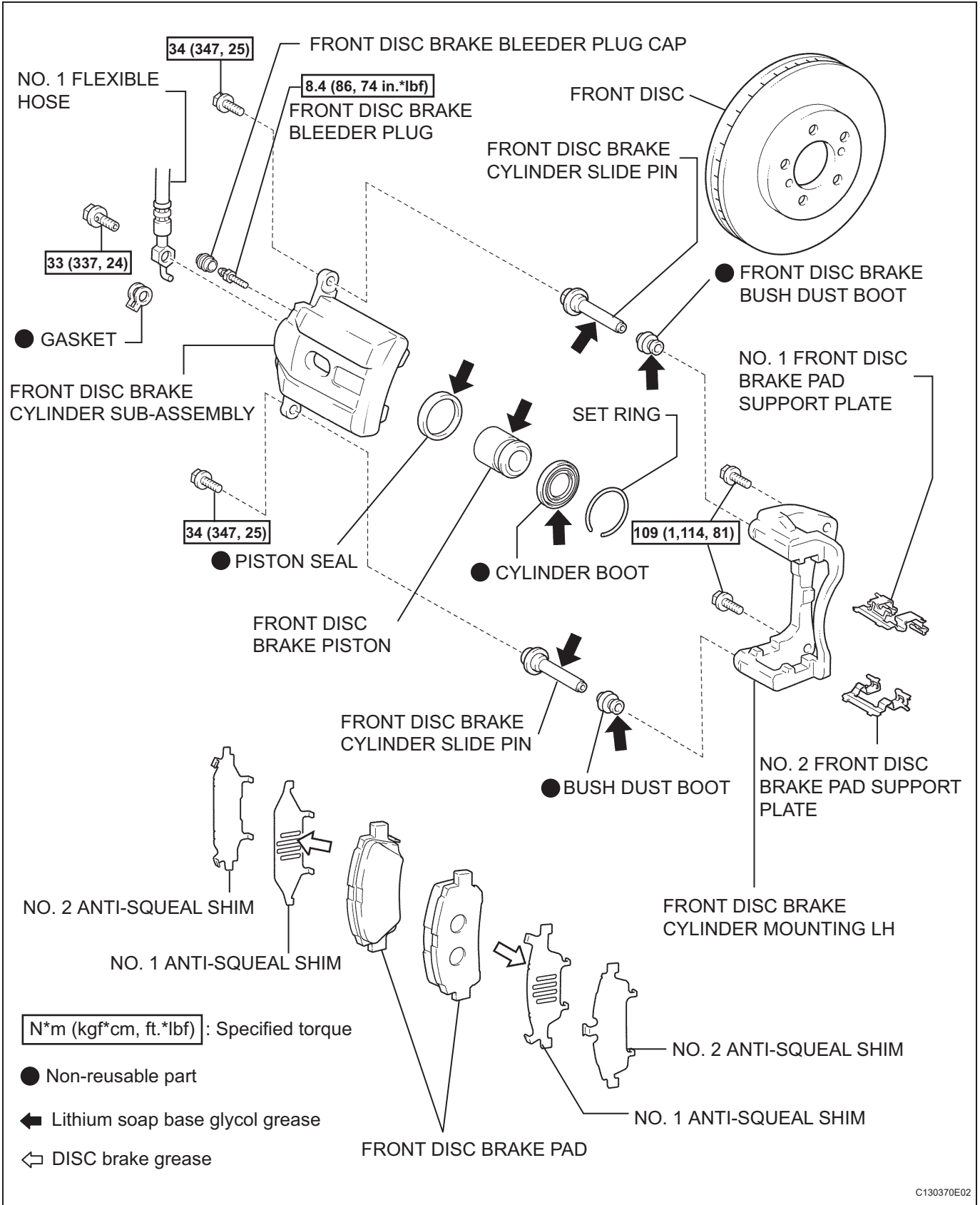


FRONT BRAKE

COMPONENTS



REMOVAL

HINT:

- Use the same procedures for the LH side and RH side.
- The procedures listed below are for the LH side.
- If work that does not involve brake fluid bleeding, such as disc brake pad replacement, is started 2 minutes or more after the power switch is turned OFF, brake control (ECB) prohibition is not necessary.

1. REMOVE FRONT WHEEL
2. SET BRAKE CONTROL (ECB) OFF (See page BR-28)

3. DRAIN BRAKE FLUID

NOTICE:

Wash brake fluid off immediately if it adheres to any painted surface.

4. REMOVE FRONT DISC BRAKE CYLINDER SUB-ASSEMBLY

- (a) Remove the union bolt and gasket, and disconnect the No. 1 flexible hose from the front disc brake cylinder.
- (b) Hold the front disc brake cylinder slide pin using a wrench. Remove the 2 bolts and separate the front disc brake cylinder.

5. REMOVE FRONT DISC BRAKE PAD KIT (PAD ONLY)

- (a) Remove the 2 front disc brake pads from the front disc brake cylinder mounting.

6. REMOVE FRONT ANTI-SQUEAL SHIM KIT

- (a) Remove the 2 No. 1 anti-squeal shims and 2 No. 2 anti-squeal shims from the front disc brake pads.

7. REMOVE NO. 1 FRONT DISC BRAKE PAD SUPPORT PLATE

- (a) Remove the No. 1 pad support plate from the front disc brake cylinder mounting.

8. REMOVE NO. 2 FRONT DISC BRAKE PAD SUPPORT PLATE

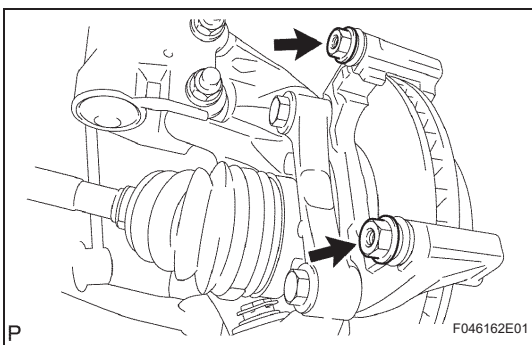
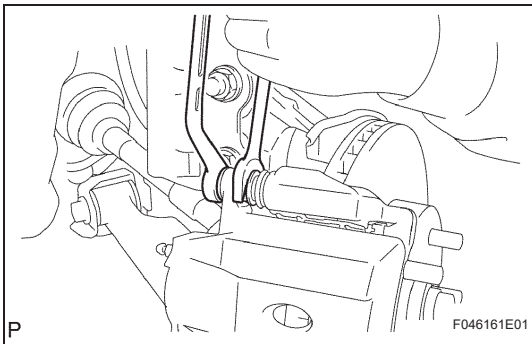
- (a) Remove the No. 2 pad support plate from the front disc brake cylinder mounting.

