

SECTION 06-04 Brakes, Rear Disc

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VEHICLE APPLICATION

Capri.

DESCRIPTION

WARNING: CONTAINS ASBESTOS FIBERS. AVOID BREATHING DUST. BREATHING ASBESTOS DUST MAY CAUSE ASBESTOSIS AND CANCER.

BREATHING ASBESTOS DUST IS HAZARDOUS TO YOUR HEALTH.

DUST AND DIRT PRESENT ON WHEEL BRAKE AND CLUTCH ASSEMBLIES MAY CONTAIN ASBESTOS FIBERS THAT ARE HAZARDOUS TO YOUR HEALTH WHEN MADE AIRBORNE BY CLEANING WITH COMPRESSED AIR OR BY DRY BRUSHING.

WHEEL BRAKE ASSEMBLIES AND CLUTCH FACINGS SHOULD BE CLEANED USING A VACUUM CLEANER RECOMMENDED FOR USE WITH ASBESTOS FIBERS. DUST AND DIRT FROM THE VACUUM SHOULD BE DISPOSED OF IN A MANNER THAT PREVENTS DUST EXPOSURE, SUCH AS SEALED BAGS. THE BAG MUST BE LABELED PER OSHA INSTRUCTIONS AND THE TRASH HAULER NOTIFIED AS TO THE BAG'S CONTENTS.

IF A VACUUM SUITABLE FOR ASBESTOS IS NOT AVAILABLE, CLEANING SHOULD BE DONE WET. IF DUST GENERATION IS STILL POSSIBLE, TECHNICIANS SHOULD WEAR GOVERNMENT-APPROVED TOXIC DUST PURIFYING RESPIRATORS.

GRINDING OR SANDING ON BRAKE LININGS, PADS, ROTORS, DRUMS OR CLUTCH FACINGS SHOULD BE DONE ONLY WHILE USING PROPERLY EXHAUST-VENTILATED EQUIPMENT.

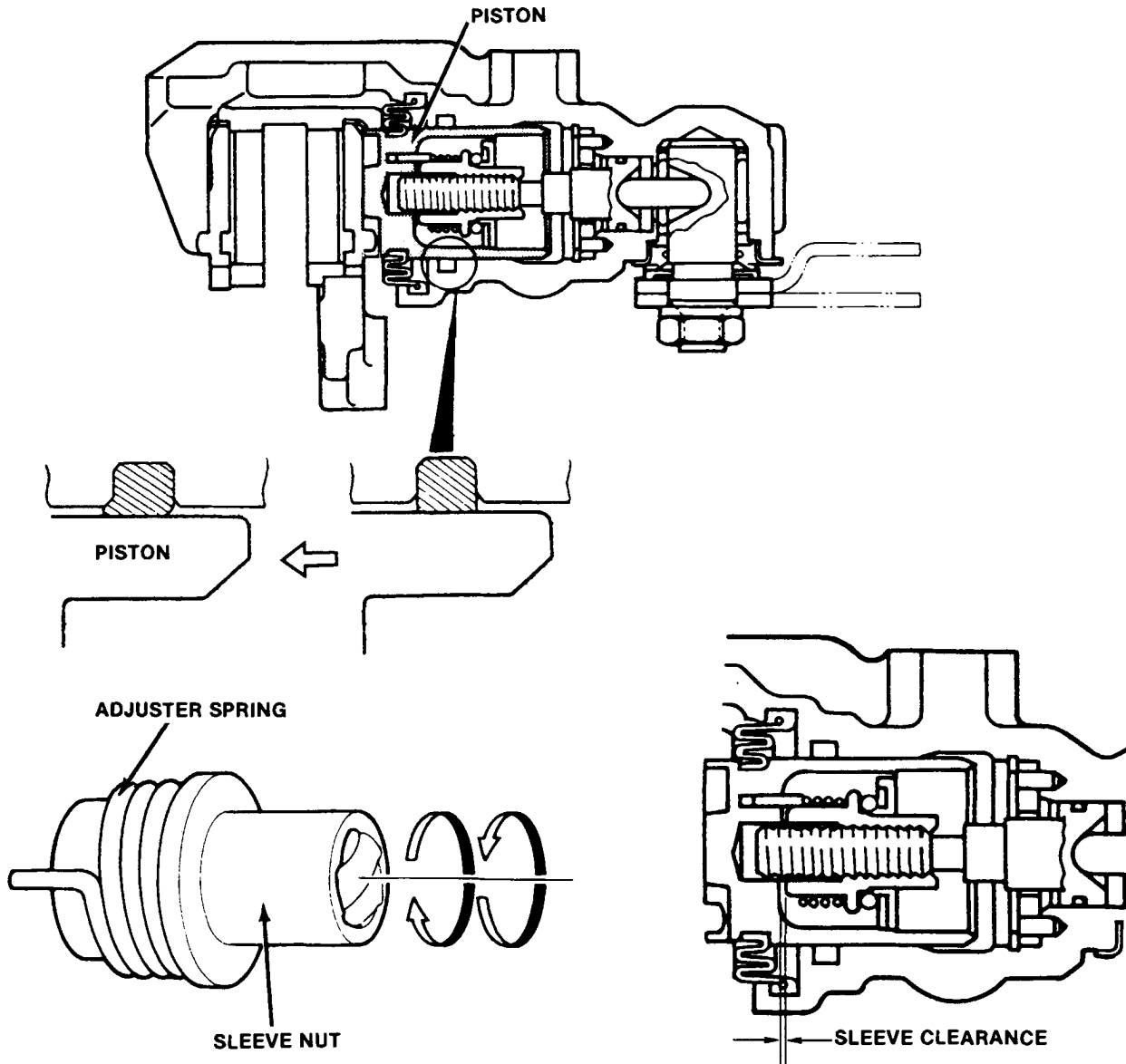
OSHA REQUIRES AREAS WHERE ASBESTOS DUST GENERATION IS POSSIBLE TO BE ISOLATED AND POSTED WITH WARNING SIGNS. ONLY TECHNICIANS CONCERNED WITH PERFORMING BRAKE OR CLUTCH SERVICE SHOULD BE PRESENT IN THE AREA.

WARNING: BRAKE FLUID CONTAINS POLYGLYCOL ETHERS AND POLYGLYCOLS. AVOID CONTACT WITH EYES. WASH HANDS THOROUGHLY AFTER HANDLING. IF BRAKE FLUID CONTACTS EYES, FLUSH EYES WITH RUNNING WATER FOR 15 MINUTES. GET MEDICAL ATTENTION IF IRRITATION PERSISTS. IF TAKEN INTERNALLY, DRINK WATER AND INDUCE VOMITING. GET MEDICAL ATTENTION IMMEDIATELY.

Rear braking is provided by a single piston, floating caliper, and disc brakes. The caliper slides on a hollow, stainless steel guide pin in bushings.

