two pins
(c) Anti–rattle spring
(d) Two pads
(e) Four anti–squeal shims

4. CHECK ROTOR DISC THICKNESS

(See step 2 on page BR–37)

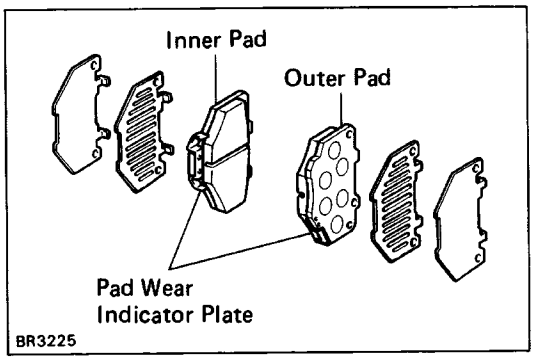
5. CHECK ROTOR DISC RUNOUT

(See step 3 on page BR–37)

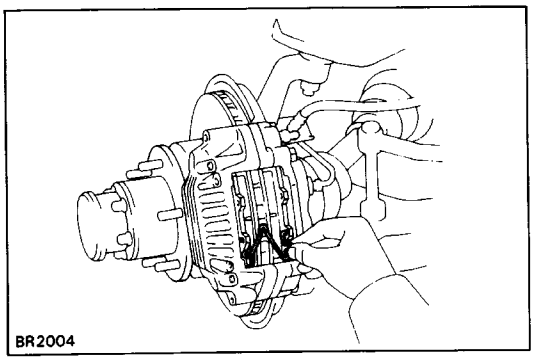


6. INSTALL NEW PADS

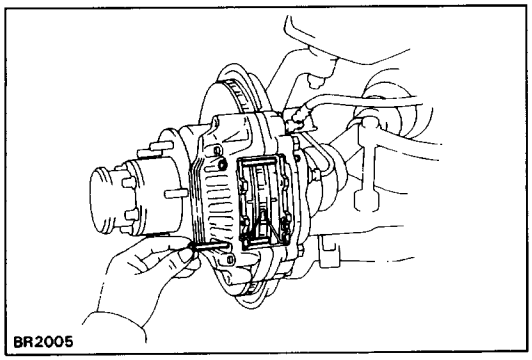
(a) Draw out a small amount of brake fluid from the res–ervoir.
(b) Press in the pistons with a hammer handle or ar equivalent.
HINT: Always change the pads on one wheel at a time as there is possibility of the opposite piston flying out.



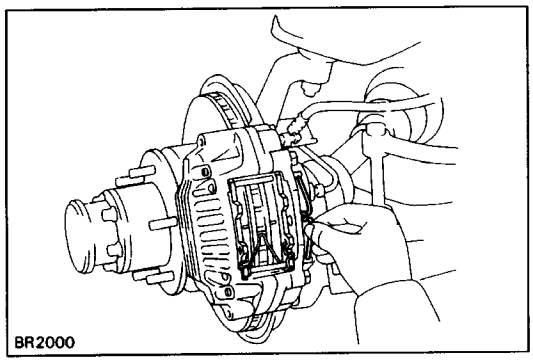
(c) Install the four anti–squeal shims to new pads a: shown.
HINT: Apply disc brake grease to both sides of the inner anti–squeal shims.
(d) Install the two pads as shown in the illustration.
NOTICE: Do not allow oil or grease to get on the rub bing face.