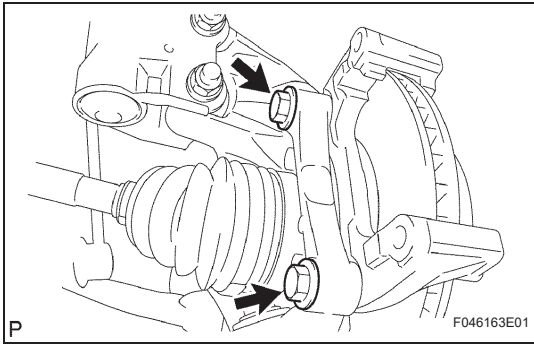
9. REMOVE FRONT DISC BRAKE CYLINDER SLIDE PIN

- (a) Pull off the 2 front disc brake cylinder slide pins from the front disc brake cylinder mounting.

10. REMOVE FRONT DISC BRAKE BUSH DUST BOOT

- (a) Remove the 2 bush dust boots from the front disc brake cylinder mounting.





11. REMOVE FRONT DISC BRAKE CYLINDER MOUNTING LH

- (a) Remove the 2 bolts and front disc brake cylinder mounting.

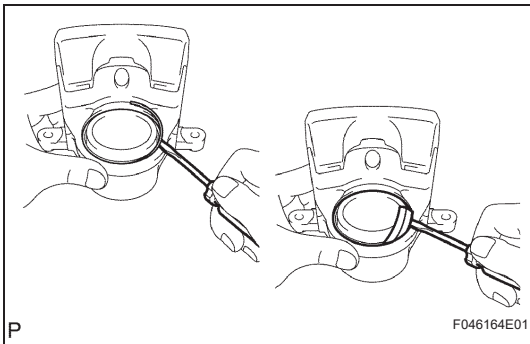
DISASSEMBLY

HINT:

- Use the same procedures for the LH side and RH side.
- The procedures listed below are for the LH side.

1. REMOVE CYLINDER BOOT

- (a) Remove the set ring and cylinder boot from the front disc brake cylinder.



2. REMOVE FRONT DISC BRAKE PISTON

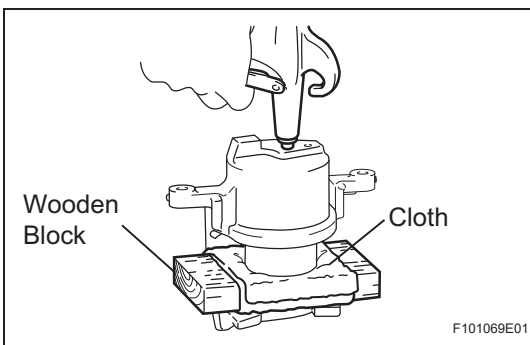
- (a) Place a wooden block wrapped in a cloth between the front disc brake piston and front disc brake cylinder to prevent them from being damaged.
- (b) Put air into the front disc brake cylinder gradually so that the piston does not protrude using compressed air. Remove the front disc brake piston from the front disc brake cylinder.

CAUTION:

Be careful not to pinch fingers.

NOTICE:

Do not spatter fluid.

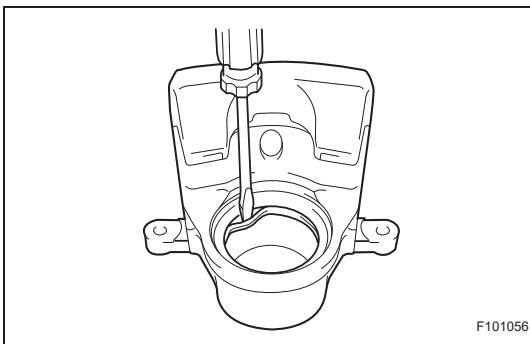


3. REMOVE PISTON SEAL

- (a) Using a screwdriver, remove the piston seal from the front disc brake cylinder.

NOTICE:

Do not damage the inside of the cylinder or the seal groove.



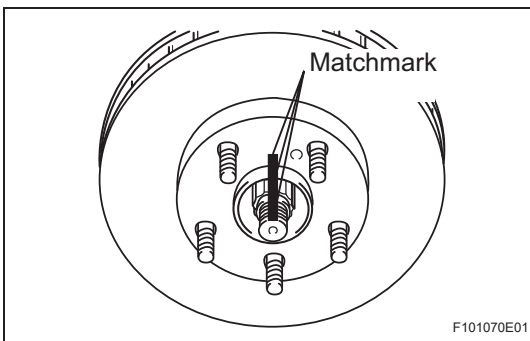
4. REMOVE FRONT DISC BRAKE BLEEDER PLUG CAP

5. REMOVE FRONT DISC BRAKE BLEEDER PLUG

6. REMOVE FRONT DISC

HINT:

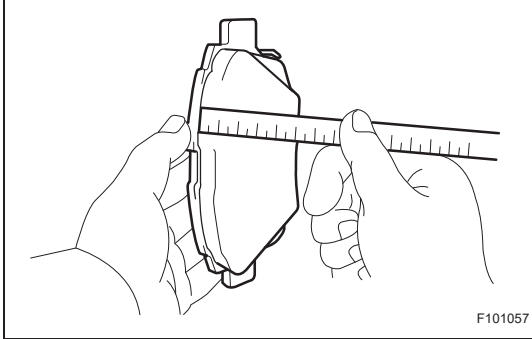
Put matchmarks on the disc and axle hub.



INSPECTION

1. INSPECT BRAKE CYLINDER AND PISTON

- (a) Check that the side of the front disc brake piston and the inside of the cylinder are not damaged. If necessary, replace the front disc brake cylinder and front disc brake piston.



2. INSPECT PAD LINING THICKNESS

- (a) Using a ruler, measure the pad lining thickness.

Standard thickness:

11.0 mm (0.433 in.)

Minimum thickness:

1.0 mm (0.039 in.)

HINT:

If the disc brake pad thickness is at the minimum or less, replace the disc brake pad.

3. INSPECT NO. 1 FRONT DISC BRAKE PAD SUPPORT PLATE

- (a) Clean the area where the No. 1 front disc brake support plate contacts the brake pad using brake cleaner. Check that there are no deformations, cracks or rust.
- (b) Check that there is no looseness or deformation with the front disc brake cylinder mounting installed.
- (c) Make sure that the support has sufficient rebound when installing the pad. Check that the pad does not easily drop after installation.

4. INSPECT NO. 2 FRONT DISC BRAKE PAD SUPPORT PLATE

HINT:

Check the No. 2 pad support plate using the same inspection procedures for the No. 1 pad support plate.

5. INSPECT DISC THICKNESS

- (a) Using a micrometer, measure the disc thickness.

Standard thickness:

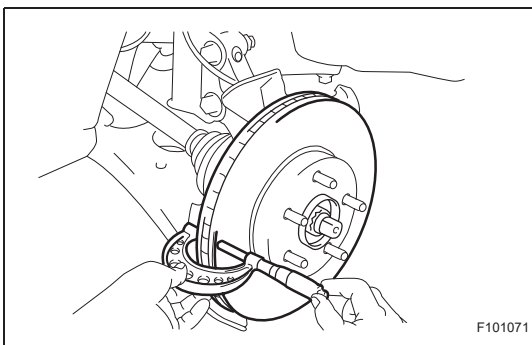
22.0 mm (0.866 in.)

