

BRAKE OPERATING SYSTEM

Adjustments

DRUM BRAKES

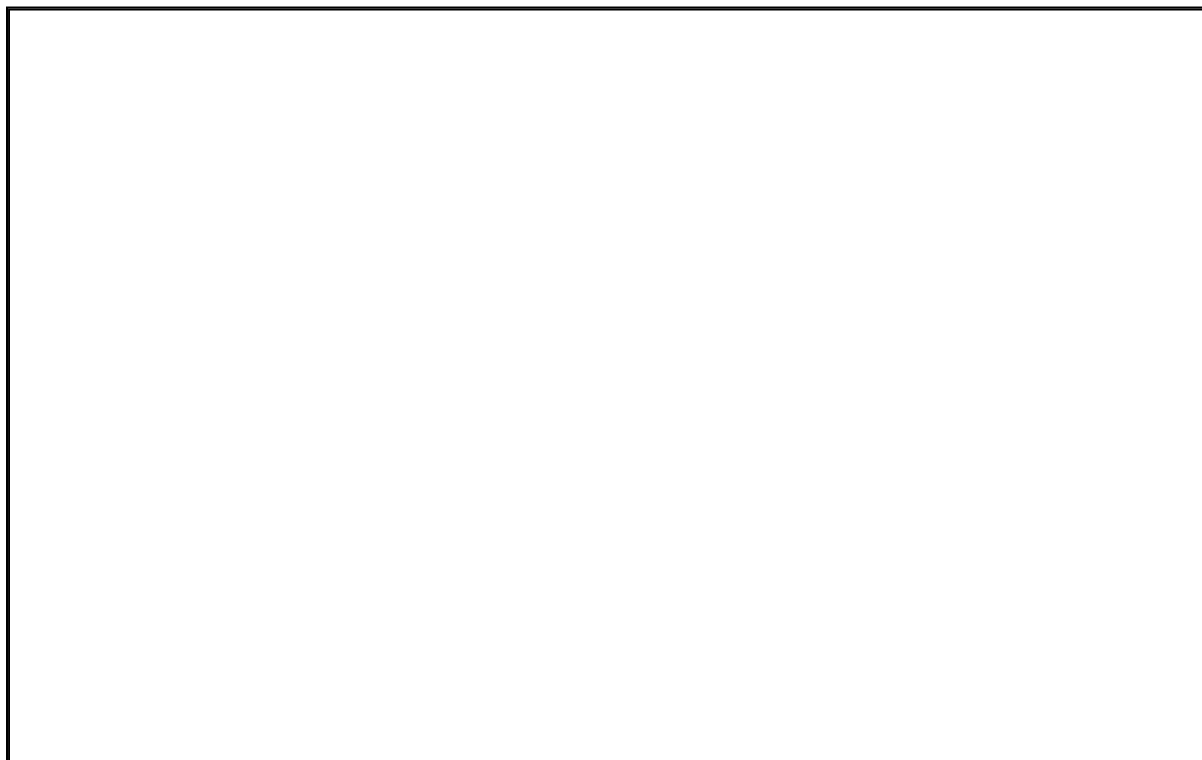
The rear drum brakes on your Taurus/Sable are self-adjusting. The only adjustment necessary should be an initial one after new brake shoes have been installed or some type of service work has been done on the rear brake system.

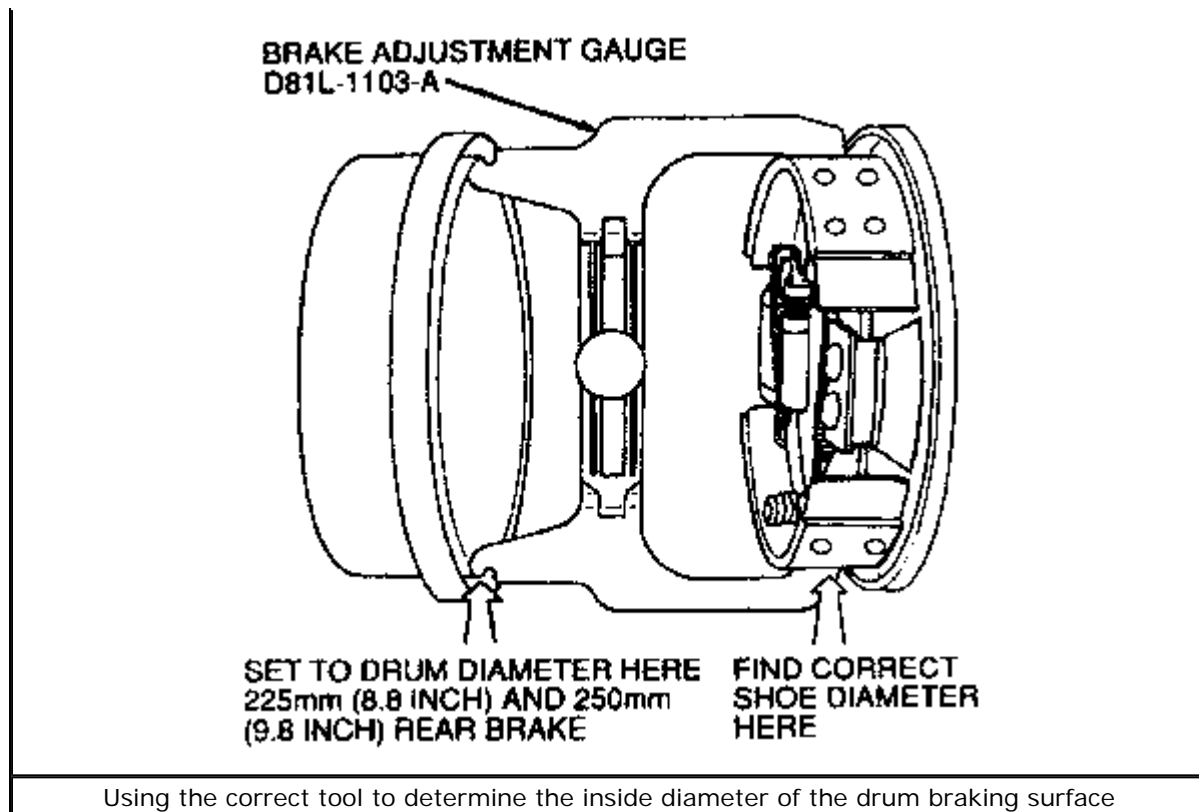
After any brake service, obtain a firm brake pedal before moving the car. Adjusted brakes must not drag. The wheel must turn freely. Be sure the parking brake cables are not too tightly adjusted.

A special brake shoe gauge is necessary for making an accurate adjustment after installing new brake shoes. The special gauge measures both the drum diameter and the brake shoe setting.

Since no adjustment is necessary except when service is performed on the rear brakes, this procedure begins with the car safely supported by jackstands and the rear drums removed.

1. **Apply a small amount of Disc Brake Caliper Slide Grease D7AZ-19590-A or equivalent, to the points where the shoes contact the rear brake backing plate. Do NOT get grease on the linings!**
2. **Determine the inside diameter of the drum braking surface using Brake Adjustment Gauge D81L-1103-A or equivalent.**





[Click to enlarge](#)

3. Adjust the brake shoes and linings diameter to fit the gauge. Align the brake shoes and linings vertically so that the flats on the bottom of the brake shoes and linings are about 0.05 in. (1.5mm) above the bottom of the brake shoe abutment plate **BEFORE** setting the gauge diameter. Hold the automatic brake shoe adjusting lever out of engagement while rotating the adjusting screw. Make sure the screw rotates freely. Lubricate if necessary.
4. Rotate the brake adjustment gauge around the brake shoes and linings to be sure of the proper setting.
5. Install the brake drum, as outlined later in this section.
6. Install the tire and wheel assembly. Install the wheel cover and nut covers, if applicable.
7. Finish the adjustment by pressing the brake pedal down several times with a minimum of 25 lbs. (111 N) of force.
8. After adjustment, check the brake operation by making several stops from various forward speeds.

DISC BRAKES

Front disc brakes require no adjustment. Hydraulic pressure maintains the proper pad-to-disc contact at all times.

On vehicles equipped with rear disc brakes, the main difference is that the rear caliper houses the emergency brake actuator. The rear disc brakes are self-adjusting. Hydraulic pressure maintains the proper pad-to-disc contact at all times.

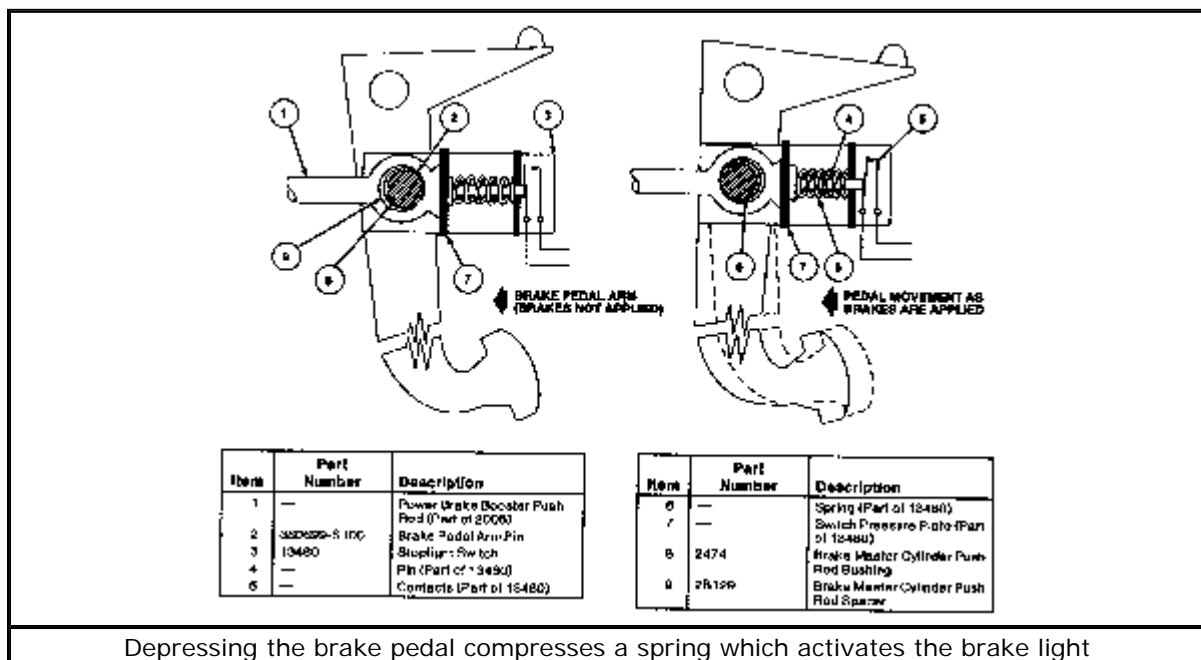
BRAKE PEDAL FREE HEIGHT

1. Insert a slender sharp pointed rod through the carpet and sound deadener to dash panel metal.
2. Measure the distance to the center top of the brake pedal pad.
3. If the position of the pedal is not within specification, check the pedal for worn bushings, missing bushings and loose retaining bolts.
4. Repair defective components as required. Proper specification should be minimum 6.34 in. (161mm) pedal free height to maximum 7.09 in. (180mm) and maximum 2.34 in. (59.4mm) pedal travel.
5. If the measurement is still not within specification, check the brake pedal booster for proper adjustment.

Brake Light Switch

REMOVAL & INSTALLATION

The mechanical stop light switch assembly is installed on the pin of the brake pedal arm, so it straddles the master cylinder pushrod.



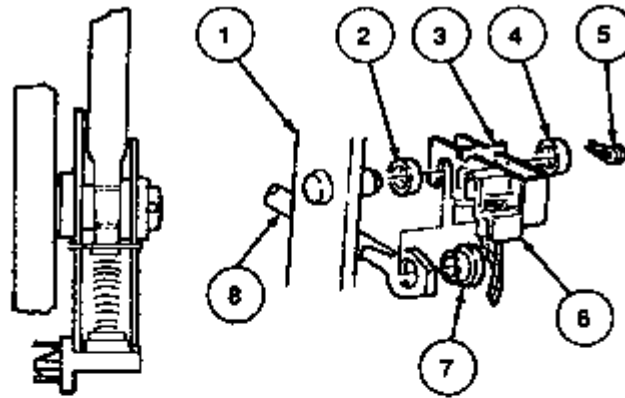
[Click to enlarge](#)

1. Disconnect the negative battery cable.
2. Disengage the wire harness at the connector from the switch.

The locking tab must be lifted before the connector can be removed.

3. Remove the hairpin retainer and white nylon washer. Slide the stop light switch and the pushrod away from the pedal. Remove the switch by sliding the it up or down.

Since the switch side plate nearest the brake pedal is slotted, it is NOT necessary to remove the brake master cylinder pushrod black bushing or the white spacer washer nearest the pedal arm from the brake pedal pin.



Item	Part Number	Description
1	2455	Brake Pedal
2	—	Inside Nylon Washer (White) (Part of 13480)
3	13480	Stoplight Switch
4	—	Outer Nylon Washer (White) (Part of 13480)
5	—	Hairpin Retainer (Part of 13480)
6	—	Wire Harness Connector
7	—	Nylon Bushing (Black) (Part of 13480)
8	—	Master Cylinder Push Rod (Part of 2140)

Exploded view of the brake light switch

[Click to enlarge](#)

To install:

4. Position the switch so the U-shaped side is nearest the pedal and directly over/under the pin. The black bushing must be in position in the pushrod eyelet with the washer face on the side away from the brake pedal arm.
5. Slide the switch up/down, trapping the master cylinder pushrod and black bushing between the switch side plates. Push the switch and pushrod assembly firmly towards the brake pedal arm. Assemble the outside white plastic washer to the pin, then install the hairpin retainer to trap the whole assembly.

Do not substitute another type of pin retainer. Replace only with a production hairpin retainer.

6. Attach the wire harness connector to the switch.
7. Check the stop light switch for proper operation. Stop lights should illuminate with less than 6 lbs. (27 N) of force applied to the brake pedal at the pad.

The stop light switch wire harness must have sufficient length to travel with the switch during full stroke at the pedal.

8. Connect the negative battery cable.

Brake Pedal

REMOVAL & INSTALLATION

1. Disconnect the negative battery cable.
2. Disengage the brake light/stop light switch electrical connector.
3. Remove the pushrod retainer and master cylinder pushrod spacer (nylon washer). Slide the stop light switch outboard along the brake pedal pin just far enough for the outer hole of the switch frame to clear the pin.
4. Remove the switch by sliding it upward. Remove the master cylinder (black) bushing from the pushrod.
5. Loosen the four power brake booster retaining nuts at the pedal support bracket. Slide the pushrod and inner master cylinder nylon washer off the pedal pin if the vehicle does not have speed control.
6. Remove the locknut, then remove the pivot bolt, brake pedal, and brake master cylinder pushrod bushing from the pedal support. Remove the speed control adapter, if equipped by unlatching the locking tab.

To install:

7. Apply a light coating of clean engine oil to the clean bushings.
8. Position the brake pedal in the pedal support bracket, then install the pivot bolt. Install the locknut and tighten to 10-20 ft. lbs. (14-27 Nm).

The head of the brake master cylinder pushrod bushing must be on the side of the booster pushrod away from the brake pedal.

9. Install the inner brake master cylinder pushrod spacer (or, if equipped, the speed control adapter), the master cylinder pushrod and the pushrod bushing on the brake pedal pin.
10. Do NOT oil the brake light switch. Position the brake light switch so that it straddles the pushrod with the slot on the pedal pin and the switch outer frame hole just clearing the pin. Slide the brake light switch down onto the pin and pushrod. Slide the assembly inboard toward the brake pedal arm. Install the outer brake master cylinder pushrod spacer and pushrod retainer. Lock the retainer securely.
11. Tighten the booster retaining nuts to 16-21 ft. lbs. (21-29 Nm).
12. Connect the brake light switch wiring to the brake light switch, then connect the negative battery cable.

Master Cylinder

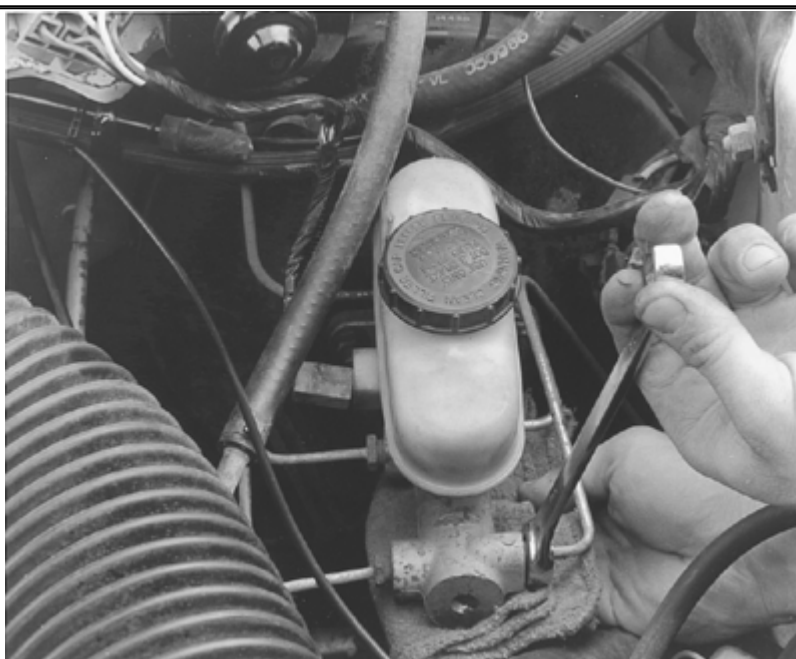
REMOVAL & INSTALLATION

1. Disconnect the negative battery cable.
2. For vehicles equipped with ABS, apply the brake pedal a few times to eliminate all of the vacuum in the system.
3. Disengage the brake warning indicator electrical connector.



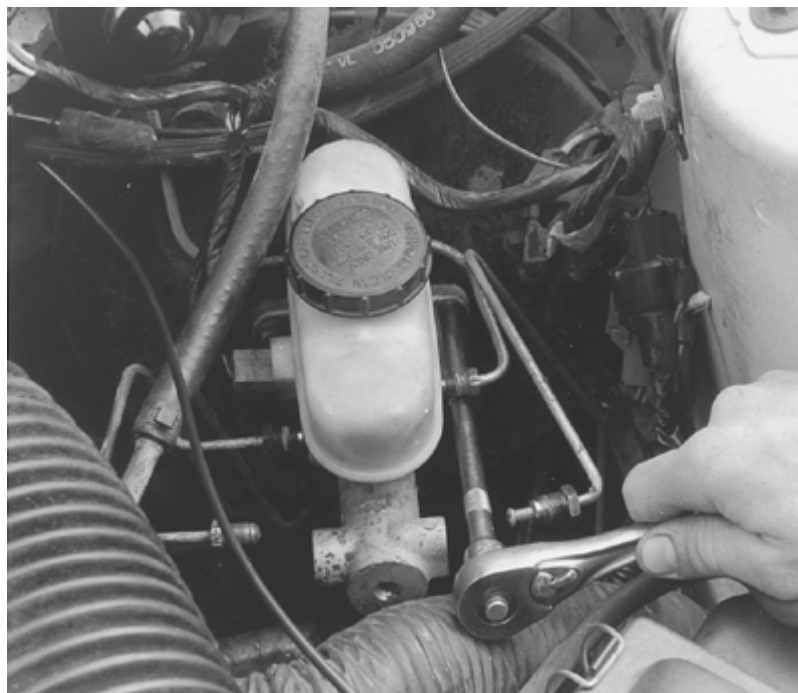
Disengage the electrical connector from the brake warning indicator

4. **Disconnect the brake lines from the primary and secondary outlet ports of the master cylinder and the brake pressure control valve.**



Disconnect the brake lines from the primary and secondary outlet ports of the master cylinder

5. **For vehicles equipped with ABS, disconnect the Hydraulic Control Unit (HCU) supply hose at the master cylinder, then secure in a position to prevent the loss of brake fluid.**
6. **Remove the nuts attaching the master cylinder to the brake booster assembly.**



Remove the retaining nuts attaching the master cylinder to the brake booster assembly, then ...

7. Slide the master cylinder forward and upward from the vehicle.



... slide the master cylinder assembly forward and upward from the vehicle

To install:

- 8. In order to ease installation, bench bleed the master cylinder before installation:**
- 1. Mount the master cylinder in a holding fixture, such as a soft jawed vise. Be careful not to damage the master cylinder housing.**
 - 2. Fill the master cylinder with brake fluid.**
 - 3. Place a suitable container under the master cylinder to catch the fluid being expelled from the outlet**

ports. Using a suitable tool inserted into the booster pushrod cavity, push the master cylinder piston in slowly.

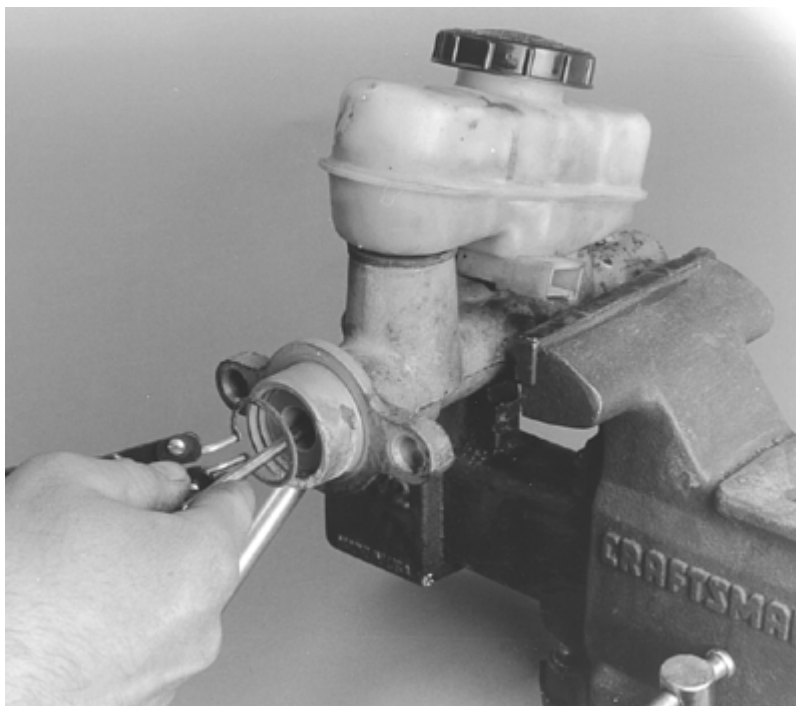
4. Place a finger tightly over each outlet port, then allow the master cylinder piston to return.
5. Repeat the procedure until only clear fluid is expelled from the master cylinder. Plug the outlet ports, then remove the master cylinder from the holding fixture.
9. For vehicles equipped with ABS, install a new seal in the groove in the master cylinder mounting face.
10. Mount the master cylinder over the booster pushrod and onto the two studs on the power brake booster assembly.
11. Install the retaining nuts, then tighten them to 16-21 ft. lbs. (21-29 Nm).
12. Attach the brake fluid lines to the master cylinder and the brake pressure control valve ports.
13. For vehicles equipped with ABS, install the HCU supply hose to the master cylinder fitting, then secure it with the hose clamp.
14. Connect the brake warning light wire.
15. Fill the brake master cylinder with DOT 3 brake fluid to 0.16 in. (4.0mm) below the MAX lines on the side of the reservoir.
16. Connect the negative battery cable, then bleed the brake system. For details, please refer to the procedure located later in this section.
17. Operate the brakes several times, then check for external hydraulic leaks.

OVERHAUL

Brake master cylinders on vehicles equipped with ABS cannot be overhauled. If service is required, the master cylinder must be replaced as an assembly.

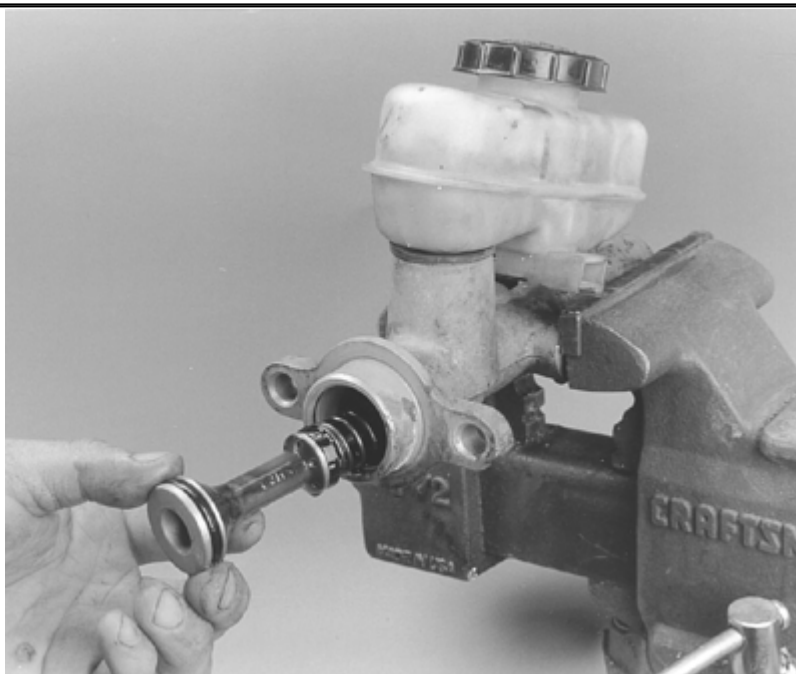
18. Remove the master cylinder from the vehicle. Position the assembly in a suitable holding fixture. If mounting in a vise, clamp it to the vise by the flange to avoid damage to the bore or reservoir areas.
19. Thoroughly clean the outside of the master cylinder assembly. Remove the cap, then drain and properly discard all old brake fluid.
20. Depress the primary piston, then remove the snapping from the retaining groove at the open end of the bore.





Depress the primary piston, then remove the snapping from the retaining groove at the open end of the bore

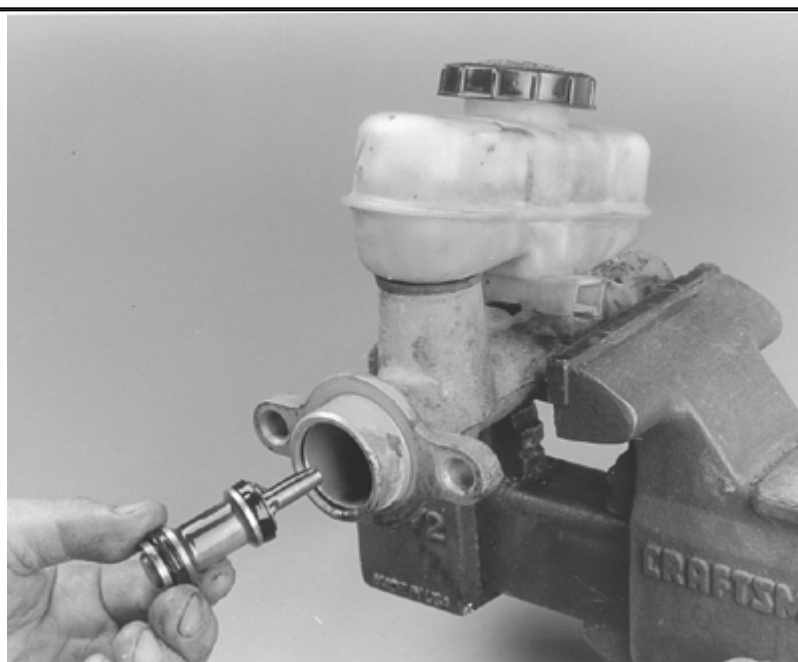
21. Remove the primary and secondary pistons from the master cylinder. Tap open the end of the master cylinder on the bench to remove the pistons. If the secondary piston does not come out readily, use low pressure compressed air to aid in removal.



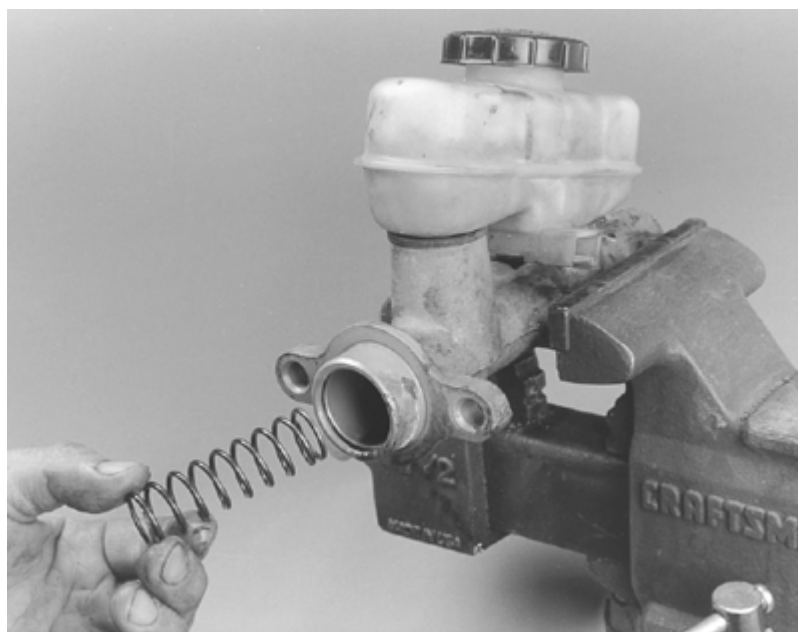
Removing the primary piston from the master cylinder



If the secondary piston does not come out readily, lightly tap the open end of the master cylinder on the bench, then the piston should slide out



Remove the secondary piston, then ...



... remove the secondary piston spring

22. Remove the reservoir assembly.
23. On the station wagon, remove the pressure control valve.

To assemble:

24. Inspect all seals on the pistons for damage and replace as required. Inspect the master cylinder body, and replace if defective. Dip all parts in clean brake fluid before installation.



Inspect all seals on the primary and secondary pistons, and replace if necessary



Replacing a seal on the secondary piston



Exploded view of the internal components of the master cylinder

25. Install the secondary piston (smaller) assembly into the bore, spring end first.
26. Install the primary piston into the bore, spring end first.
27. Depress the primary piston, then install the snapping.
28. On the station wagon, install the brake pressure control valve.
29. Install the master cylinder reservoir assembly.
30. Fill and bleed the master cylinder, then put the securely cap the reservoir. Connect the negative battery cable.

Power Brake Booster

REMOVAL & INSTALLATION

1. Disconnect the negative battery cable, then remove the brake lines from the primary and secondary ports of the master cylinder.
2. Disconnect the manifold vacuum hose from the power brake booster check valve. For vehicles equipped with ABS, depress the brake pedal several times to

- eliminate all of the vacuum in the system.
3. Disengage the fluid level warning indicator electrical connector.
4. Unfasten the nuts securing the master cylinder to the power brake booster, then remove the master cylinder.
5. Working inside the vehicle, under the instrument panel, remove the brake light switch wiring connector from the switch. Remove the pushrod retainer and the master cylinder pushrod spacer (outer nylon washer) from the brake pin. Slide the brake light switch along the brake pedal pin, far enough for the outer hole to clear the pin.
6. Remove the switch by sliding it upward. Remove the booster-to-dash panel retaining nuts. Slide the booster pushrod and pushrod bushing off the brake pedal pin.
7. Working inside the engine compartment, remove the screws from the vacuum outlet manifold fitting at the dash panel, then position the vacuum fitting aside.
8. Position the wire harness aside. Remove the transaxle shift cable and bracket.
9. Move the power brake booster forward until the booster studs clear the dash panel, then remove the booster.

The diagram shows an exploded view of a power brake booster assembly. Callouts 1-20 identify various components. Two sub-diagrams are included: 'VACUUM HOSE ROUTING' (VIEW X) showing the hose path and 'VIEW Z' showing the pedal pin assembly with a note: 'PIN MUST BE LOCKED IN PLACE AS SHOWN ONE PLACE MARKED'.

