

FRONT DISC BRAKE

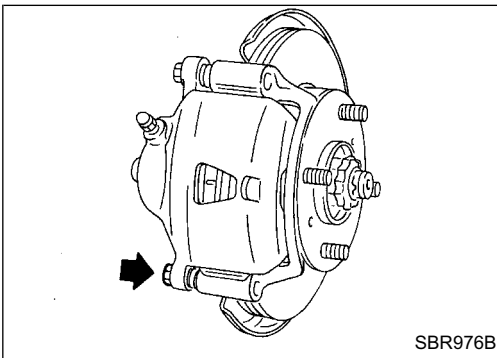
Pad Replacement

WARNING:

Clean brake pads with a vacuum dust collector to minimize the hazard of airborne particles or other materials.

CAUTION:

- When cylinder body is open, do not depress brake pedal because piston will pop out.
- Be careful not to damage piston boot or get oil on rotor. Always replace shims when replacing pads.
- If shims are rusted or show peeling of the rubber coat, replace them with new shims.
- It is not necessary to remove connecting bolt except for disassembly or replacement of caliper assembly. In this case, suspend cylinder body with wire so as not to stretch brake hose.



1. Remove master cylinder reservoir cap.
2. Remove pin bolt.
3. Open cylinder body upward. Then remove pad with retainers, inner and outer shims.

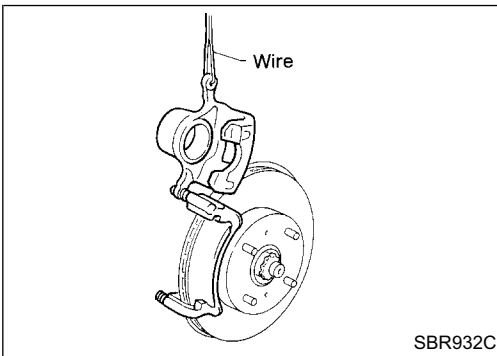
Standard pad thickness:

11 mm (0.43 in)

Pad wear limit:

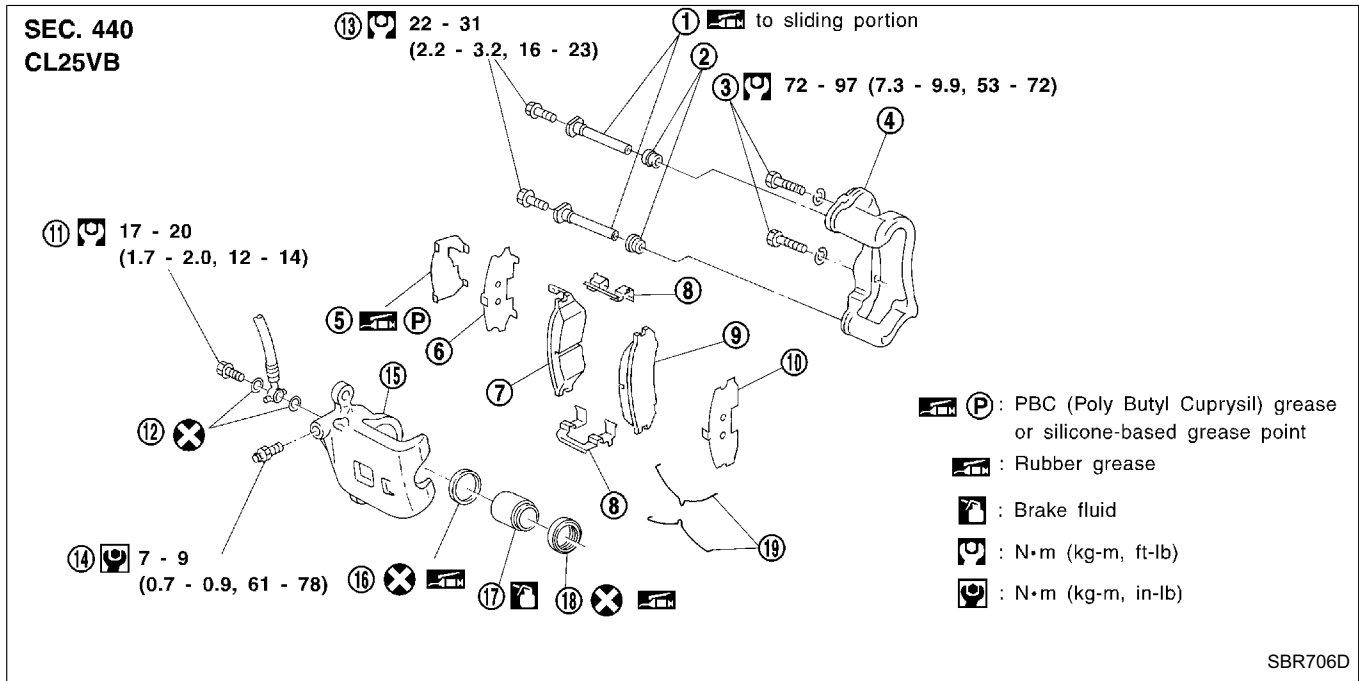
2.0 mm (0.079 in)