DESCRIPTION (Continued)

A caliper bolt attaches the lower guide pin bushing and the caliper to the anchor plate. The pads are held in place by the caliper and the anchor plate.



H5670-A

During normal operation, hydraulic pressure from the master cylinder pushes the piston forward and applies pressure on the inboard brake pad. This pressure also causes the caliper to slide inboard on the upper guide pin and lower guide pin bushing. As the brakes are applied, the square cut piston seal distorts.

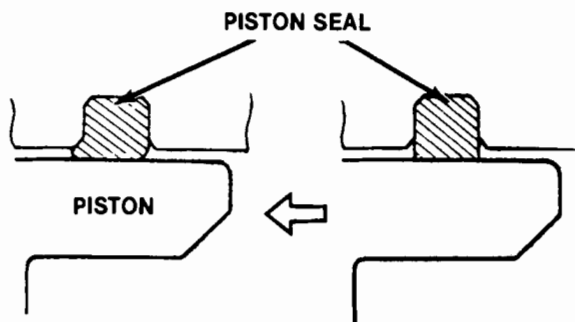
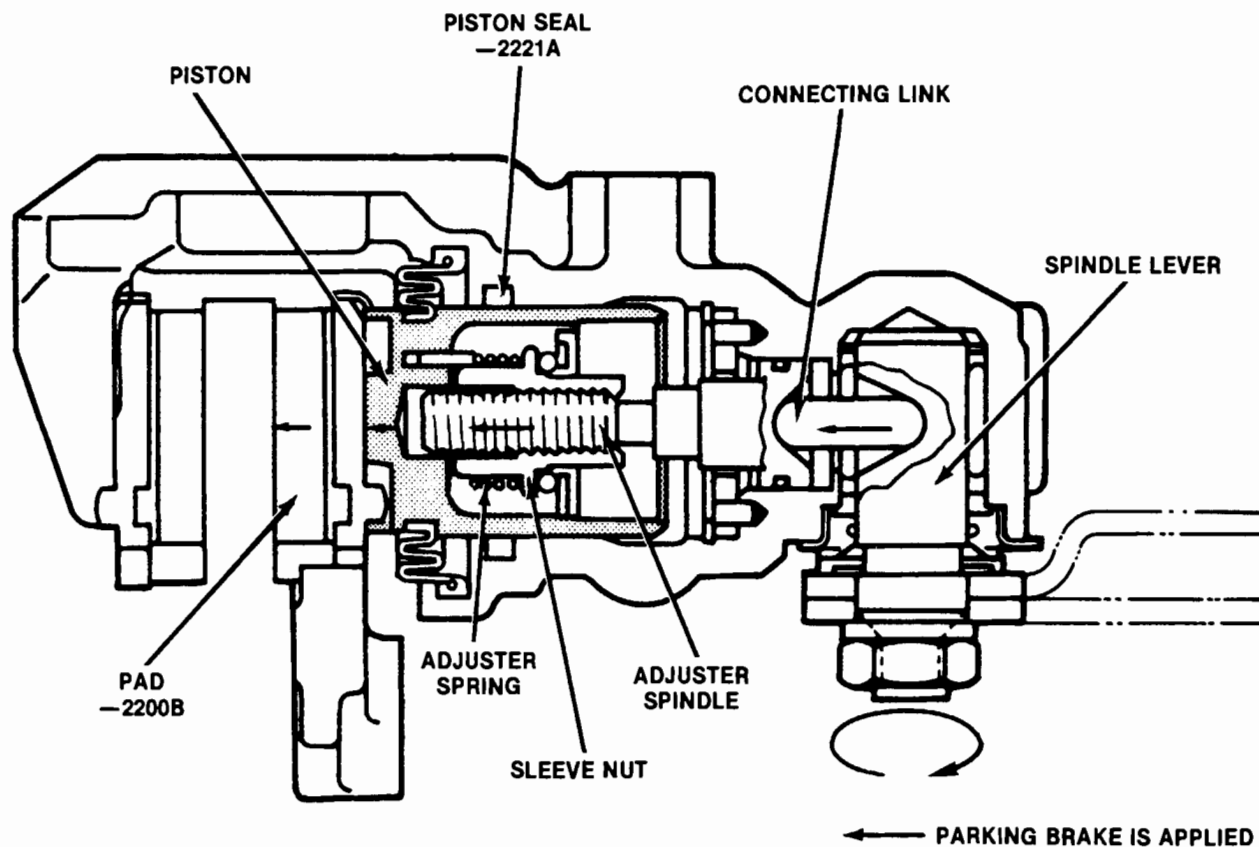
When the brake pedal is released, the square cut seal returns the piston to normal position. If the piston travels no further than the square cut seal can return it, no self-adjustment takes place.

But if the movement of the piston is greater than the deformation limit of the square cut piston seal, the piston and sleeve nut will travel on the threads of the spindle. This is because the loosened adjuster spring allows the sleeve nut to rotate. When the brake pedal is released, the piston returns to the amount the square cut seal was deformed, but does not return to its original position. This is because the tightened adjuster spring does not allow the sleeve nut to rotate and travel on the thread. The piston can adjust outward from the caliper housing but it cannot move inward.

DESCRIPTION (Continued)

Brakes, Parking

When the parking brake lever is applied inside the vehicle, the parking brake cable then moves the caliper mounted parking brake lever or "spindle lever." This causes force to be applied to the connecting link, which then pushes the piston against the inboard pad. The pressure of the piston against the inboard pad causes the caliper to slide on the upper guide pin and lower guide pin sleeve thereby applying pressure to the outboard pad. As the piston moves outward in the caliper housing, it causes the square cut piston seal to distort. When the parking brake lever is released, the square cut seal returns the piston to normal position and releases the brakes.



H5871-A

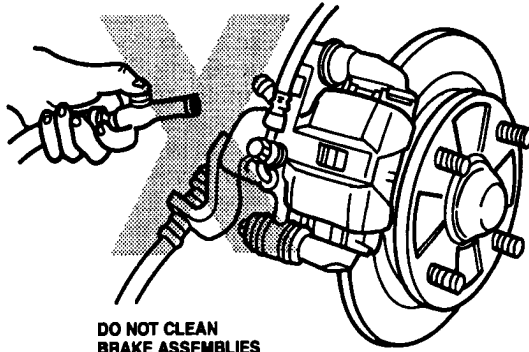
DESCRIPTION (Continued)

Brake Pads

The brake pads are equipped with a wear indicator that will make a squealing noise when the pads are worn. This allows for service before any rotor damage occurs.