Item	Part Number	Description
1	NR2017-5101	Nut
2	7140	Brake Master Cylinder
3	7B033	Clutch Pedal and Bracket
4	-	Coil
5	NR0023H-5103	U-Nut
6	NR0023A-52	Washer

Item	Part Number	Description
7	NR2048-52	Nut
8	0-506	Pedal Support Bracket
9	U-510	Clutch Pin
10	-	Pushrod (with bush)
11	2474	Brake Master Cylinder Pin and Spring

Item	Part Number	Description
12	NR0023H-5103	U-Nut
13	0B-23	Washer
14	-	Vacuum Tube
15	13403	Clutch Pedal
16	2419A-52-103	Clutch Pedal to Cross Valve
17	20497	Vacuum Outlet Manifold
18	-	Pin (Part of 2175)

Item	Part Number	Description
19	2455	Brake Pedal (Automatic Transaxle)
20	2455	Brake Pedal (Manual Transaxle)
6	-	Spring for 21-22 hrs (14-21 lbs)
11	-	Spring for 5-29 hrs (12-21 lbs)

Common power brake booster and related components

[Click to enlarge](#)

To install:

10. **Align the pedal support bracket inside the vehicle, then place the power brake booster in position on the dash panel and hand-start the retaining nuts.**
11. **Working inside the vehicle, install the master cylinder pushrod spacer or speed control dump valve, pushrod and master cylinder pushrod bushing onto the pedal pin and into the pushrod. The head of the bushing should be on the side of the pushrod away from the pedal arm. Tighten the booster-to-dash panel retaining nuts to 16-21 ft. lbs. (21-29 Nm).**
12. **Position the brake light switch so that it straddles the booster pushrod with the brake light switch slot toward the pedal blade and hole just clearing the pin. Slide the switch down onto the pin. Slide the assembly toward the pedal arm, being careful not to bend or deform the brake light switch. Install the master cylinder pushrod spacer on the pin, then secure all of the parts to the pin with the hairpin retainer. Make sure the retainer is fully installed and locked over the pedal pin. Attach the brake light switch wiring connector to the switch.**
13. **Position the speed control dump valve to the dash panel, then secure using the two retaining screws.**
14. **Move the wiring harness into position. Install the shift cable and bracket.**
15. **Connect the manifold vacuum hose to the power brake booster check valve.**
16. **Position the master cylinder assembly on the booster assembly studs.**
17. **Install the brake tube fittings into the master cylinder ports. Tighten to 10-17 ft. lbs. (14-24 Nm). Tighten the master cylinder nuts to 16-21 ft. lbs. (21-29 Nm).**
18. **Engage the fluid level warning indicator electrical connector.**
19. **Bleed the brake system. For details, please refer to the procedure later in this section.**
20. **Adjust the manual shift linkage.**
21. **Connect the negative battery cable, then start the engine and check the brake function.**

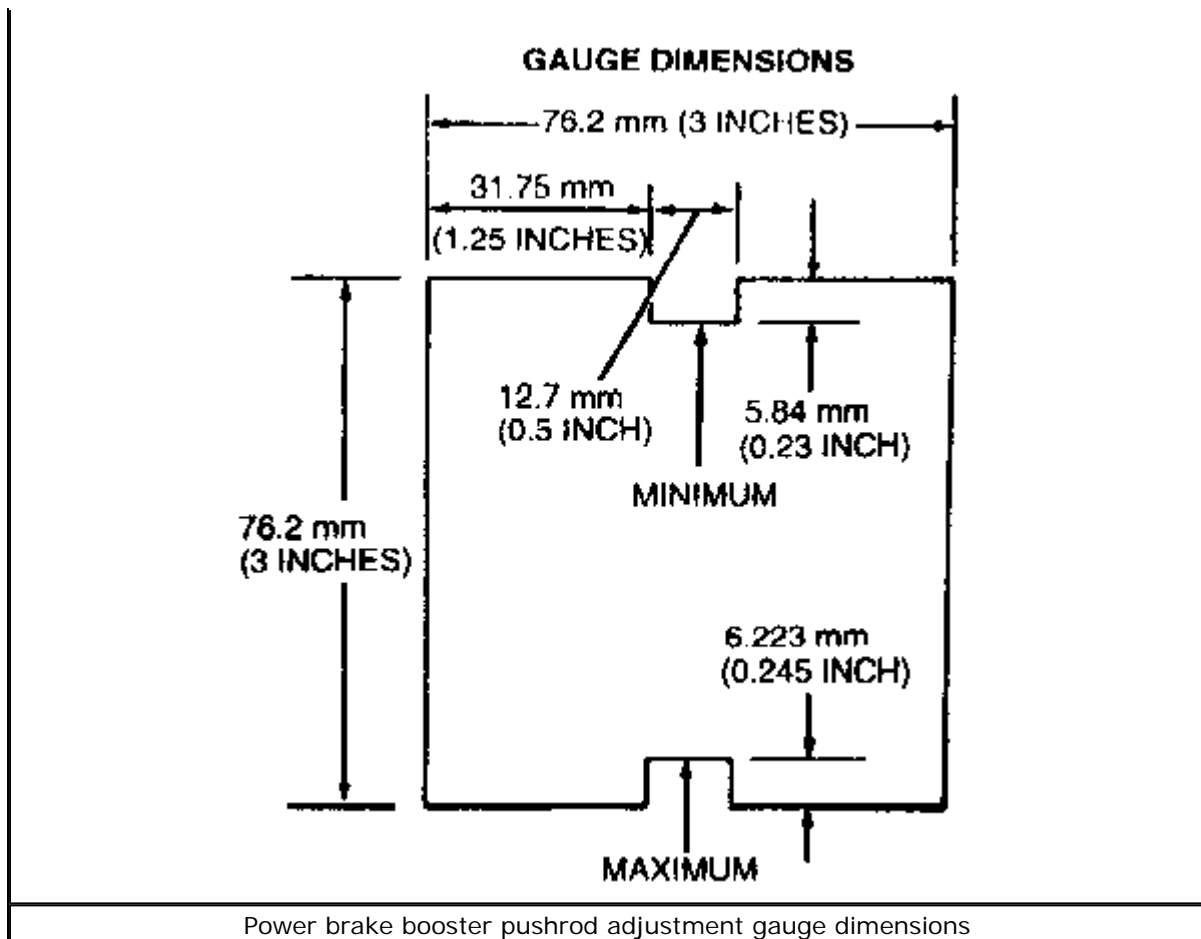
ADJUSTMENT

On vehicles without ABS, the power brake booster has an adjustable pushrod (output rod) which is used to compensate for dimensional variations in an assembled power brake booster. The pushrod length is adjusted after each booster unit has been assembled in production. A properly adjusted pushrod that remains assembled to the power brake booster with which it was matched during production should never require a service adjustment.

A power brake booster that is suspected of having an improper pushrod length will indicate either of the following:

- **A pushrod that is too long will prevent the master cylinder piston from completely releasing hydraulic pressure and eventually cause the brakes to drag.**
- **A pushrod that is too short will have excessive brake pedal travel and cause a groaning noise to come from the power brake booster.**

If necessary, pushrod length can be checked using a pushrod gauge and the following procedure.

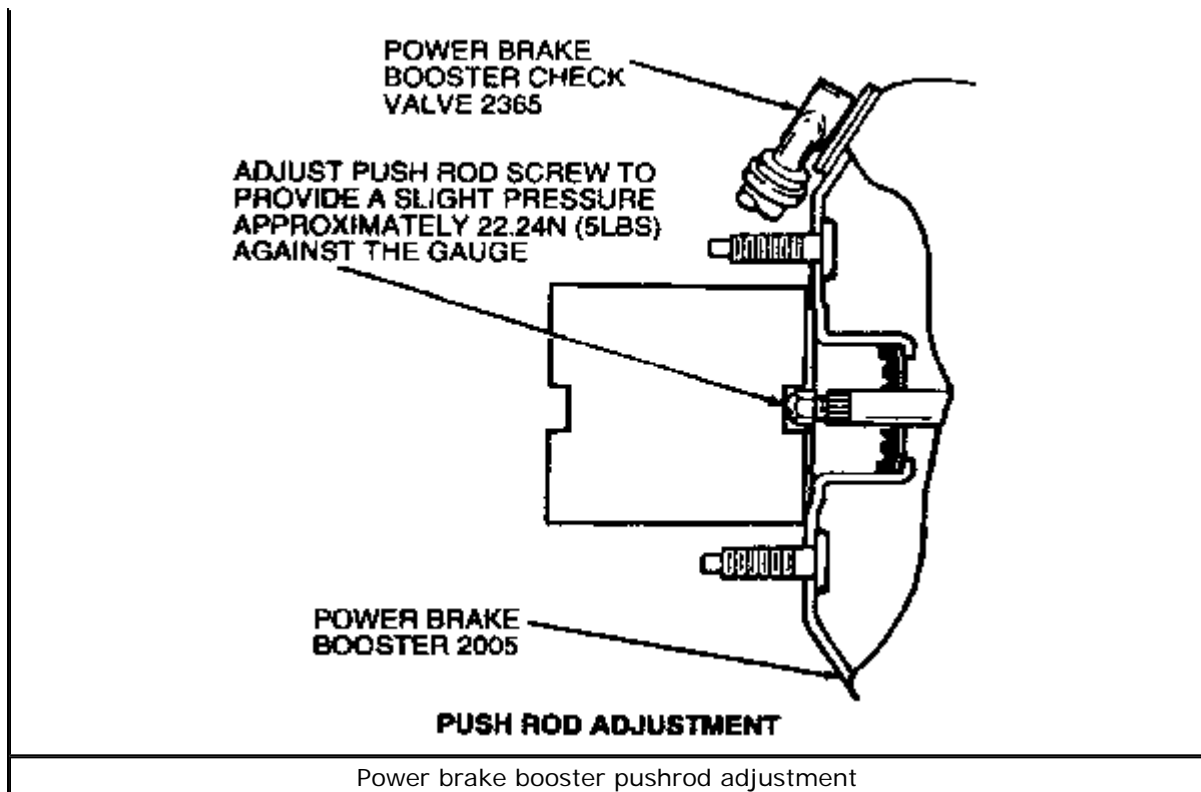


[Click to enlarge](#)

1. Without disconnecting the brake lines, disconnect the master cylinder and set it away from the booster power unit.

The master cylinder must be supported to avoid damaging the brake lines.

2. With the engine running, check and adjust the pushrod length so that it is 0.230-0.245 in. (5.84-6.22mm), as indicated by the gauge shown. A force of approximately 5 lbs. (22 N) applied to the pushrod with the gauge will confirm that the pushrod is seated within the power booster. If adjustment is necessary, grip the rod only by the knurled area.



[Click to enlarge](#)

3. Install the master cylinder on the power booster. Gradually and alternately tighten the retaining nuts to 16-21 ft. lbs. (21-29 Nm).

Proportioning Valve

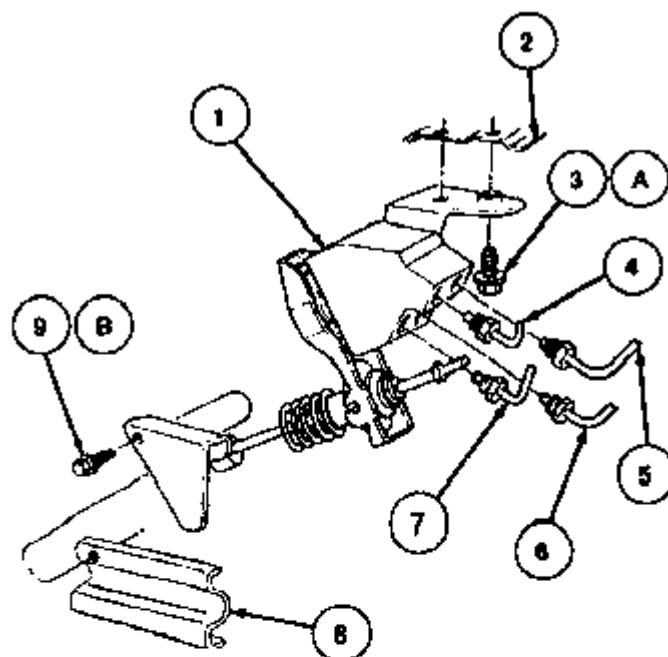
REMOVAL & INSTALLATION

The valve for the sedan is mounted to the floorpan near the left rear wheel. The valves for the station wagon are screwed into the master cylinder.

Sedan

1. Raise and safely support the vehicle.
2. Note the position of the four brake tubes connected to the valve, then disconnect them from the valve assembly.
3. Remove the screw retaining the valve bracket to the lower suspension arm.
4. Remove the two screws retaining the valve bracket to the underbody, then remove the assembly.

The service replacement valve will have a red plastic gauge clip on the valve, which must not be removed until the valve is installed on the vehicle.



Item	Part Number	Description
1	2B547	Brake Load Sensor
2	—	Proportioning Valve Body
3	N802191-S56	Bolt
4	2L568	Brake Tube Assy
5	2L569	Brake Tube Assy
6	2265	Brake Tube Assy
7	2B255	Brake Tube Assy
8	5500	Rear Suspension Arm and Bushing
9	N804846-S58	Bolt
10	—	Lower Adjusting Screw
11	—	Red Plastic Gauge (Not Shown)
A	—	Tighten to 11.4-15.6 N·m (8-12 Lb·Ft)
B	—	Tighten to 8-8 N·m (4-6 Lb·Ft)

View of a common proportioning valve-sedan only

[Click to enlarge](#)

To install:

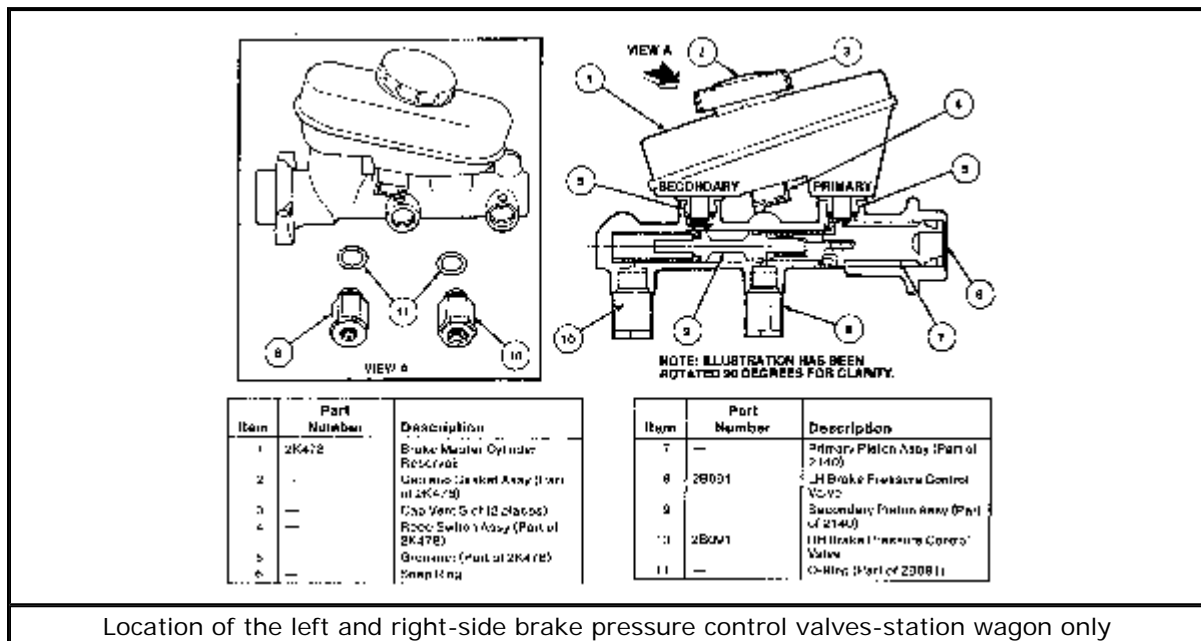
5. Make sure the rear suspension is in the full rebound position.
6. Make sure the red plastic gauge clip is in position on the valve and that the operating rod lower adjustment screw is loose.
7. Position the valve assembly to the underbody, then install the two retaining screws.
8. Position the valve bracket to the lower suspension arm, then install one retaining screw. Tighten the screw to 4-6 ft. lbs. (6-8 Nm). Make sure the brake pressure

differential valve adjuster sleeve is resting on the lower bracket, then tighten the setscrew.

9. Connect the brake lines in the same position as removed.
10. Bleed the rear brakes. For details, please refer to the procedure located later in this section.
11. Remove the red plastic gauge clip, then carefully lower the vehicle.

Station Wagon

1. Disconnect the primary or secondary brake line from the master cylinder, as necessary.
2. Loosen and remove the brake pressure control valve(s) from the master cylinder housing.



[Click to enlarge](#)

To install:

3. Install the brake pressure control valve(s) in the brake master cylinder housing port, then tighten to 10-16 ft. lbs. (13-22 Nm).
4. Install the brake tube, then tighten to 12-15 ft. lbs. (16-20 Nm).
5. Fill and bleed the brake system. For details, please refer to *Brake System Bleeding*.

Brake Hoses and Pipes

REMOVAL & INSTALLATION

Flexible Hoses

Flexible hoses are usually installed between the frame-to-front calipers and the frame-to-rear differential, although they may be used elsewhere on some applications. Commonly, flexible hoses are used at points on the vehicle where

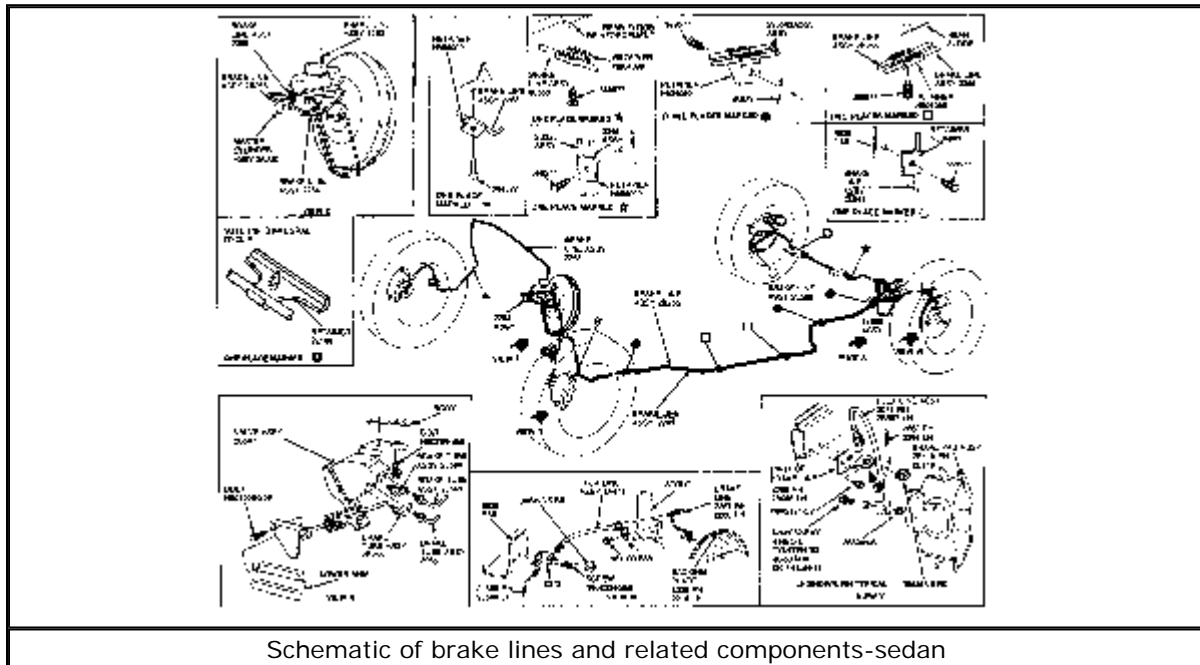
suspension travel would damage or break a solid pipe. Hoses should be replaced if they show signs of softening, cracking or other damage.

FRONT HOSE

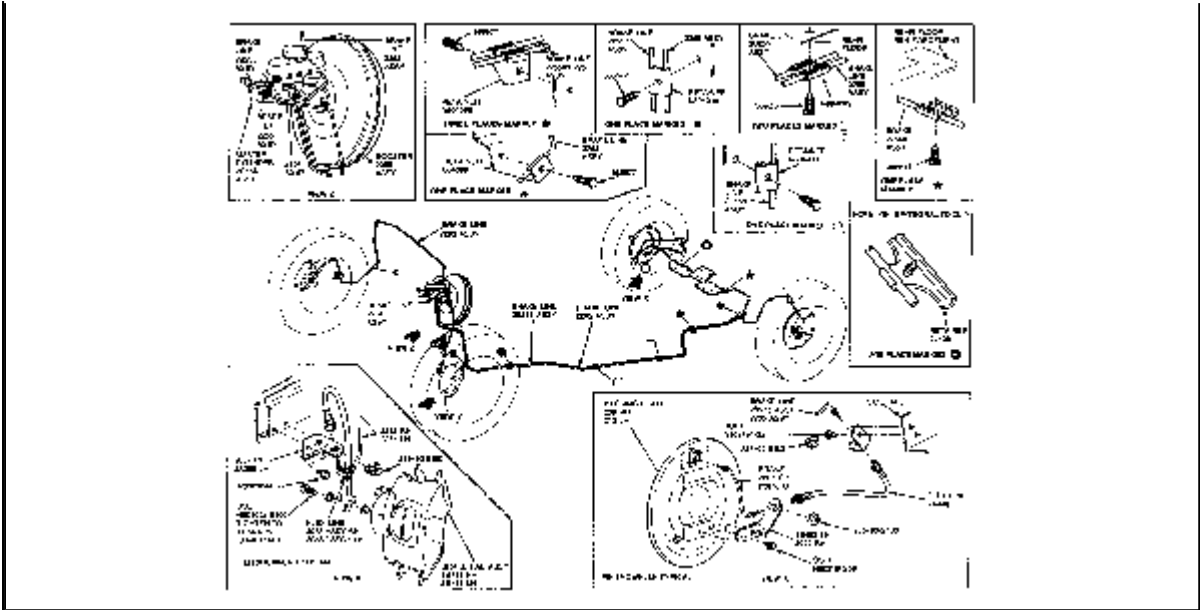
1. Raise and safely support the vehicle.
2. Remove the wheel and tire assembly from the rotor mounting face. Be careful not to damage or interfere with the wheel cylinder bleeder screw during removal.
3. Disconnect the front brake hose from the caliper. Remove the hollow retaining bolt that connects the hose fitting to the caliper. Remove the front brake hose assembly from the caliper, then plug the hose to avoid dirt or contamination from entering the hose.
4. Remove the front brake hose from the brake fluid distributor tube, then remove the brake hose clip and the brake hose.

To install:

5. Connect the front brake hose to the fluid distributor tube, then install the hose clip.
6. Remove the plugs, then install the brake hose on the caliper using a new copper washer on each side of the fitting outlet. Insert a retaining bolt through the washers and fittings, then tighten the bolts to 30-40 ft. lbs. (41-54 Nm).
7. Bleed the brake system. For details, please refer to the procedure later in this section. Make sure to replace the rubber bleed screw after bleeding the system.
8. Install the wheel and tire assembly, then carefully lower the vehicle. Tighten the lug nuts to 85-105 ft. lbs. (115-142 Nm).



[Click to enlarge](#)

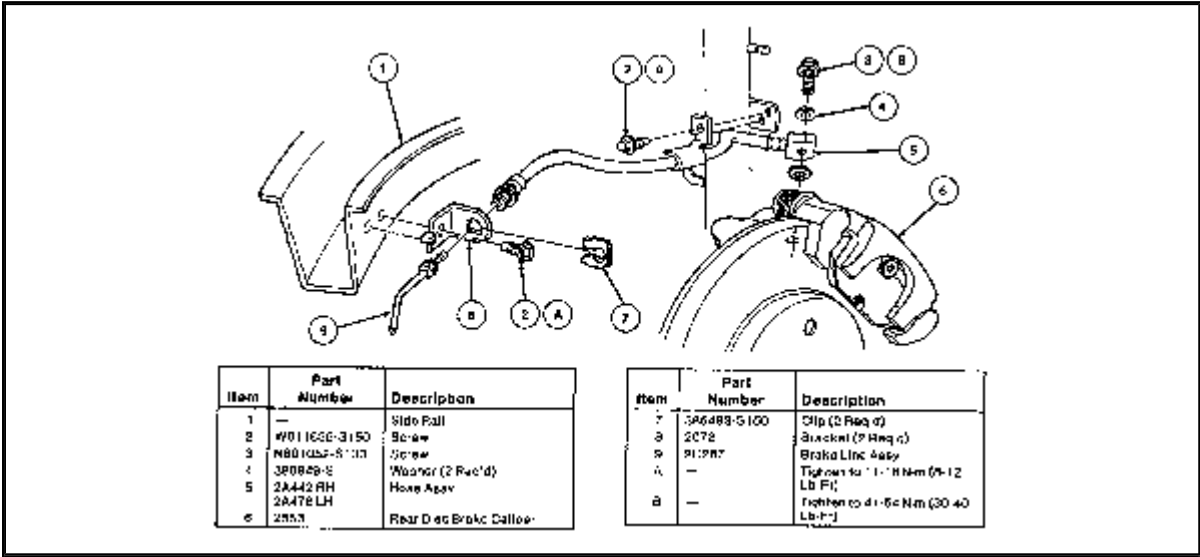


Schematic of brake lines and related components-station wagon

[Click to enlarge](#)

REAR HOSE

1. Raise and safely support the vehicle.
2. Remove the wheel and tire assembly.
3. Remove the rear wheel brake hose from the rear disc brake caliper assembly.
4. Remove the rear wheel brake hose from the rear shock absorber.
5. Remove the brake hose clip from the bracket, then remove the rear hose from the brake fluid distribution tube.



Common rear brake hose assembly

[Click to enlarge](#)

To install:

6. Seat the brake hose into the bracket, then install the hose clip.

7. **Connect the hose to the brake fluid distributor tube.**
8. **Using new washers, connect the rear wheel brake hose to the rear disc caliper. Tighten the retaining bolt to 30-40 ft. lbs. (41-54 Nm).**
9. **Bleed the brake system, as outlined later in this section.**
10. **Install the wheel and tire assembly, then carefully lower the vehicle and final tighten the lug nuts to 85-105 ft. lbs. (115-142 Nm).**

Steel Pipes

When replacing steel brake pipes, always use the double-walled steel piping which is designed to withstand high pressure and resist corrosion. Also, it is important to make sure that the pipe is of the same size to assure both a proper fit and proper brake operation.

CAUTION

Never use copper tubing. It is subject to fatigue, cracking, and/or corrosion, which will result in brake line failure.

Whenever possible, try to work with brake lines that are already cut to the length needed. These lines are available at most auto parts stores and have machine made flares, the quality of which is hard to duplicate with most of the available inexpensive flaring kits.

When the brakes are applied, there is a great deal of pressure developed in the hydraulic system. An improperly formed flare can leak with a resultant loss of stopping power. If you have never formed a double-flare, take time to familiarize yourself with the flaring kit; practice forming double-flares on scrap tubing until you are satisfied with the results.

1. **Obtain the recommended bulk $\frac{3}{16}$ in. double wall steel brake tubing and the correct standard tube nuts for $\frac{3}{16}$ in. tubing.**

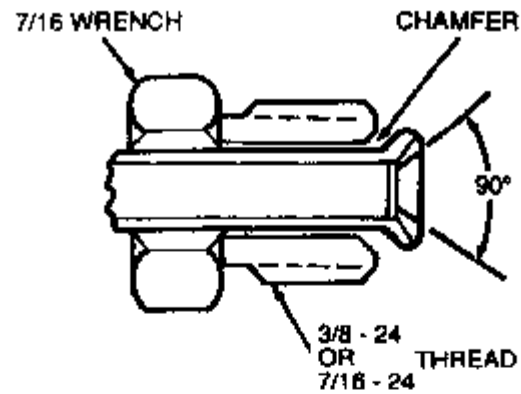
The outside diameter of the line is used to specify size.

2. **Using a tubing cutter, cut the tubing to the proper length. Clean burrs after cutting. The correct length may be determined by measuring the line to be replaced using a length of cord, then adding $\frac{1}{8}$ in. (1.2mm) for each flare.**

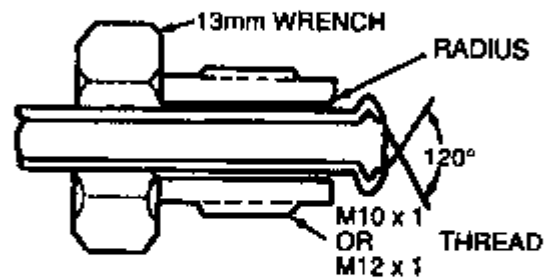
Make sure the fittings are installed and oriented correctly before flaring both ends of the line.

3. **Place a tube nut onto the tube in the correct direction, then flare the tube with an SAE inverted flare or a metric ISO flare using Brake Line Flaring Tool D81L-2269-A, or equivalent. Carefully follow the instructions included with the tool. Repeat on the opposite end of the tube.**

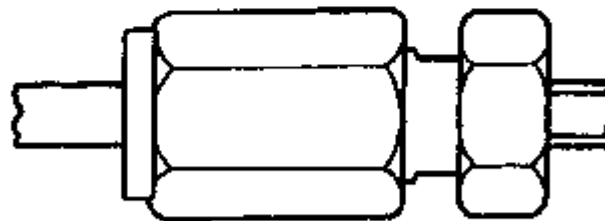
- SAE double 45-degree flare.



- ISO Metric flare.



- Tube to tube connection.



- SAE double 45 Union (repair).



Commonly used types of brake line flared connections

[Click to enlarge](#)

4. Bend the replacement tube to match the removed tube using a tubing bender. When the replacement brake tube is installed, maintain adequate clearance to metal edges and moving or vibrating parts.
5. Clean the brake tube by flushing with clean brake fluid. Install the brake tube, then

tighten the tube nuts to specification using an inch lb. torque wrench.

6. Bleed the brake system.

Bleeding

PROCEDURE

Manual Bleeding

1. Clean all dirt from the master cylinder filler cap.
2. If the master cylinder is known or suspected to have air in the bore, it must be bled **BEFORE** any of the wheel cylinders or calipers. To bleed the master cylinder, loosen the upper secondary left front outlet fitting approximately $\frac{3}{4}$ of a turn.
3. Have an assistant depress the brake pedal slowly through its full travel. Close the outlet fitting and let the pedal return slowly to the fully released position. Wait 5 seconds and then repeat the operation until all air bubbles disappear.
4. Loosen the upper primary right-hand front outlet fitting about $\frac{3}{4}$ of a turn. Repeat Step 3 with the right-hand front outlet fitting.
5. To continue to bleed the brake system, remove the rubber dust cap from the wheel cylinder bleeder fitting or caliper fitting at the right rear side of the vehicle. Check to make sure the wheel cylinder bleeder screw is positioned at the upper half of the front caliper. If not, the caliper is located on the wrong side. Place a suitable box wrench on the bleeder fitting, then attach a rubber drain tube to the fitting. The end of the tube should fit snugly around the bleeder fitting.
6. Submerge the free end of the tube in a container partially filled with clean brake fluid, then loosen the fitting about $\frac{3}{4}$ of a turn.



Submerge the free end of the brake tube in a container partly filled with clean brake fluid, then loosen the fitting about $\frac{3}{4}$ of a turn

7. Have an assistant push the brake pedal down slowly through its full travel. Close the bleeder fitting and allow the pedal to slowly return to its full release position. Wait 5 seconds, then repeat the procedure until no bubbles appear at the submerged end of the bleeder tube.

8. When the fluid is completely free of air bubbles, close the bleeder fitting, then remove the bleeder tube. Install the rubber dust cap on the bleeder fitting.
9. Repeat this procedure in the following sequence: left front, left rear and right front. Refill the master cylinder reservoir after each wheel cylinder or caliper has been bled, then install the master cylinder cover and gasket. When brake bleeding is completed, the fluid level should be filled to the maximum level indicated on the reservoir using clean brake fluid from a sealed container.
10. Always make sure the disc brake pistons are returned to their normal positions by depressing the brake pedal several times until normal pedal travel is established. If the pedal feels spongy, repeat the bleeding procedure.