Minimum thickness:

20.0 mm (0.787 in.)

HINT:

If the disc plate thickness is at the minimum or less, replace the front disc.



REASSEMBLY

HINT:

- Use the same procedures for the LH side and RH side.
- The procedures listed below are for the LH side.

1. INSTALL FRONT DISC

- (a) Align matchmarks on the disc and the axle hub. Install the front disc.

NOTICE:

When installing a new disc, select the position where the disc has the minimum runout.

2. INSPECT DISC RUNOUT

- (a) Check the looseness of the front wheel bearing and runout in the axle hub before inspecting the disc runout (see page [AH-4](#)).
- (b) Hold the front disc with the 3 hub nuts.
Torque: 103 N*m (1,050 kgf*cm, 76 ft.*lbf)
- (c) Holding a dial indicator 10 mm (0.394 in.) away from the outer edge of the front disc, measure the disc runout.

Maximum disc runout:

0.05 mm (0.0020 in.)

NOTICE:

If the runout exceeds the maximum value, change the installation positions of the disc and axle so that the runout will become minimal. If the runout exceeds even when the installation positions are changed or if disc thickness does not exceed the limit, shave the disc. If disc thickness exceeds the limit, replace the disc.

3. TEMPORARILY TIGHTEN FRONT DISC BRAKE BLEEDER PLUG

4. INSTALL FRONT DISC BRAKE BLEEDER PLUG CAP

5. INSTALL PISTON SEAL

- (a) Apply lithium soap base glycol grease around a new piston seal and install it into the brake cylinder groove securely.

6. INSTALL FRONT DISC BRAKE PISTON

- (a) Check the side of the front disc brake piston for any scratch.

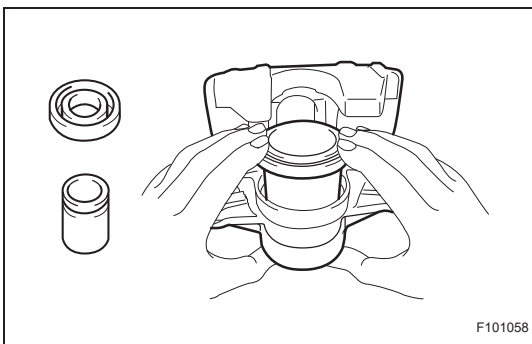
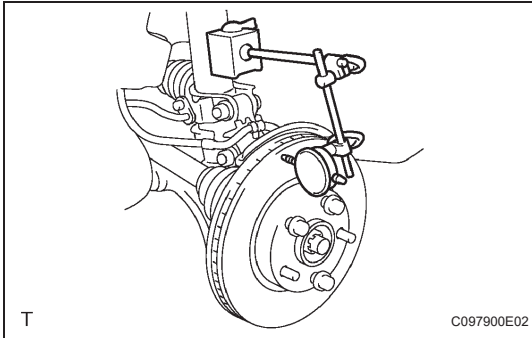
NOTICE:

Replace the front disc brake piston with a new one if there is any scratch on it.

- (b) Apply lithium soap base glycol grease to the inside of a new cylinder boot and install it to the front disc brake piston.

NOTICE:

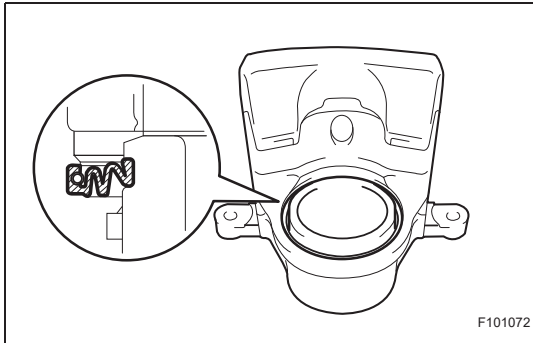
Install the cylinder boot securely into the front disc brake piston groove.



- (c) Apply lithium soap base glycol grease around the front disc brake piston and install it to the front disc brake cylinder.

NOTICE:

- Do not install the piston forcibly into the front disc brake cylinder.
- Do not damage the piston tip during installation.
- Do not push the piston directly using hard or sharp tools.



7. INSTALL CYLINDER BOOT

- (a) Install the cylinder boot to the disc brake cylinder groove.

NOTICE:

Install the cylinder boot securely into the disc brake cylinder and piston groove.

- (b) Using a screwdriver, install a new front disc brake piston set ring to the front disc brake cylinder.

NOTICE:

Do not damage the cylinder boot.

INSTALLATION

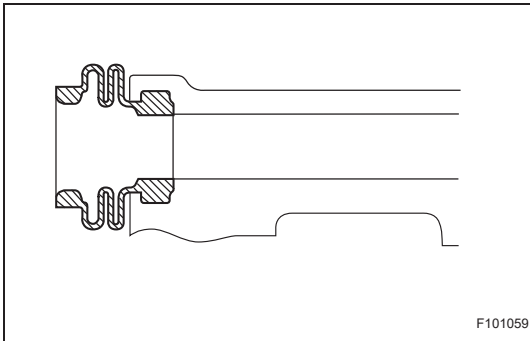
HINT:

- Use the same procedures for the LH side and RH side.
- The procedures listed below are for the LH side.

1. INSTALL FRONT DISC BRAKE CYLINDER MOUNTING LH

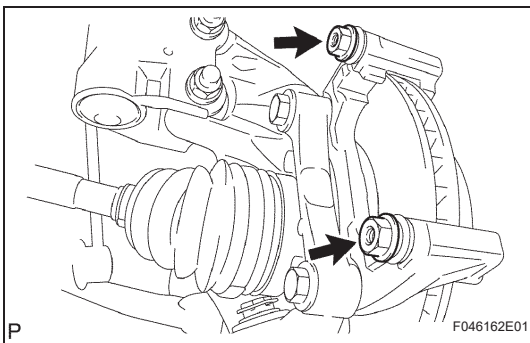
- (a) Install the front disc brake cylinder mounting with the 2 bolts.

Torque: 109 N*m (1,114 kgf*cm, 81 ft.*lbf)



2. INSTALL FRONT DISC BRAKE BUSH DUST BOOT

- (a) Apply lithium soap base glycol grease to seal surface of 2 new bush dust boots.
- (b) Install the 2 bush dust boots to the front disc brake cylinder mounting.



3. INSTALL FRONT DISC BRAKE CYLINDER SLIDE PIN

- (a) Apply lithium soap base glycol grease to the sliding and fitting portion of the front disc brake cylinder slide pin.
- (b) Push the front disc brake cylinder slide pin into the disc brake bush dust boot to install it.

4. INSTALL NO. 1 FRONT DISC BRAKE PAD SUPPORT PLATE

- (a) Install the No. 1 pad support plate to the front disc brake cylinder mounting.