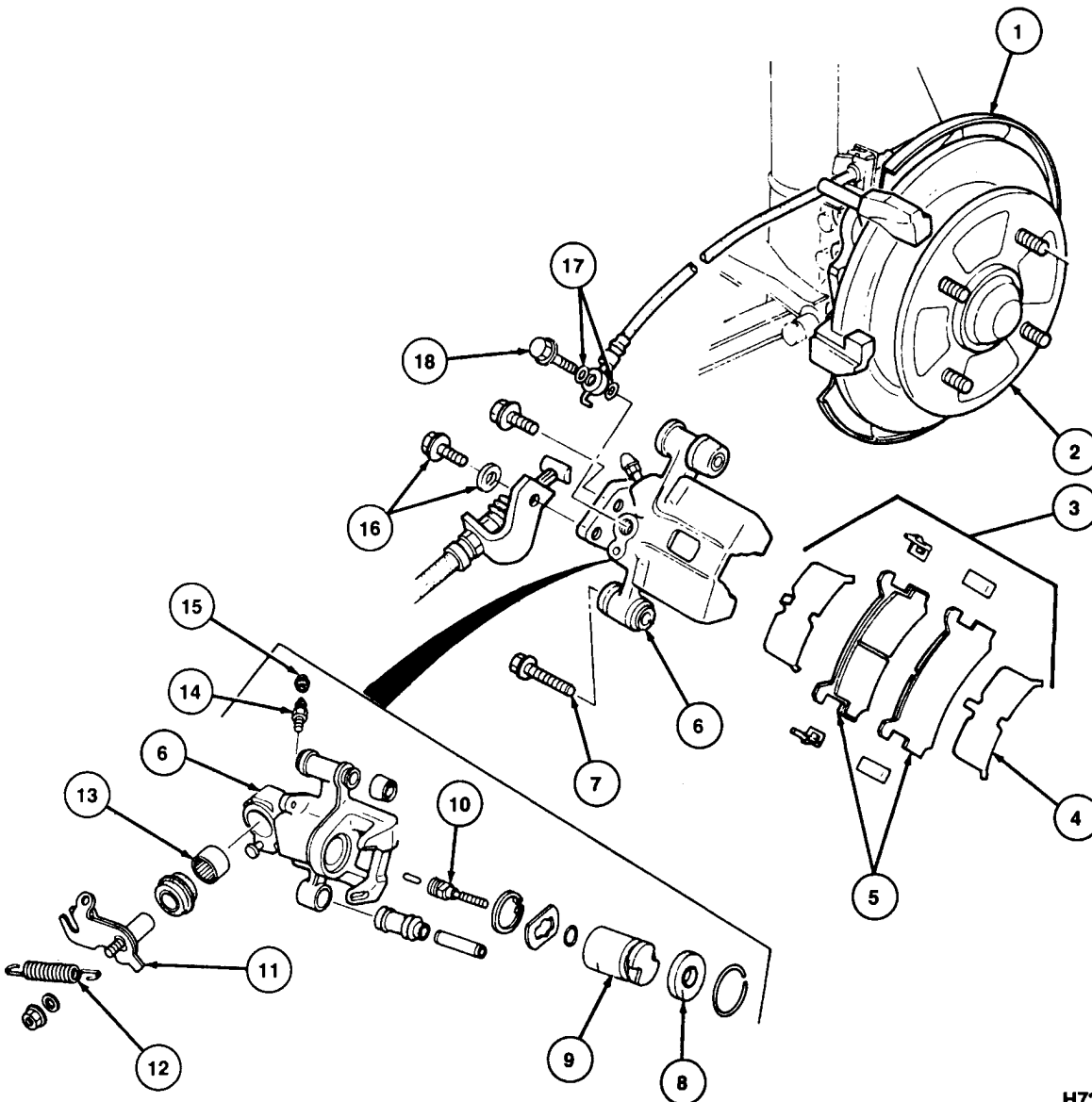
CAUTION: Do not use denatured alcohol for flushing system or cleaning assemblies where alcohol could be trapped and subsequently contaminate brake fluid. Contaminated fluid may cause eventual failure of rubber components in the system.

Use Rotunda Brake and Clutch Service Vacuum 091-00001 or equivalent to clean brake assemblies.



DO NOT CLEAN
BRAKE ASSEMBLIES
WITH COMPRESSED
AIR

H7238-A



H7355-B

DESCRIPTION (Continued)

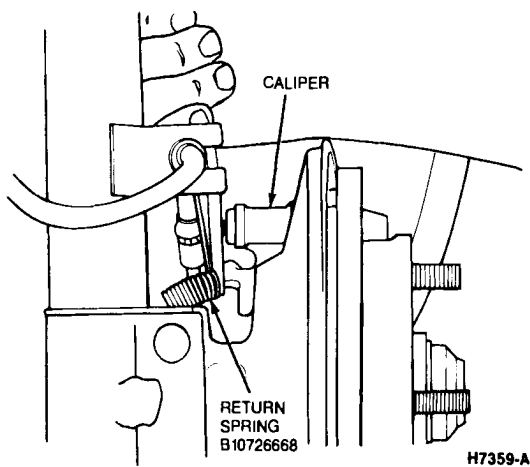
Item	Part Number	Description	Item	Part Number	Description
1	B107 26260 B107 26270	Dust Shield	10	H001 26731	Adjuster Spindle
2	BF68 26251	Rotor	11	B107 26800 B107 26810	Lever
3	2200	Brake Pad Assy	12	B107 26668	Spring
4	—	Shim	13	H001 26205	Needle Bearing
5	—	Disc Pad	14	B107 33691	Bleeder
6	2B120B	Caliper Assy	15	0259 33693	Cap
7	B107 26998	Caliper Bolt	16	26680	Bolt and Washer
8	—	Dust Seal	17	—	Copper Washer
9	B107 26660	Piston	18	—	Banjo Bolt

REMOVAL AND INSTALLATION

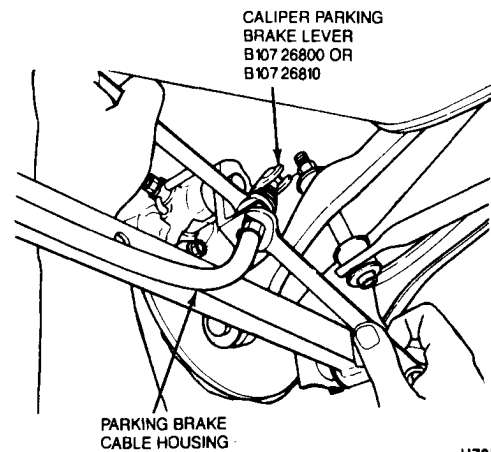
Brake Pads

Removal

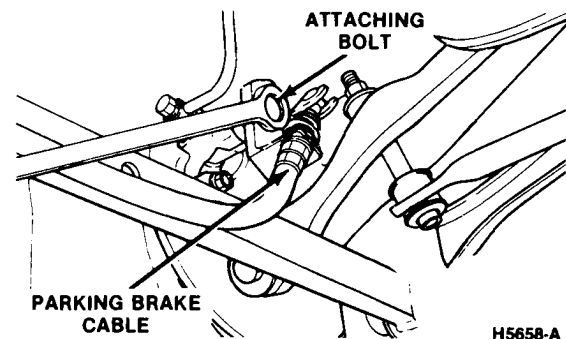
1. Remove approximately two-thirds of the brake fluid from the master cylinder.
2. Raise vehicle. Refer to Section 00-02.
3. Remove wheel and tire assembly.
4. Using a pair of needle-nose pliers, remove parking brake return springs at the back of the caliper.