Pressure Bleeding

For pressure bleeding, use Rotunda Brake Bleeder 104-00064 or equivalent. Always bleed the longest line first. The bleeder tank should contain enough new brake fluid to complete the braking operation. Use only DOT 3 brake fluid from a new, sealed container. Never reuse brake fluid that has been drained from the hydraulic system. The pressure bleeder tank should be charged with 10-30 psi (69-206 kPa) of air pressure.

1. Clean all dirt from the reservoir filler cap and surrounding area.

NEVER exceed 50 psi (344 kPa) of air pressure to prevent system damage.

2. Remove the master cylinder filler cap, then fill the reservoir with fluid to the MAX fill line. Following the manufacturer's instructions, install the pressure bleeder adapter tool to the master cylinder reservoir, then attach the bleeder tank hose to the fitting on the adapter.
3. If all wheel cylinders are to be bled, start with the right-hand rear brake wheel cylinder. Remove the dust cap from the right rear caliper bleeder fitting. Attach a rubber drain tube to the fitting, making sure the tube fits snugly.
4. Open the valve on the bleeder tank to admit pressurized brake fluid to the master cylinder reservoir.
5. Submerge the free end of the tube in a container partly filled with clean brake fluid, then loosen the wheel cylinder bleeder screw.
6. When the air bubbles cease to appear in the fluid at the submerged end of the bleeder tube, close the wheel cylinder bleeder screw, then remove the tube. Tighten to 7.5-8.9 ft. lbs. (10-12 Nm). Replace the rubber dust cap on the wheel cylinder bleeder screw.
7. Repeat Steps 3-6 at the left front disc brake caliper.
8. Next, repeat Steps 4, 5 and 6 at the left rear wheel cylinder or caliper, and then the right front disc brake caliper.
9. When the bleeding procedure is finished, close the bleeder tank valve, then remove the hose from the adapter fitting.
10. After disc brake service, make sure the disc brake pistons are returned to their normal positions and that the brake shoe and lining assemblies are properly seated. This is accomplished by depressing the brake pedal a few times until normal pedal travel is established.
11. Remove the pressure bleeder adapter tool from the master cylinder. Fill the master cylinder reservoir to the proper level using clean brake fluid from a sealed container.

Rear Brake Bleeding With a Fully Charged Accumulator

1. Remove the dust cap from the right rear caliper bleeder fitting. Attach a rubber drain tube to the fitting, making sure the tube fits snugly.
2. Turn the ignition switch to the RUN position. This will turn on the electric pump to charge the accumulator, as required.
3. Have an assistant hold the brake pedal in the applied position. Open the bleeder fitting for 10 seconds at a time until an air-free stream of brake fluid flow is observed.

CAUTION

To prevent possible injury, care must be used when opening the bleeder screws, due to the high pressures stored by a fully charged accumulator.

4. Repeat the procedure at the left rear caliper.
5. Pump the brake pedal several times to complete the bleeding procedure.
6. Adjust the fluid level in the reservoir to the MAX mark with a fully charged accumulator.

If the pump motor is allowed to run continuously for approximately 20 minutes, an internal thermal safety switch may shut the motor off to prevent it from overheating. If that happens, a 2-10 minute cool down period is typically required before normal operation can resume.

FRONT DISC BRAKES

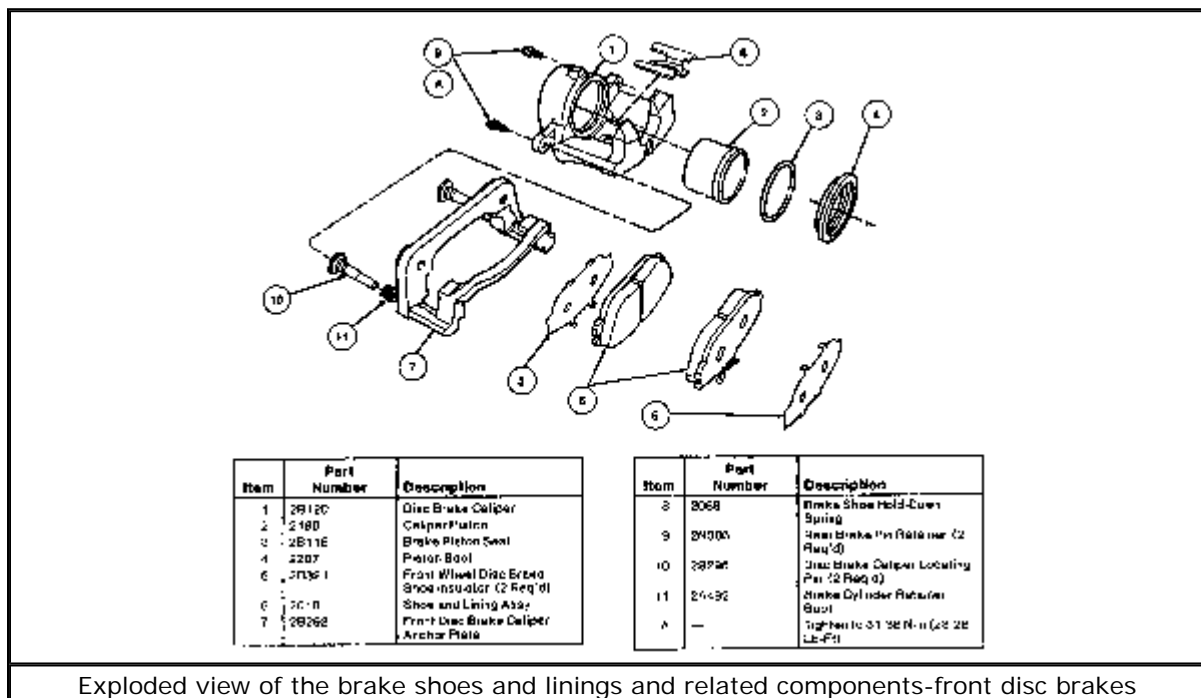
CAUTION

Brake shoes may contain asbestos, which has been determined to be a cancer causing agent. Never clean the brake surfaces with compressed air! Avoid inhaling any dust from any brake surface! When cleaning brake surfaces, use a commercially available brake cleaning solvent.

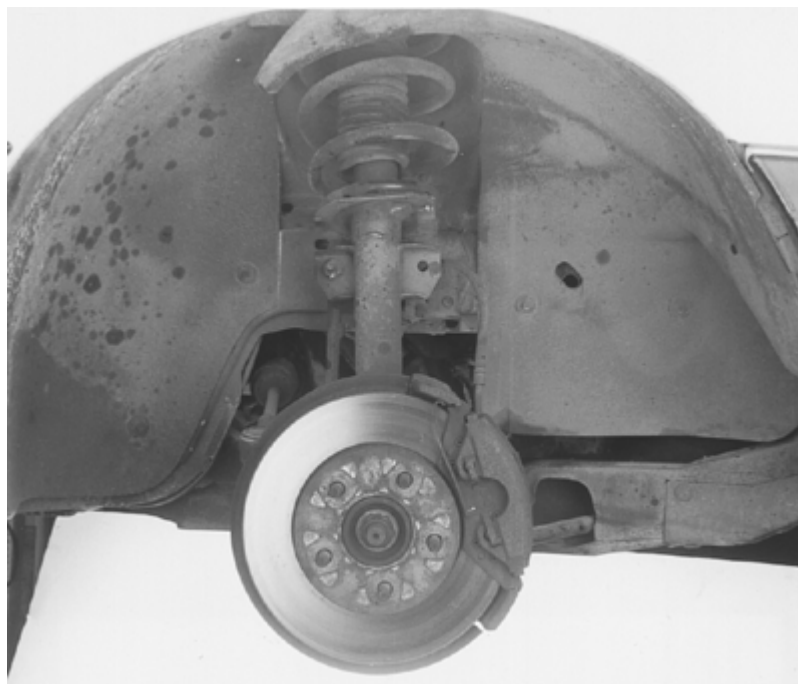
Brake Pads

REMOVAL & INSTALLATION

1. Remove the master cylinder cap and check the fluid level in the reservoir. Remove the brake fluid until the reservoir is half full. Discard the removed fluid.
2. Raise and safely support the vehicle. Remove the wheel and tire assembly from the rotor mounting face, being careful not to damage or interfere with the caliper, rotor shield or the steering knuckle.



[Click to enlarge](#)

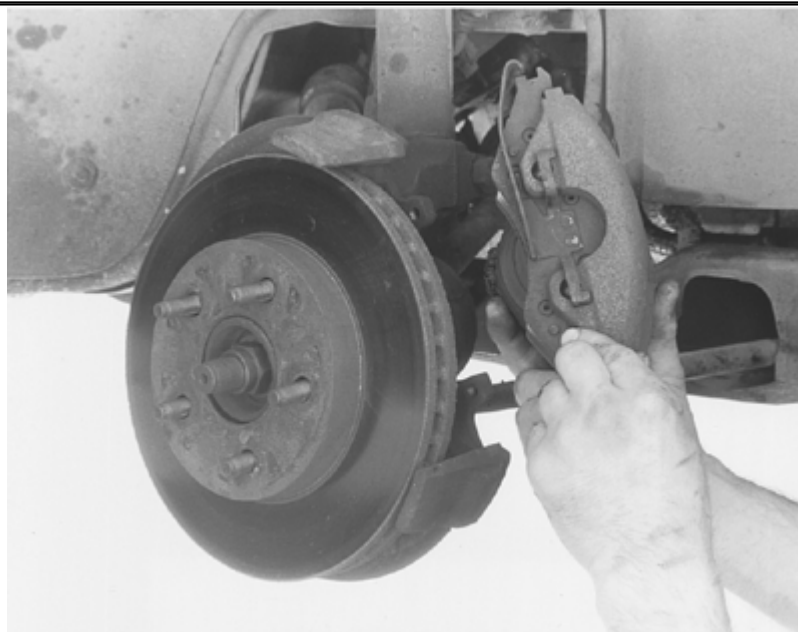


View of an early model front disc brake assembly

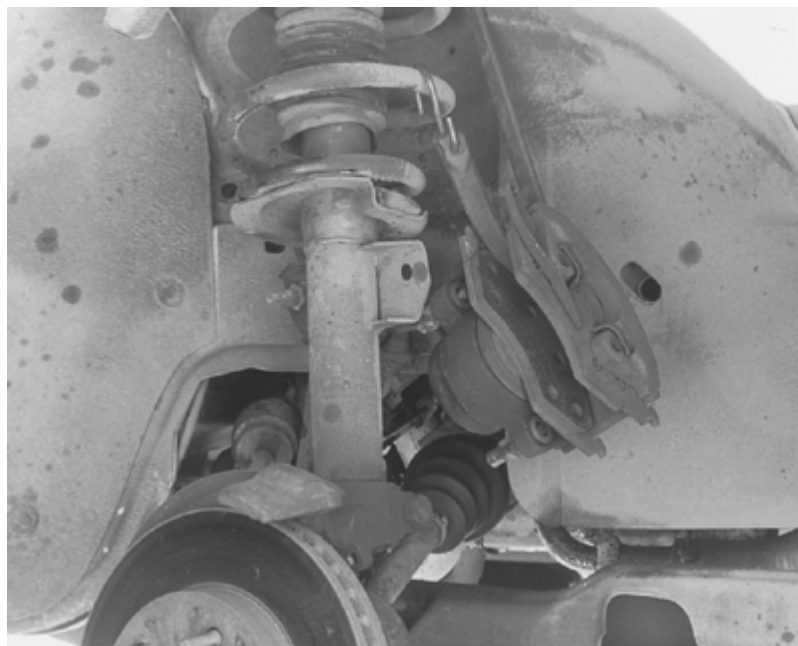
3. For vehicles through 1993, remove the caliper locating pins using Torx® Drive Bit D79P-2100-T40, or equivalent. For 1994-95 vehicles, remove the rear brake pin retainers.

It is not necessary to disconnect the brake lines.

4. Lift the caliper assembly from the integral knuckle, anchor plate and rotor using a rotating motion. Suspend the caliper inside the fender housing with wire. Do not allow the caliper to hang from the brake hose.



Lift the caliper assembly from the integral knuckle, anchor plate and rotor using a rotating motion



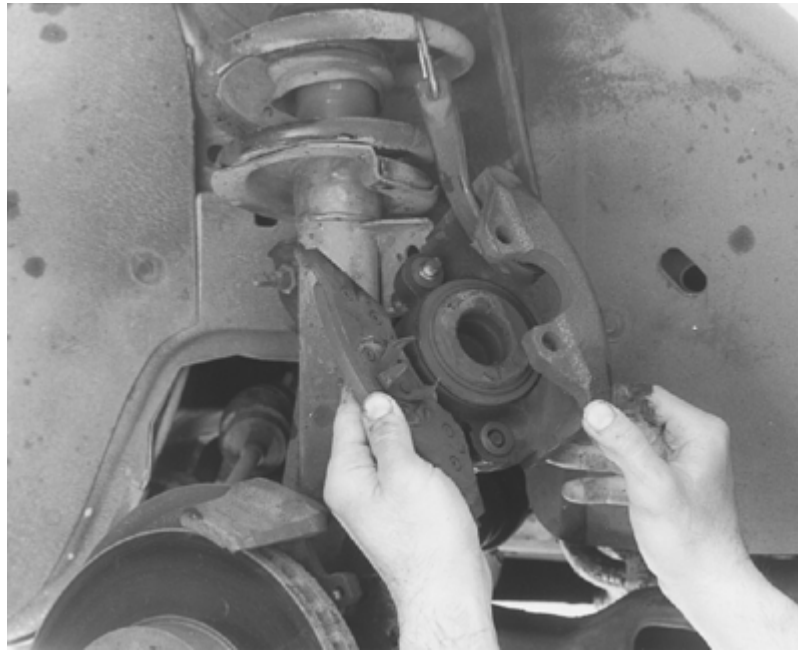
Suspend the caliper inside the fender housing with wire. Do NOT let the caliper hang from the brake hose

Do not pry directly against the caliper piston or damage will result.

- 5. Remove the inner and outer brake pads. Inspect the rotor braking surfaces for scoring and machine as necessary. Refer to the minimum rotor thickness specification when machining. If machining is not necessary, hand sand the glaze from the braking surfaces with medium grit sandpaper.**



Remove the outer brake pad from the caliper assembly, then ...



... remove the inner brake pad

To install:

6. Use a 4 in. (10cm) C-clamp and a wood block about $2\frac{3}{4}$ in. x 1 in. (7cm x 2.5cm) and about $\frac{3}{4}$ in. (19mm) thick to seat the caliper piston in its bore. This must be done to provide clearance for the caliper assembly with the new brake pads to fit over the rotor during installation. Care must be taken during this procedure to prevent damage to the caliper piston. Do not allow metal or sharp objects to come into direct contact with the piston surface or damage will result.
7. Remove all rust buildup from the inside caliper legs (brake shoe contact area). Install the inner pad in the caliper piston. Do not bend the pad clips during installation in the piston or distortion and rattles can occur. Install the outer pad. Make sure the clips are properly seated.
8. Install the caliper over the rotor as outlined later in this section. Install the caliper locating pins or rear brake pin retainer, as applicable. Tighten the rear brake pin retainer to 25 ft. lbs. (34 Nm).
9. Install the wheel and tire assembly. Lower the vehicle, then, using a torque wrench, tighten the lug nuts to 85-105 ft. lbs. (115-142 Nm).
10. Pump the brake pedal prior to moving the vehicle to position the brake linings. Refill the master cylinder.

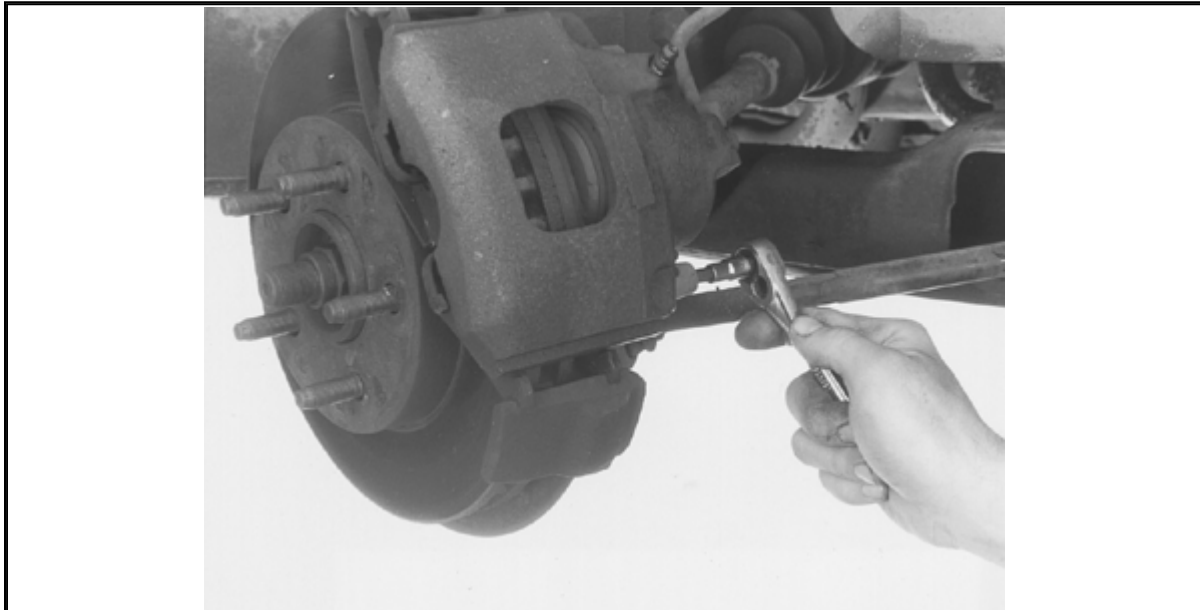
INSPECTION

1. Remove the pads from the caliper.
2. Check both the inner and outer pads for excessive wear. Please refer to the specification chart in this section.
3. If only one pad is found to be defective, replace both of them on each side (complete axle set), not just the defective one.

Brake Caliper

REMOVAL & INSTALLATION

1. Raise and safely support the vehicle.
2. Remove the wheel and tire assembly, making sure not to damage the bleeder screw fitting during removal. Mark the caliper to ensure that it is reinstalled on the correct knuckle.
3. Disconnect the flexible brake hose from the caliper or rotor, depending upon application. Remove the hollow retaining bolt that connects the hose fitting to the caliper or rotor. Remove, then plug the hose assembly from the caliper or rotor.
4. For vehicles through 1993, remove the caliper locating pins using Torx® Drive Bit D79P-2100-T40, or equivalent. For 1994-95 vehicles, remove the two rear brake pin retainers.

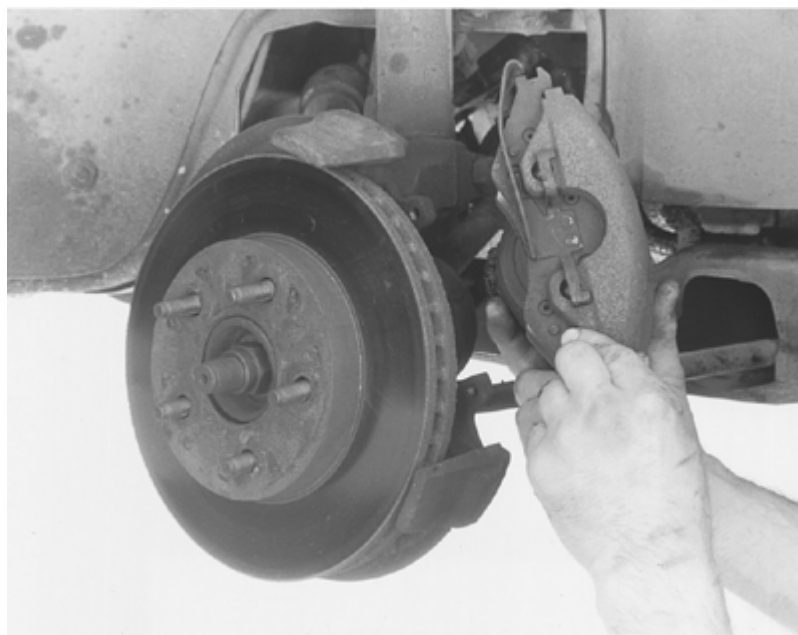


Using a Torx® head tool to disconnect the caliper locating pins-vehicles though 1993



Removing one of two caliper locating pins

5. Lift the caliper off of the rotor, integral knuckle and anchor plate using a rotating motion.

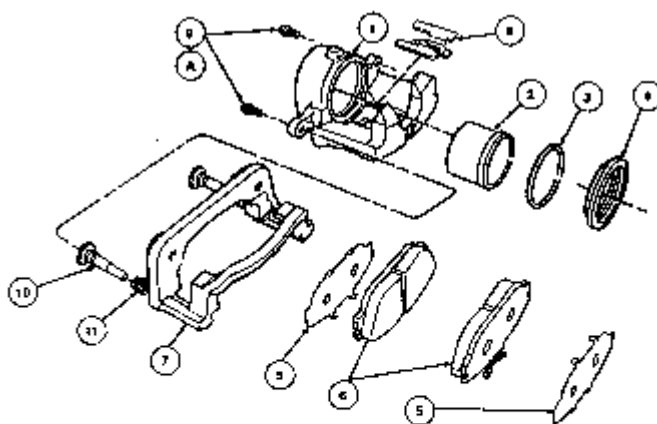


Lift the caliper off of the rotor using a rotating motion

To install:

Do NOT pry directly against the piston or damage to the piston will likely result.

- Retract the piston fully into the piston bore. Position the caliper assembly above the rotor with the anti-rattle spring under the upper arm of the knuckle. Install the caliper over the rotor with a rotating motion. Make sure the inner and outer shoes are properly positioned and the outer anti-rattle spring is properly positioned. Make sure the clip-on insulators are attached to the brake shoe plate.



Item	Part Number	Description
1	2B120	Disc Brake Caliper
2	2186	Caliper Piston
3	2B115	Brake Piston Seal
4	2207	Front Disc Brake Caliper Boot
6	2B324	Front Wheel Disc Brake Shoe/Insulator (2 Req'd)
8	2001	Shoe and Lining Assy
7	2B282	Front Disc Brake Caliper Anchor Plate

Item	Part Number	Description
2	2088	Brake Shoe Hold-Down Spring
8	2A378	Rear Brake Pin Retainer (2 Req'd)
10	2B298	Disc Brake Caliper Lubricating Pin (2 Req'd)
11	2A422	Brake Slide Pin Boot
A	-	Tighten to 31-35 Nm (23-25 Lb-Ft)

Exploded view of a common caliper and related components

[Click to enlarge](#)

7. Lubricate the locating pins and the inside of the insulators with silicone grease. For vehicles through 1993, install the locating pins through the caliper insulators and hand-start the threads into the knuckle attaching holes. For 1994-95 vehicles, install the rear brake pin retainers through the caliper holes and into the caliper locating pins, then hand-start.

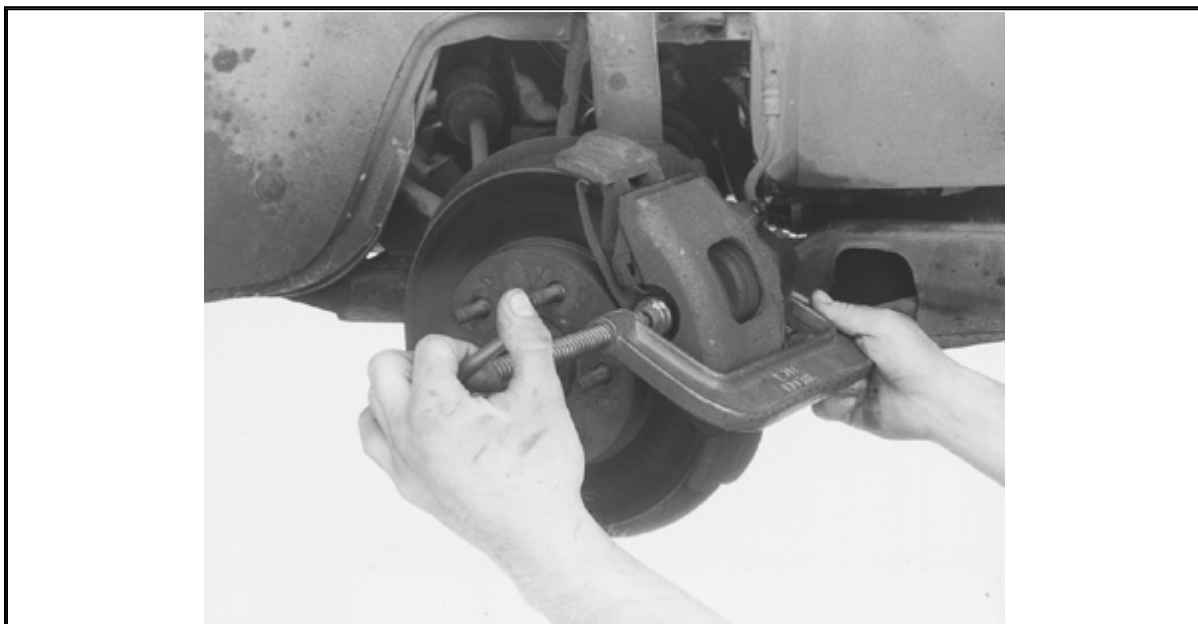
Make sure the correct caliper assembly, as marked during removal, is installed on the correct knuckle. The caliper bleed screw should be positioned on top of the caliper when assembled on the vehicle.

8. Tighten the locating pins to 18-25 ft. lbs. (24-34 Nm) or the rear brake pin retainers to 25 ft. lbs. (34 Nm).
9. Remove the plug and install the brake hose on the caliper using a new copper washer on each side of the fitting outlet. Insert the attaching bolt through the washers and fittings, then tighten to 30-40 ft. lbs. (41-54 Nm).
10. Bleed the brake system, filling the master cylinder as required; make sure to replace the rubber bleed screw cap after bleeding.
11. Install the wheel and tire assembly, then lower the vehicle. Final tighten the lug nuts, in a star pattern, to 85-105 ft. lbs. (115-142 Nm) using a torque wrench, not an impact tool. Pump the brake pedal prior to moving the vehicle to position the brake shoes and linings.

OVERHAUL

1. Remove the caliper assembly from the knuckle and rotor. Do not use a screwdriver or similar tool to pry the piston back into the cylinder bore. Use a C-clamp. Remove the outer shoe by pushing the shoe to move the "buttons" from the caliper housing and slipping down the caliper leg until the clip is disengaged. Remove the inner shoe by pulling it straight out of the piston.

Inner shoe removal force may be as high as 10-20 lbs. (45-90 N).

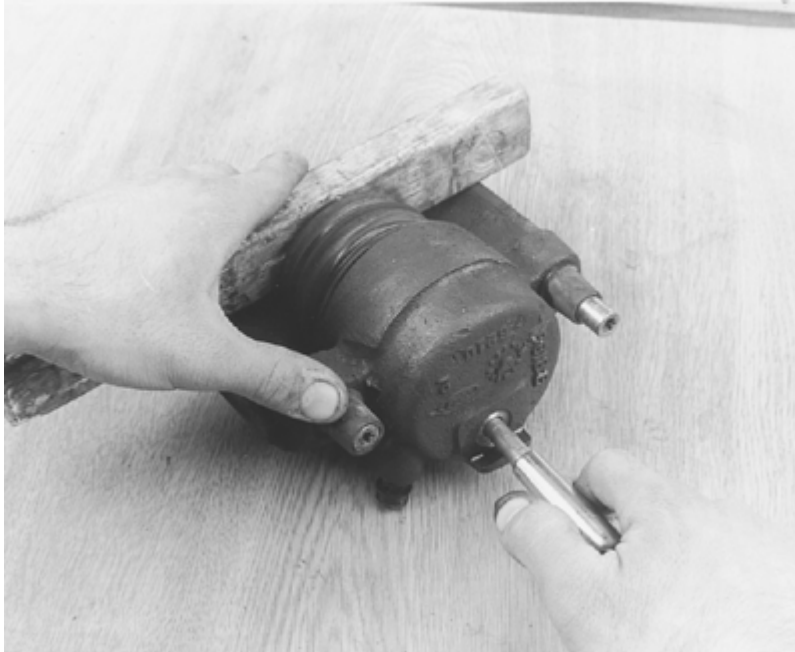


When removing the caliper assembly from the knuckle and rotor, do not use a screwdriver or other prytool to pry the piston back into the cylinder bore; use a C-clamp

1. If further disassembly is required to service the piston, disconnect the caliper from the hydraulic system, then blow the piston out using air pressure. If the caliper

piston is seized, and cannot be forced from the caliper, tap lightly around the piston while applying air pressure.

Do NOT use a screwdriver or any similar tool to pry the piston out of the bore. It will result in damage to the piston. Cushion the piston's impact against the caliper when blowing it out of the bore by placing rags or a block of wood between the piston and the caliper bridge.



Blow the piston out of the caliper using air pressure, but be sure to put a piece of wood or rags between the piston and the caliper bridge first



Remove the piston from the caliper

2. Remove the dust seal from the caliper, then discard it and replace with a new one during assembly.



Remove the dust seal from the caliper, then discard it and replace with a new one during assembly

3. Remove the rubber piston seal from the caliper, then discard it and replace with a new one during assembly.

To assemble:

4. When assembling the caliper, examine the piston for surface irregularities or small chips and cracks. Replace the piston if damaged. Be sure to clean the foreign material from the piston surfaces and lubricate with brake fluid before inserting it into the caliper. Always install a new seal and dust boot.



When overhauling the caliper, always install a new seal

5. When installing the piston back into its bore, use a wood block or another flat stock, like an old shoe lining assembly, between the C-clamp and piston. Do not apply the C-clamp directly to the piston surface. This can result in damage to the piston. Be sure the piston is not cocked.

6. Be certain the dust boot is tight in the boot groove on the piston and in the caliper.
7. To install the inner shoe with its attached three-finger clip into the piston, grab each end of the shoe, making it square with the piston. Push firmly until the shoe clip snaps into the piston. Do not allow the shoe or the clip tangs to cock during installation.
8. Install the brake caliper as outlined earlier in this section.

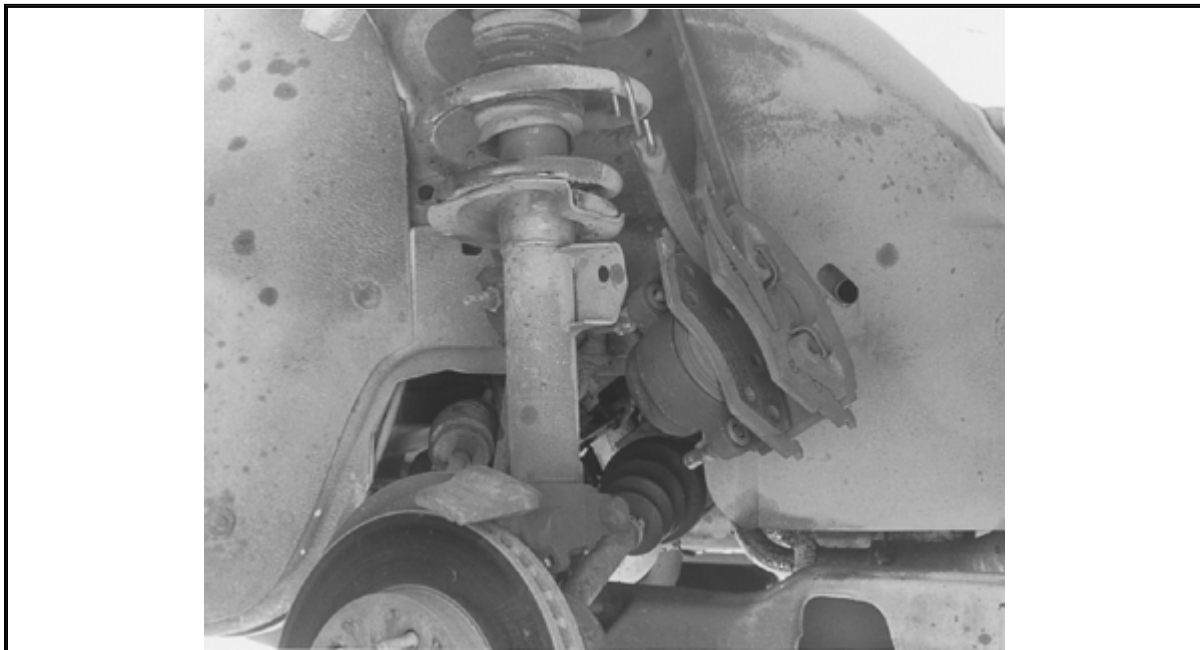
Brake Rotor

REMOVAL & INSTALLATION

1. Raise the vehicle and support it safely.
2. Remove the wheel and tire assembly from the rotor face, being careful not to damage or interfere with the caliper bleeding screw fitting.