Carefully monitor brake fluid level because brake fluid will return to reservoir when pushing back piston.



FRONT DISC BRAKE

Component



- | | | |
|-----------------------------|-------------------|---------------------|
| ① Main pin | ⑧ Pad retainer | ⑭ Bleed valve |
| ② Pin boot | ⑨ Outer pad | ⑮ Cylinder body |
| ③ Torque member fixing bolt | ⑩ Outer shim | ⑯ Piston seal |
| ④ Torque member | ⑪ Connecting bolt | ⑰ Piston |
| ⑤ Shim cover | ⑫ Copper washer | ⑱ Piston boot |
| ⑥ Inner shim | ⑬ Main pin bolt | ⑲ Pad return spring |
| ⑦ Inner pad | | |

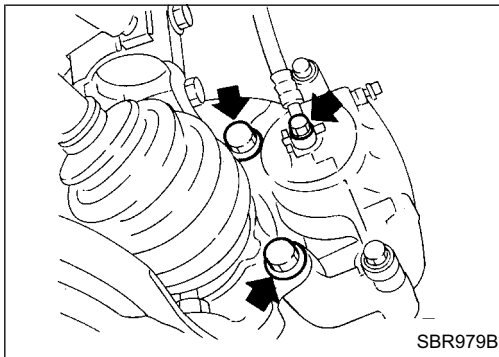
Removal

WARNING:

Clean brake pads with a vacuum dust collector to minimize the hazard of airborne particles or other materials.

Remove torque member fixing bolts and connecting bolt.

It is not necessary to remove connecting bolt except for disassembly or replacement of caliper assembly. In this case, suspend caliper assembly with wire so as not to stretch brake hose.



Disassembly

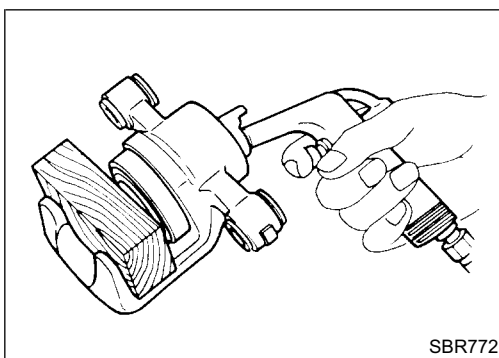
WARNING:

Do not place your fingers in front of piston.

CAUTION:

Do not scratch or score cylinder wall.

1. Push out piston with piston boot with compressed air.
2. Remove piston seal with a suitable tool.



Inspection — Caliper

CYLINDER BODY

- Check inside surface of cylinder for score, rust, wear, damage or presence of foreign materials. If any of the above conditions are observed, replace cylinder body.
- Minor damage from rust or foreign materials may be eliminated by polishing surface with a fine emery paper. Replace cylinder body if necessary.

CAUTION:

Use brake fluid to clean. Never use mineral oil.

PISTON

CAUTION:

Piston sliding surface is plated. Do not polish with emery paper even if rust or foreign materials are stuck to sliding surface.

Check piston for score, rust, wear, damage or presence of foreign materials. Replace if any of the above conditions are observed.