5. Loosen the parking brake cable housing adjusting nut. Remove the cable housing from the bracket on the rear lower control arm.

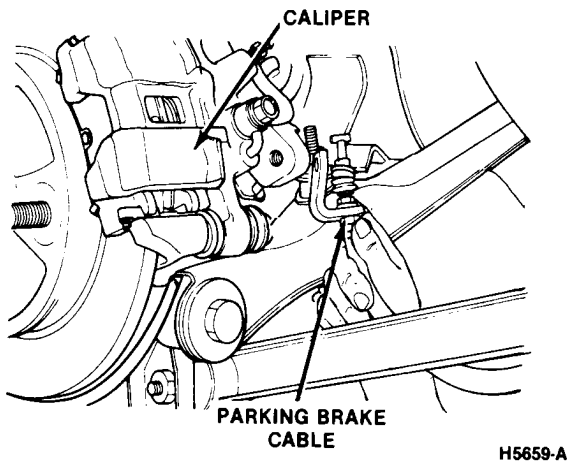


6. Loosen the retaining bolt connecting the parking brake cable bracket to the rear caliper.

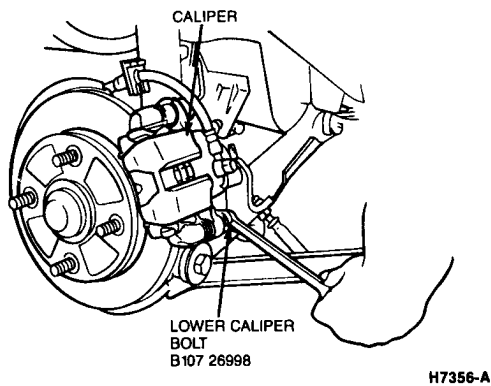


REMOVAL AND INSTALLATION (Continued)

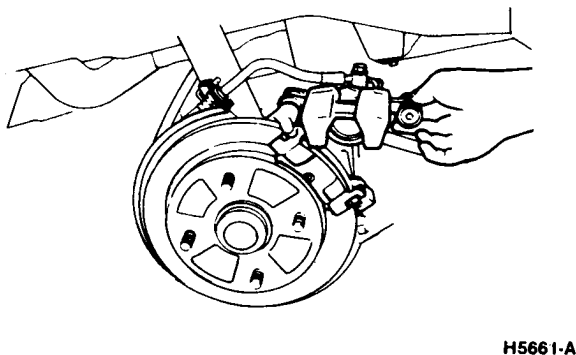
7. Remove parking brake cable from the rear caliper.



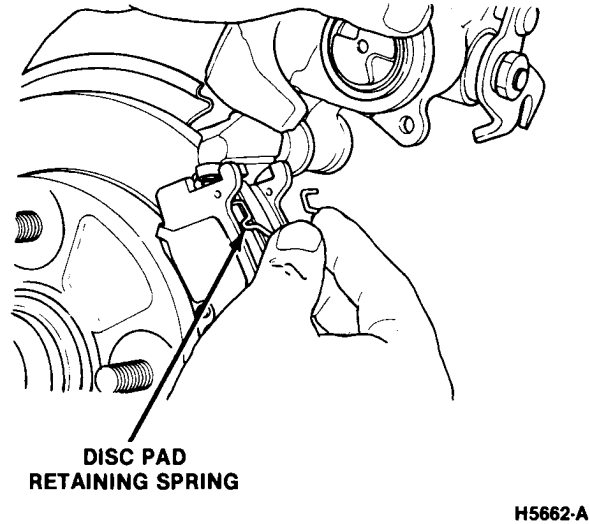
8. Loosen lower caliper bolt.



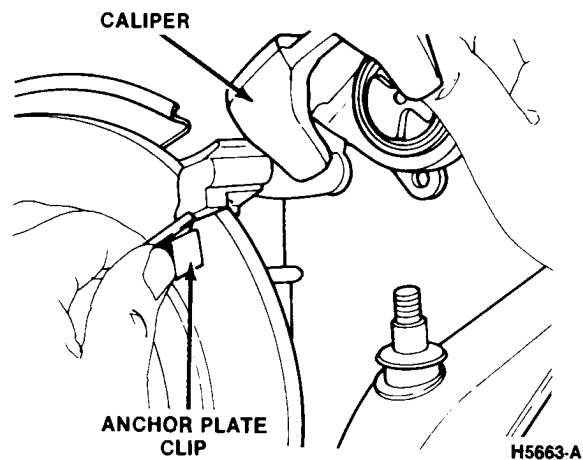
9. Pivot the caliper upward on the upper caliper guide pin.



10. Remove the disc pad retaining spring.



11. Remove disc pads and shims.
12. Remove anchor plate clips from the caliper anchor plate. Attach tape to the anchor plate clips and label "top" and "bottom".



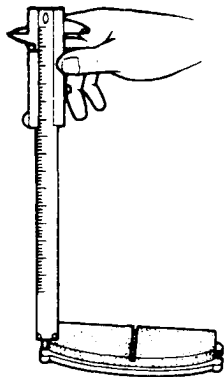
13. Remove and resurface the rotor if necessary, as outlined.

Inspection

Inspect the pads for:

REMOVAL AND INSTALLATION (Continued)

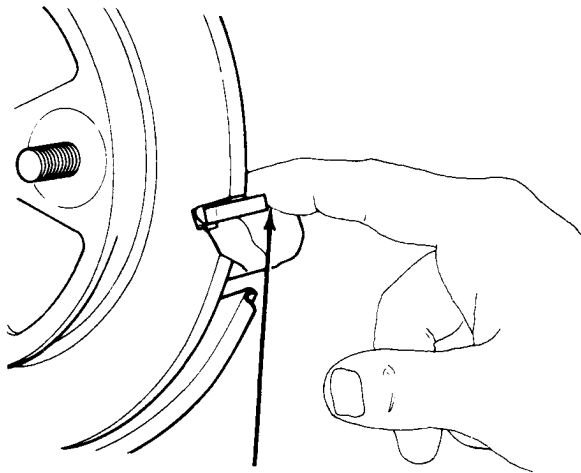
- Grease on the face.
- Abnormal wear or cracking.
- Deterioration or damage due to heat.
- Minimum thickness of 3mm (0.12 inch).



