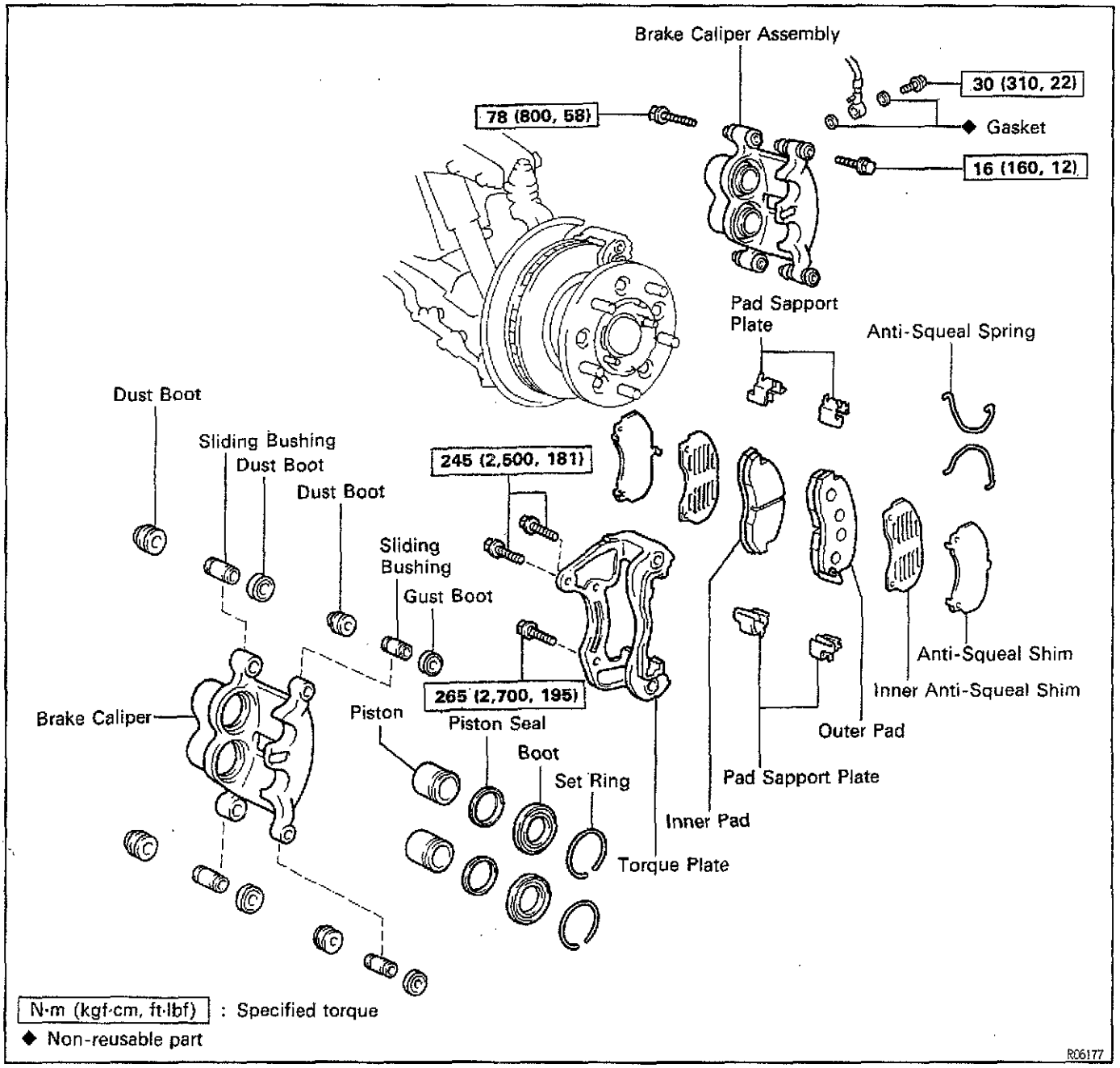
FRONT BRAKE (Disc Brake)

COMPONENTS

BR0L4-01



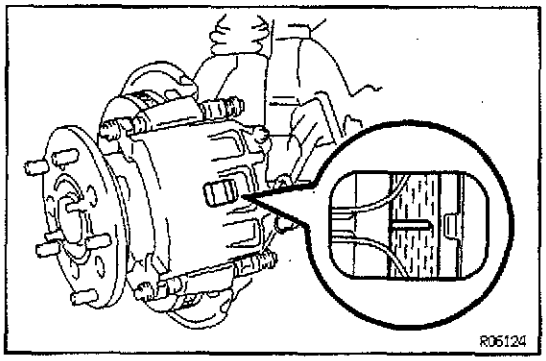
BR

BR0L5-01

BRAKE PADS REPLACEMENT

HINT: If a squealing noise occurs from the front brakes while driving, check the pad wear indictor plate. If there are traces of the indictor contacting the disc, the brake pad should be replaced.