5. INSTALL NO. 2 FRONT DISC BRAKE PAD SUPPORT PLATE

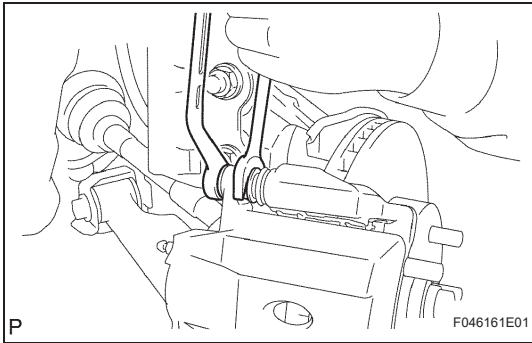
- (a) Install the No. 2 pad support plate to the front disc brake cylinder mounting.

6. INSTALL FRONT ANTI-SQUEAL SHIM KIT

- (a) Apply disc brake grease to the area where the No. 1 anti-squeal shim makes contact.
- (b) Install the 2 No. 1 anti-squeal shims and 2 No. 2 anti-squeal shims to the front disc brake pads.

7. INSTALL FRONT DISC BRAKE PAD KIT (PAD ONLY)

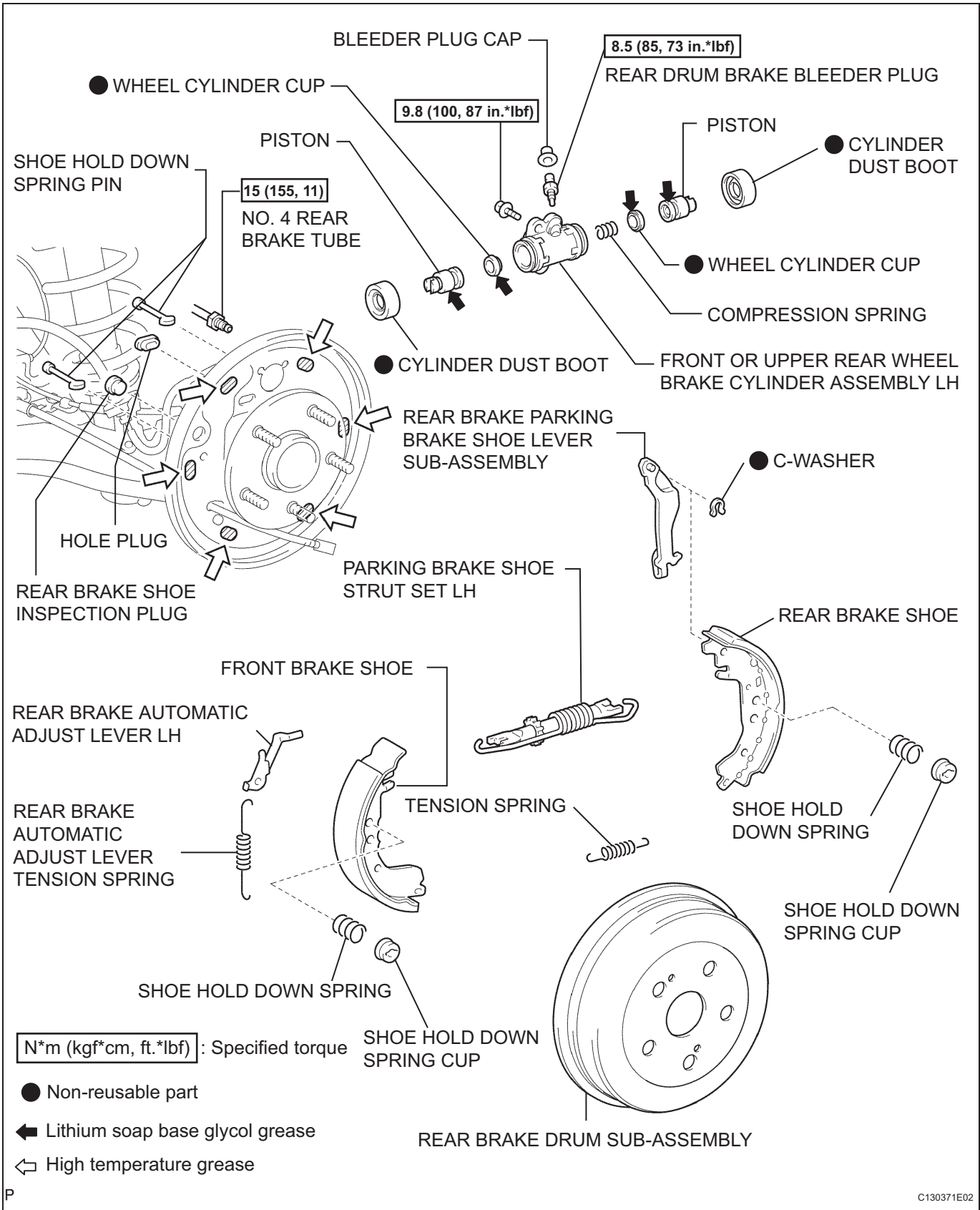
- (a) Install the 2 front disc brake pads to the front disc brake cylinder mounting.



8. **INSTALL FRONT DISC BRAKE CYLINDER SUB-ASSEMBLY**
 - (a) Install the front disc brake cylinder with the 2 bolts.
Torque: 34 N*m (347 kgf*cm, 25 ft.*lbf)
 - (b) Placing a new gasket inbetween, connect the No. 1 flexible hose to the front disc brake cylinder with the union bolt.
Torque: 33 N*m (337 kgf*cm, 24 ft.*lbf)
9. **FILL RESERVOIR WITH BRAKE FLUID (See page BR-5)**
10. **BLEED AIR FROM FRONT AND REAR BRAKE SYSTEMS (See page BR-5)**
11. **CHECK FOR BRAKE FLUID LEAKAGE**
12. **CHECK FLUID LEVEL IN RESERVOIR**
13. **INSTALL FRONT WHEEL**
Torque: 103 N*m (1,050 kgf*cm, 76 ft.*lbf)
14. **CHECK AND CLEAR DTC**
 - (a) Check and clear the DTC (see page BC-38).

REAR DRUM BRAKE

COMPONENTS



N*m (kgf*cm, ft.*lbf) : Specified torque

- Non-reusable part
- ← Lithium soap base glycol grease
- High temperature grease

BR

REMOVAL

HINT:

- Use the same procedures for the LH side and RH side.
- The procedures listed below are for the LH side.
- If work that does not involve brake fluid bleeding, such as drum brake shoe replacement, is started 2 minutes or more after the power switch is turned OFF, brake control (ECB) prohibition is not necessary.

1. **REMOVE REAR WHEEL**
2. **SET BRAKE CONTROL (ECB) OFF (See page BR-28)**
3. **DRAIN BRAKE FLUID**

NOTICE:

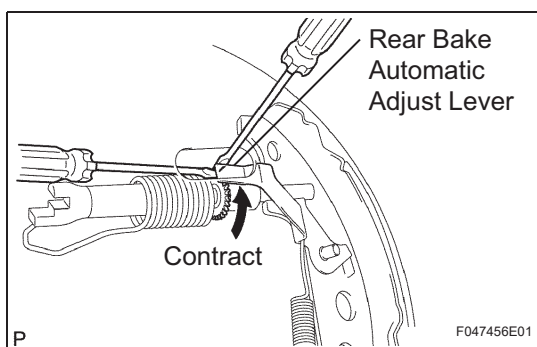
Wash brake fluid off immediately if it adheres to any painted surfaces.