H5356-A

Installation

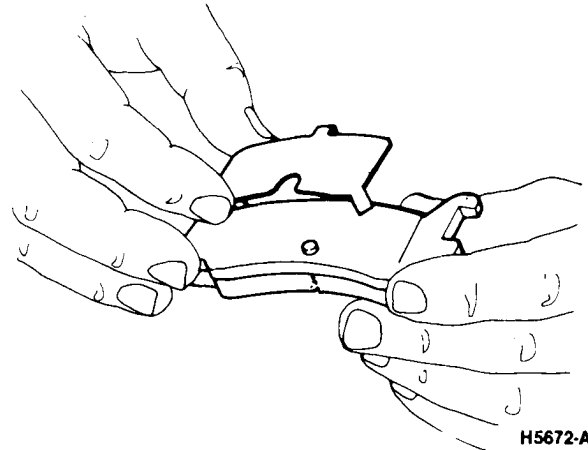
1. Install anchor plate clips. If not installed in their original locations, the locating tabs may contact the rotor.
2. Lubricate the anchor plate clips with Disc Brake Caliper Slide Grease D7AZ-19590-A (ESA-M1C172-A) or equivalent.



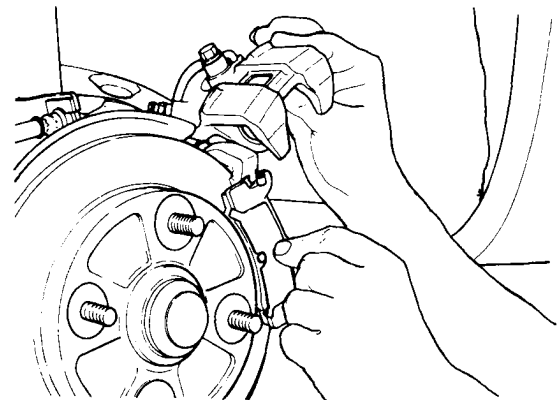
GREASE THE ANCHOR
PLATE CLIPS

H5664-A

3. Install shims on the backs of the pads and install the pads in the anchor plate.

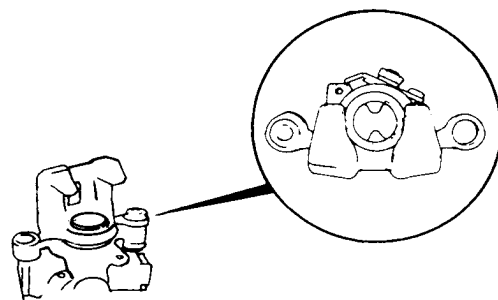


H5672-A



H5666-A

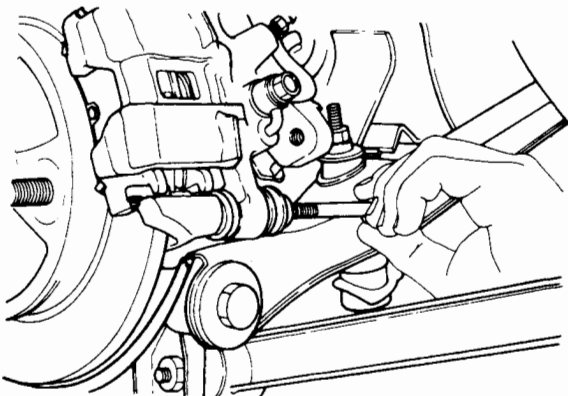
4. Install the disc pad retaining spring.
5. Pivot the caliper down over the pads. If necessary, rotate the disc brake piston.



H5665-A

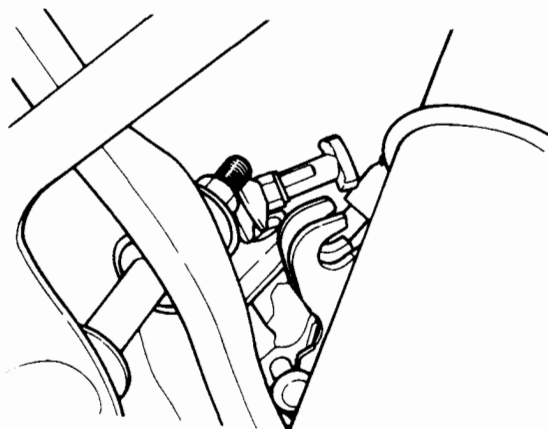
REMOVAL AND INSTALLATION (Continued)

6. Install the lower caliper bolt. Tighten bolt to 39-49 N-m (29-36 lb-ft).



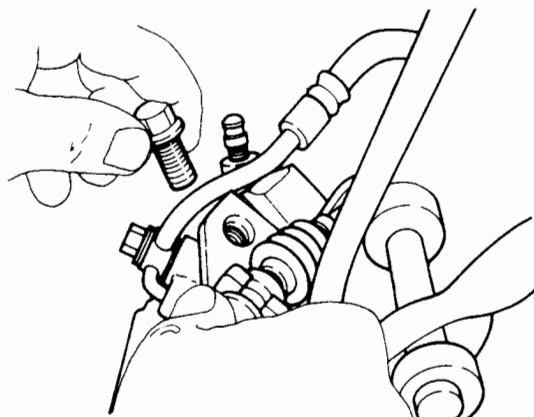
H5667-A

7. Install the parking brake cable in the caliper parking brake lever.



H5668-A

8. Position the parking brake cable bracket against the rear caliper. Install the parking brake cable retaining bolt.

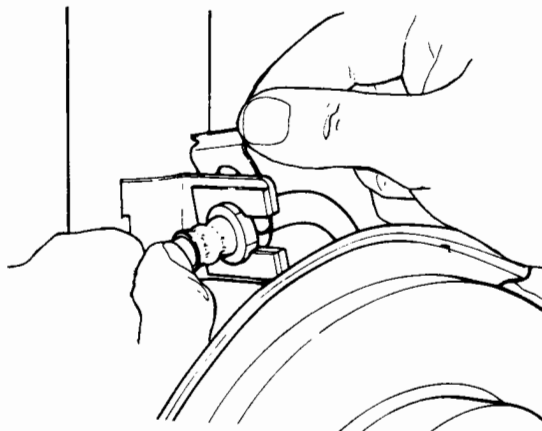


H5669-A

9. Install wheel and tire assembly. Tighten wheel lug nuts to 90-120 N-m (67-88 lb-ft).
10. Pump the brake pedal several times to seat the brake pads.
11. Check, and if necessary, add fluid in the master cylinder.
12. With the wheels off the ground, spin each wheel several times to be sure the calipers are not frozen and the parking brake is not adjusted too tight.

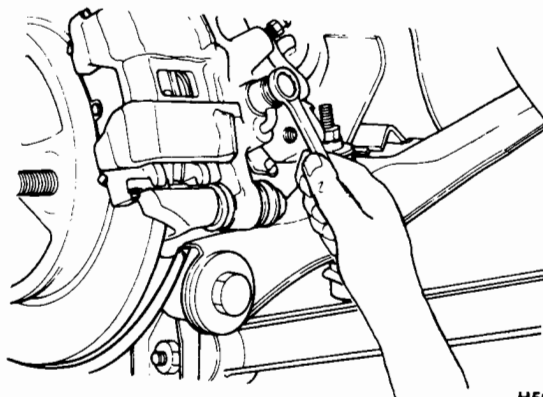
Caliper**Removal**

1. Raise vehicle. Refer to Section 00-02.
2. Remove wheel and tire assembly.
3. Remove brake pads as outlined.
4. Remove the retaining clip from the brake flex hose.