1. **REMOVE FRONT WHEEL**

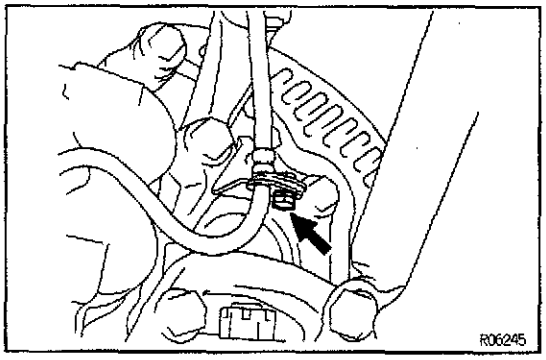


2. INSPECT PAD LINING THICKNESS

Check the pad thickness through the caliper inspection hole and replace pads if groove can no longer be seen.

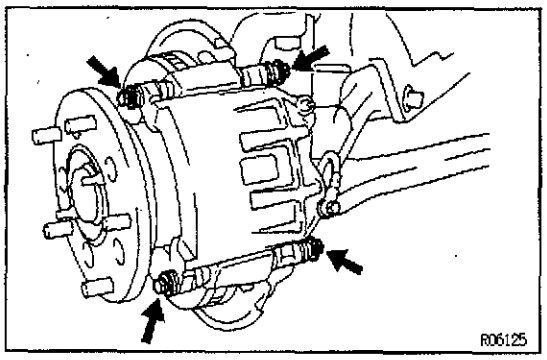
Minimum thickness:

1.0 mm (0.039 in.)

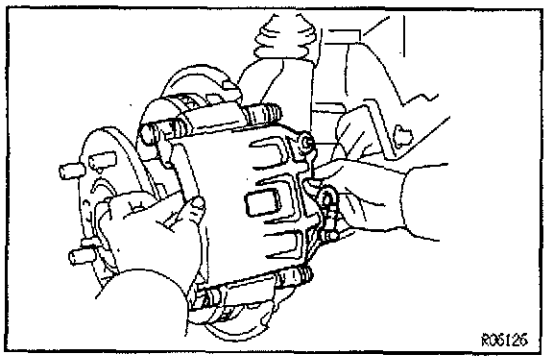


3. REMOVE CALIPER

(a) Remove the bolt and brake hose from the steering knuckle.

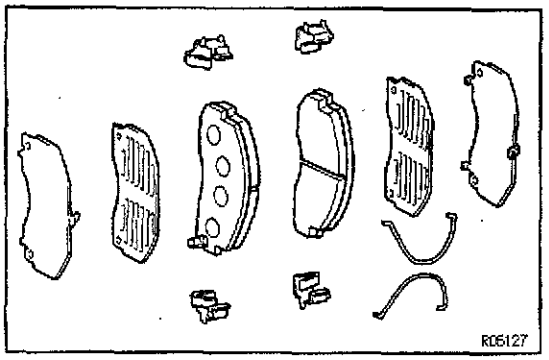


(b) Remove the 4 installation bolts.



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

HINT: Do not disconnect the brake hose.