Handle the rotor and caliper carefully as to prevent deformation, nicking, scratching and/or contamination of the rotor.

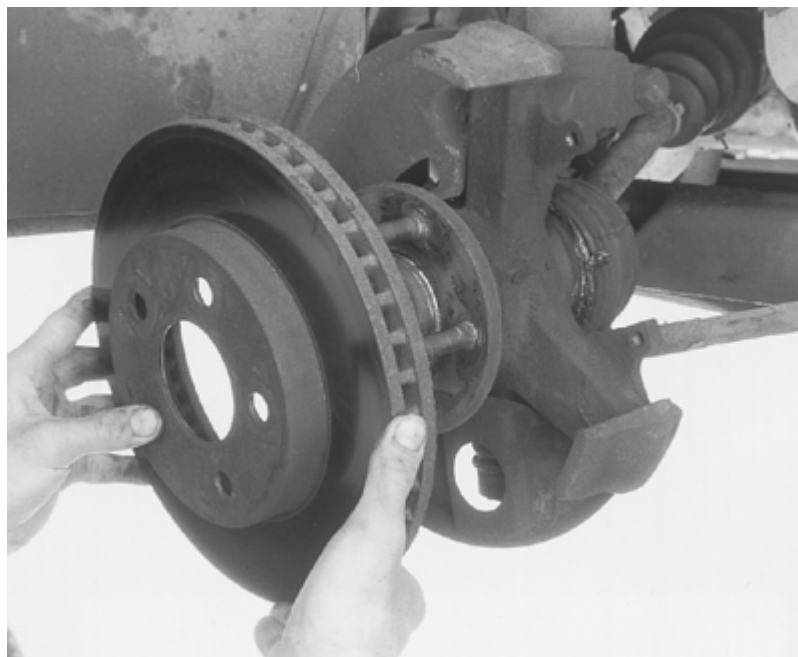
3. Remove the caliper anchor plate bolt, then remove the caliper assembly from the rotor. Position the caliper aside and support it with a length of wire. Do NOT allow the caliper to hang by the brake hose.



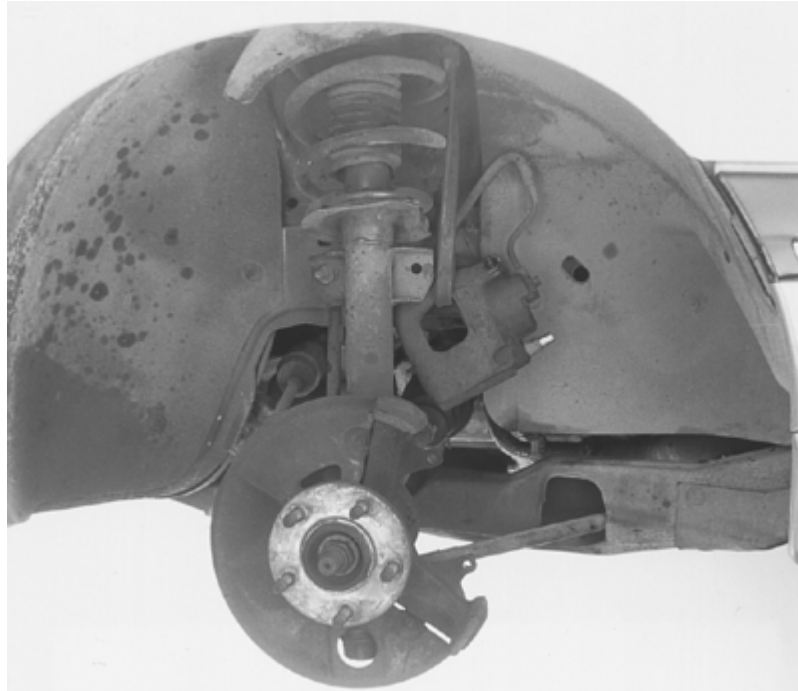
After removing the caliper assembly from the rotor, position the caliper aside and support it with a length of wire. Do NOT allow the caliper to hang by the brake hose

4. Remove the rotor from the hub assembly by pulling it off the hub studs. If additional force is required to remove the rotor, apply rust penetrator on the front and rear rotor/hub mating surfaces, then strike the rotor between the studs with a plastic hammer. If this does not work, attach a 3-jaw puller and remove the rotor.

If excessive force must be used to remove the rotor, it should be checked for lateral run-out before installation.



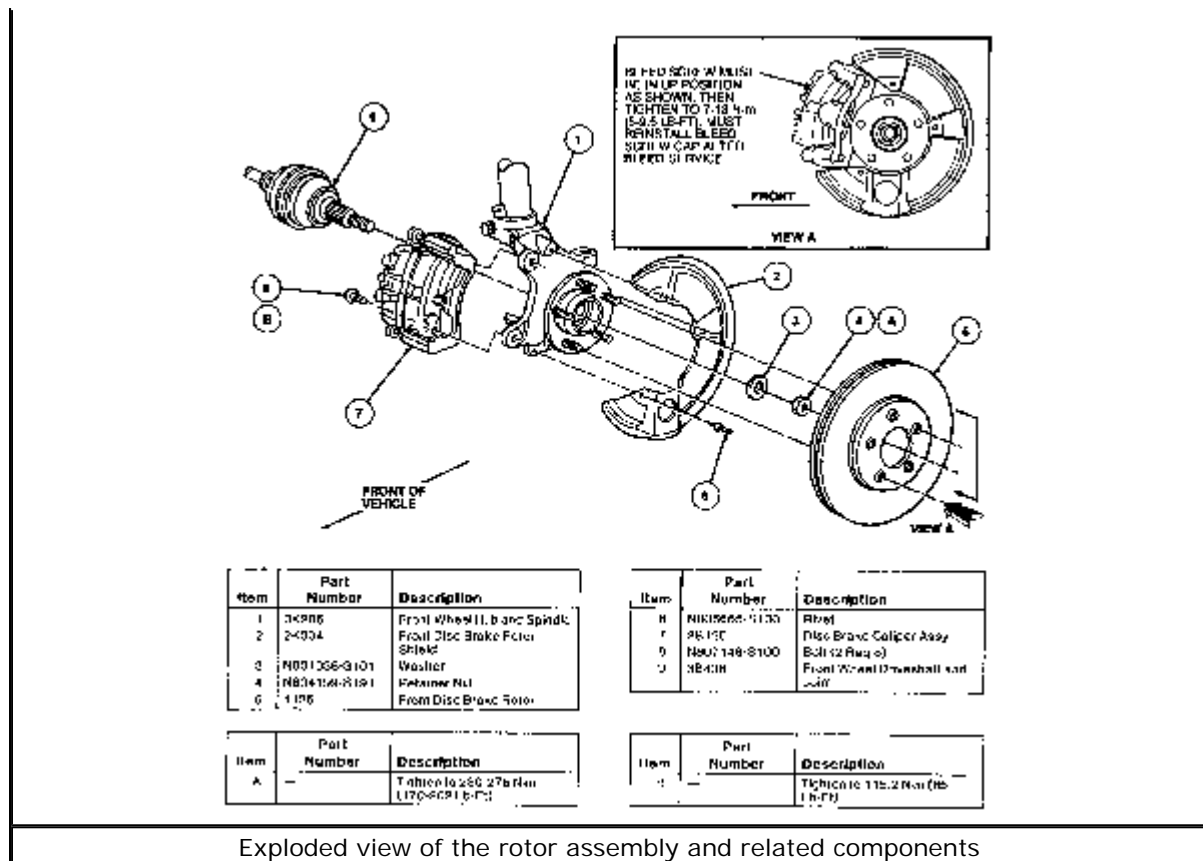
Remove the rotor from the hub assembly by pulling it off the hub studs



View of the hub assembly with the rotor removed

To install:

- 5. Check the rotor for scoring and/or other wear. Machine or replace, as necessary. If machining, observe the minimum thickness specification.**



[Click to enlarge](#)

- If a new rotor is being installed, remove the protective coating from the rotor with Carburetor Tune-Up Cleaner D9AZ-19579-AA or equivalent before installation. If the old rotor is being installed, make sure the rotor braking and mounting surfaces are clean.

Failure to clean rust and foreign debris from the rotor and hub mounting faces when installing a new or used rotor, will result in high lateral run-out, which will speed up the development of brake roughness, shudder and/or vibration.

- Apply a small amount of Silicone Dielectric Compound D7AZ-19A331-A or equivalent to the pilot diameter of the rotor.
- Install the rotor on the wheel hub assembly.
- Install the caliper and caliper anchor bolts on the rotor, then tighten the bolts to 85 ft. lbs. (115 Nm).
- Install the wheel and tire assembly, then hand-tighten the lug nuts.
- Lower the vehicle, then final tighten the lug nuts to 85-105 ft. lbs. (115-142 Nm). Pump the brake pedal before moving the car to position the brake shoes and linings.

INSPECTION

Check the disc brake rotor for scoring, cracks or other damage. Rotor run-out should be measured while the rotor is installed, but rotor thickness (or thickness variation) may be checked with the rotor installed or removed. Use a dial gauge to check the rotor run-out. Check the rotor thickness to make sure it is greater than the minimum allowable thickness, and check for thickness variations using a

caliper micrometer.

Chilton® Automotive Information Systems. © 2004 Thomson Delmar Learning.

REAR DRUM BRAKES

CAUTION

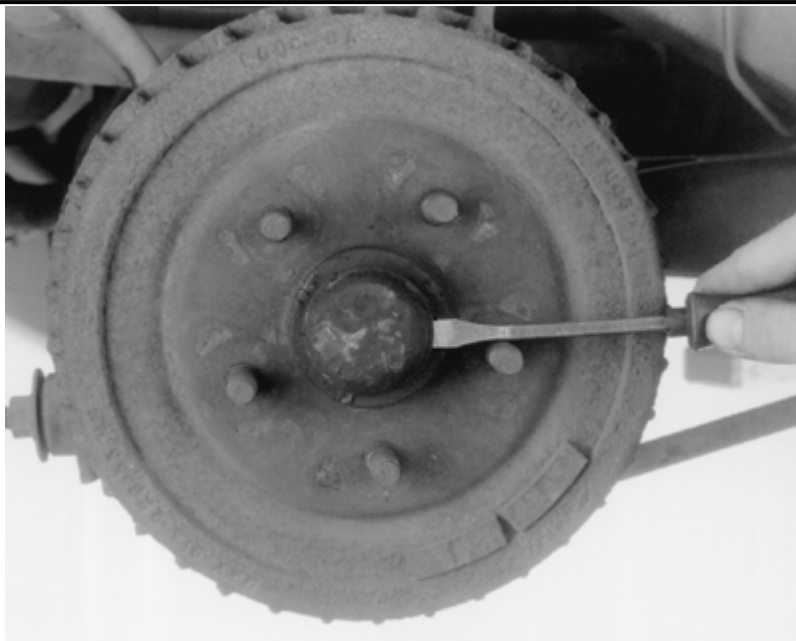
Brake shoes may contain asbestos, which has been determined to be a cancer causing agent. Never clean the brake surfaces with compressed air! Avoid inhaling any dust from any brake surface! When cleaning brake surfaces, use a commercially available brake cleaning solvent.

Brake Drums

REMOVAL & INSTALLATION

1986-89 Vehicles

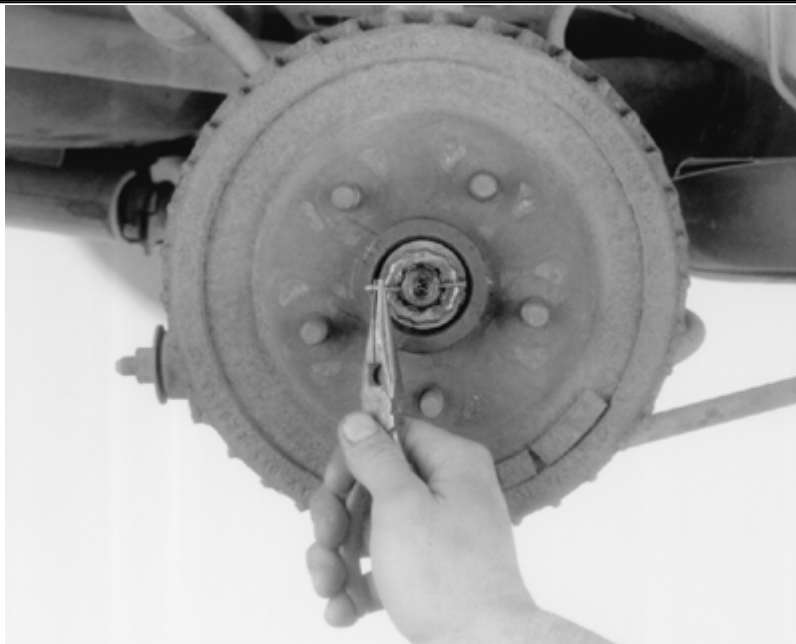
1. Raise and safely support the vehicle.
2. Remove the wheel cover or nut covers, as required. Remove the wheel and tire assembly.
3. Remove the grease cap from the hub. Remove the cotter pin, nut lock, adjusting nut and keyed flat washer from the spindle. Remove the outer bearing and discard the cotter pin.



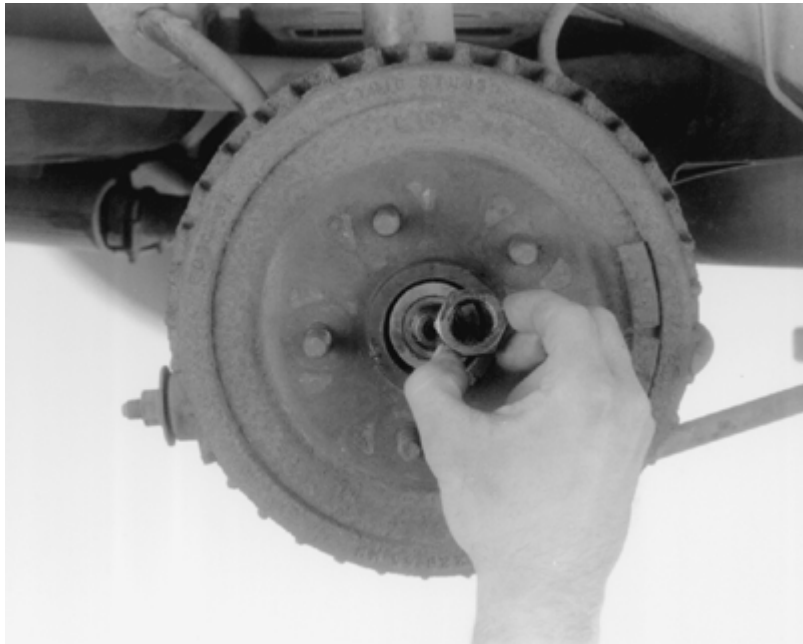
After removing the wheel and tire assembly, pry the grease cap from the hub. Be careful not to distort or damage the flange



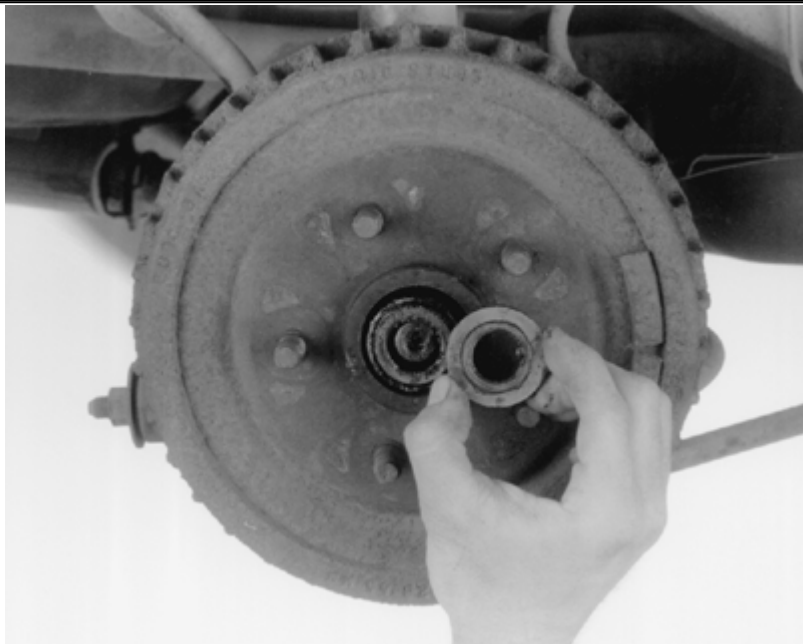
After removing the grease cap, unbend the cotter pin



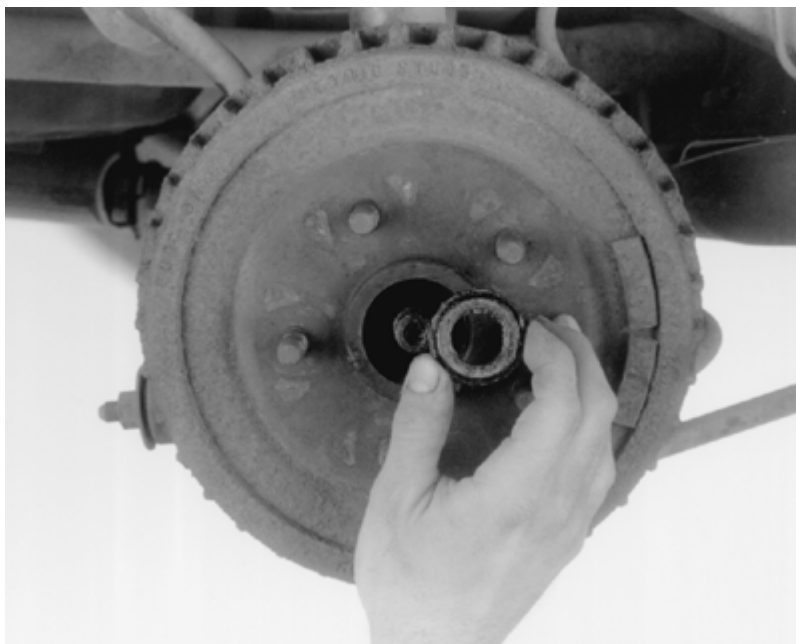
Grasp the cotter pin with needle-nose pliers and pull or pry it free of the spindle. Discard the cotter pin and replace it with a new one during installation



Remove the adjusting nut from the spindle



Remove the keyed washer from the spindle



Remove the outer bearing assembly. Note that this can be done with the hub and drum on or off the vehicle

4. Remove the hub/drum assembly as a unit. Be careful not to damage the grease seal and inner bearing during removal. Make sure you don't drag the seal across the spindle threads during removal and installation.

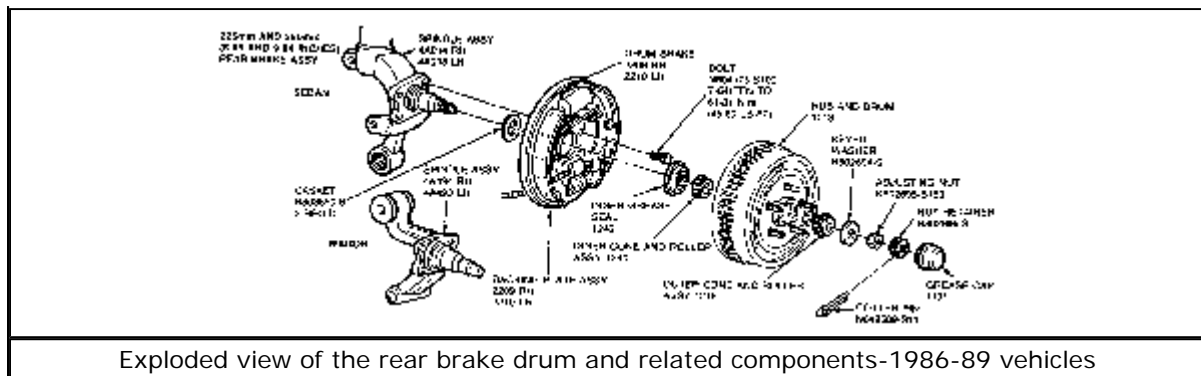


Remove the hub and drum assembly from the spindle

5. Inspect the drum for scoring and/or other wear. Machine or replace, as necessary. If machining, observe the maximum permissible drum diameter specification.

To install:

6. Inspect and lubricate the bearings, as necessary. Replace the grease seal if any damage is visible.
7. Clean the spindle stem, then apply a thin coat of wheel bearing grease.

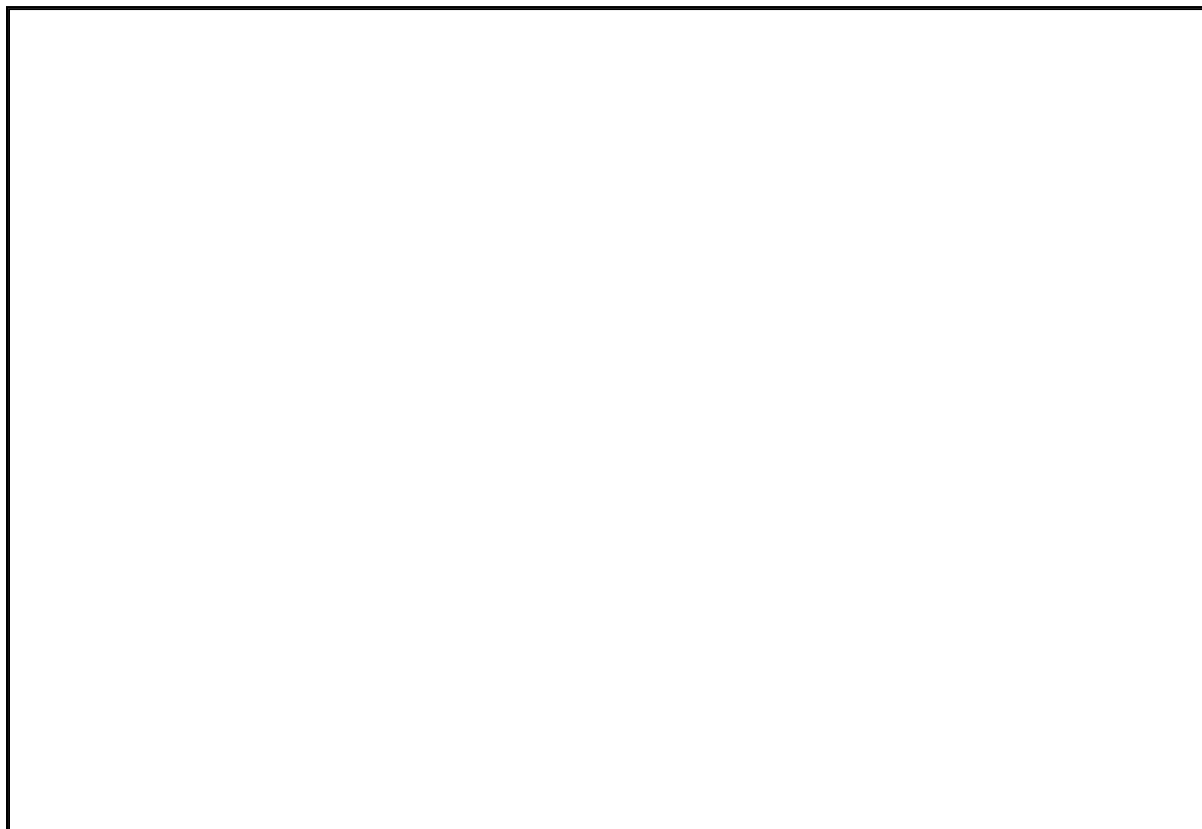


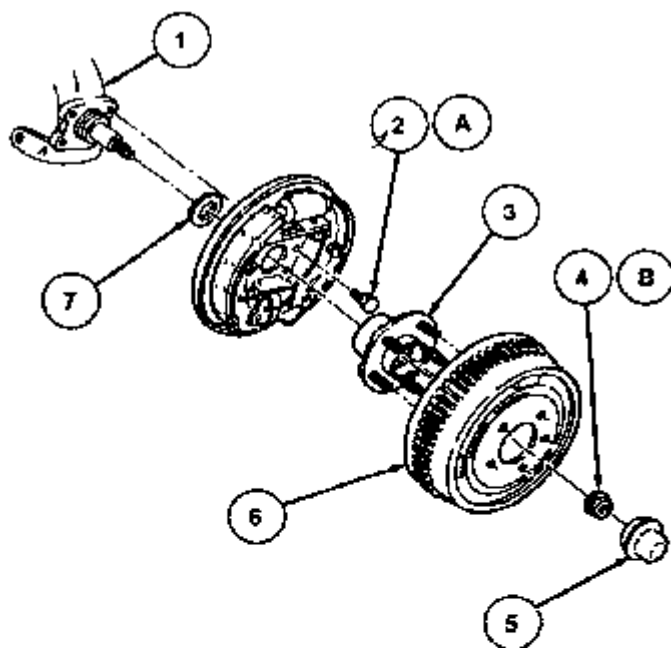
[Click to enlarge](#)

8. Install the hub and drum assembly on the spindle. Install the outer bearing in the hub on the spindle.
9. Install the keyed flat washer and adjusting nut, then finger-tighten the nut.
10. Adjust the wheel bearings. For details, please refer to the procedure in *Section 8* of this manual.
11. Install the nut retainer and a new cotter pin. Install the grease cap, tapping lightly around the flange to seat the cap.
12. Install the wheel and tire assembly. Install the wheel cover or nut covers, as required, then carefully lower the vehicle.

1990-95 Vehicles

1. Raise and safely support the vehicle.
2. Remove the wheel cover or nut covers, as required.
3. Remove the rear wheel and tire assembly.





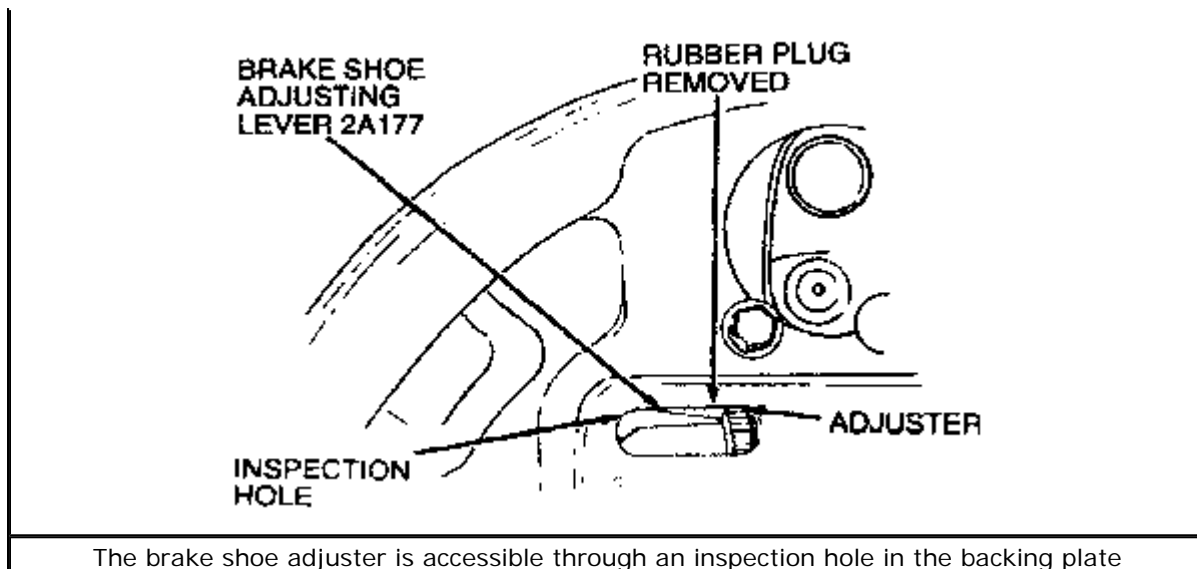
Item	Part Number	Description
1	4A013	Rear Wheel Spindle
2	N804175-S100	Bolt (4 Req'd Each Side)
3	1104	Wheel Hub
4	4B477	Rear Axle Wheel Hub Retainer (2 Req'd)
5	—	Rear Hub Cap Grease Seal
6	1126	Brake Drum
7	N803650-S	Gasket
A	—	Tighten to 60-80 N-m (45-60 Lb-Ft)
B	..	Tighten to 255-345 N-m (188-254 Lb-Ft)

Exploded view of the brake drum and related components

[Click to enlarge](#)

4. Remove the two drum retaining nuts, then remove the drum.

If the drum will not come off, pry the rubber plug from the backing plate inspection hole. Remove the brake line-to-axle retention bracket. This will allow sufficient room to insert suitable brake tools through the inspection hole to disengage the adjusting lever and back off the adjuster.



[Click to enlarge](#)

5. Inspect the drum for scoring and/or other wear. Machine or replace, as necessary. If machining, observe the maximum permissible drum diameter specification.

To install:

6. Install the drum assembly on the rear hub, then secure using the two retaining nuts. Adjust the brakes as outlined earlier in this section.
7. Install the wheel and tire assembly.
8. Install the wheel cover or nut covers, as required, then carefully lower the vehicle.

INSPECTION

Inspect the brake drums for excessive wear. Using a brake drum inspection gauge tool D81L-1103-A or equivalent, measure the drum inside diameter. If the drum is not within specification, it must be either cut or replaced. The maximum inside diameter of the drum is stamped on it. If this number exceeds the drum wear or refinishing specification, the drum must be replaced. For additional information on brake drum diameter, please refer to the specification chart later in this section.

Brake Shoes

INSPECTION

Inspect the brake shoes for excessive lining wear or shoe damage. If the lining is worn below $\frac{1}{32}$ in. (0.8mm) replace both shoes. Replace any lining that has become contaminated with brake fluid, oil or grease.

Replace the brake shoe and lining in axle sets only. Never replace just one shoe of a brake assembly.

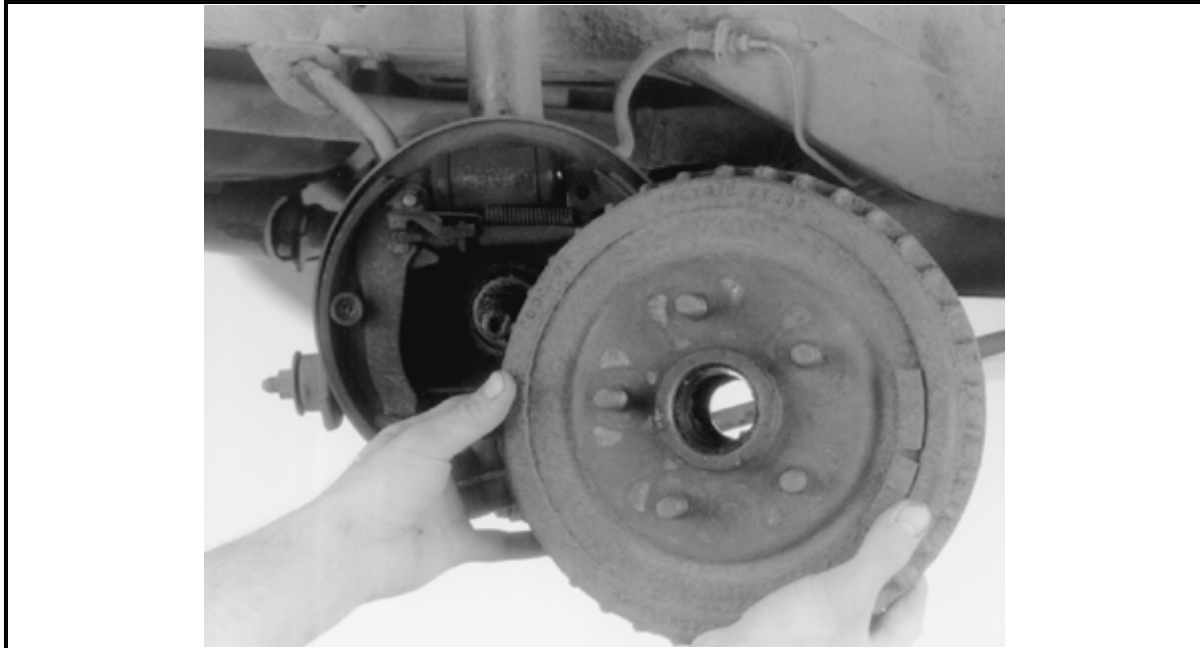
Check the condition of the brake shoes and linings, retracting springs, hold-down springs and the brake drum for signs of overheating. If the shoes and linings have a slight blue coloring (indicating overheating), the retracting springs and hold-down springs should be replaced. If they're not replaced, the overheated springs

will lose their tension and could allow new linings to drag and prematurely wear.