H5674-A

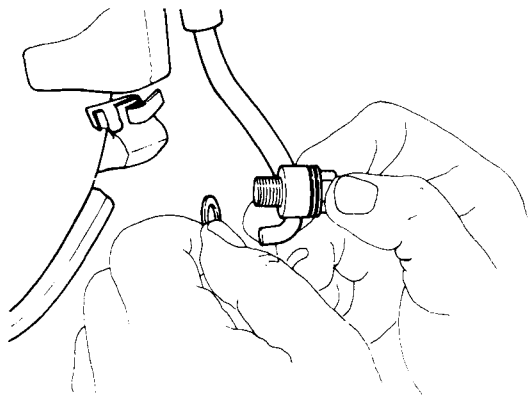
5. Remove the banjo bolt attaching the brake flex hose to the caliper.



H5673-A

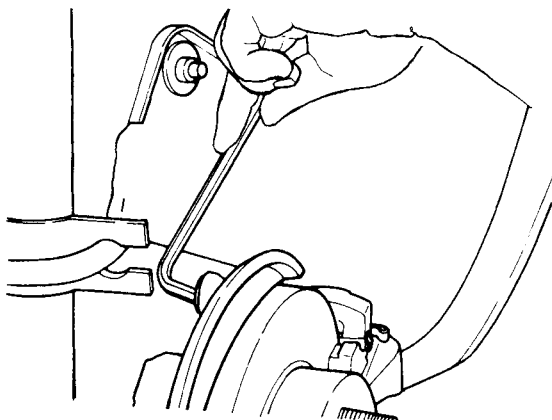
REMOVAL AND INSTALLATION (Continued)

6. Remove the two copper washers that seal the flex hose banjo fitting, and discard.



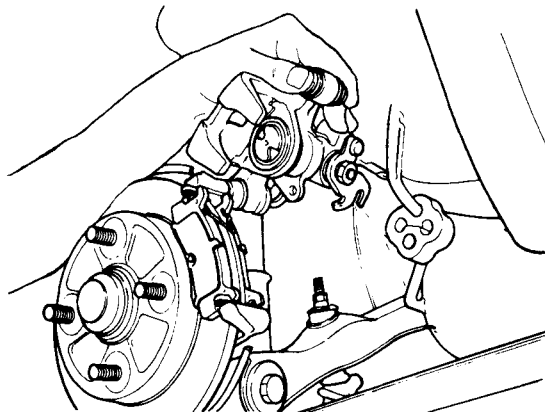
H5675-A

7. Remove the lower caliper retaining bolt.
 8. Using a cold chisel, remove the upper caliper guide pin dust cap. This will give access to the Allen head on the guide pin.
 9. Using an Allen wrench, loosen and remove the upper caliper guide pin.



H5676-A

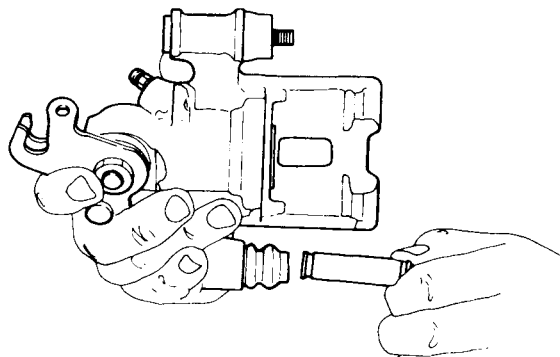
10. Lift the caliper off the rotor.



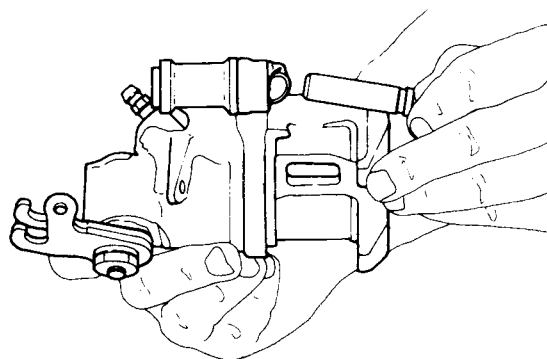
H5677-A

Installation

1. Install the brake pads and shims as outlined.
 2. Before installing the caliper, remove the upper guide pin and the lower guide pin bushing.



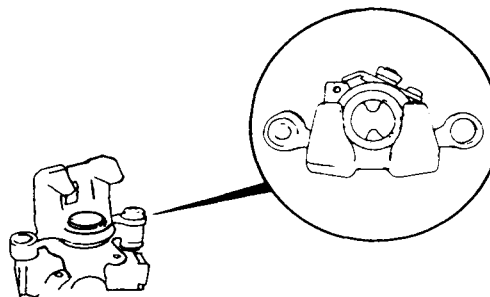
H5678-A



H5679-A

3. Remove the guide pin and guide pin bushing dust boots.
 4. Lubricate the upper guide pin and lower guide pin bushing with Disc Brake Caliper Slide Grease D7AZ-19590-A (ESA-M1C172-A) or equivalent. Install the guide pin and guide pin bushing dust boots.
 5. Position the caliper over the rotor.

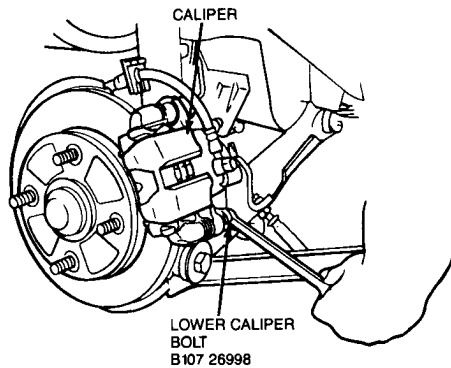
NOTE: To provide the necessary clearance, it may be necessary to rotate the piston into the caliper.



H5685-A

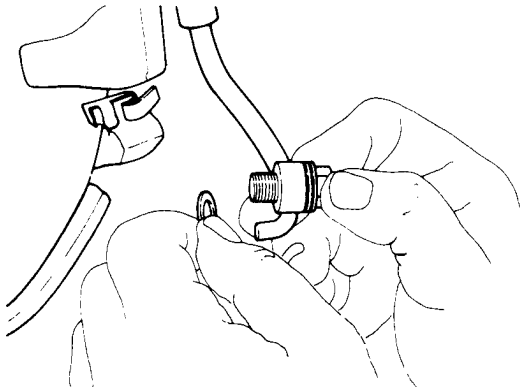
REMOVAL AND INSTALLATION (Continued)

6. Tighten the upper guide pin with an Allen wrench, and install the dust cap with a plastic hammer.
7. Install the lower caliper retaining bolt through the lower caliper guide pin bushing. Tighten to 39-49 N·m (29-36 lb-ft).