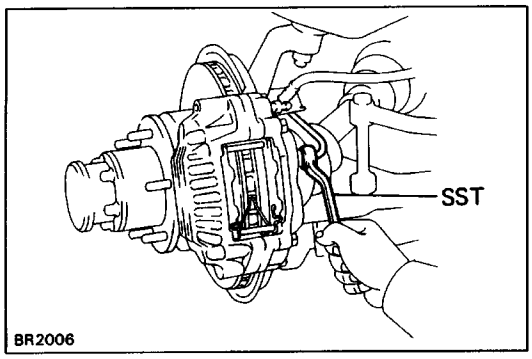
7. INSTALL ANTI–RATTLE SPRING



8. INSTALL TWO PINS



9. INSTALL CLIP



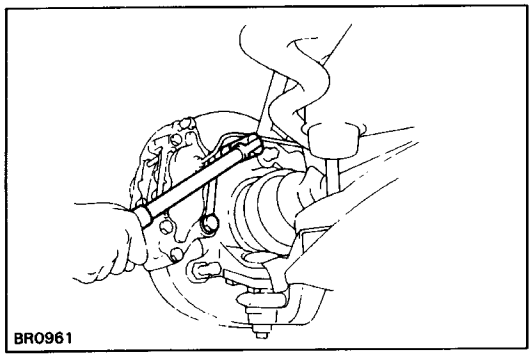
REMOVAL OF CYLINDER

(See page BR–33**)**

1. REMOVE FRONT WHEEL

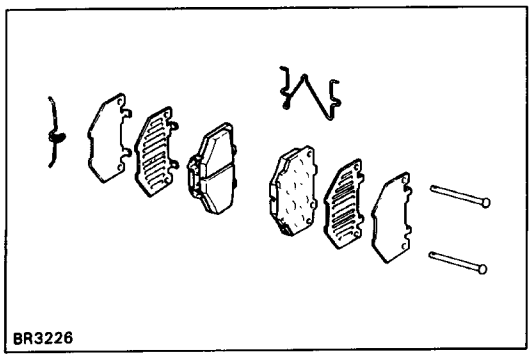
2. DISCONNECT BRAKE TUBE

Using SST, disconnect the brake tube.
Use a container to catch the brake fluid.
SST 09751–36011



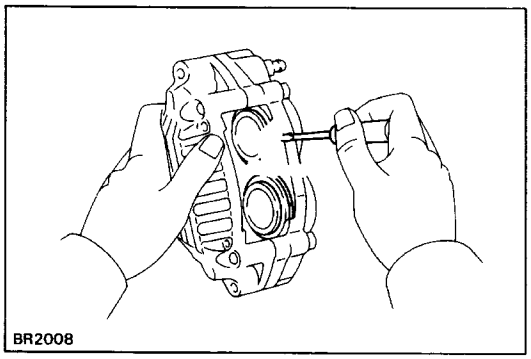
3. REMOVE CYLINDER

Remove the two mounting bolts and remove the cylinder.



4. REMOVE FOLLOWING PARTS:

(a) Clip
(b) Two pins
(c) Anti–rattle spring
(d) Two pads
(e) Four anti–squeal shims

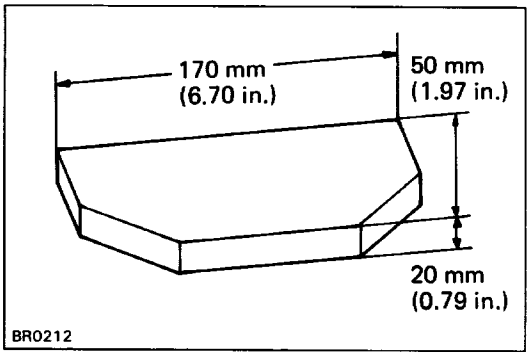


DISASSEMBLY OF CYLINDER

(See page BR–33)

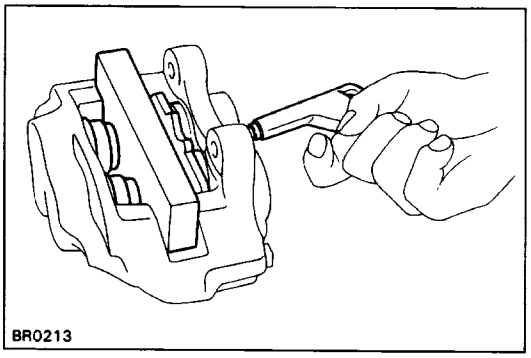
1. REMOVE CYLINDER BOOT SET RINGS AND BOOTS

Using a screwdriver, remove the four cylinder boot set rings and four boots.



2. REMOVE PISTONS FROM CYLINDER

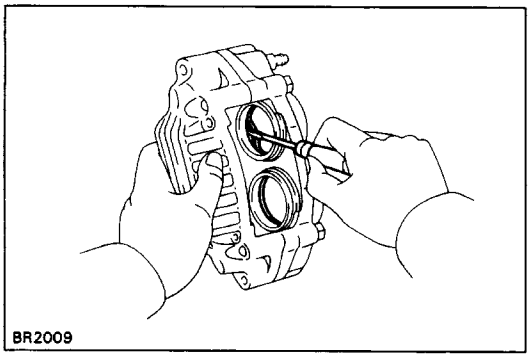
(a) Prepare the wooden plate as shown in the illustration to hold the pistons.



(b) Place the plate between the pistons and insert a pad at one side.

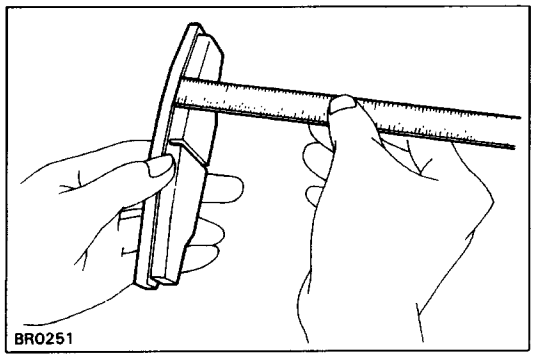
(c) Use compressed air to remove the pistons alternately from the cylinder.