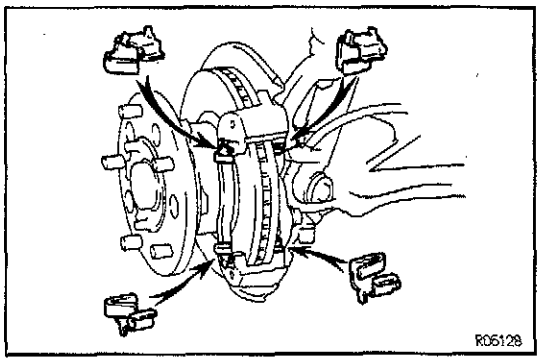


4. REMOVE FOLLOWING PARTS

(a) 2 anti–squeal springs
(b) 2 brake pads
(c) 4 anti–squeal shims
(d) 4 pad support plates

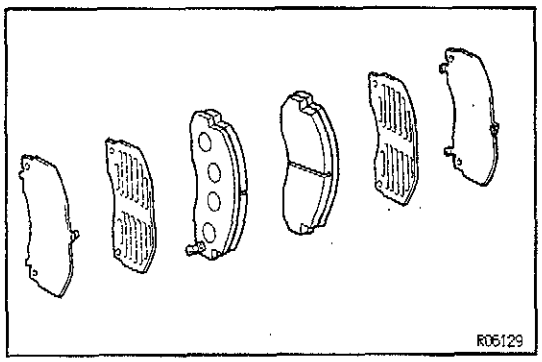
5. CHECK DISC THICKNESS AND RUNOUT

(See page BR–47)



6. INSTALL PAD SUPPORT PLATES

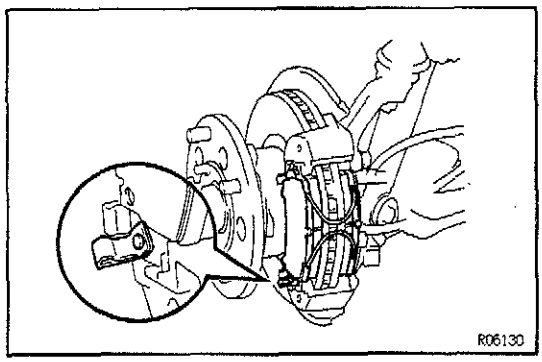
Install the 4 pad support plates to the torque plate.



7. INSTALL NEW PADS

(a) Apply disc brake grease to both sides of the inner anti–squeal shims.

(b) Install the 2 anti–squeal shims on each pad.

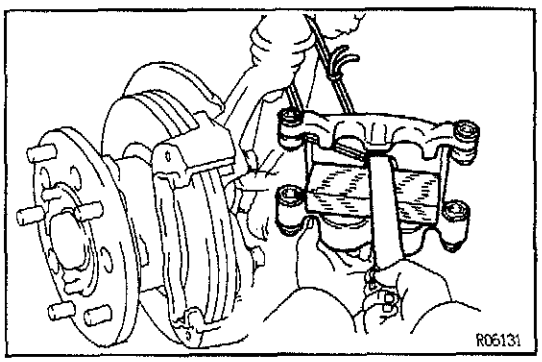


(c) Install the inside pad.

(d) Install the outside pad with the pad wear indicator plate facing downward.

NOTICE: There should be no oil or grease adhering to the friction surfaces of the pads or the pads or the disc.

(e) Install 2 anti–squeal springs.



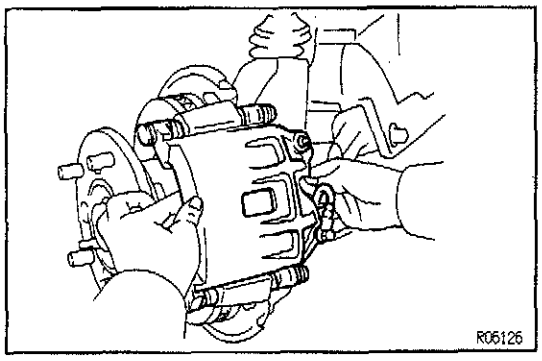
8. INSTALL CALIPER

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

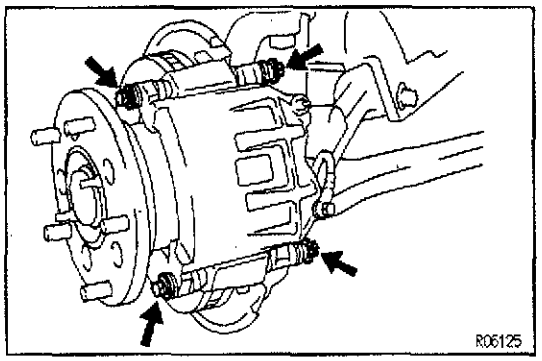
(b) Place a wooden plate between the piston and caliper.

(c) Press in the pistons with a hammer handle or an equivalent.