4. **REMOVE REAR BRAKE DRUM SUB-ASSEMBLY**

- (a) Put matchmarks on the rear brake drum and the axle hub.
- (b) Release the parking brake and remove the rear brake drum.

HINT:

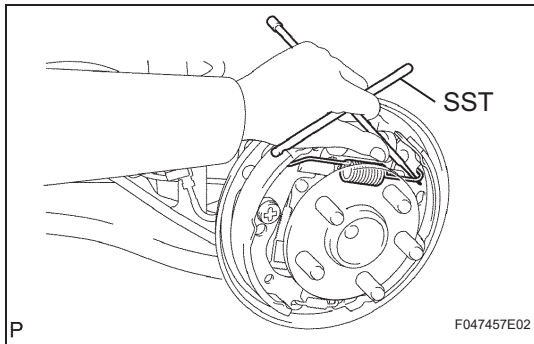
If the rear brake drum cannot be removed, push the rear brake automatic adjust lever through the backing plate service hole using a screwdriver. Turn and contract the adjuster using another screwdriver.



DISASSEMBLY

HINT:

- Use the same procedures for the LH side and RH side.
- The procedures listed below are for the LH side.



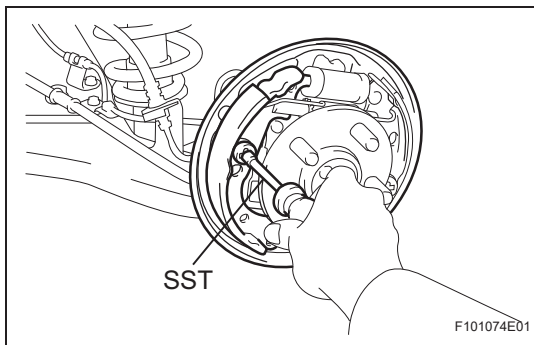
1. DISCONNECT PARKING BRAKE SHOE STRUT SET LH

- (a) Using SST, disconnect the spring and parking brake shoe strut set from the brake shoes.

SST 09703-30011

NOTICE:

Be careful not to damage the cylinder dust boot.



2. REMOVE FRONT BRAKE SHOE

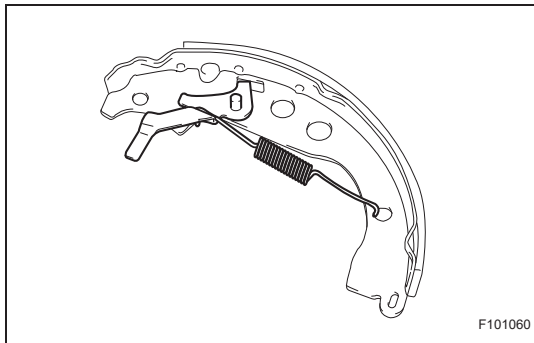
- (a) Using SST, remove the cup, shoe hold down spring and pin.

SST 09718-00010

- (b) Remove the front brake shoe and tension spring.

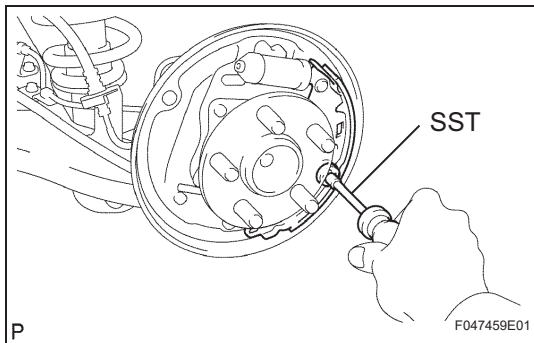
3. REMOVE PARKING BRAKE SHOE STRUT SET LH

- (a) Remove the parking brake shoe strut set from the rear brake shoe.



4. REMOVE REAR BRAKE AUTOMATIC ADJUST LEVER LH

- (a) Remove the rear brake automatic adjust lever tension spring and the rear brake automatic adjust lever.

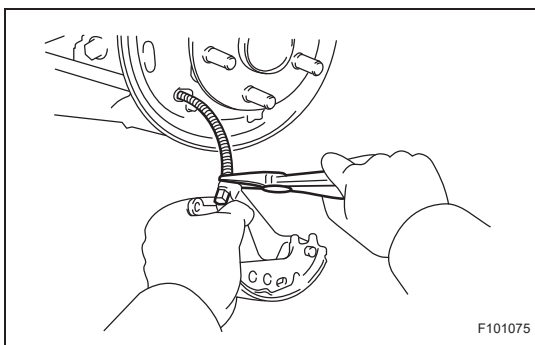


5. REMOVE REAR BRAKE SHOE

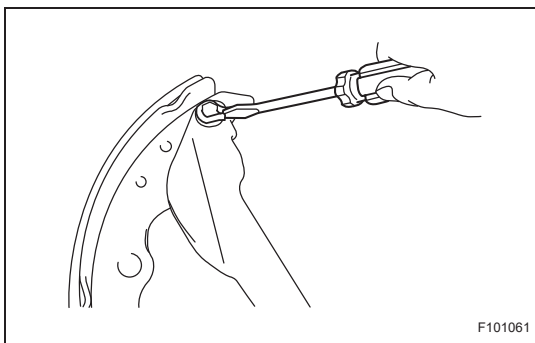
- (a) Remove the tension spring from the rear brake shoe.

- (b) Using SST, remove the cup, shoe hold down spring and pin.

SST 09718-00010

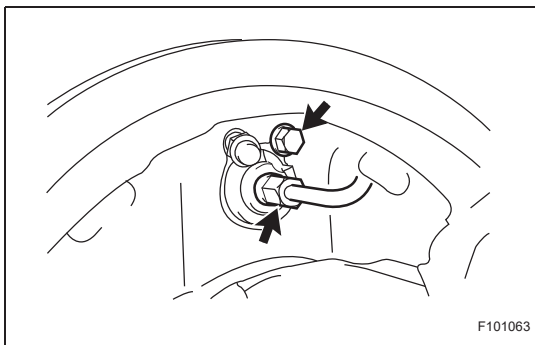


- (c) Using needle-nose pliers, disconnect the parking brake cable, and remove the rear brake shoe.



6. REMOVE REAR BRAKE PARKING BRAKE SHOE LEVER SUB-ASSEMBLY

- (a) Using a screwdriver, remove the C-washer and parking brake shoe lever.



7. REMOVE FRONT OR UPPER REAR WHEEL BRAKE CYLINDER ASSEMBLY LH

- (a) Using SST, disconnect the brake line.
SST 09023-00101
HINT:
 Use a container to catch the brake fluid.
 (b) Remove the bolt and the rear wheel brake cylinder.