NOTICE: Do not place your fingers in front of the pistons when using compressed air.



3. REMOVE PISTON SEALS

Using a screwdriver, remove the four seals from the cylinder.



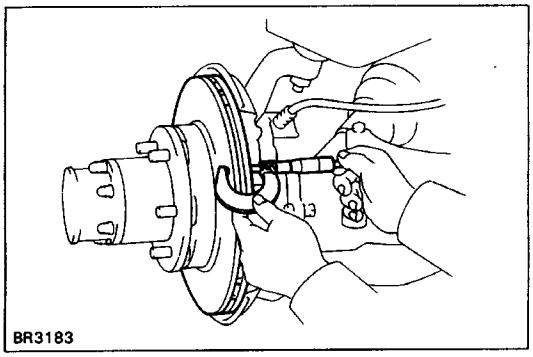
INSPECTION AND REPAIR OF FRONT BRAKE COMPONENTS

1. MEASURE PAD LINING THICKNESS

Standard thickness: 9.5 mm (0. 374 in.)

Minimum thickness: 1.5 mm (0.059 in.)

Replace the pads if the thickness is less than the mini–mum (the 1.5 mm slit is no longer visible) or if it shows sign of uneven wear.

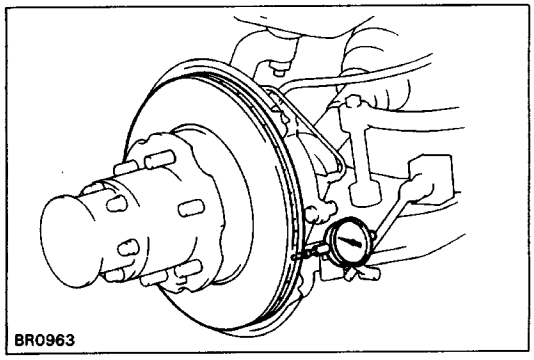


2. MEASURE ROTOR DISC THICKNESS

Standard thickness: 20.0 mm (0.787 in.)

Minimum thickness: 18.0 mm (0.709 in.)

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



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: 0.09 mm (0.0035 in.)

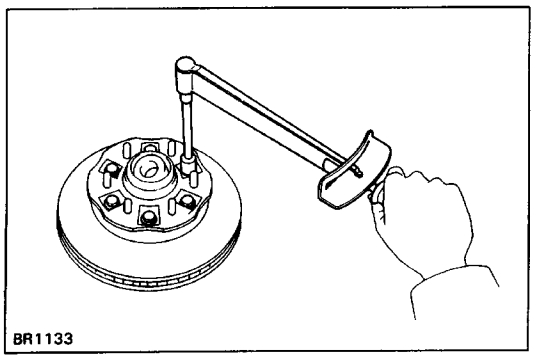
If the runout is greater than maximum, replace the rotor disc.

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

4. IF NECESSARY, REPLACE ROTOR DISC

(a) Remove the front axle hub.

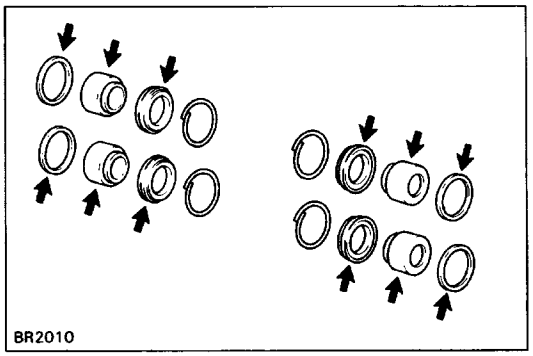
(b) Remove the disc from the axle hub.



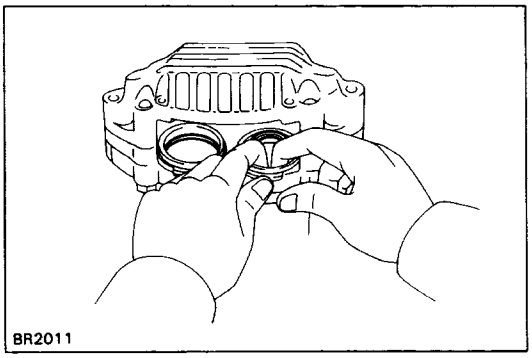
(c) Install a new rotor disc and torque the bolts.