HINT: If the piston is difficult to push in, loosen the bleeder plug and push in the piston while letting some brake fluid escape.

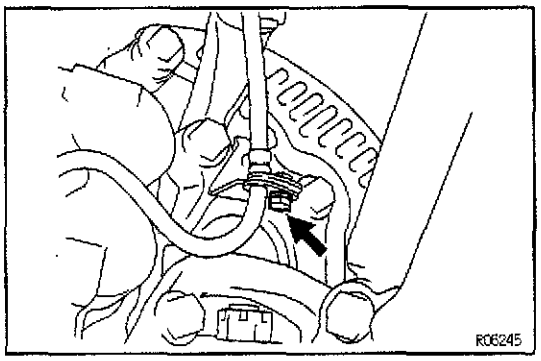


(d) Install the brake caliper carefully so the boot is not wedged.



(e) Install and torque the installation bolts.
Torque:

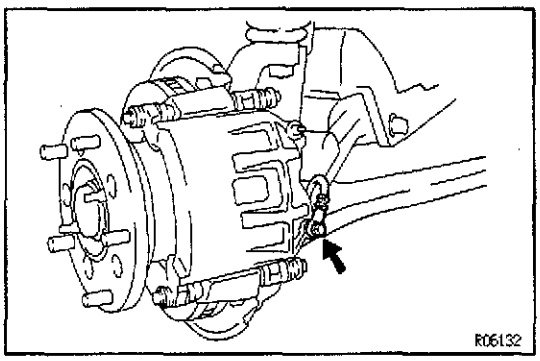
Outside bolts	16 N·m (160 kgf·cm, 12 ft·lbf)
Inside bolts	78 N·m (800 kgf·cm, 58 ft·lbf)



(f) Install the brake hose to the steering knuckle with the bolt.

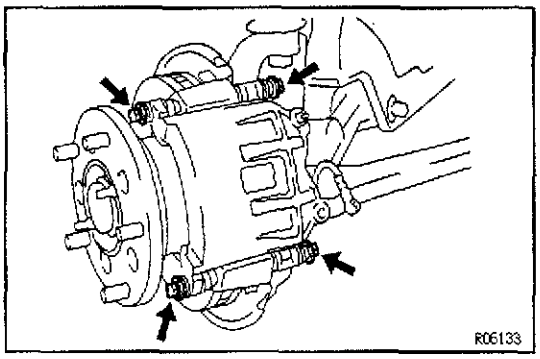
9. **INSTALL FRONT WHEEL**
10. **CHECK THAT FLUID LEVEL IS AT MAX LINE**

CALIPER REMOVAL



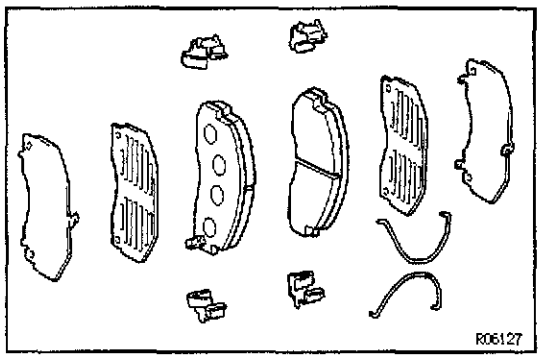
1. **DISCONNECT BRAKE HOSE**

(a) Remove the union bolt and 2 gaskets from the brake caliper, then disconnect the brake hose from the brake caliper.
(b) Use a container to catch the brake fluid as it drains out.



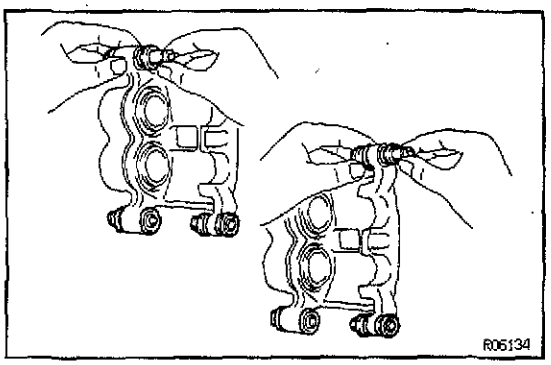
2. **REMOVE CALIPER**

Remove the 4 installation bolts and caliper.