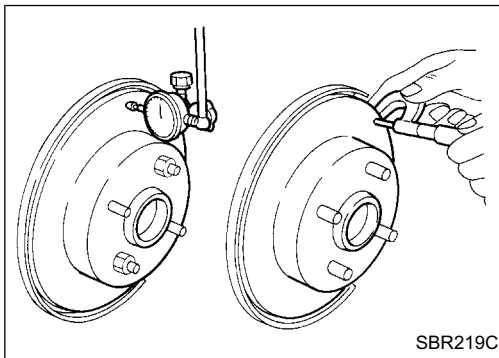
SLIDE PIN, PIN BOLT AND PIN BOOT

Check for wear, cracks or other damage. Replace if any of the above conditions are observed.

Inspection — Rotor

RUBBING SURFACE

Check rotor for roughness, cracks or chips.



RUNOUT

1. Secure rotor to wheel hub with at least two nuts (M12 x 1.25).
2. Check runout using a dial indicator.

Make sure that wheel bearing axial end play is within the specifications before measuring. Refer to “Front Wheel Bearing” in FA section.

Maximum runout:

0.08 mm (0.0031 in)

3. If the runout is out of specification, find minimum runout position as follows:
 - a. Remove nuts and rotor from wheel hub.
 - b. Shift the rotor one hole and secure rotor to wheel hub with nuts.
 - c. Measure runout.
 - d. Repeat steps a. to c. so that minimum runout position can be found.
4. If the runout is still out of specification, turn rotor with on-car brake lathe (“MAD, DL-8700”, “AMMCO 700 and 705” or equivalent).

FRONT DISC BRAKE

Inspection — Rotor (Cont'd)

THICKNESS

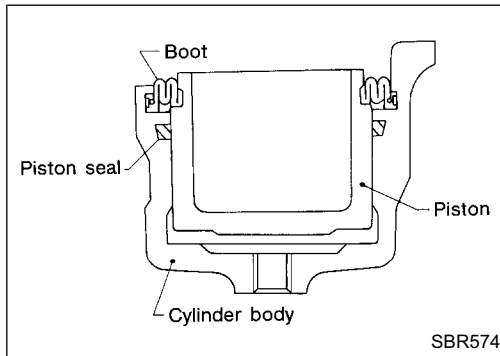
Thickness variation (At least 8 positions):

Maximum 0.01 mm (0.0004 in)

If thickness variation exceeds the specification, turn rotor with on-car brake lathe.

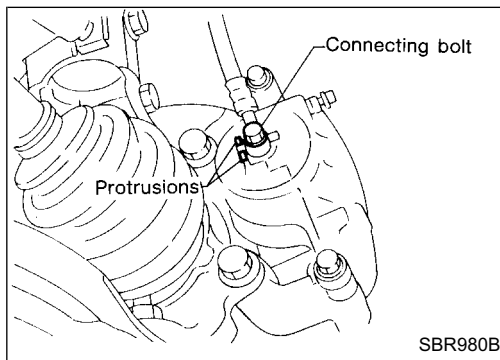
Rotor repair limit:

20.0 mm (0.787 in)



Assembly

1. Insert piston seal into groove on cylinder body.
2. With piston boot fitted to piston, insert piston boot into groove on cylinder body and install piston.
3. Properly secure piston boot.



Installation

CAUTION:

- Refill with new brake fluid "DOT 3".
- Never reuse drained brake fluid.

1. Install brake hose to caliper securely.
2. Install all parts and secure all bolts.
3. Bleed air. Refer to "Bleeding Brake System" (BR-4).

Brake Burnishing Procedure

When experiencing soft brake pedal feel at very low mileage, or after replacing the rotor, burnish the brake pad contact surfaces according to the following procedures.

CAUTION:

Only perform this procedure under safe road and traffic conditions. Use extreme caution.

1. Drive the vehicle on a straight smooth road at 50 km/h (31 MPH).
2. Use medium brake pedal/foot effort to bring the vehicle to a complete stop from 50 km/h (31 MPH). Adjust brake pedal/foot pressure such that vehicle stopping time equals 3 to 5 seconds.
3. To cool the brake system, drive the vehicle at 50 km/h (31 MPH) for 1 minute without stopping.
4. Repeat steps 1 to 3 10 times or more to complete the burnishing procedure.