Torque: 64 N–m (650 kgf–cm, 47 ft–lbf)

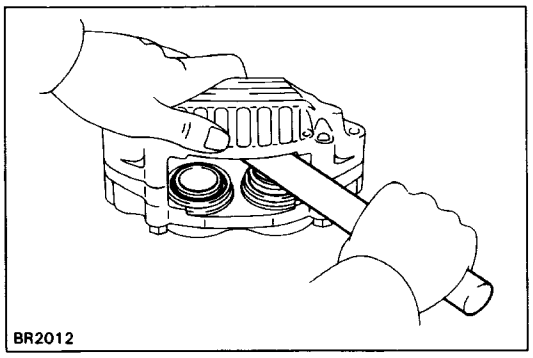
(d) Install the axle hub and adjust the front bearing pre–load.



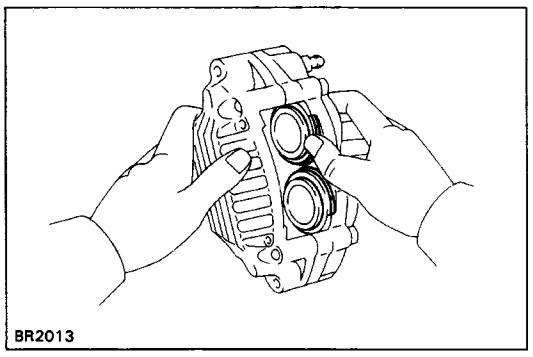
ASSEMBLY OF CYLINDER
(See page BR–33)
1. APPLY LITHIUM SOAP BASE GLYCOL GREASE TO PARTS INDICATED BY ARROWS



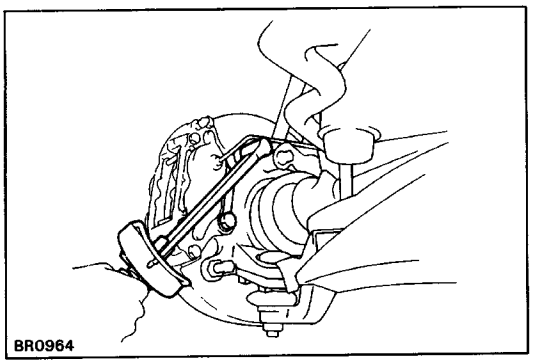
2. INSTALL PISTON SEALS INTO CYLINDER



3. INSTALL PISTONS INTO CYLINDER



4. INSTALL CYLINDER BOOTS AND SET RINGS INTO CYLINDER



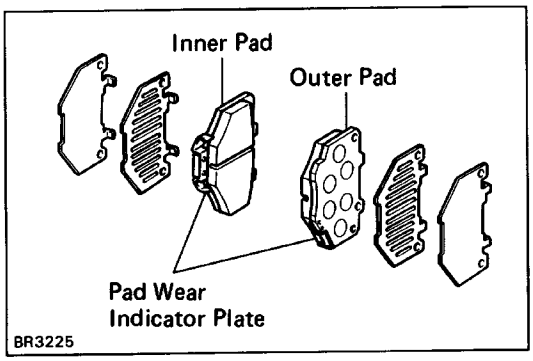
INSTALLATION OF CYLINDER

(See page BR–33)

1. INSTALL CYLINDER

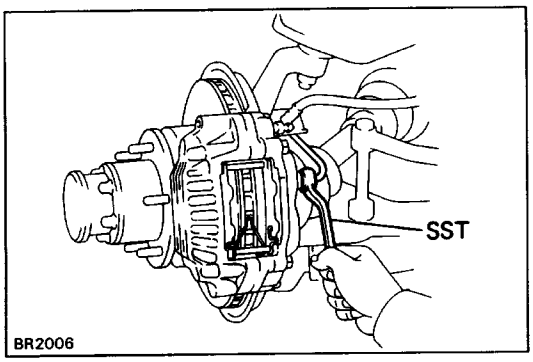
Install the brake cylinder, and torque the two mounting bolts.

Torque: 123 N–m (1,250 kgf–cm, 90 ft–lbf)



2. INSTALL PADS

(See steps 6 to 9 on pages BR–34 and 35)



3. CONNECT BRAKE TUBE

Using SST, connect the brake tube.

SST 09751–36011

Torque: 15 N–m (155 kgf –cm, 11 ft–lbf)

4. FILL BRAKE RESERVOIR WITH BRAKE FLUID AND BLEED BRAKE SYSTEM

(See page BR–8)

5. CHECK FOR FLUID LEAKAGE

6. INSTALL FRONT WHEEL