REMOVAL & INSTALLATION

Special brake tools are available from auto supply stores, which will ease removal and installation of the retracting springs and the shoe hold-down spring/anchor pin assembly.

1. Raise and safely support the vehicle.
2. Remove the wheel and tire assembly, then remove the brake drum.



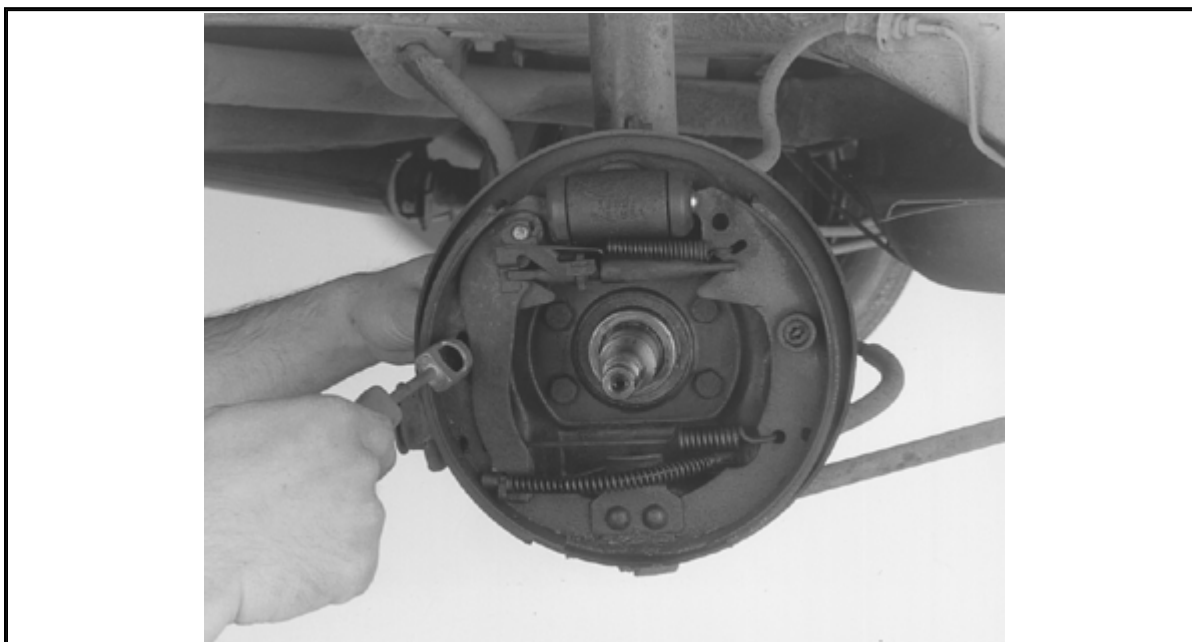
Remove the rear hub and drum assembly from the spindle



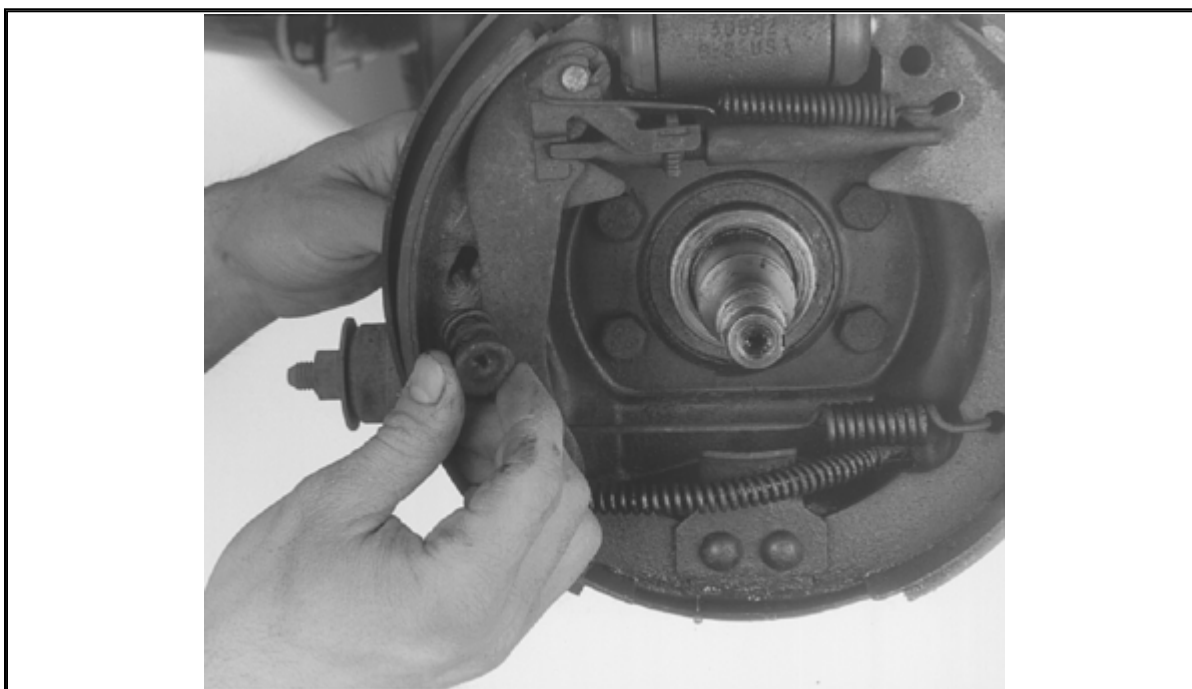
Use an evaporative spray brake cleaner to remove brake dust from the components

3. For 1993-95 vehicles, remove the parking brake cable and conduit from the parking brake lever. For vehicles through 1992, it may be easier to remove the parking brake cable after lifting the assembly off the backing plate.
4. Using a suitable tool, depress and twist the two hold-down spring retainers one-

quarter turn, then remove the retainers and hold-down springs. The hold-down pins can be removed from the rear of the backing plate.



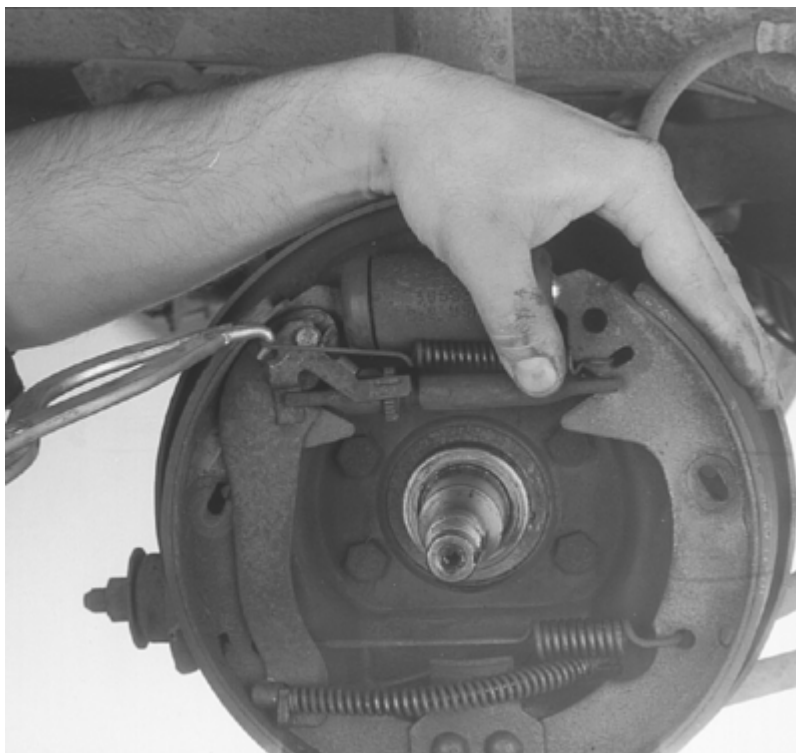
Use the brake tool to compress the hold-down spring and twist the plate to free the pin



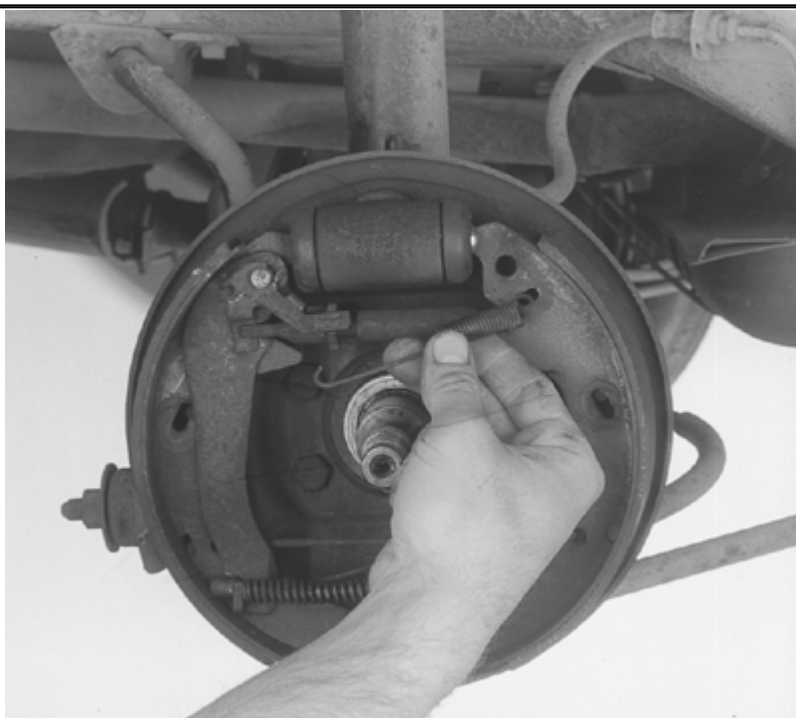
Once the pin is released, you can withdraw the spring from the backing plate

- 5. Lift the brake shoes and linings, retracting springs, and adjuster assembly off the backing plate. When removing the assembly, be careful not to bend the adjusting lever.**





An alternate method of removing the brake shoes is to disengage, then ...



... remove the adjuster screw retractor spring

6. Remove the retracting springs from the lower brake attachments and upper shoe-to-adjusting lever attachment points. This will separate the brake shoes and disengage the adjuster mechanism.
7. Remove the horseshoe parking brake lever pin retainer and spring washer, then slide the lever off the parking brake lever pin on the trailing shoe.

To install:

8. Apply a light coating of Disc Brake Caliper Slide Grease D7AZ-19590-A or

equivalent, at the points where the brake shoes contact the backing plate.

9. Apply a thin coat of lubricant to the adjuster screw threads and the socket end of the adjusting screw. Install the stainless steel washer over the socket end of the adjusting screw and install the socket. Turn the adjusting nut all the way down on the screw, then back off $\frac{1}{2}$ turn.
10. Assemble the parking brake lever to the trailing shoe by installing the spring washer and a new horseshoe parking brake lever pin retainer. Crimp the clip until it retains the lever to the shoe securely.
11. Position the trailing shoe against the brake backing plate, then attach the parking brake cable.
12. For vehicles through 1992, attach the lower shoe retracting spring to the leading and trailing shoe, then install to the backing plate. It will be necessary to stretch the retracting spring as the shoes are installed downward over the anchor plate to the inside of the shoe retaining plate.
13. For 1993-95 vehicles, position the leading shoe on the rear brake backing plate, then attach the lower brake shoe retracting spring to the brake shoes.
14. Install the adjuster screw assembly between the leading shoe slot and the slot in the trailing shoe/parking brake lever assembly. The adjuster socket end slot must fit into the trailing shoe and parking brake lever.
15. Install the adjuster lever in the groove of the parking brake lever pin and into the slot of the adjuster socket that fits into the trailing shoe web.

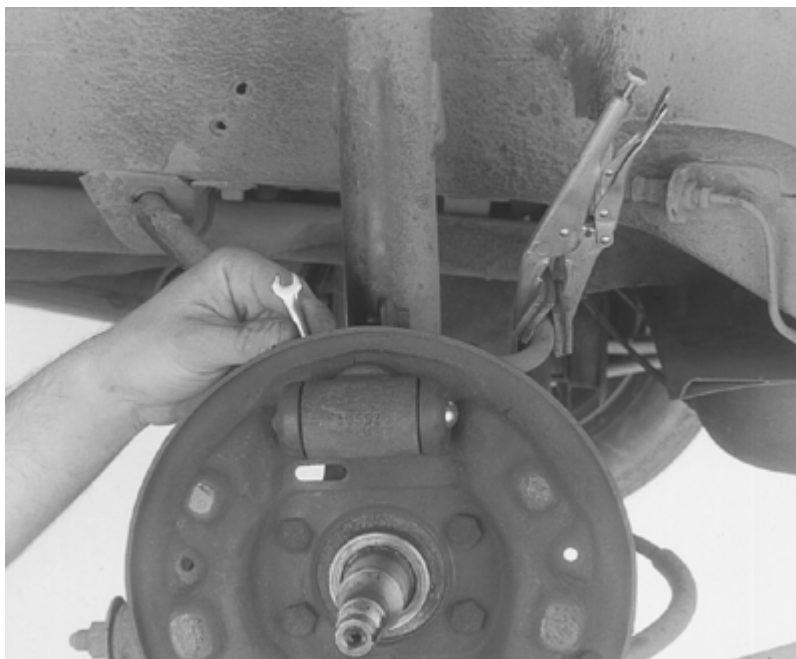
The adjuster socket blade is marked R for the right-hand or L for the left-hand brake assemblies. The R or L adjuster blade must be installed with the letter R or L in the upright position, facing the wheel cylinder, on the correct side to ensure that the deeper of the 2 slots in the adjuster socket fits into the parking brake lever.

16. Attach the upper retracting spring to the leading shoe slot. Using a suitable spring tool, stretch the other end of the spring into the notch on the adjuster lever. If the adjuster lever does not contact the star wheel after installing the spring, it is possible that the adjuster socket is installed incorrectly.
17. Install the brake shoe hold-down spring pins, brake shoe hold-down springs and retainers. If installed, remove the brake cylinder clamp D81L-1103-B or equivalent. Attach the parking brake cable and conduit to the parking brake lever.
18. Adjust the brake shoes, as outlined earlier in this section.
19. Install the brake drum, then the wheel/tire assembly. Lower the vehicle.

Wheel Cylinders

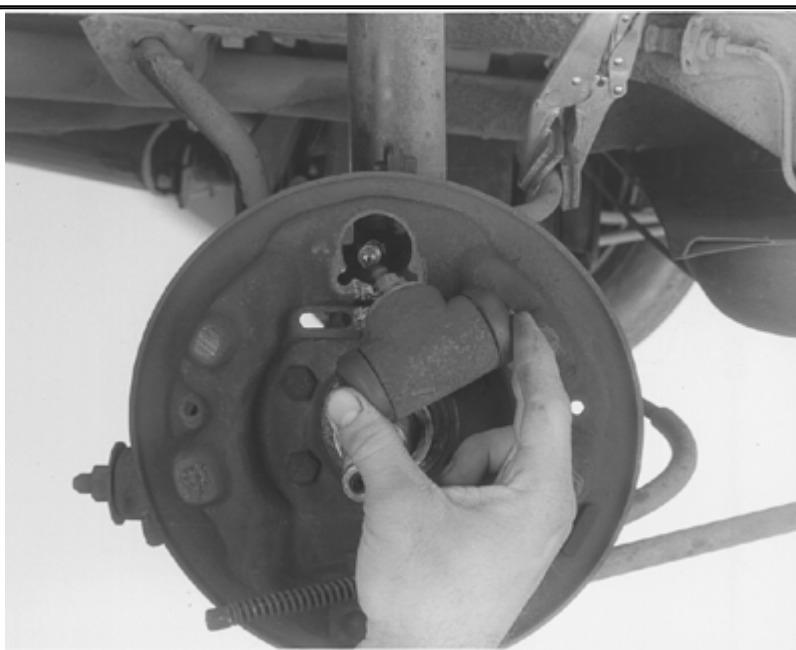
REMOVAL & INSTALLATION

1. Raise and safely support the vehicle.
2. Remove the wheel and tire assembly.
3. Remove the brake drum, as outlined earlier in this section.
4. Remove the brake shoes, adjuster and retracting springs assembly from the brake backing plate, as previously outlined.
5. Disconnect and plug the brake line wheel cylinder, behind the backing plate.



Although you can clamp the brake lines to prevent fluid leakage during wheel cylinder removal, do NOT use locking pliers. There are special tools available for this purpose

6. Remove the wheel cylinder-to-backing plate bolts, then remove the wheel cylinder.



After removing the retaining bolts, remove the wheel cylinder from the backing plate

To install:

Before connecting, wipe the ends of the rear brake lines with a clean cloth to remove any foreign matter.

7. Position the wheel cylinder on the brake backing plate, then finger-tighten the brake line to the wheel cylinder.

WARNING

Do NOT allow brake fluid to come in contact with the brake shoes and linings or they must be replaced.

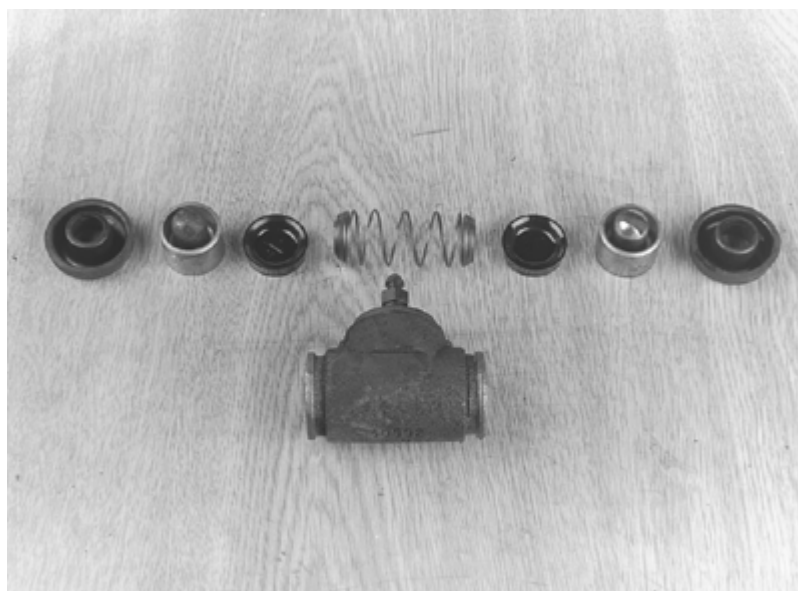
8. **Secure the wheel cylinder to the backing plate using the retaining bolts. Tighten the bolts to 8-10 ft. lbs. (10-14 Nm).**
9. **Using a tube nut wrench, install the tube nut fitting, then tighten to 11-15 ft. lbs. (15-20 Nm).**
10. **Install, then adjust the brakes, following the procedure earlier in this section.**
11. **Install the brake drum, followed by the tire and wheel assembly.**
12. **Bleed the brake system before attempting to drive the vehicle. For details, please refer to the procedure earlier in this section.**
13. **Lower and road test the vehicle.**

OVERHAUL

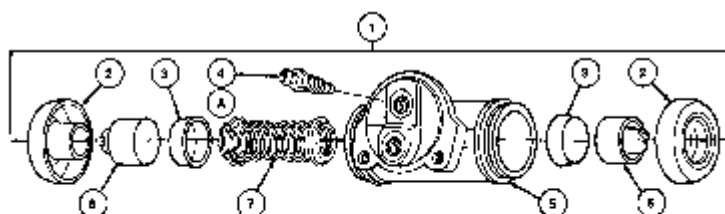
Wheel cylinders need not be rebuilt unless they are leaking or seized. To check the wheel cylinder for leakage, carefully pull the lower edge of the rubber end boot away from the cylinder. A slight amount of fluid in the boot is normal, but excessive brake fluid in the boot or running out of the boot (when the edges are pulled away from the cylinder) denotes leakage.

It is not necessary to remove the cylinder from the brake backing (mounting) plate to rebuild the cylinder, however removal makes the job easier.

1. **Disengage and remove the rubber boots from both ends of the wheel cylinder. The piston should come out with the boot. If not, remove the piston by applying finger pressure inward on one piston; the piston on the opposite end should come out. Take care not to splash brake fluid all over yourself when the piston pops from the cylinder.**
2. **Remove the rubber cups, center expander and spring from the wheel cylinder. Remove the bleeder screw from the back of the cylinder.**
3. **Discard all rubber boots and cups. Wash the pistons and cylinder in denatured alcohol or clean brake fluid.**
4. **Inspect the pistons for scratches, scoring or other visible damage. Inspect the cylinder bore for score marks or rust. The cylinder may be honed (with a brake cylinder hone) if necessary. Do not hone more than 0.003 in. (0.076mm) beyond original diameter. If the scoring or pitting is deeper, replace the cylinder.**



Internal components of an early model wheel cylinder



Item	Part Number	Description
1	2281	Rear Wheel Cylinder Foot (Part of 2281)
2	-	Foot (Part of 2281)
3	-	Cup (Part of 2281)
4	-	Wheel Cylinder Bleeder Screw (Part of 2281)
5	-	Cylinder Housing (Part of 2281)

Item	Part Number	Description
6	-	Piston (Part of 2281)
7	-	Roller Spring and Cup Expander Assy (Part of 2281)
A	-	Torque to 10-20 Nm (7.5-16 Lb-Ft)

Exploded view of the wheel cylinder

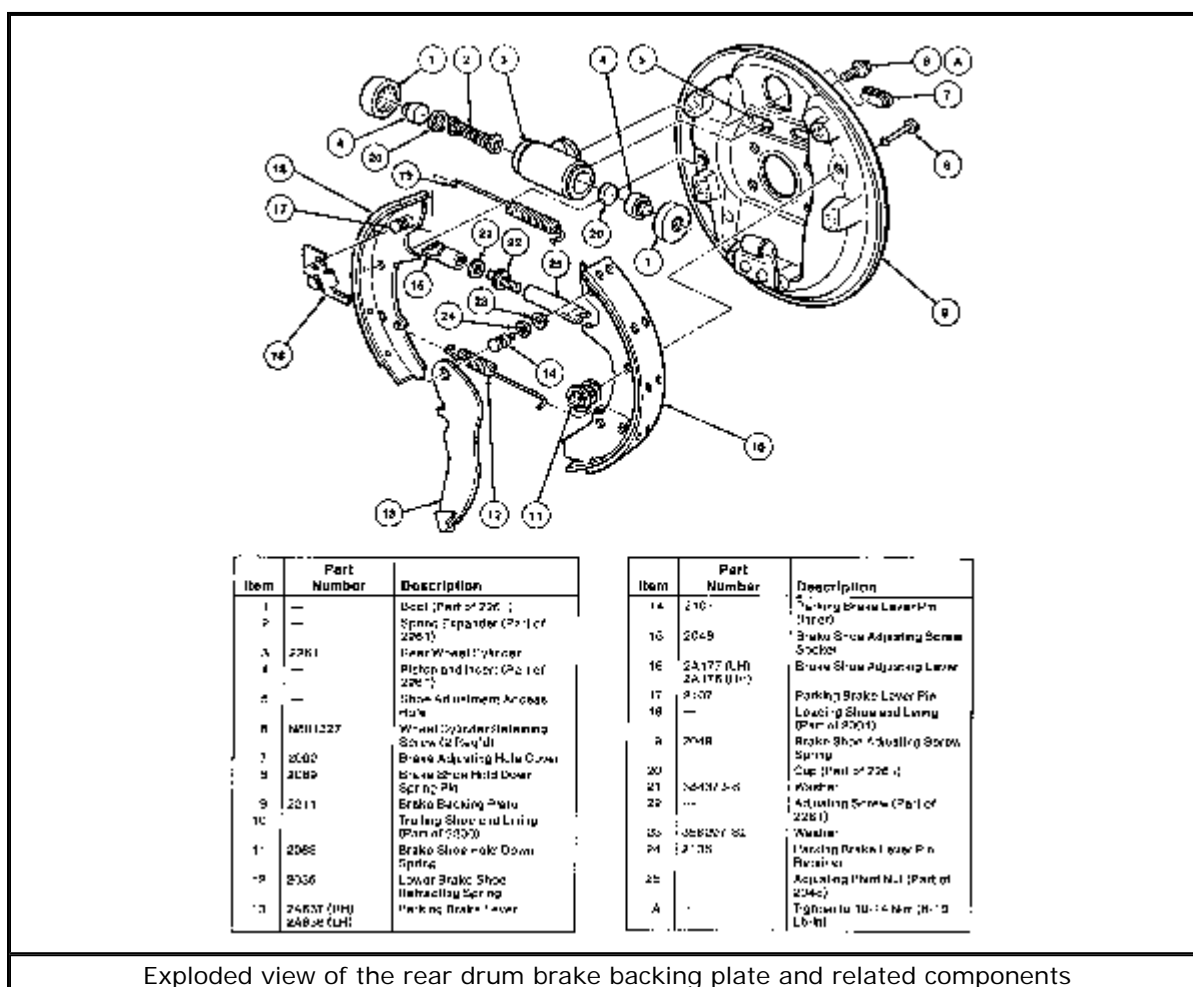
[Click to enlarge](#)

5. After honing the cylinder, wash again with alcohol or clean brake fluid. Check the bleeder screw hole to make sure it is opened. Wipe the cylinder bore with a clean cloth. Install the bleeder screw.
6. Never reuse the old rubber parts. Always use all of the parts supplied in the rebuilding kit.
7. Apply a light coating of brake fluid or the special lubricant (if supplied with the rebuilding kit) on the pistons, rubber cups and cylinder bore.
8. Insert the spring and expander assembly into the cylinder bore. Put the cups (facing inward) and the pistons into the cylinder. Install the boots and fit the outer lips into the retaining grooves on the outer edges of the wheel cylinder.
9. If removed, install the wheel cylinder onto the backing plate, then connect the brake line. Be sure that the inlet port (where the brake hose connects) is toward the rear of the car.
10. Install the brake shoes, drum and wheel assembly.
11. Adjust and bleed the brake system. Road test the car.

Brake Backing Plate

REMOVAL & INSTALLATION

1. Raise and safely support the vehicle. Remove the tire and wheel assembly.
2. Remove the brake drum, as well as the grease cap/seal. Remove and discard the retaining nut.
3. Remove the bearing hub unit from the spindle. Disconnect the brake line.
4. Remove the brake shoes, adjuster assemblies, wheel cylinder and parking brake cable from the backing plate.
5. Remove the backing plate-to-spindle retaining bolts, then discard them.
6. Remove the backing plate and foam gasket.



[Click to enlarge](#)

To install:

7. Install a new foam gasket on the rear wheel spindle.
8. Install the brake backing plate with new adhesive coated retaining bolts.
9. Install the wheel cylinder, then connect the brake line.
10. Install the brake shoe/lining and adjuster assemblies. Insert the parking brake lever through the backing plate. The prongs must be securely locked in place. Connect the parking brake cable to the lever.

11. **Install the bearing and hub assembly on the spindle. Install the hub retainer, then tighten the nut to 188-254 ft. lbs. (255-345 Nm).**
 12. **Install a new grease seal using a 1⁷/₈ in. x 3³/₄ in. drive socket.**
 13. **Install the brake drum, then adjust the brakes, as previously outlined.**
 14. **Bleed the brake system. Check the parking brake cable adjustment.**
 15. **Install the tire and wheel assembly, then carefully lower the vehicle.**
-

Chilton® Automotive Information Systems. © 2004 Thomson Delmar Learning.

REAR DISC BRAKES

Introduction

CAUTION

Brake shoes may contain asbestos, which has been determined to be a cancer causing agent. Never clean the brake surfaces with compressed air! Avoid inhaling dust from any brake surface! When cleaning brake surfaces, use a commercially available brake cleaning solvent.

Brake Pads

REMOVAL & INSTALLATION

1. Remove the master cylinder cap and check the fluid level in the reservoir. Remove brake fluid as necessary until the reservoir is half full. Discard the removed fluid.