3. **REMOVE FOLLOWING PARTS:**

(a) 2 anti—squeal springs
(b) 2 brake pads
(c) 4 anti—squeal shims
(d) 4 pad support plates



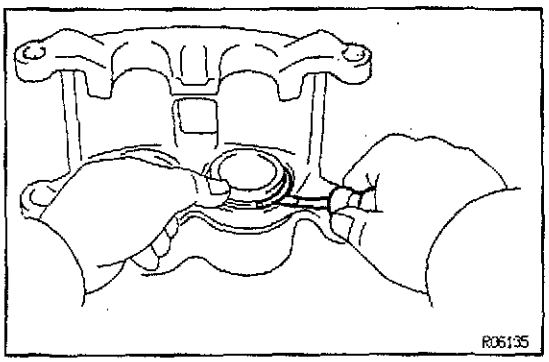
BR0L7-01

CALIPER DISASSEMBLY

1. REMOVE FOLLOWING PARTS:

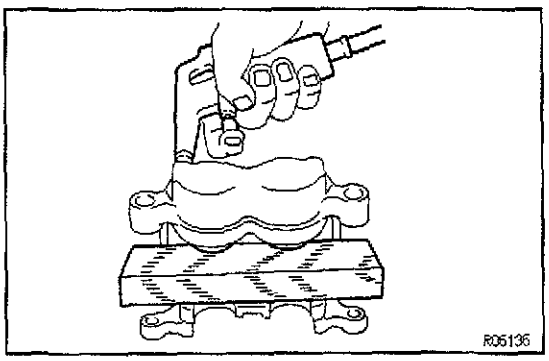
(a) 4 sliding bushings

(b) 8 dust boots



2. REMOVE CYLINDER BOOT SET RINGS AND CYLINDER BOOTS

Using a screwdriver, remove the 2 cylinder boot set rings and 2 cylinder boots from the cylinders.

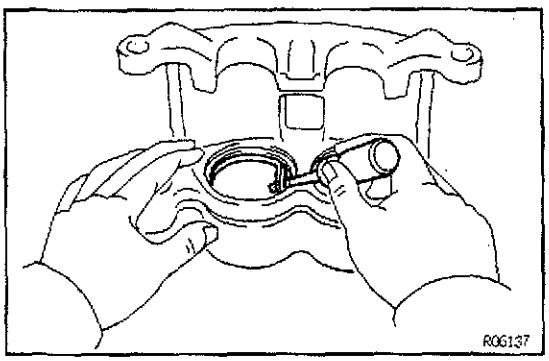


3. REMOVE PISTONS FROM CYLINDERS

(a) Place a wooden plate between the pistons and caliper, as shown.

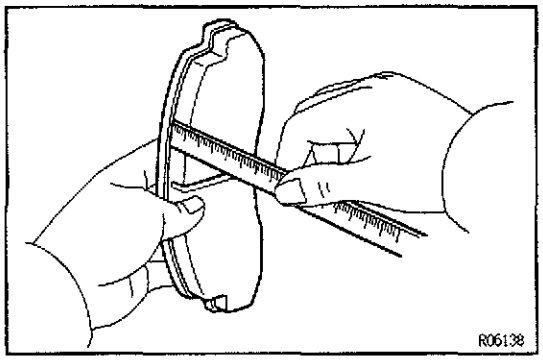
(b) Use compressed air to remove the 2 pistons from the cylinders.

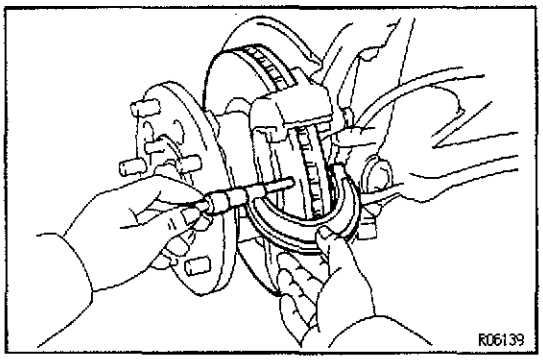
CAUTION: Do not place your fingers in front of the pistons when using compressed air.