8. REMOVE REAR WHEEL CYLINDER CUP KIT

- (a) Remove the 2 cylinder dust boots from the rear wheel brake cylinder.
 (b) Remove the 2 pistons and the compression spring.
 (c) Remove the 2 wheel cylinder cups from each piston.

9. REMOVE REAR DRUM BRAKE BLEEDER PLUG

- (a) Remove the rear drum bleeder plug from the rear wheel cylinder.

INSPECTION

1. INSPECT BRAKE DRUM INSIDE DIAMETER

- (a) Using a brake drum gauge or equivalent, measure the inside diameter of the drum.

Standard inside diameter:

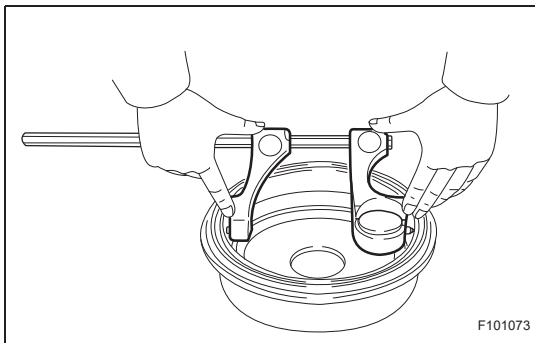
200.0 mm (7.874 in.)

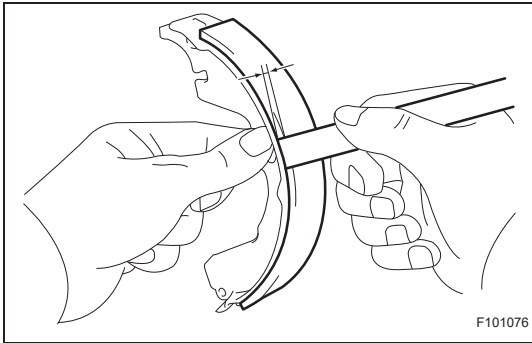
Maximum inside diameter:

201.0 mm (7.913 in.)

HINT:

If the inside diameter of the brake drum is at the maximum or more, replace the rear brake drum sub-assembly.





2. INSPECT REAR DRUM BRAKE SHOE LINING THICKNESS

- (a) Using a ruler, measure the thickness of the shoe lining.

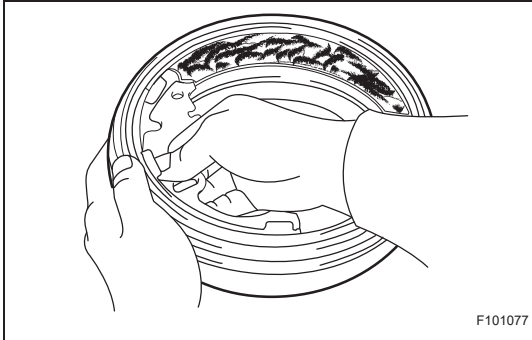
Standard thickness:

4.0 mm (0.157 in.)

Minimum thickness:

1.0 mm (0.039in.)

If the lining thickness is at the minimum thickness or less, or if there is severe or uneven wear, replace the brake shoe.



3. INSPECT BRAKE DRUM AND REAR DRUM BRAKE SHOE LINING FOR PROPER CONTACT

- (a) Apply chalk to the inside surface of the drum, then grind the drum on the brake shoe lining to fit. If the contact between the drum and the shoe lining is improper, repair it using a brake shoe grinder or replace the brake shoe.

4. INSPECT BRAKE WHEEL CYLINDER

- (a) Check the cylinder bore and the piston for rust or scoring. If necessary, replace the rear wheel brake cylinder assembly.

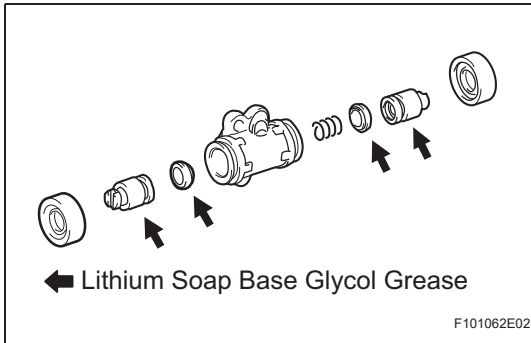
REASSEMBLY

HINT:

- Use the same procedures for the LH side and RH side.
- The procedures listed below are for the LH side.

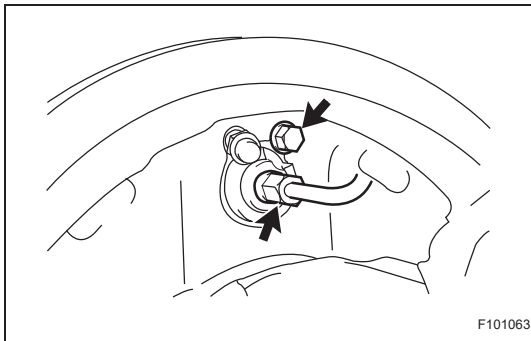
1. TEMPORARILY TIGHTEN REAR DRUM BRAKE BLEEDER PLUG

- Install the rear drum brake bleeder plug to the rear wheel brake cylinder.



2. INSTALL REAR WHEEL CYLINDER CUP KIT

- Apply lithium soap base glycol grease to 2 new wheel cylinder cups and 2 pistons.
- Install the 2 wheel cylinder cups on each piston.
- Install the compression spring and the 2 pistons to the rear wheel brake cylinder.
- Install the 2 new cylinder dust boots to the rear wheel brake cylinder.

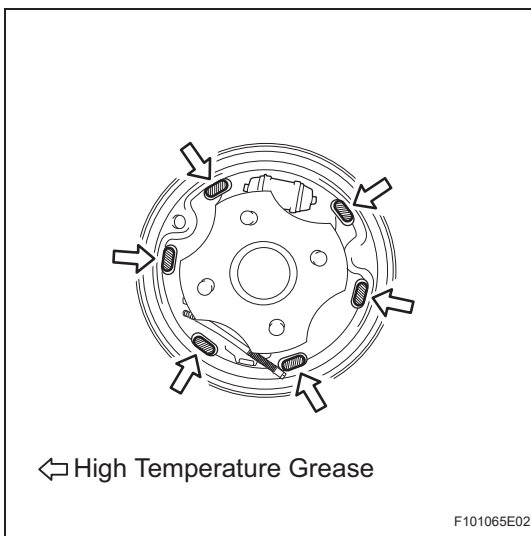


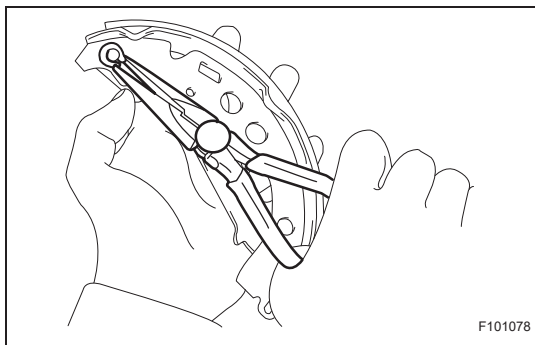
3. INSTALL FRONT OR UPPER REAR WHEEL BRAKE CYLINDER ASSEMBLY LH

- Install the rear wheel brake cylinder with the bolt.
Torque: 9.8 N*m (100 kgf*cm, 87 in.*lbf)
- Using SST, connect the brake line.
SST 09023-00101
Torque: 15 N*m (155 kgf*cm, 11 ft.*lbf)