FRONT OF VEHICLE

DO NOT INSTALL ADJACENT TO EACH OTHER

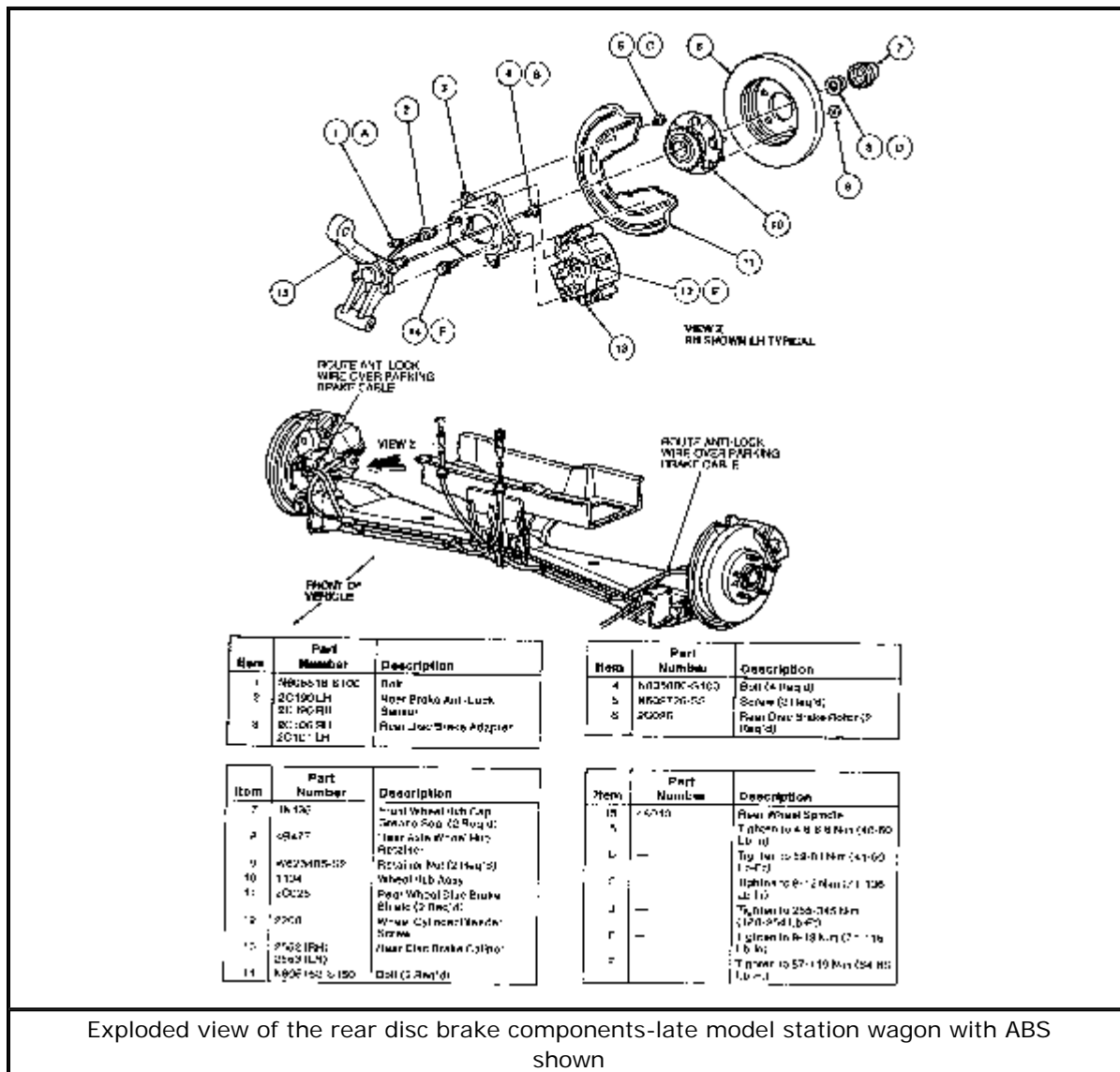
VIEW 7

VIEW 2
NOT SHOWN AS TYPICAL

Item	Part Number	Description
1	MM00101-S100	Bolt
2	2528 18 (LH) 25 190 (RH)	Rear Brake Anti-Lock Sensor
3	25 107 (LH) 25 100 (RH)	Rear Disc Brake Adapter
4	4800268-8100	Each (2 Req'd) Rear Wheel Disc Brake Shield
5	29229	Shield
6	NE02126-82	Screw (2 Req'd)
7	4R477	Adjuster Nut (2 Req'd)
8	13125	Front Hub Cap Grease Seal
9	4B477	Rear Axle Wheel/Hub Flange
10	20026	Rear Disc Brake Flange
11	1123	Wheel hub
12	2328	Wheel Cylinder/Wheel Screw
13	2502, 2503	Rear Disc Brake Caliper
14	9907 148 8181	Back (2 Req'd) Rear Wheel Spindle
15	44013	Tighten to 4-6.82 Nm (40-50 Lb-in)
A	-	Tighten to 58-81 Nm (44-60 Lb-ft)
B	-	Tighten to 19 Nm (15 Lb-ft)
C	-	Tighten to 255-268 Nm (188-254 Lb-ft)
D	-	Tighten to 6-10 Nm (7-11 Lb-in)
E	-	Tighten to 87-119 Nm (64-88 Lb-ft)

Exploded view of the rear disc brake components-late model sedan with ABS shown

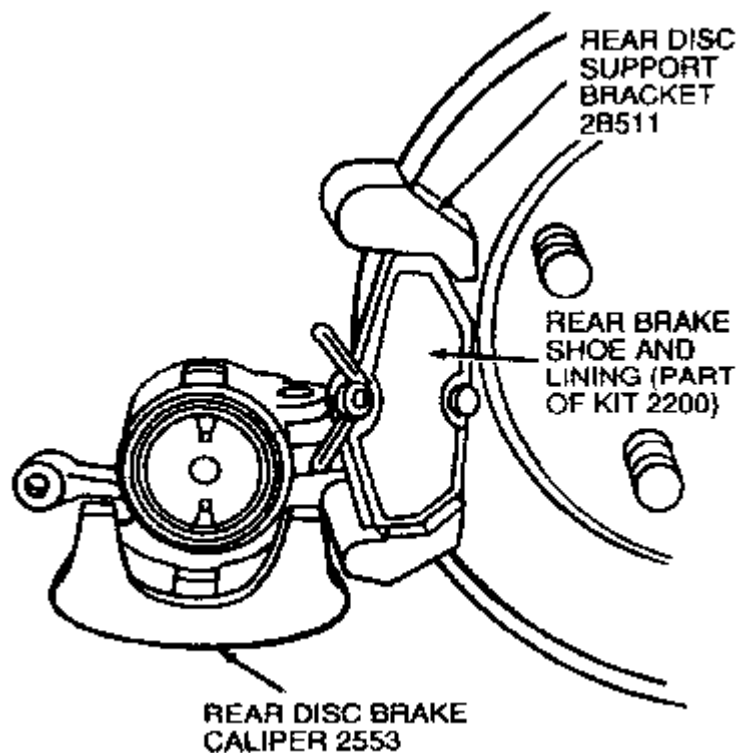
[Click to enlarge](#)



Exploded view of the rear disc brake components-late model station wagon with ABS shown

[Click to enlarge](#)

2. Raise and safely support the vehicle.
3. Remove the wheel and tire assembly.
4. Remove the screw retaining the brake hose bracket to the shock absorber bracket. Remove the retaining clip from the parking brake cable at the caliper. Remove the cable end from the parking brake lever.
5. Hold the slider pin hex-head with an open-end wrench. Remove the upper rear brake pin retainer/pinch bolt. Rotate the caliper away from the rotor.



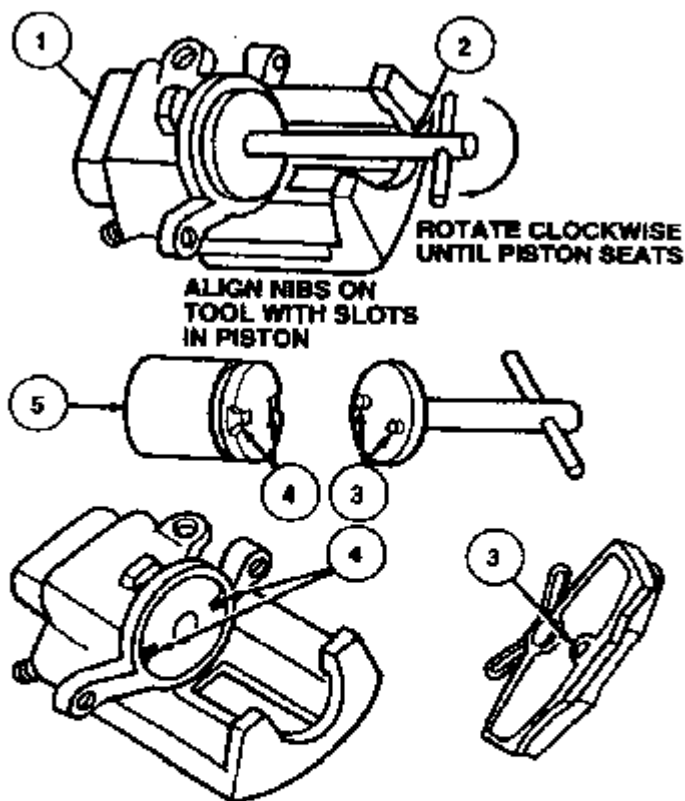
After removing the upper rear brake pin retainers or pinch bolt (as applicable) rotate the caliper away from the rotor

[Click to enlarge](#)

6. Remove the inner and outer brake pads from the rear disc support bracket/anchor plate.

To install:

7. Using Rear Caliper Piston Adjuster T87P-2588-A or equivalent, rotate the piston and adjuster clockwise until it is fully seated. Make sure one of the two slots in the piston face is positioned so it will engage the nib on the brake pad.



Item	Part Number	Description
1	2553	Rear Disc Brake Caliper Housing
2	T87P-2588-A	Rear Caliper Piston Adjuster
3	—	Nibs
4	—	Slots
5	2B588	Rear Disc Brake Piston and Adjuster

Make sure one of the two slots in the piston face is positioned so it will engage the nib on the brake pad

[Click to enlarge](#)

8. Install the inner and outer brake pads in the anchor plate/support bracket. Rotate the caliper assembly over the rotor into position on the anchor plate/support bracket. Make sure the brake pads are installed correctly.
9. Remove the residue from the rear brake pin retainers/pinch bolt threads, then apply one drop of Threadlock and Sealer E0AZ-19554-AA or equivalent to the threads. Install and tighten the retainers to 23-26 ft. lbs. (31-35 Nm) while holding the slider pins with an open-end wrench.
10. Attach the cable end to the parking brake lever. Install the cable retaining clip on the caliper assembly. Position the flexible brake hose and bracket assembly to the shock absorber bracket, then install the retaining screw. Tighten the screw to 8-11 ft. lbs. (11-16 Nm).
11. Install the wheel and tire assembly, then carefully lower the vehicle. Pump the brake pedal prior to moving the vehicle to position the brake linings. Refill the master cylinder.

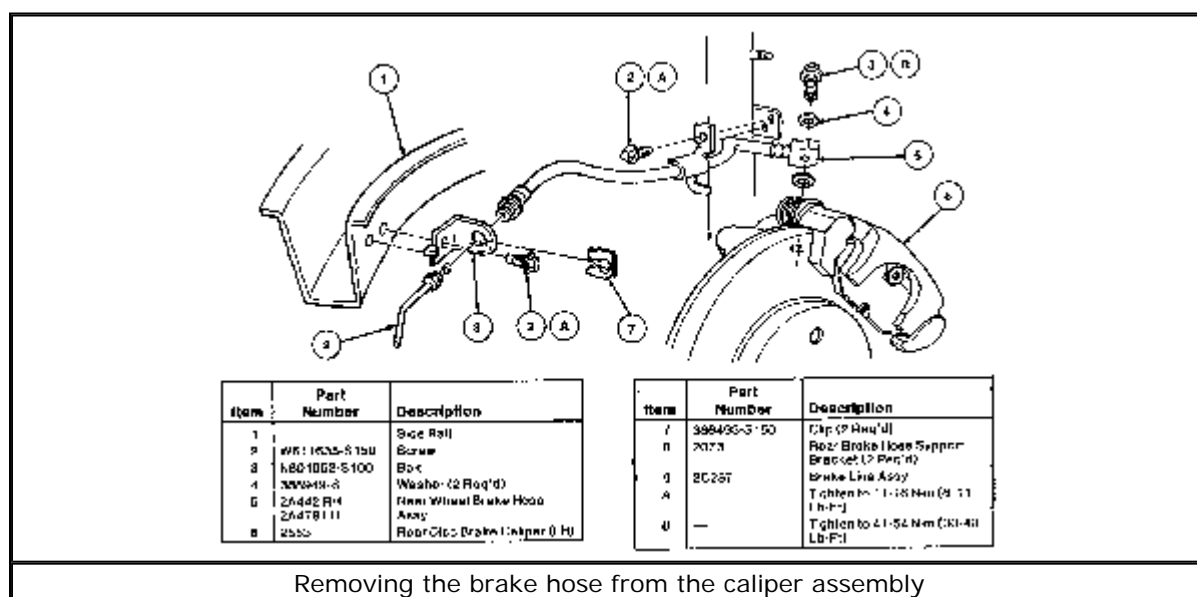
INSPECTION

The rear disc brakes can be inspected through an oval hole in the back of the brake caliper. Raise the rear of the vehicle, then remove the wheel and tire assembly to inspect the brake pads. If the brake lining thickness is less than 0.12 in. (3mm) the brake pads should be replaced.

Brake Caliper

REMOVAL & INSTALLATION

1. Raise and safely support the vehicle.
2. Remove the wheel and tire assembly.
3. Remove the brake hose from the caliper assembly.

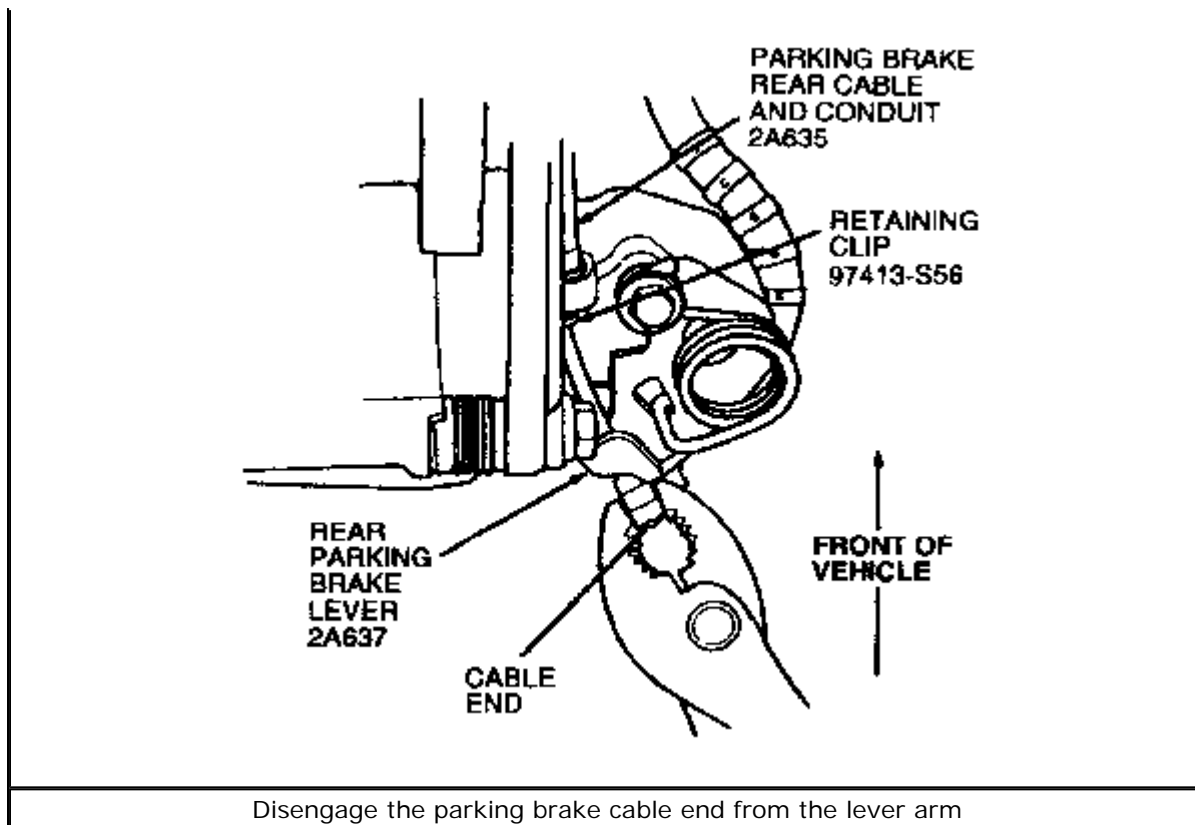


Removing the brake hose from the caliper assembly

[Click to enlarge](#)

4. Remove the retaining clip from the parking brake cable at the caliper. Disengage the parking brake cable end from the lever arm.

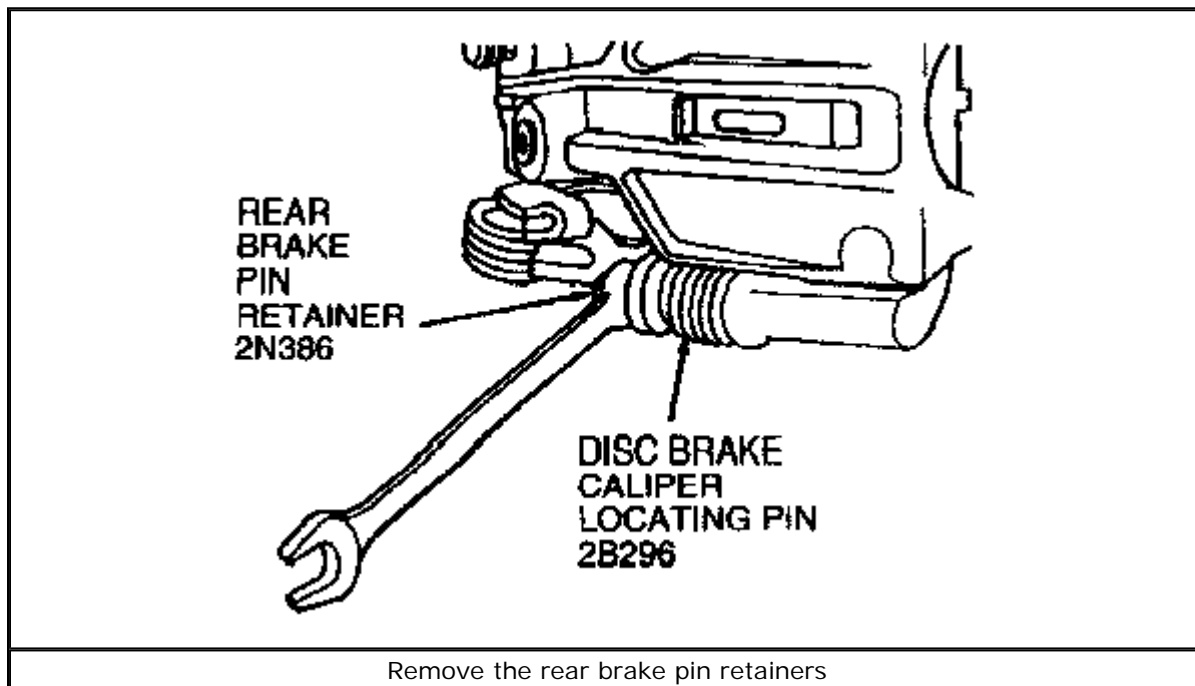




Disengage the parking brake cable end from the lever arm

[Click to enlarge](#)

- Depending on vehicle application, hold one of the slider pin hex-heads with an open-end wrench, then remove the pinch bolt or pin retainer. Repeat for the other slider pin. Lift the caliper assembly away from the anchor plate. Remove the locating/slider pins and boots from the anchor plate/support bracket.

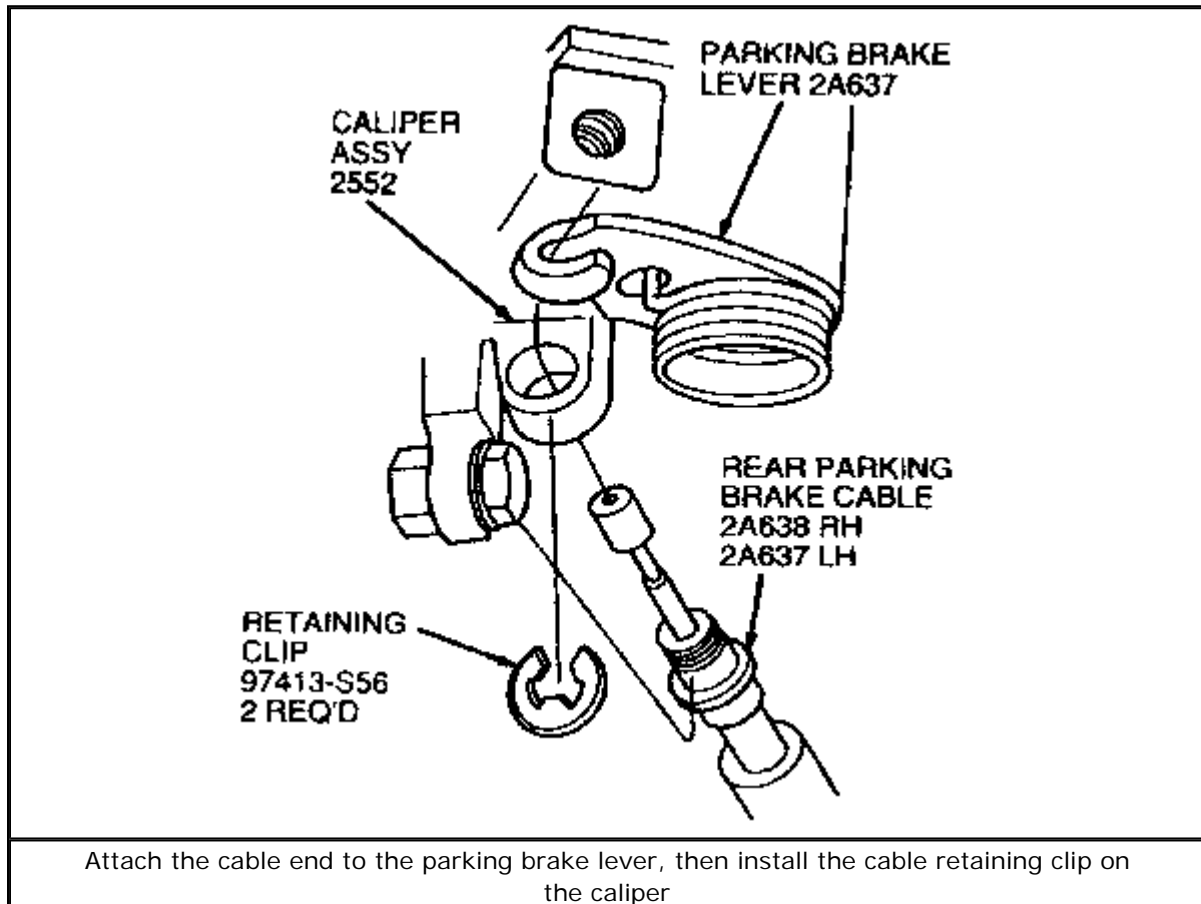


Remove the rear brake pin retainers

To install:

- Apply Silicone Dielectric Compound or equivalent to the inside of the locating/slider pin boots and to the pins.

7. Position the slider pins and boots in the anchor plate. Position the caliper assembly on the anchor plate. Make sure the brake pads are installed correctly.
8. Remove the residue from the pinch bolt threads, then apply one drop of Threadlock and Sealer E0AZ-19554-AA or equivalent. Install the pinch bolts or pin retainers, then tighten to 23-26 ft. lbs. (31-35 Nm) while holding the slider pins with an open-end wrench.
9. Attach the cable end to the parking brake lever. Install the cable retaining clip on the caliper assembly.



[Click to enlarge](#)

10. Using new washers, connect the brake flex hose to the caliper. For vehicles through 1992, tighten the retaining bolt to 8-11 ft. lbs. (11-16 Nm). For 1993-95 vehicles, tighten the retaining bolt to 30-40 ft. lbs. (41-54 Nm).
11. Bleed the brake system, filling the master cylinder as required.
12. Install the wheel and tire assembly, then lower the vehicle. Pump the brake pedal prior to moving the vehicle to position the brake pads.

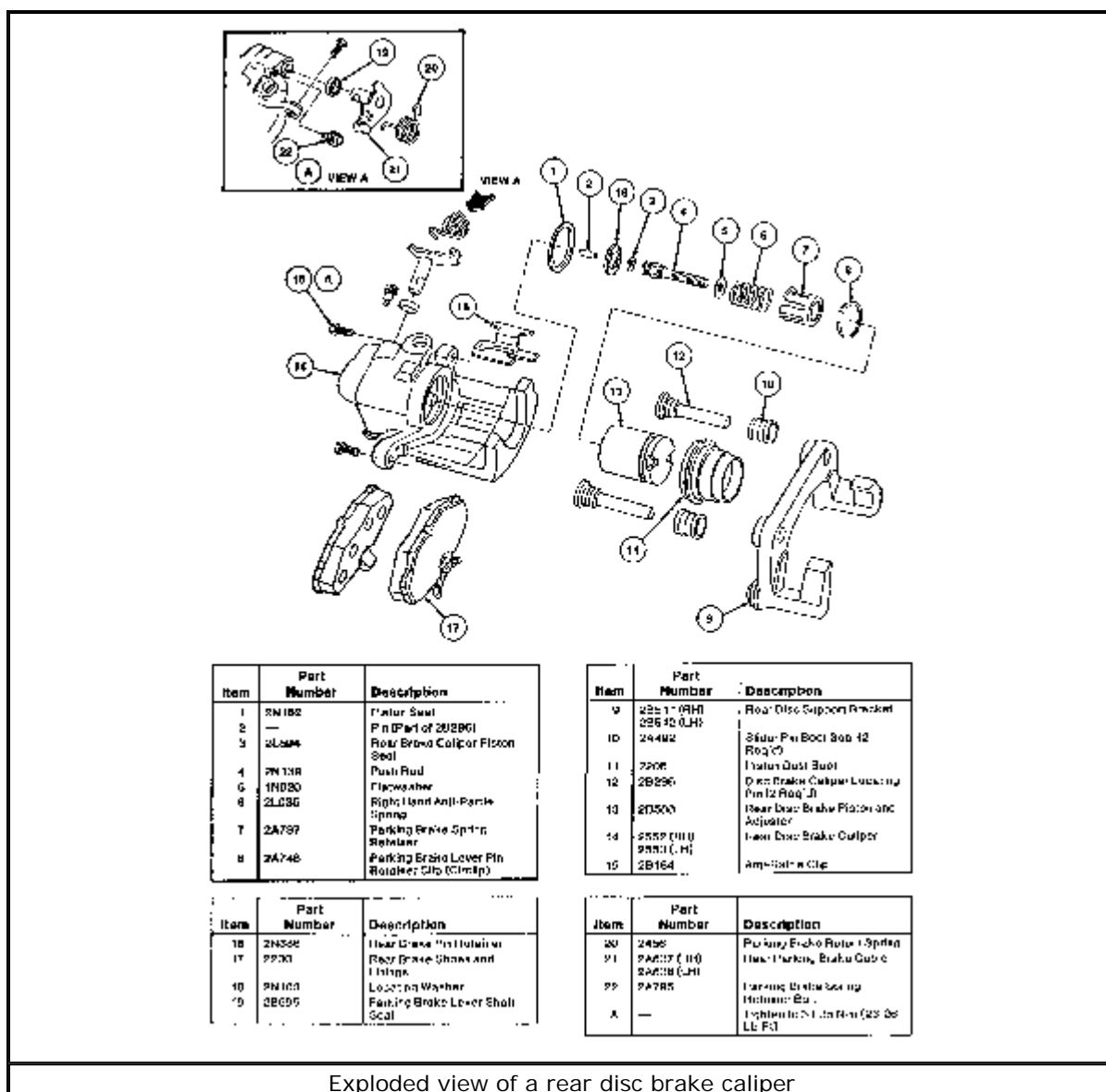
OVERHAUL

1. Remove the caliper assembly from the vehicle following the procedure earlier in this section.
2. Mount the caliper in a vise with soft-jawed protectors.
3. Using Rear Caliper Piston Adjuster T87P-2588-A or equivalent, turn the piston and adjuster counterclockwise to remove the piston from the bore.
4. Using snapping pliers, remove the snapping retaining the pushrod from the caliper.

CAUTION

The snapping and spring cover are under tension caused by spring load. Be careful when removing the snapping to avoid injury.

5. Remove the spring cover, spring, washer and key plate, then pull out the pushrod strut pin from the piston bore.
6. Remove the parking brake lever return spring, then unscrew the parking brake lever stop bolt and pull the parking brake lever out of the caliper housing.
7. Clean all metal parts with isopropyl alcohol. Use clean, dry compressed air to clean the grooves and passages. Inspect the caliper bores for damage or excessive wear. If the piston is pitted, scratched or scored replace the piston.



Exploded view of a rear disc brake caliper

[Click to enlarge](#)

To assemble:

8. Lightly grease the parking brake lever bore and the lever shaft seal with Silicone Dielectric Compound or equivalent. Press the parking brake lever shaft seal into

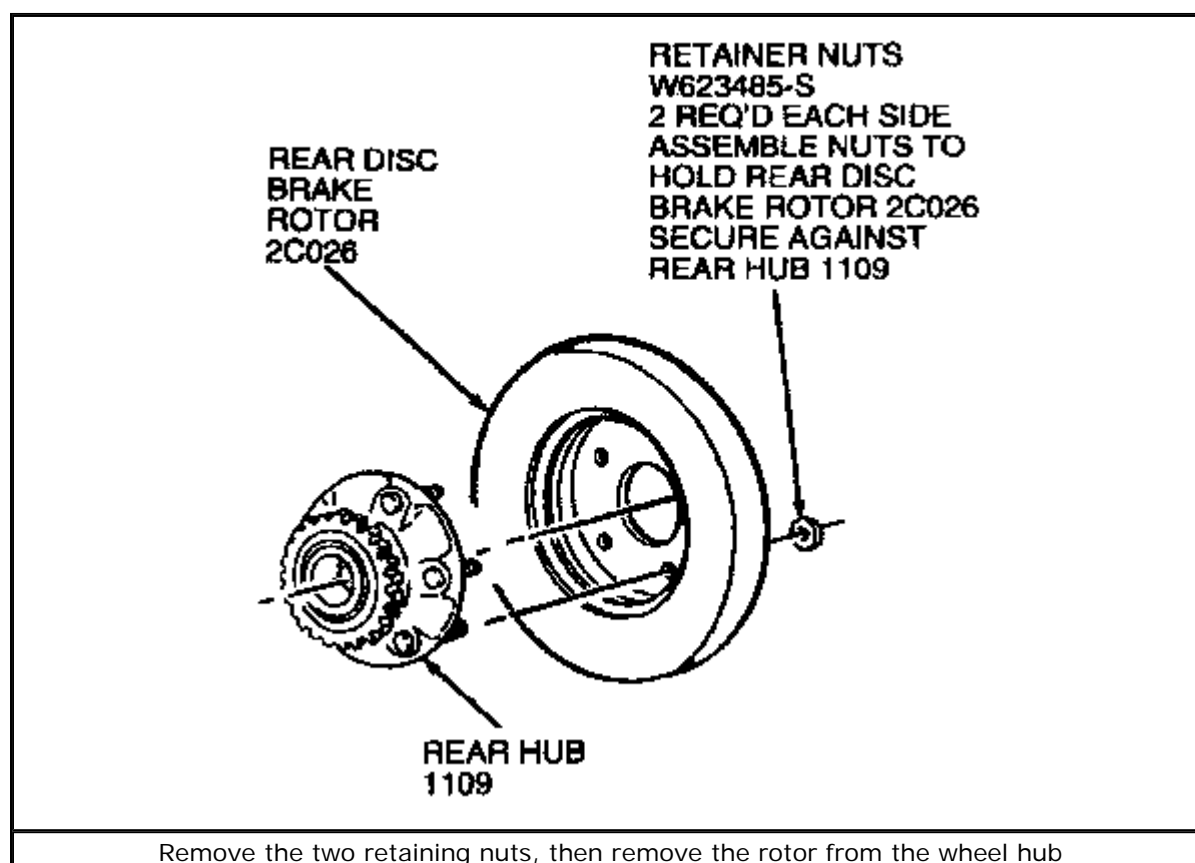
the caliper bore.

9. Grease the parking brake shaft recess and lightly grease the parking brake lever shaft. Install the shaft into the caliper housing.
10. Install the lever stop bolt into the caliper housing and tighten the bolt to 4.5-7.0 ft. lbs. (6-9 Nm).
11. Attach the parking brake lever return spring to the stop bolt, then install the free end into the parking brake lever slot.
12. Install a new O-ring seal in the groove of the pushrod. Grease the pushrod end with Silicone Dielectric Compound or equivalent.
13. Position the strut pin in the caliper housing and in the recess of the parking brake lever shaft. Install the pushrod into the bore. Make sure the pin is positioned correctly between the shaft recess. Install the flat washer, pushrod, spring and spring cover, in that order.

Brake Rotor

REMOVAL & INSTALLATION

1. Raise and safely support the vehicle.
2. Remove the wheel and tire assembly.
3. Remove the caliper assembly from the rotor, then support it with a length of wire. Do NOT let the caliper hang from the brake line.
4. For 1993-95 vehicles, unfasten the upper and lower support bracket-to-rear disc brake adapter bolts, then remove the rear disc support bracket.
5. Remove the two rotor retaining nuts, then remove the rotor from the hub.



[Click to enlarge](#)

To install:

6. **Check the rotor for scoring and/or other wear. Machine or replace, as necessary. If machining, observe the minimum thickness specification.**
7. **If the rotor is being replaced, remove the protective coating from the new rotor with Carburetor Tune-Up Cleaner D9AZ-19579-AA or equivalent.**
8. **Install the rotor on the hub, then fasten the two retaining nuts securely.**

The support brackets are interchangeable from right or left.

9. **For 1993-95 vehicles, install the support bracket. Position the bracket on the right or left-hand rear disc brake adapter, as applicable. Add one drop of Threadlock and Sealer E0AZ-19554-AA or equivalent to each bolt, then attach the bracket to the right or left-hand brake adapter. Tighten to 64-88 ft. lbs. (87-117 Nm).**
10. **Install the brake shoes and linings, then install the caliper assembly as outlined earlier in this section.**
11. **Install the wheel and tire assembly, then carefully lower the vehicle. Pump the brake pedal prior to moving the vehicle to position the brake pads.**

INSPECTION

Check the disc brake rotor for scoring, cracks or other damage. Rotor run-out should be measured while the rotor is installed, but rotor thickness or thickness variation may be checked with the rotor installed or removed. Use a dial gauge to check the rotor run-out. Check the rotor thickness to make sure it is greater than minimum thickness and check for thickness variations using a caliper micrometer. If the rotor is not within specification, either have it cut (if possible) or replace it.