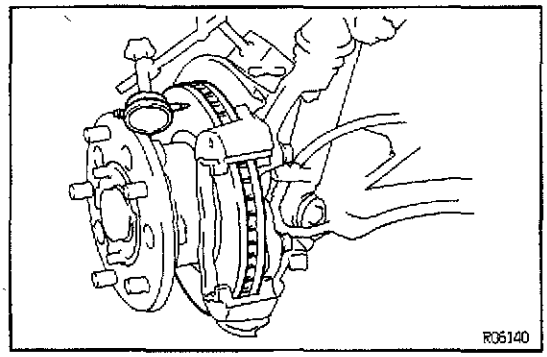


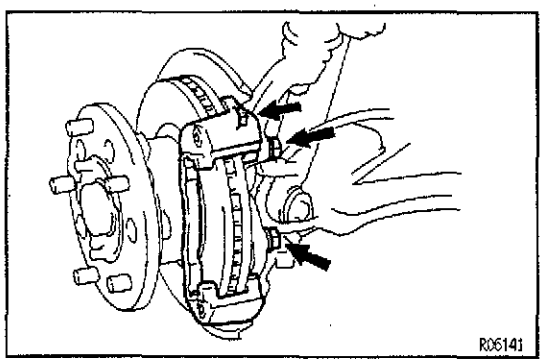
4. REMOVE PISTON SEALS FROM CYLINDERS

Using a screwdriver, remove the 2 piston seals from the cylinders.









FRONT BRAKE COMPONENTS INSPECTION AND REPAIR

1. MEASURE PAD LINING THICKNESS

Using a ruler, measure the pad lining thickness.

Standard thickness:

14.0 mm (0.551 in.)

Minimum thickness:

1.0 mm (0.039 in.)

Replace the pad as a set if the thickness is less than the minimum or if it shows sign of uneven wear.

2. MEASURE DISC THICKNESS

Standard thickness:

35.0 mm (1.378 in.)

Minimum thickness:

33.0 mm (1.299 in.)

Replace the disc if the thickness of the disc is at the *minimum thickness or less. Replace the disc or grind it* on lathe if it is worn unevenly.

3. MEASURE DISC RUNOUT

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

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

Maximum disc runout:

0.12 mm (0.0047 in.)

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

4. IF NECESSARY, REPLACE DISC

(a) Remove the torque plate from the knuckle.

(b) Remove the axle hub with the disc. (See page SA – 11)

(c) Remove the disc from the axle hub.

(d) Install a new disc to the axle hub.

Torque: 167 N·m (1,700 kgf·cm, 123 ft·lbf)

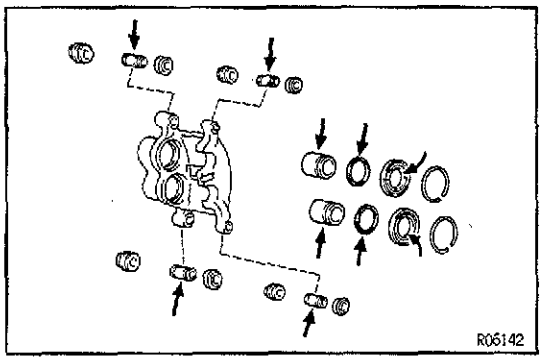
(e) Install the axle hub with the disc.

(f) Install the torque plate onto the knuckle.

Torque:

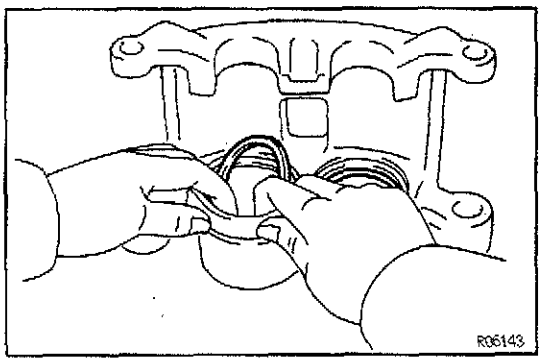
Upper side bolts 245 N·m (2,500 kgf·cm, 181 ft·lbf)

Lower side bolt 265 N·m (2,700 kgf·cm, 195 ft·lbf)