4. APPLY HIGH TEMPERATURE GREASE

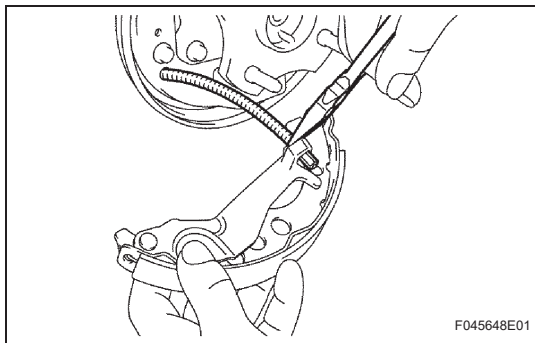
- Apply high temperature grease to the shoe attached surface of the backing plate.





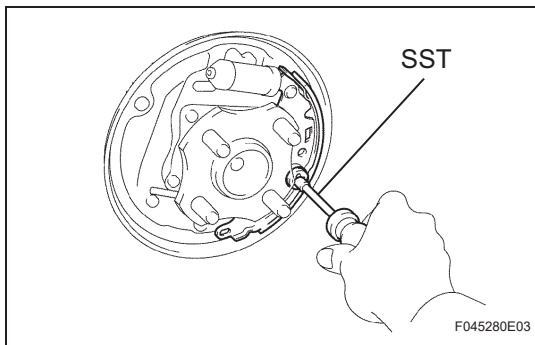
5. INSTALL REAR BRAKE PARKING BRAKE SHOE LEVER SUB-ASSEMBLY

- (a) Using needle-nose pliers, install the parking brake lever with a new C-washer.



6. INSTALL REAR BRAKE SHOE

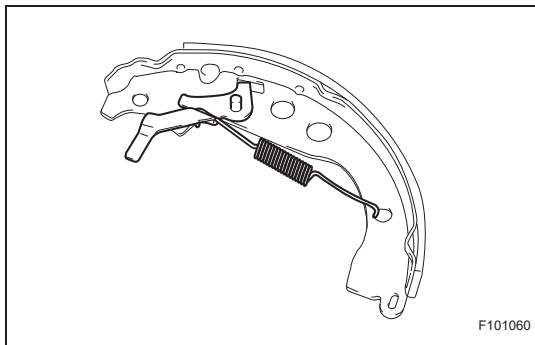
- (a) Using needle-nose pliers, connect the No. 3 parking brake cable to the parking brake shoe lever.



- (b) Using SST, install the rear brake shoe, pin, shoe hold down spring and cup.
SST 09718-00010

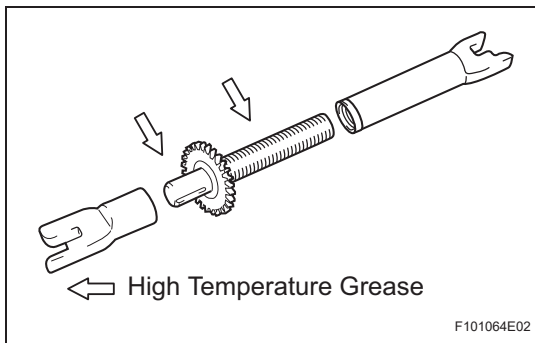
7. INSTALL REAR BRAKE SHOE RETURN SPRING

- (a) Install the rear brake shoe return spring to the rear brake shoe.



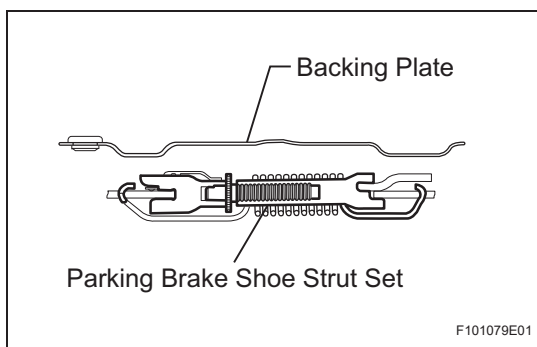
8. INSTALL REAR BRAKE AUTOMATIC ADJUST LEVER LH

- (a) Install the rear brake automatic adjust lever and the rear brake automatic adjust lever tension spring to the front brake shoe.

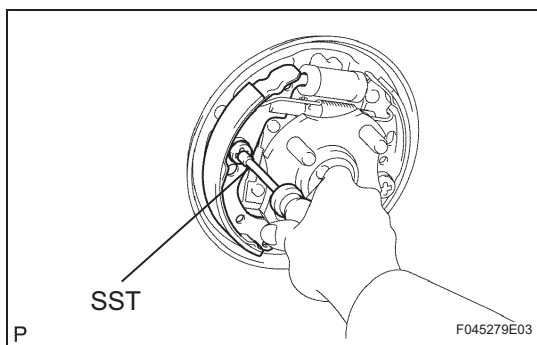


9. INSTALL PARKING BRAKE SHOE STRUT SET LH

- (a) Apply high temperature grease to the adjusting bolt and assemble the strut set.
(b) Install the shoe return spring to the strut set.



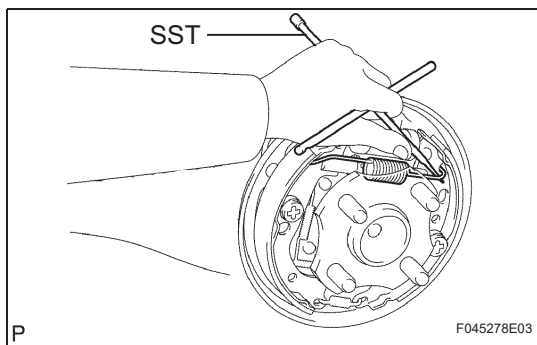
(c) Install the strut set as shown in the illustration.



10. INSTALL FRONT BRAKE SHOE

- (a) Connect the tension spring to the front brake shoe and rear brake shoe.
- (b) Using SST, install the front brake shoe, pin, shoe hold down spring and cup.

SST 09718-00010



11. CONNECT PARKING BRAKE SHOE STRUT SET LH

- (a) Using SST, connect the shoe return spring to the front brake shoe and rear brake shoe.

SST 09703-30011

NOTICE:

Be careful not to damage the wheel cylinder boot.