Chilton® Automotive Information Systems. © 2004 Thomson Delmar Learning.

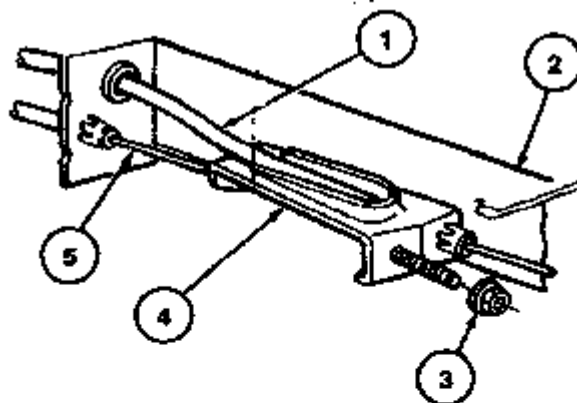
PARKING BRAKE

Cable

REMOVAL & INSTALLATION

Front Cable

1. Raise and safely support the vehicle.
2. Loosen the adjuster nut at the cable adjuster bracket.
3. Lower the vehicle.
4. Disconnect the front parking brake cable and conduit from the control assembly at the clevis using a $\frac{1}{2}$ in. (13mm) box-end wrench to press the conduit retaining prongs, then remove the cable-end pronged fitting from the parking brake control.
5. Remove the left-hand cowl side trim panel, then pull the carpet back to expose the cable and conduit.



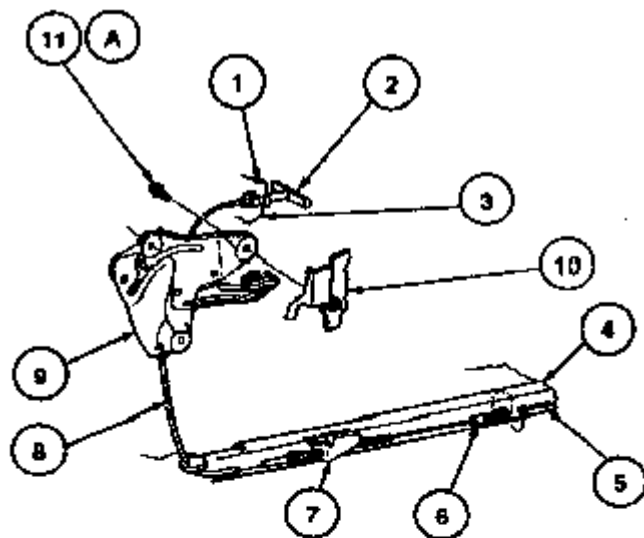
Item	Part Number	Description
1	2A635	LH Parking Brake Rear Cable and Conduit
2	10116	Inner Floor Side Member
3	W5202A2-S60	Adjuster Nut
4	2K390	Rear Parking Brake Cable Adjuster
5	2A635	RH Parking Brake Rear Cable and Conduit

Remove the left-hand cowl side trim panel, then pull the carpet back to expose the cable and conduit

[Click to enlarge](#)

6. Raise and safely support the vehicle.

7. Disconnect the front cable from the rear cable at the cable connector.
8. Remove the cable and push-in prong retainer from the cable bracket, using a 1/2 in. (13mm) box-end wrench to depress the retaining prongs.



**AUTOMATIC AND MANUAL PARKING
BRAKE RELEASE HANDLE**

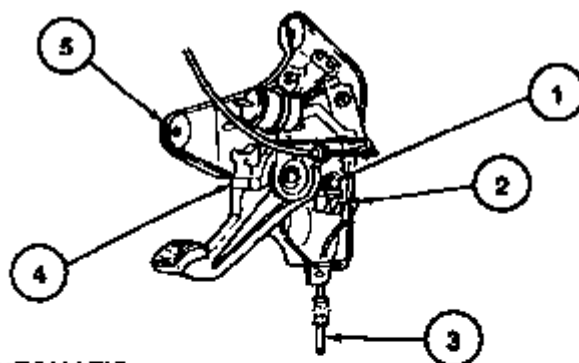
Item	Part Number	Description
1	391115-S411	Clip
2	2780	Parking Brake Release Handle
3	04320	Instrument Panel
4	11135	Front Floor Pan
5	2A635	Parking Brake Rear Cable and Conduit
6	2A709	Cable Connector
7	2K390	Rear Parking Brake Cable Adjuster
8	2853	Front Parking Brake Cable and Conduit
9	2780	Parking Brake Control
10	02344	Cowl Side Trim Panel
11	N800377-S2	Bolt (3 Req'd)
A	—	Tighten to 23-35 N·m (17-26 Lb·Ft)

Front parking brake cable and related components

[Click to enlarge](#)

9. Pull the cable assembly down through the floorpan hole.





**AUTOMATIC
RELEASE**

Item	Part Number	Description
1	—	Clevis (Part of 2780)
2	—	Cable End (Part of 2853)
3	2853	Front Parking Brake Cable and Conduit
4	15A85 1	Parking Brake Signal Switch and Bracket
5	2780	Parking Brake Control

Pulling the front parking brake cable assembly down through the floorpan hole

[Click to enlarge](#)

To install:

10. Start the front parking brake cable and conduit through the hole in the floor pan, then secure the grommet in place.

The prongs must be securely locked into place.

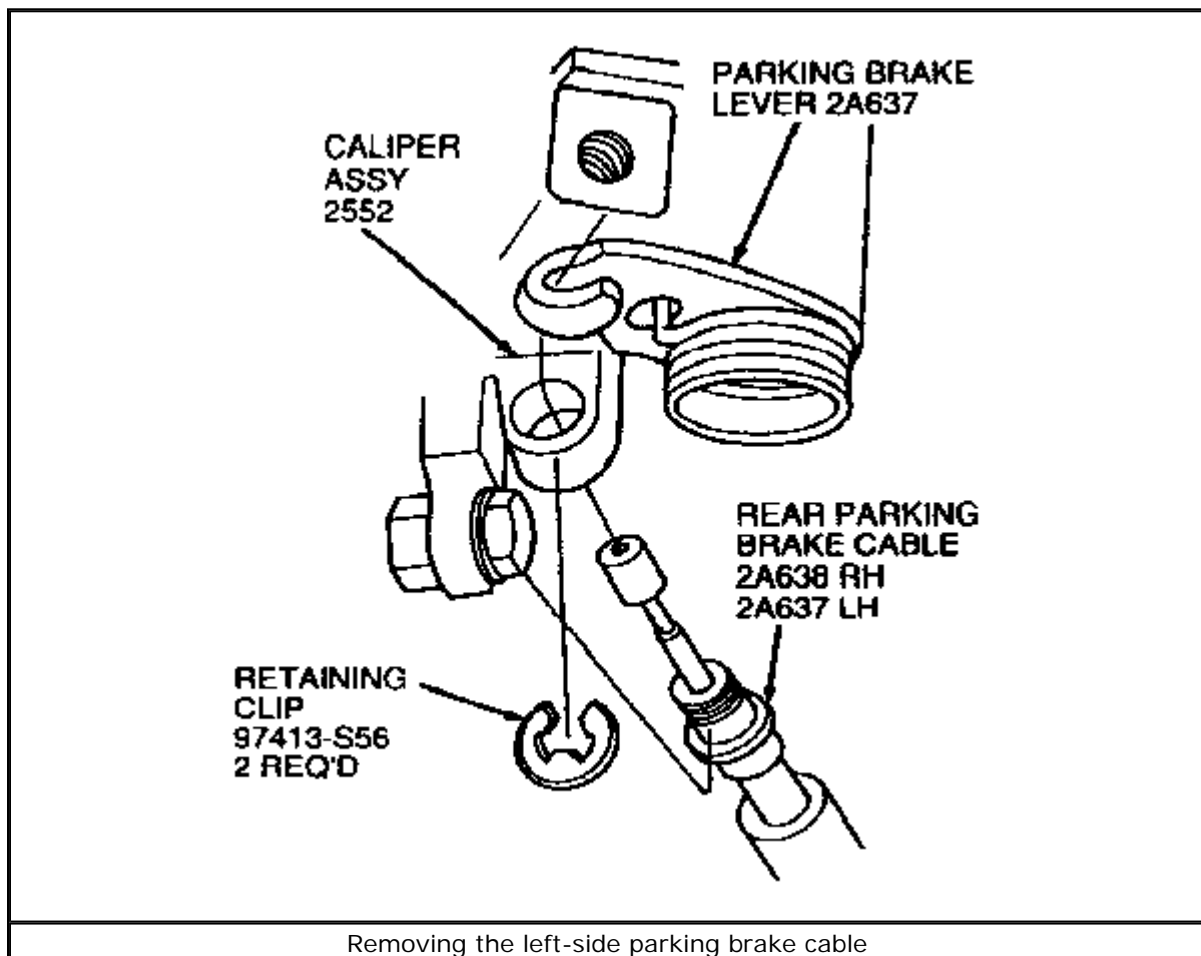
11. Position the cable and conduit through the front cable bracket at the inner floor side member. Push the prong into the bracket. Seat the cable seal into the hole in the front floorpan.
12. Connect the rear cable to the front cable.
13. Carefully lower the vehicle.
14. Push the prong retainer into the parking brake control housing until the prongs are secure, then connect the front parking brake cable and conduit to the parking brake control clevis.
15. Reinstall the carpet and the left-hand cowl side trim panel.
16. Raise and safely support the vehicle.
17. Adjust the parking brake, following the procedure located in this section, then lower the vehicle and check the parking brake operation.

Rear Cable

LEFT SIDE

1. Raise and safely support the vehicle.

2. Remove the parking brake cable adjusting nut.
3. Remove the rear cable end fitting from the front cable connector.
4. If equipped with drum brakes, remove the wheel and tire, then remove the brake drum.
5. Disconnect the cable from the parking brake actuating lever. On vehicles equipped with drum brakes, use a $1\frac{1}{2}$ in. (13mm) box-end wrench to depress the conduit retaining prongs, then remove the cable end pronged fitting from the backing plate. On vehicles equipped with disc brakes, remove the E-clip from the conduit end of the fitting at the caliper, then remove the cable from the caliper.
6. Push the plastic snap-in grommet rearward to disconnect it from the inner floor side rail bracket.
7. Remove the pronged connector from the parking park adjuster bracket, then remove the cable assembly.



[Click to enlarge](#)

To install:

8. Insert the cable through the inner floor side rail bracket and cable adjuster. Make sure the pronged connector is securely attached to the adjuster.
9. Seat the plastic snap-in grommet inside the inner floor side rail bracket.

The left-side parking brake rear cable must be located over the right-side parking brake rear cable and conduit.

10. For vehicles equipped with drum brakes, insert the parking brake and conduit end into the support plate, then push the pronged cable end into the parking brake support plate hole. Make sure the prongs are locked into place.
11. Connect the brake cable to the parking brake actuating lever.
12. For vehicles equipped with disc brakes, insert the parking brake rear cable and conduit end into the caliper, then install the E-clip.
13. Attach the parking brake rear cable and conduit end to the parking brake lever.
14. Attach the parking brake rear cable and conduit to the parking brake front cable and conduit.
15. If equipped with drum brakes, install the drum, followed by the wheel and tire assembly.
16. Install the parking brake cable adjusting nut. Adjust the parking brake, as described later in this section.
17. Lower the vehicle, then check the parking brake for proper operation.

RIGHT SIDE

1. Raise and safely support the vehicle.
2. Remove the parking brake cable adjuster nut.
3. Use a $\frac{1}{2}$ in. (13mm) box wrench to remove the conduit retainer prongs, then remove the cable from the frame inner floor side rail bracket.
4. If equipped with drum brakes, remove the rear wheel and drum assembly.
5. Disconnect the brake cable from the parking brake actuating lever. On drum brake vehicles, use a $\frac{1}{2}$ in. (13mm) box end wrench to depress the conduit retaining prongs, then remove the cable end pronged fitting from the backing plate. On disc brake vehicles, remove the E-clip from the conduit end of the fitting at the caliper, then remove the cable and conduit from the caliper.
6. On Taurus/Sable sedans, perform the following:
 1. Remove the brake pressure control valve bracket at the control arm.
 2. Remove the cable retaining screw and clip from the lower control arm.
 3. Remove the screw from the cable bracket at the crossmember.
 4. Remove the entire right-side rear parking brake cable assembly.
7. On station wagons, perform the following:
 1. Remove the cable retaining clip and screw from each lower control arm.
 2. Remove the cable clip retaining screw from the lower control inner mounting bracket.
8. Remove the parking brake cable assembly from the vehicle.

To install:

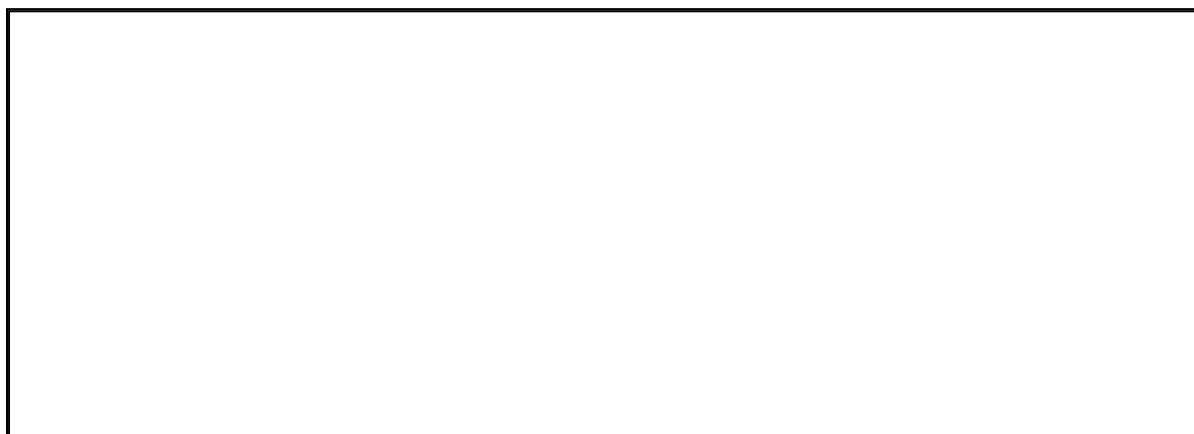
9. Insert the cable and conduit into the opening in the inner floor side rail bracket and threaded end of the cable and conduit in the cable adjuster, then start the adjuster nut on the threads. Make sure the pronged fitting is pressed into the inner floor side rail bracket and securely locked into place.

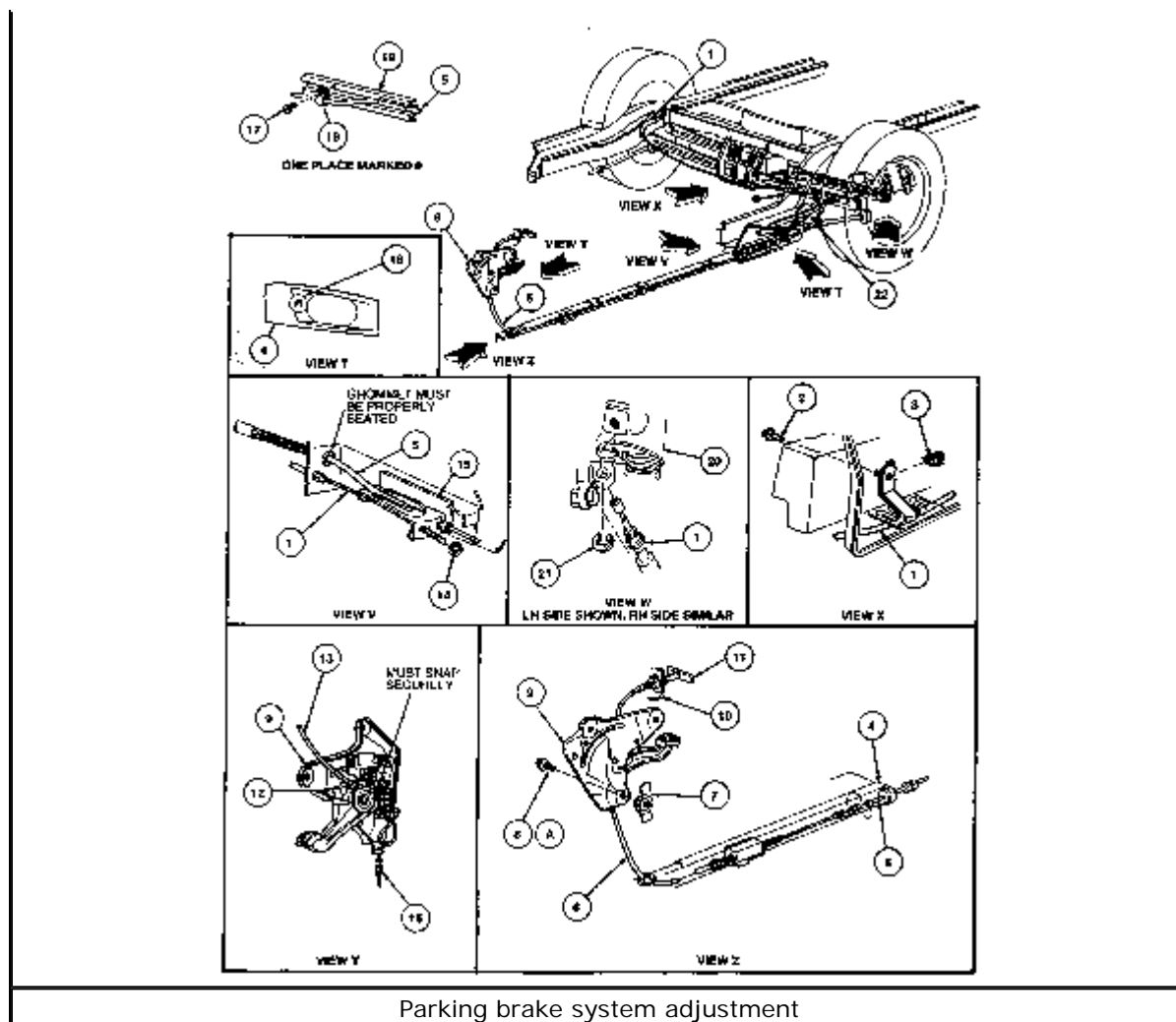
10. Route the right-side parking brake rear cable and conduit under the left-side parking brake rear cable/conduit and rear control arm.
11. Secure the cable and conduit end into the parking brake lever.
12. For vehicles equipped with disc brakes, insert the parking brake cable and conduit end into the caliper, then install the E-clip.
13. For vehicles equipped with drum brakes, insert the cable and conduit end pronged fitting into the support plate, then lock securely into place.
14. Attach the brake hose clip, then install the nut and screw, then tighten to 6-8 ft. lbs. (8-11 Nm).
15. On station wagons, install the parking brake rear cable and conduit retaining clips to the rear suspension arm. On sedans, install the parking brake rear cable/conduit screw and clip, then tighten the screws to 6-8 ft. lbs. (8-11 Nm).
16. Position the cable and conduit assembly to the lower control arm, then tighten the retaining screw to 4-6 ft. lbs. (6-8 Nm).
17. On sedans, if applicable, fasten the brake load sensor proportioning valve to the control arm.
18. If equipped with drum brakes, install the rear wheel and drum assembly.
19. Install the parking brake cable adjuster nut.
20. Adjust the parking brake. following the procedure later in this section. Carefully lower the vehicle, then check the parking brake for proper operation.

ADJUSTMENT

Vehicles With Drum Brakes

1. Make sure the parking brake is fully released. Place the transaxle in the N position.
2. Raise and safely support the vehicle. Working in front of the left rear wheel, tighten the adjusting nut against the cable equalizer, causing a rear wheel brake drag. Then, loosen the adjusting nut until the rear brakes are fully released. There should be no brake drag. Refer to the accompanying figure for adjusting nut location.
3. If the brake cables were replaced, stroke the parking brake with about 100 lbs. (445 Nm) of pedal effort several times, then release the control and repeat Step 2.
4. Check for operation of the parking brake with the vehicle supported and the parking brake fully released. If there is any slack in the cables, or if the rear brakes drag when the wheels are turned, adjust as required.
5. Lower the vehicle.





[Click to enlarge](#)

Vehicles With Disc Brakes

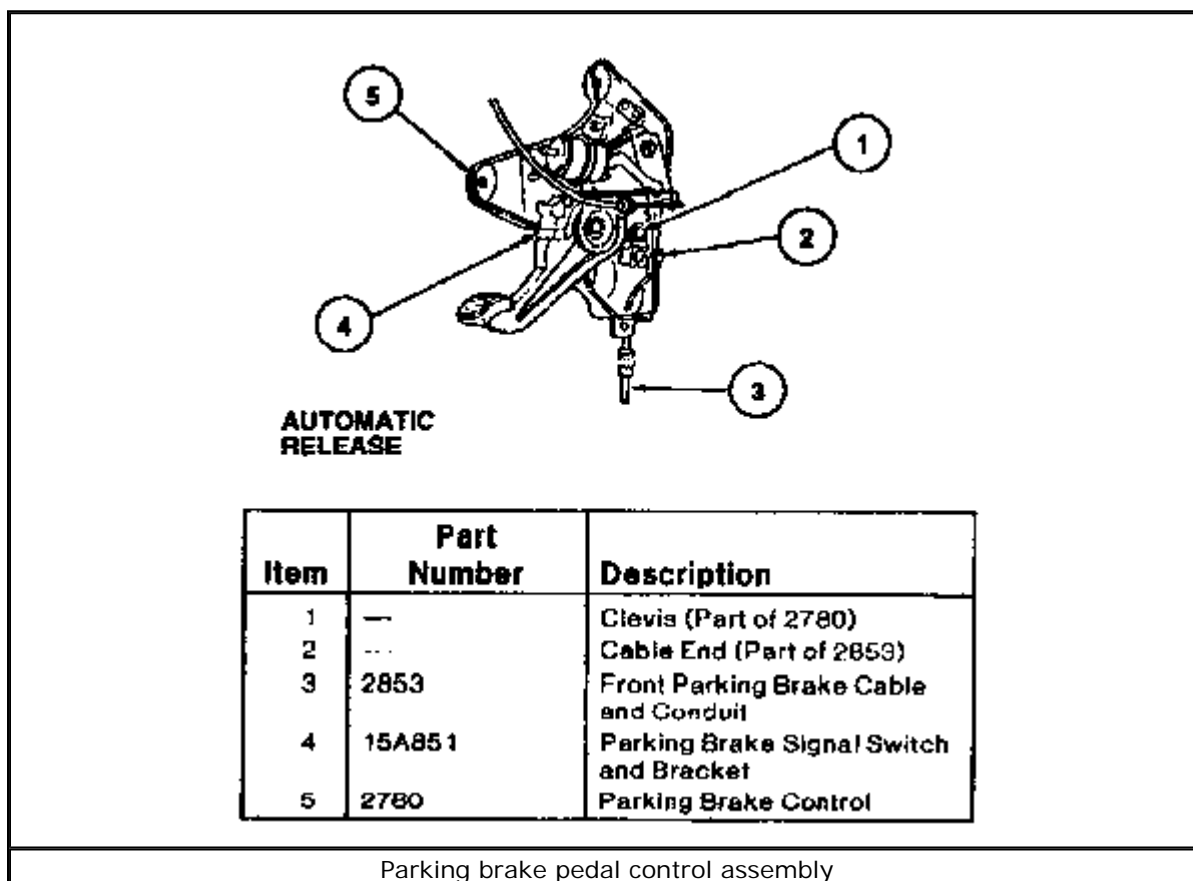
1. Make sure the parking brake is fully released.
2. Raise and safely support the vehicle.
3. Tighten the adjusting nut against the cable adjuster bracket until there is less than $\frac{1}{16}$ in. (1.6mm) movement of either rear parking brake lever at the caliper. Refer to the accompanying figure for adjusting nut location.
4. If the brake cables were replaced, stroke the parking brake with about 100 lbs. (445 Nm) of pedal effort several times, then release the control and repeat Step 3.
5. Lower the vehicle, then check operation of the parking brake.

Brake Pedal

REMOVAL & INSTALLATION

1. Fully release the parking brake. Raise and safely support the vehicle.
2. Remove all tension from the rear cables by backing off the adjusting nut from the equalizer or adjuster.
3. Lower the vehicle. If equipped, disconnect the vacuum hose from the parking brake release control motor.

4. Disconnect the release cable from the parking brake control release arm. Remove the release cable grommet from the parking brake control.
5. Disengage the wiring connector from the parking brake warning indicator switch. Remove the cable from the clevis at the brake control.
6. Remove the push pin from the cowl side trim panel.
7. Remove the conduit retainer from the control assembly by using a $1\frac{1}{2}$ in. (13mm) box-end wrench to press the retaining prongs.
8. Remove the three bolts and one push pin retaining the control assembly to the cowl side panel. Remove the control assembly from the vehicle.



[Click to enlarge](#)

To install:

9. Position the control assembly in the vehicle. Fit the cable through its mounting hole, then press the pronged retainer in place. Make sure the prongs are locked securely into place.
10. Connect the cable to the control assembly. Install the retaining bolts and push pin. Tighten the retaining bolts to 17-26 ft. lbs. (23-35 Nm).
11. If equipped, connect the vacuum hose to the parking brake release control motor.
12. Connect the release cable to the parking brake control release arm. Install the release cable grommet to the parking brake control.
13. Engage the wiring connector to the warning switch and bracket.
14. Raise and safely support the vehicle. Adjust the parking brake assembly, as outlined earlier in this section.

15. **Carefully lower the vehicle, then check the parking brake assembly for proper operation.**
-

Chilton® Automotive Information Systems. © 2004 Thomson Delmar Learning.

ANTI-LOCK BRAKE SYSTEM

Description

Beginning in 1990, the Taurus and Sable (except 2.5L engine) were available with Anti-lock Braking System (ABS) as an option on vehicles with four wheel disc brakes. The system was standard on the Taurus SHO starting in 1990. The system prevents wheel lock-up by automatically modulating the brake pressure during emergency stopping. The system controls each front brake separately and the rear brakes as an axle set. During ABS operation, the driver will sense brake pedal pulsation, along with a slight up-and-down movement in the pedal height and a clicking sound; this is normal.

Component Operation

The ABS system consists of the following major components.

POWER BRAKE BOOSTER

The power brake booster is a self-contained unit that is mounted on the engine compartment side of the dash panel and uses engine intake manifold vacuum and atmospheric pressure for its power. If it becomes damaged or stops functioning properly, it must be replaced as an assembly, except for the power brake booster check valve.

BRAKE MASTER CYLINDER

The brake master cylinder is a tandem master cylinder. The primary (rear) circuit feeds the right-hand front and left-hand rear brakes. The secondary (front) circuit feeds the left-hand front and right-hand rear brakes. The master cylinder is serviced as a complete assembly.

HYDRAULIC CONTROL UNIT

The anti-lock brake Hydraulic Control Unit (HCU) is located in the front of the engine compartment on the left-hand side of the vehicle. It consists of the brake pressure control valve block assembly, pump motor, and the master cylinder filler cap with fluid level indicator assembly.

During normal braking, fluid from the brake master cylinder enters the HCU reservoir through two inlet ports at the rear of the HCU. The fluid then passes through four normally open inlet valves, one to each wheel. If the ABS control module senses that a wheel is about to lock, the module activates the appropriate inlet valve which closes that valve. This prevents any more fluid from entering the affected brake. The ABS control module then opens the normally closed outlet valve which decreases the pressure trapped in the line.

The brake pressure control valve block, pump motor and HCU reservoir are serviced separately. Other than seals and gaskets, no internal parts can be

serviced.

ANTI-LOCK BRAKE (ABS) CONTROL MODULE

The Anti-lock Brake System (ABS) control module is located on the front right-hand side, next to the windshield washer reservoir for all vehicles except the SHO. On the Taurus SHO, it is mounted on top of the front left brake anti-lock sensor.

It is an on-board diagnostic, non-serviceable unit consisting of two microprocessors and the necessary circuitry for their operation. The module monitors system operation during normal driving, as well as during anti-lock braking. Under normal driving conditions, the ABS control module produces short test pulses to the solenoid valves that check the electrical system without any mechanical reaction. Impending wheel lock conditions trigger signals from the ABS control module that open and close the appropriate solenoid valves. This results in moderate pulsations in the brake pedal.

If brake pedal travel exceeds a preset dimension determined by the anti-lock brake pedal sensor switch setting, the ABS control module will send a signal to the pump motor to turn on and provide high pressure to the brake system. Each time the vehicle is driven, as soon as the speed reaches 42 mph (70 km/h), the ABS control module turns on the pump motor for about $\frac{1}{2}$ second (a mechanical noise will be heard; this is normal). When the pump motor starts to run, a gradual rise in brake pedal height will be noticed. The rise will continue until the sensor switch closes, and the pump motor will shut off until the brake pedal travel again exceeds the anti-lock brake pedal sensor switch setting.

Most malfunctions to the anti-lock braking system will be stored as a Diagnostic Trouble Code (DTC) in the keep-alive memory of the ABS control module.

ANTI-LOCK BRAKE SENSOR

Four sets of variable-reluctance brake anti-lock sensors and sensor indicators which determine the rotational speed of each wheel are used in the ABS system. The sensors operate on magnetic induction principle. As the teeth on the ABS sensor indicators rotate past the sensors, a signal proportional to the speed of rotation is generated and sent to the ABS control module.

The front brake anti-lock sensors are attached to the front wheel spindles. The front brake anti-lock sensor indicators are pressed into the outer CV-joints. The rear brake anti-lock sensors are attached to the right and left-hand rear disc brake adapters. The rear brake anti-lock sensor indicators are pressed into the wheel hub assemblies.

BRAKE PEDAL TRAVEL SWITCH

The brake pedal travel switch monitors brake pedal travel, then sends this information to the ABS control module through the wire harness. The brake pedal sensor switch adjustment is critical to pedal feel during ABS cycling. The switch is mounted in a hole in the right-hand side of the brake pedal support bracket, and to a pin on the speed control dump valve adapter bracket.

The switch is normally closed. When brake pedal travel exceeds the switch setting during an anti-lock stop, the ABS control module senses that the switch is open and grounds the pump motor relay coil. This energizes the relay and turns the

pump motor on. When the pump motor is running, the HCU reservoir is filled with high pressure brake fluid, and the brake pedal will be pushed up until the brake pedal travel switch closes.

When the switch closes, the pump motor is turned off; the brake pedal will drop some with each ABS control cycle until the switch opens again and the pump motor is turned on again. This minimizes pedal feedback during ABS cycling. If the switch is not adjusted properly or is not electrically connected, it will result in objectionable pedal feel during ABS stops.

Anti-Lock Brake System Service

PRECAUTIONS

Failure to observe the following precautions may result in system damage.

- **Before servicing any high pressure component, be sure to discharge the hydraulic pressure from the system.**
- **Do not allow the brake fluid to contact any of the electrical connectors.**
- **Use care when opening the bleeder screws due to the high pressures available from the accumulator.**

RELIEVING SYSTEM PRESSURE

Before servicing any components which contain high pressure, it is mandatory that the hydraulic pressure in the system be discharged. To discharge the system, turn the ignition **OFF** and pump the brake pedal a minimum of 20 times until an increase in pedal force is clearly felt.