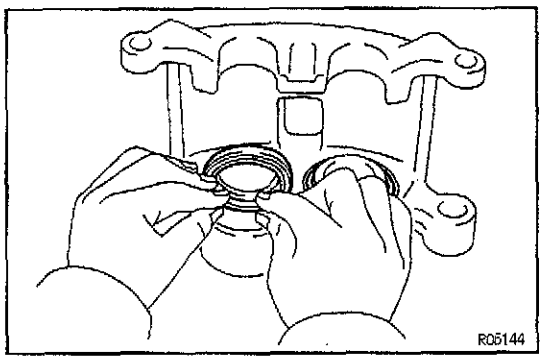


CALIPER ASSEMBLY

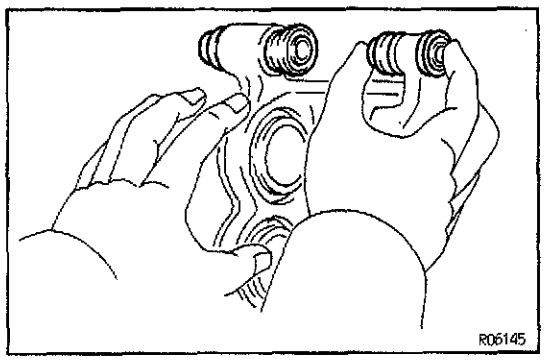
1. APPLY LITHIUM SOAP BASE GLYCOL GREASE TO PARTS INDICATED WITH ARROWS



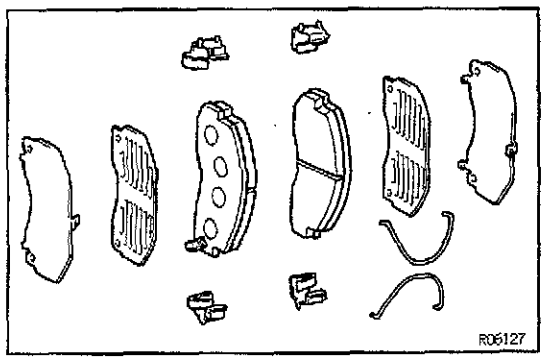
2. INSTALL PISTON SEALS AND PISTONS IN CYLINDERS



3. INSTALL CYLINDER BOOTS AND SET RINGS IN CYLINDERS

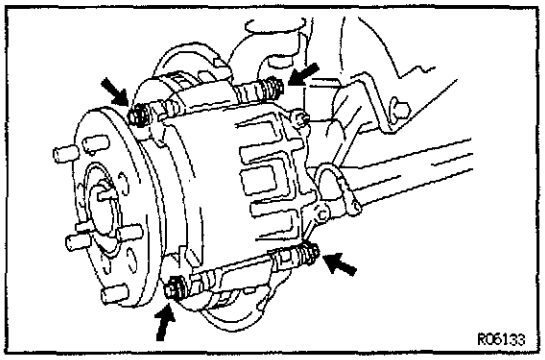


4. INSTALL FOLLOWING PARTS:
(a) 8 dust boots
(b) 4 sliding bushings



CALIPER INSTALLATION

1. INSTALL FOLLOWING PARTS:
(a) 4 pad support plates
(b) 4 anti—squeal shims
(c) 2 pads
(d) 2 anti—squeal springs

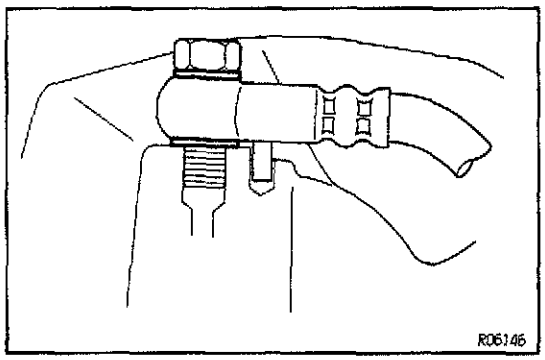


2. **INSTALL CALIPER**

Install the caliper to the torque plate with the bolts.

Torque:

Outside bolts	**16 N·m (160 kgf·cm, 12 ft·lbf)**
Inside bolts	**78 N·m (800 kgf·cm, 58 ft·lbf)**



3. **CONNECT BRAKE HOSE**

Install the brake hose on the brake caliper with 2 new gaskets.

Torque: 30 N·m (310 kgf·cm, 22 ft·lbf)

HINT: Install the brake hose lock securely in the lock hole in the brake caliper.

4. **FILL BRAKE RESERVOIR WITH BRAKE FLUID AND BLEED BRAKE SYSTEM (See page BR–9)**
5. **CHECK FOR FLUID LEAKAGE**