H7356-A

8. Install two new copper washers and banjo bolt on the flex hose banjo fitting.



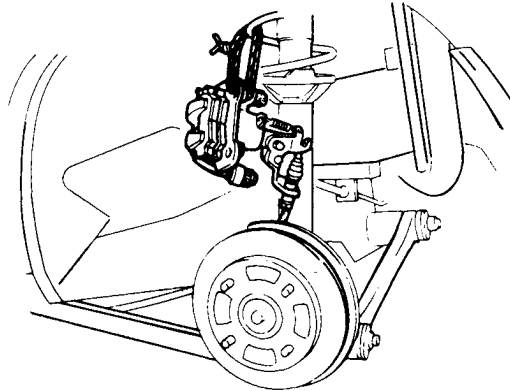
H5675-A

9. Position the flex hose on the caliper and install the banjo bolt. Tighten the bolt to 22-29 N·m (17-21 lb-ft).
10. Bleed the brakes, either manually or with Brake Bleeder 104-00064 or equivalent. Refer to Section 06-00.
11. Install the wheel and tire assembly. Tighten wheel lug nuts to 90-120 N·m (67-88 lb-ft).

Rotor**Removal**

1. Raise vehicle. Refer to Section 00-02.
2. Remove wheel and tire assembly.

3. Using a cape chisel, unstack and remove the halfshaft retaining nut and washer. Discard nut, it cannot be reused. Refer to Section 04-02.
4. Remove the disc brake pads and caliper from the anchor plate as outlined. Support the caliper by a wire strung from the coil spring. Do not disconnect the brake line from the caliper.



H5688-A

5. Remove the rotor. Refer to Section 04-02.

Inspection

Any time brake service is performed, the rotor must be visually inspected to check for any abnormal wear, and checked with a micrometer to make sure the thickness is within specification. Minimum thickness for the rotor is 9mm (0.354 inch).

If the vehicle owner has complained of a pulsating brake pedal, the rotor must be checked for runout (warped rotor) and thickness variation. Refer to Section 06-00.

Rotor Refinishing

If there are just surface irregularities, the rotor may be resurfaced by lightly sanding the face with fine emery cloth. To perform this:

1. Remove the wheel.
2. Remove the caliper as outlined.
3. Lightly sand both sides of the rotor. The back side of the rotor can be sanded at the anchor plate where the caliper normally rides. If scratches or scoring exceed 0.22mm (0.008 inch) the rotor must be resurfaced.

If the rotor has deep scratches or grooves, rotor runout (warped rotor) or incorrect thickness variation, it must be resurfaced off the vehicle on a brake drum/rotor lathe as follows:

1. Remove the wheel and tire assembly.
2. Remove the caliper and support it by a wire as outlined.
3. Remove the rotor from the vehicle as outlined.

REMOVAL AND INSTALLATION (Continued)

4. Resurface the rotor on a rotor lathe. Follow the manufacturer's instructions for the rotor refinishing equipment being used.

NOTE: The rotor must be machined while it is bolted to the hub. The rotor and hub are mounted as an assembly on the rotor lathe, and then the rotor is turned. Machining the rotor separately and then bolting it back onto the hub may cause rotor runout.

Minimum Thickness

Brake rotor minimum thickness is shown on each rotor. This is the thickness at which the rotor becomes unsafe to use. It is called the discard thickness. The discard thickness is 9mm (0.350 inch). To find the minimum thickness to which you can machine the rotor, add 0.762mm (0.030 inch) to the minimum thickness, 9mm (0.350 inch) discard limit marked on the rotor. This 9.762mm (0.380 inch) machining limit allows for rotor wear after it has been resurfaced and returned to use.

If the thickness of the rotor is less than the minimum thickness, discard the rotor and install a new one.

CAUTION: Machining a rotor thinner than the machining limit could permit the rotor to wear past the safe discard point before the lining wears out. It may also result in severe overheating and fade because the thin rotor may be unable to absorb the heat generated during braking.

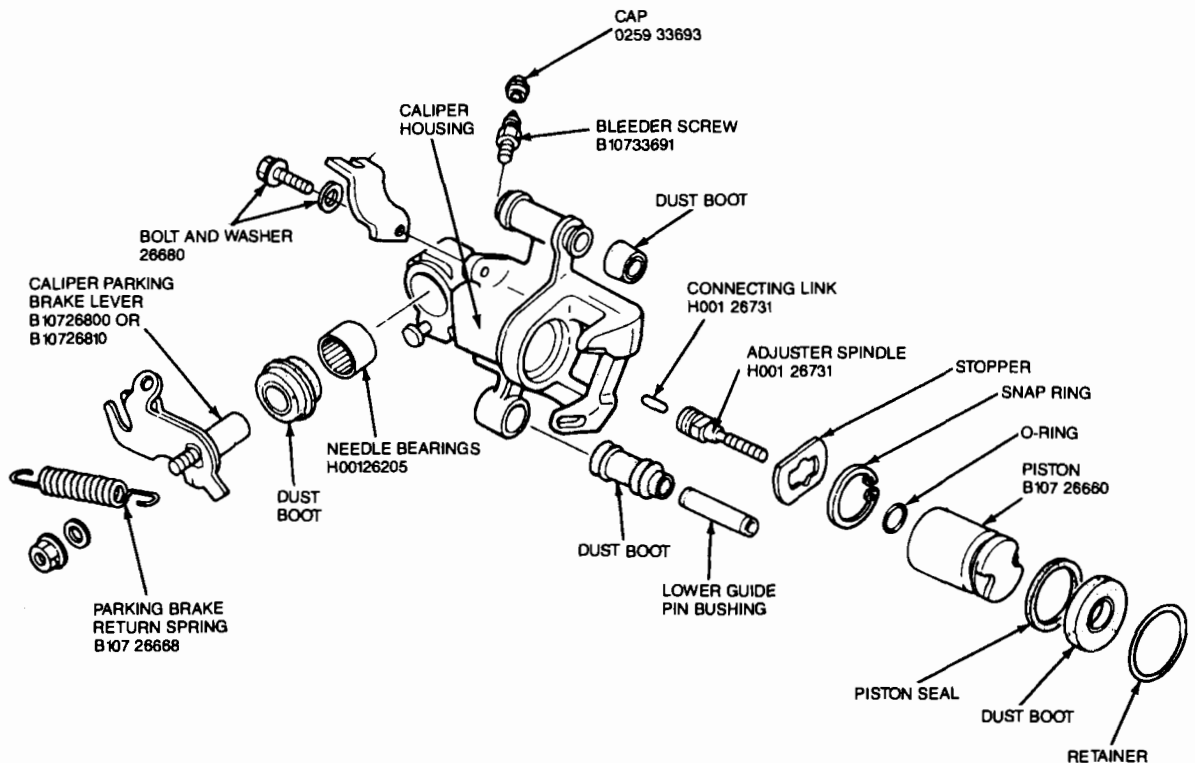
Installation

1. Install the rotor on the spindle. Refer to Section 04-02.
2. Install the caliper and brake pads as outlined.
3. Install the wheel and tire assembly. Tighten wheel lug nuts to 90-120 N·m (67-88 lb-ft).