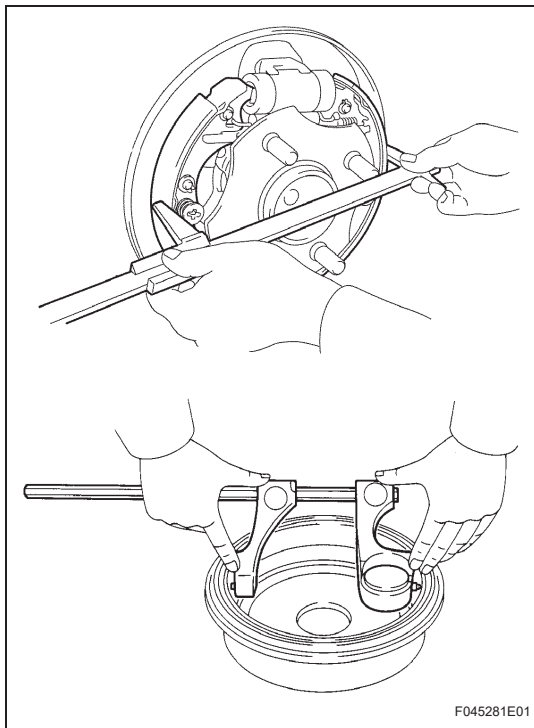
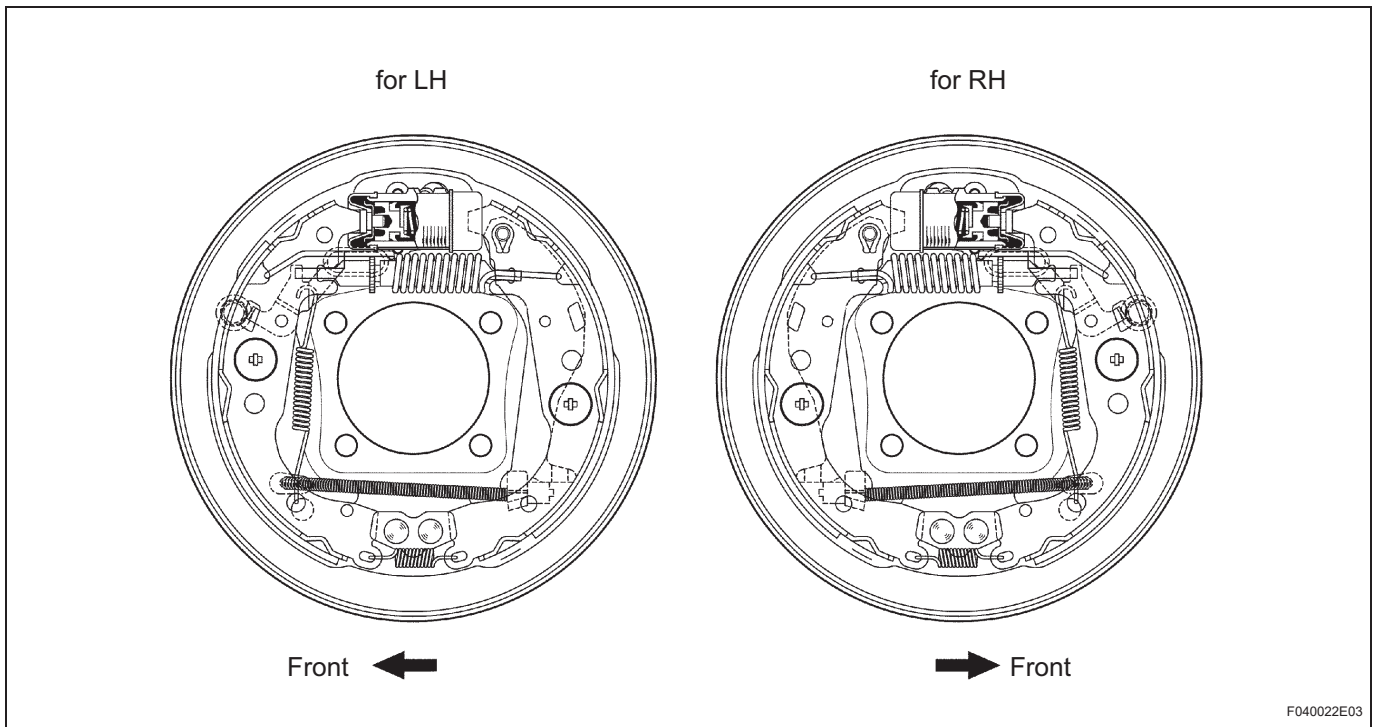
12. CHECK REAR DRUM BRAKE INSTALLATION

- (a) Check that each part is installed properly.

NOTICE:

There should be no oil or grease adhering to the friction surfaces of the shoe lining and drum.

If they are not installed correctly as shown in the illustration, reinstall them.



- (b) Measure the brake drum inside diameter and the diameter of the brake shoes. Check that the difference between the diameter is the correct shoe clearance.

Standard shoe clearance:

0.6 mm (0.024 in.)

NOTICE:

There should be no oil or grease adhering to the friction surfaces of the shoe lining and the drum.

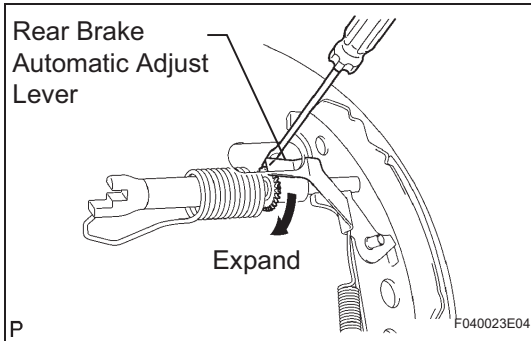
INSTALLATION

HINT:

- Use the same procedures for the LH side and RH side.
- The procedures listed below are for the LH side.

1. INSTALL REAR BRAKE DRUM SUB-ASSEMBLY

- (a) Aligning the matchmarks, install the rear brake drum.



2. ADJUST REAR DRUM BRAKE SHOE CLEARANCE

- (a) Temporarily install 2 hub nuts.
- (b) Remove the hole plug, and turn the adjuster to expand the shoe until the drum locks.
- (c) Rotate the adjuster by 8 notches.
- (d) Install the hole plug.
- (e) Remove the 2 hub nuts.

3. FILL RESERVOIR WITH BRAKE FLUID (See page [BR-5](#))

4. BLEED AIR FROM FRONT AND REAR BRAKE SYSTEMS (See page [BR-5](#))

5. CHECK FOR BRAKE FLUID LEAKAGE

6. CHECK FLUID LEVEL IN RESERVOIR

7. INSTALL REAR WHEEL

Torque: 103 N*m (1,050 kgf*cm, 76 ft.*lbf)

8. CHECK PARKING BRAKE PEDAL TRAVEL (See page [PB-1](#))

9. ADJUST PARKING BRAKE PEDAL TRAVEL (See page [PB-1](#))

10. CHECK AND CLEAR DTC

- (a) Check and clear the DTC (see page [BC-38](#)).