DISASSEMBLY AND ASSEMBLY

Caliper

Caliper — Disassembled View

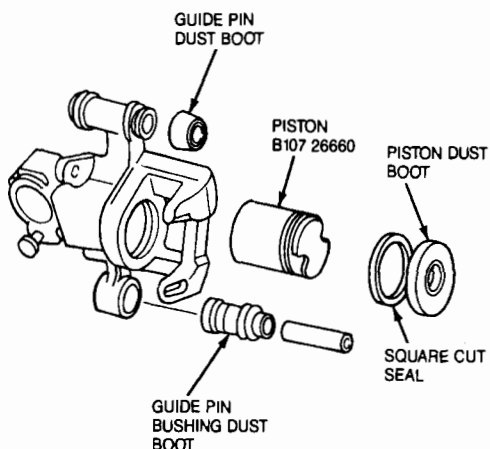


H7360-A

DISASSEMBLY AND ASSEMBLY (Continued)

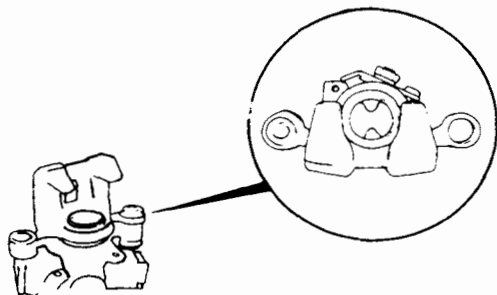
Disassembly

1. Remove disc pads and shims.
2. Remove the caliper as outlined.
3. Open the bleeder screw and drain the brake fluid from the caliper through the brake hose fitting. After draining the fluid, close the bleeder screw.
4. Remove the caliper guide bushing and dust boots.



H6425-A

5. Pry the retaining spring off the dust boot with a screwdriver.
6. Remove the piston.



H5665-A

7. Remove the dust boot and discard.
8. Remove the piston seal from the caliper and discard.
CAUTION: Use a plastic or wooden pick to remove the seal. A metal tool can scratch or nick the seal groove resulting in a possible seal leak.
9. Remove the parking brake mechanism from the caliper housing.

Inspection

The caliper bore, piston seal groove and piston must be inspected for cuts, deep scratches and pitting whenever the caliper is rebuilt. The piston and bore may be lightly polished with crocus cloth, but if deep scratches remain they must be replaced.

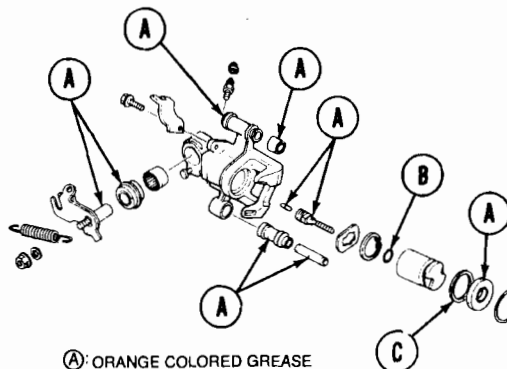
The seal groove in the caliper must be free of deep scratches that would prevent the seal from working properly.

Inspect the upper guide pin and lower guide pin bushing for wear.

Inspect the upper guide pin and lower guide pin bushing dust boots for damage and poor sealing.

Assembly

1. Lubricate the needle bearings with the special grease included in the caliper rebuilding kit. Install the needle bearings, dust boot and parking brake lever.

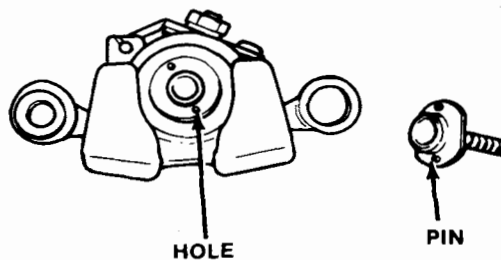


- (A) ORANGE COLORED GREASE
- (B) WHITE COLORED GREASE
- (C) RED COLORED GREASE

NOTE:
APPLY THE GREASE SUPPLIED IN THE SEAL KIT TO THE PLACES SHOWN IN THE FIGURE

H7361-A

2. Install the adapter spindle in the caliper by aligning the pins of the adjuster spindle with the holes of the caliper.



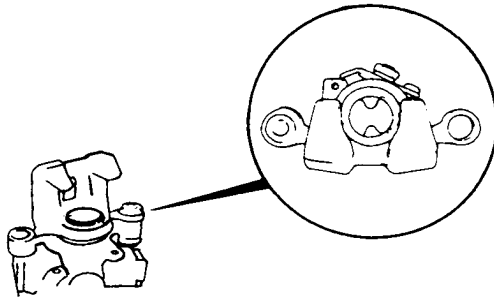
H5683-A

DISASSEMBLY AND ASSEMBLY (Continued)

3. Lubricate a new piston seal with brake fluid and install in the caliper groove. Lubricate the caliper bore and the piston with brake fluid.

CAUTION: Be sure the seal does not become twisted and that it is firmly seated in the caliper bore.

4. Install the dust boot in the caliper bore and install the wire retainer spring.
5. Install the piston in the caliper bore by rotating the piston.



H5665-A

6. Install the upper guide pin dust boot and lower guide pin bushing dust boot.
7. Install the caliper upper guide pin and lower guide pin bushing.
8. Install the anchor plate clips, brake pads, shims and spring retainer as outlined.
9. Install the caliper on the anchor plate as outlined.
10. Tighten the upper guide pin with an Allen wrench and install the dust cap with a plastic hammer.

11. Install the lower caliper bolt and tighten to 39-49 N·m (29-36 lb-ft).
12. Bleed the brakes, either manually or with Rotunda Brake Bleeder 104-00064 or equivalent. Refer to Section 06-00.
13. Pump the brake pedal several times to seat the pads.
14. Check the fluid level in the master cylinder reservoir and add fluid if needed.
15. Spin each rotor to make sure the brakes are not dragging.
16. Install both tire and wheel assemblies. Tighten wheel lug nuts to 90-120 N·m (67-88 lb-ft).

SPECIFICATIONS

TORQUE SPECIFICATIONS

Description	N·m	Lb·Ft
Caliper Retaining Bolts	39-49	29-36
Banjo Bolt	22-29	17-21
Wheel Lug Nuts	90-120	67-88

SPECIAL SERVICE TOOLS

ROTUNDA EQUIPMENT

Model	Description
091-00001	Brake and Clutch Service Vacuum
104-00064	Brake Bleeder