Hydraulic Control Unit (HCU)

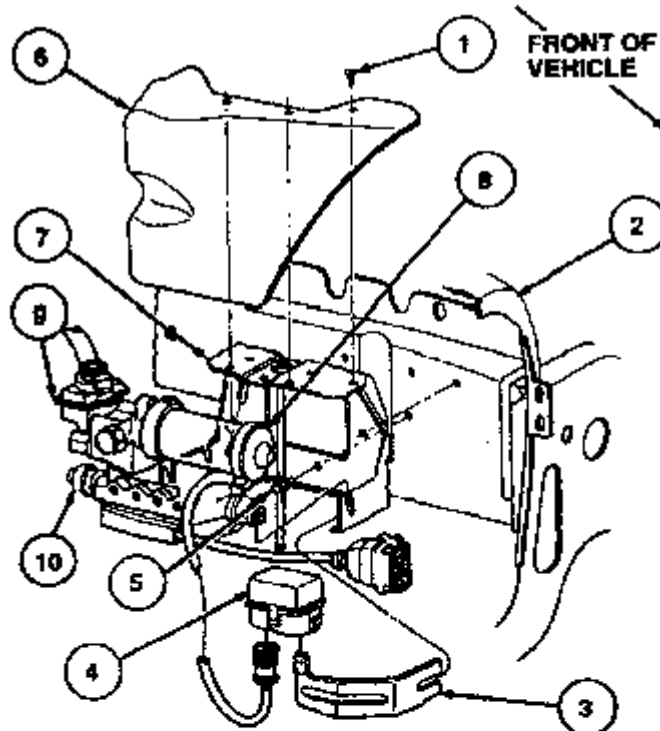
The anti-lock brake Hydraulic Control Unit (HCU) is located in the front of the engine compartment on the left-hand side of the vehicle. It attaches to a bracket that is mounted to the left-hand front inside rail inside the engine compartment. The battery and battery tray sit atop the hydraulic control bracket.

REMOVAL & INSTALLATION

1. **On all vehicles, except Taurus SHO, disconnect the battery cables, then remove the battery from the vehicle. Remove the battery tray. Remove the three plastic push pins holding the acid shield to the HCU mounting bracket, then remove the acid shield.**
2. **On Taurus SHO, it is only necessary to disconnect the negative battery cable and remove the electronic control unit and its mounting bracket from the top of the HCU mounting bracket.**
3. **Unfasten the 19-pin connector from the HCU to the wiring harness, then detach the 4-pin connector from the HCU to the pump motor relay.**
4. **Remove the two lines from the inlet ports and the four lines from the outlet ports of the HCU. Plug each port to prevent brake fluid from spilling onto the paint and wiring.**

The nut on the front of the HCU also retains the relay mounting bracket.

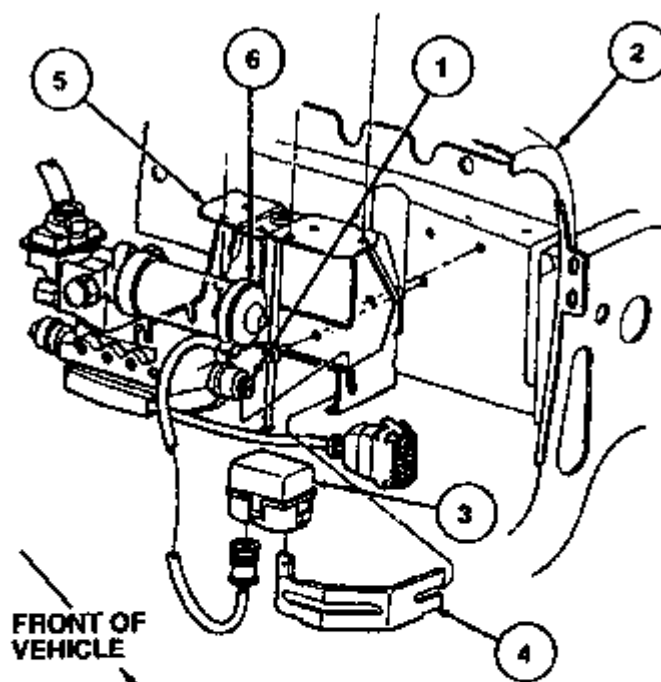
5. Remove the three nuts retaining the HCU assembly to the mounting bracket, then remove the assembly from the vehicle.



Item	Part Number	Description
1	N805636S	Push Pin (3 Req'd)
2	16138	Radiator Support
3	2C303	Anti-Lock Brake Pump Bracket
4	--	Pump Relay (Part of 2C303)
5	N606888558	Bolt (3 Req'd)
6	2C314	Acid Shield
7	2C304	Anti-Lock Brake Hydraulic Control Bracket
8	2C256	Pump Motor
9	2C246	Hydraulic Control Unit Reservoir
10	2C266	Brake Pressure Control Valve Block

HCU location and related components-except SHO vehicles

[Click to enlarge](#)



Item	Part Number	Description
1	N606688-S56	Bolt (3 Req'd)
2	16138	Radiator Support
3	2C303	Anti-Lock Brake Pump Bracket
4	—	Relay Bracket (Part of 2C303)
5	2C304	Anti-Lock Brake Hydraulic Control Bracket
6	2C256	Pump Motor

HCU location and related components-SHO vehicles only

[Click to enlarge](#)

To install:

Attach the relay mounting bracket with the nut on the front of the hydraulic control unit reservoir.

6. Position the HCU reservoir assembly into the mounting bracket, then secure using the three retaining nuts. Tighten the nuts to 12-18 ft. lbs. (16-24 Nm).
7. Connect the four lines to the outlet ports on the side of the HCU reservoir and the two tubes to the inlet ports on the rear of the HCU reservoir, then tighten to 10-18 ft. lbs. (14-24 Nm).
8. Fasten the 19-pin connector to the harness, then attach the 4-pin connector to the pump motor relay.
9. On all vehicles except SHO, install the acid shield and the three plastic push pins holding the acid shield to the HCU bracket. Install the battery tray, then install the battery and connect the cables.
10. On the SHO, install the anti-lock brake control module to the top of the anti-lock brake control module mounting bracket. Connect the negative battery cable.

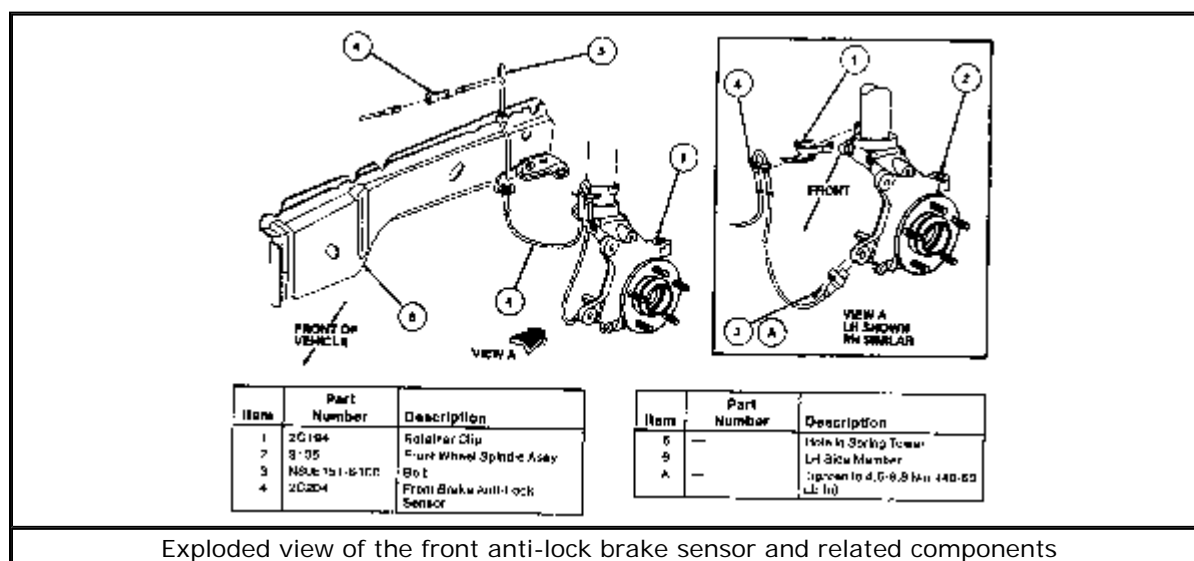
11. Bleed the brake system, then check for fluid leaks.

Wheel Sensors

REMOVAL & INSTALLATION

Front

1. Disconnect the negative battery cable.
2. Disengage the sensor connector located in the engine compartment.
3. For the right front sensor, remove the two plastic push studs to loosen the front section of the splash shield in the wheel well. For the left front sensor, remove the two plastic push studs to loosen the rear section of the splash shield.
4. Thread the sensor wire(s) through the holes in the fender apron. For the right front sensor, remove the two retaining clips behind the splash shield.
5. Raise and safely support the vehicle. Remove the wheel and tire assembly.
6. Disengage the sensor wire grommets at the height sensor bracket and from the retainer clip on the shock strut just above the spindle.
7. Loosen the sensor retaining screw, then remove the sensor assembly from the front knuckle.



[Click to enlarge](#)

To install:

8. Align the sensor with its mounting holes on the front wheel spindle. Tighten the retaining screws to 40-60 inch lbs. (4.5-6.8 Nm).
9. Install the grommets at the height sensor bracket, then install the retainer clip at the shock absorber.
10. Thread the wire through the holes in the fender apron. For the right-hand sensor only, install the retainer clips. Secure the splash shield with the plastic push studs.
11. Engage the sensor connector to the wiring harness from the engine compartment.
12. Connect the negative battery cable.

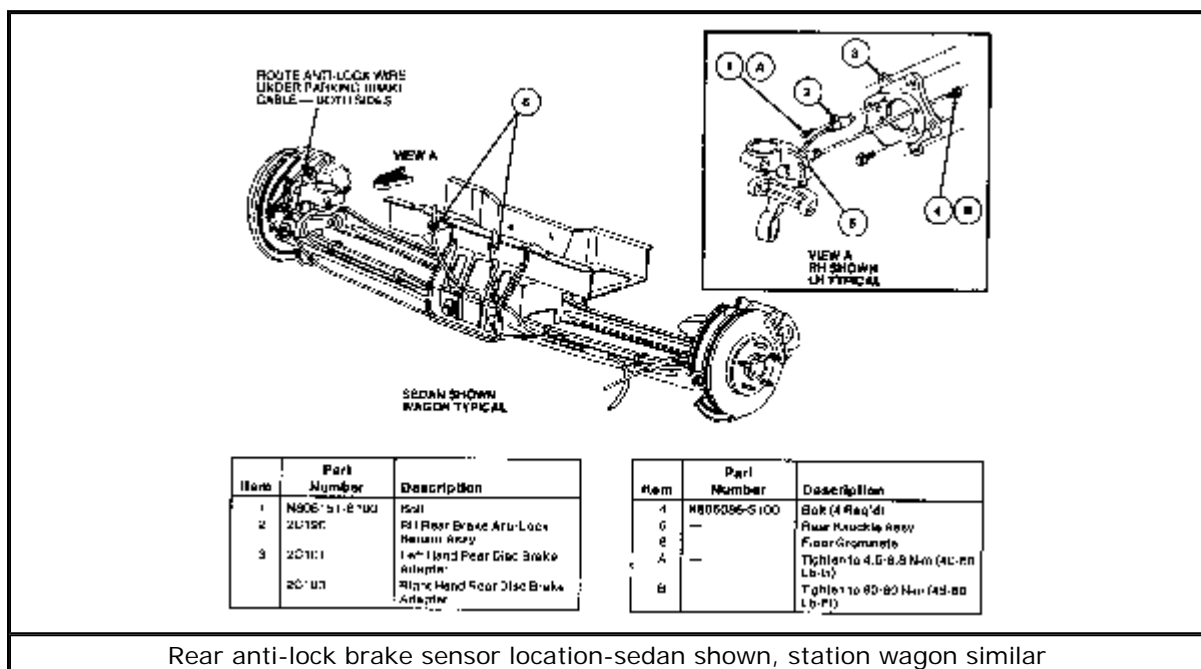
Rear

EXCEPT STATION WAGON

1. Disconnect the negative battery cable.
2. Remove the rear seat and seat back insulation.
3. Disengage the sensor wire from the harness, then tie one end of a string or wire to the sensor connector and the other end to the rear seat sheet metal bracket.
4. Push the sensor wire grommet and connector through the floorpan, drawing the string or wire with the sensor connector.
5. Raise and safely support the vehicle.
6. Disconnect the string or wire from the sensor from underneath the vehicle.
7. Disconnect the routing clips from the suspension arms, then unfasten the sensor retaining bolts from the rear brake adapters and remove the sensor from the vehicle.

To install:

8. Insert the sensor into the hole in the right or left-hand rear disc brake adapter, then install the retaining bolt. Tighten to 40-60 inch lbs. (4.6-6.8 Nm).
9. Install the sensor wire routing clips to the suspension arms.
10. Attach string or wire to the new sensor connector, then pull the sensor connector through the hole in the floor pan using the string or wire.
11. Install the sensor wire grommet into the hole in the floorpan.
12. Remove the string or wire, then connect the rear brake anti-lock sensor to the wire harness.
13. Install the rear seat back, then connect the negative battery cable.



[Click to enlarge](#)

STATION WAGON

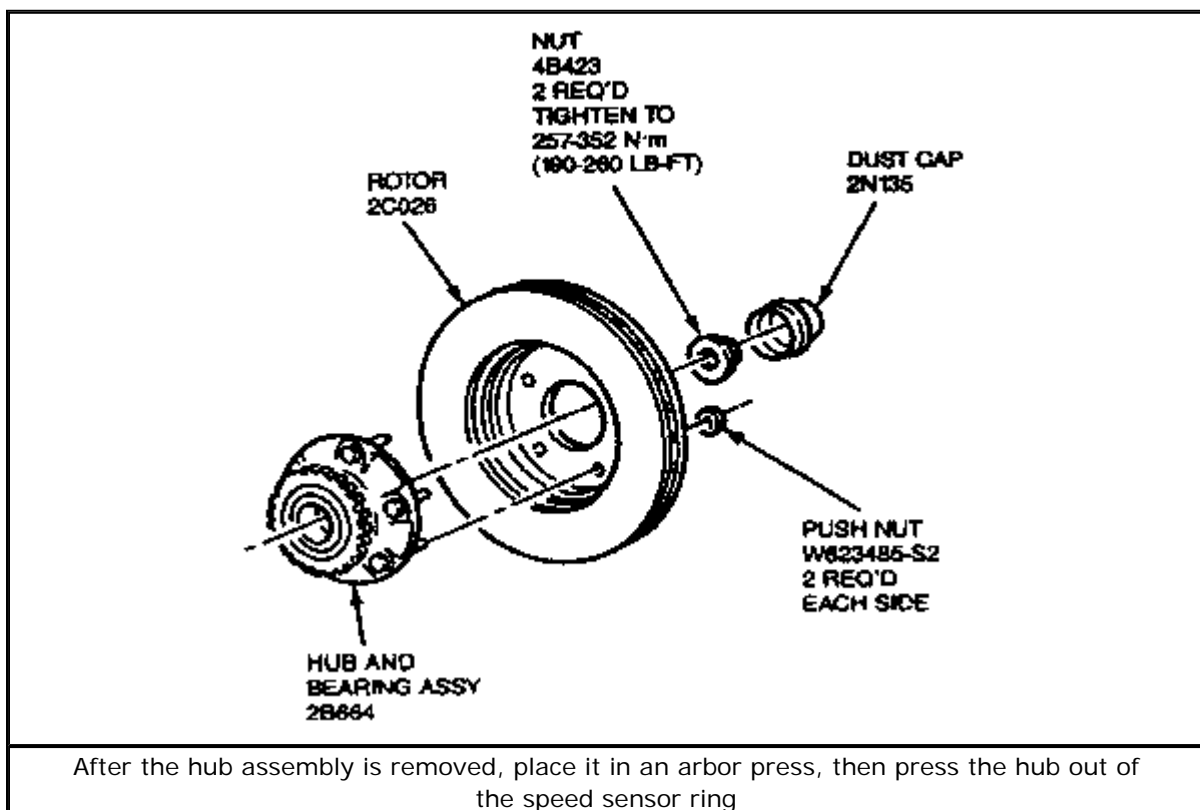
1. Disconnect the negative battery cable.
2. Raise and safely support the vehicle.
3. Disengage the sensor electrical connector from the harness.
4. Remove the sensor wire with the attached grommet from the hole in the floorpan.
5. Remove the routing clips, then unfasten the sensor retaining bolt and remove the sensor from the vehicle.

To install:

6. Install the sensor, then secure using the retaining bolt. Tighten the bolt to 40-60 inch lbs. (4.6-6.8 Nm).
7. Route the sensor wire, then install the clips.
8. Engage the sensor electrical connector to the wiring harness, then push the grommet through the hole in the floorpan and into position.
9. Lower the vehicle, then connect the negative battery cable.

Rear Speed Indicator Ring**REMOVAL & INSTALLATION**

1. Raise and safely support the vehicle. Remove the tire and wheel assembly.
2. Remove the caliper, rotor and rear hub assemblies.
3. Position the hub assembly in an arbor press, then press the hub out of the speed sensor ring.



[Click to enlarge](#)

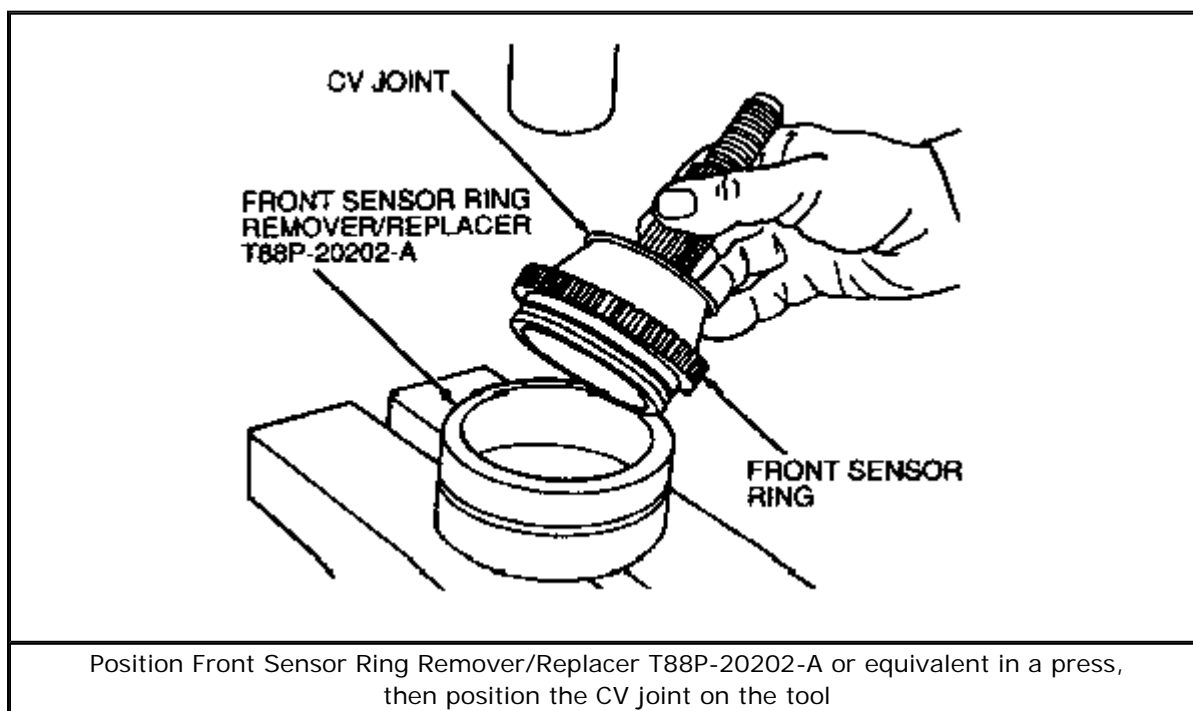
To install:

4. Position the rear speed sensor ring over the hub.
5. Using a flat piece of steel or similar tool, press the ring down until it is flush with the top of the hub.
6. Install the rear hub, rotor and caliper. Install the wheel and tire assembly, then carefully lower the vehicle.

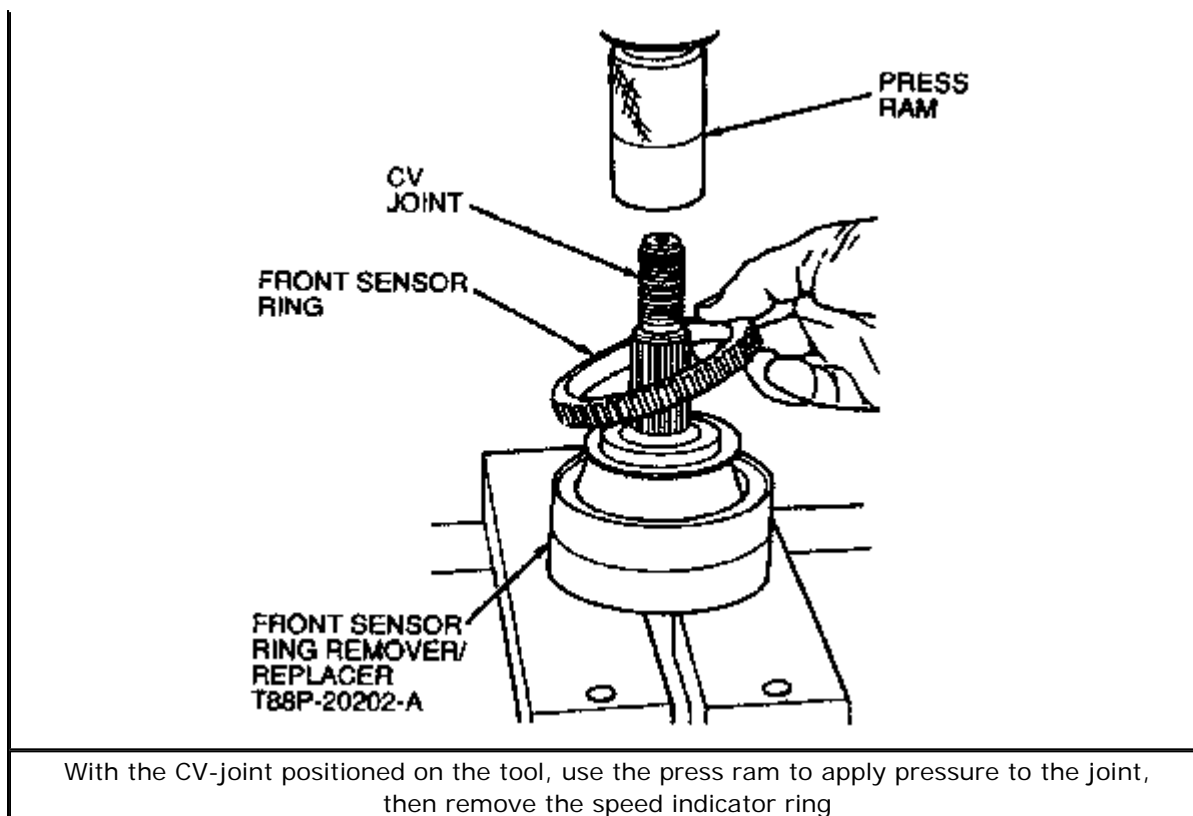
Front Speed Indicator Ring

REMOVAL & INSTALLATION

1. Raise and safely support the vehicle.
2. Remove the outboard CV-joint. For details, please refer to the procedure in *Section 7* of this manual.
3. Position Front Sensor Ring Remover/Replacer T88P-20202-A or equivalent, in a press. Position the CV-joint on the tool.



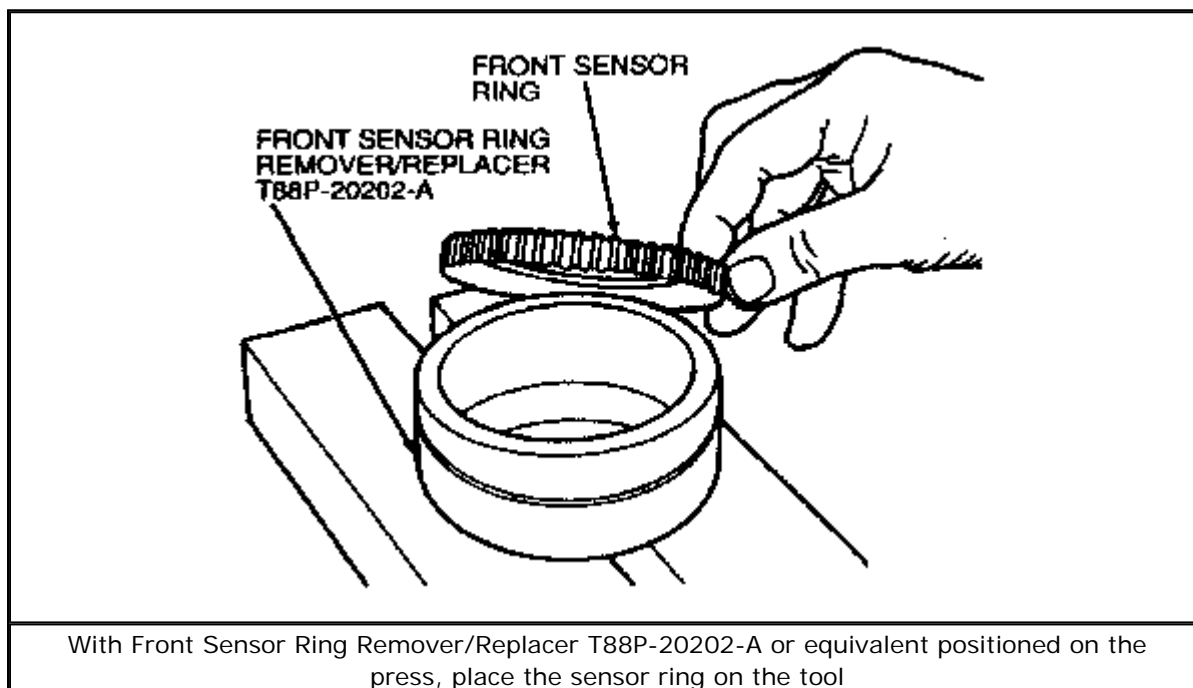
4. With the CV-joint positioned on the tool, use the press ram to apply pressure to the joint, then remove the speed indicator ring.



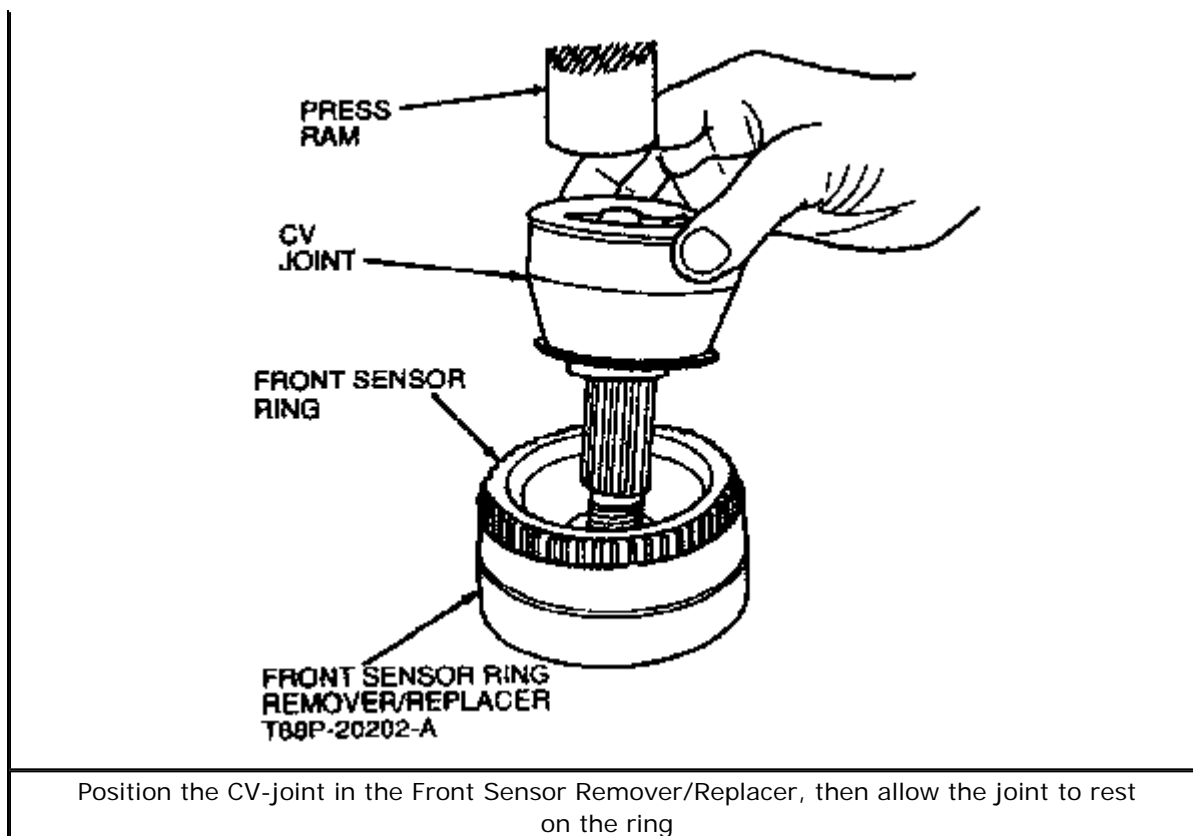
[Click to enlarge](#)

To install:

5. With Front Sensor Ring Remover/Replacer T88P-20202-A or equivalent positioned on the press, place the sensor ring on the tool.



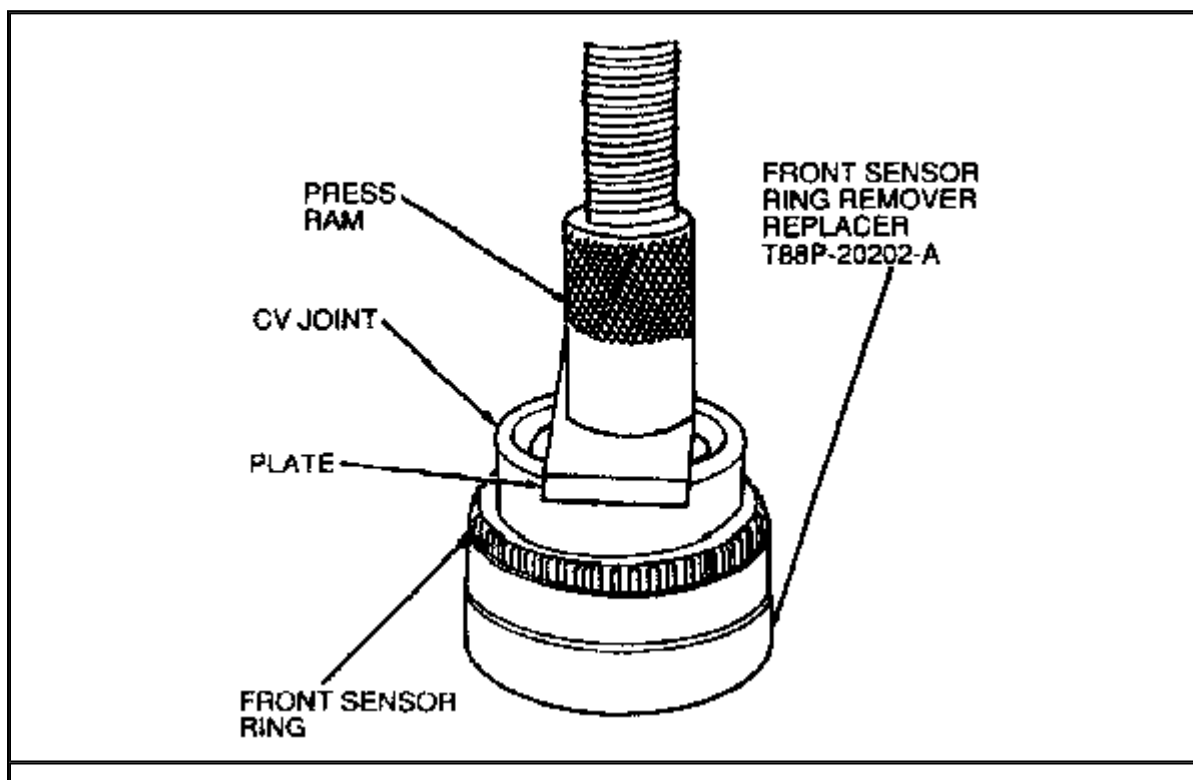
6. Position the CV-joint in the Front Sensor Remover/Replacer, then allow the joint to rest on the ring.



[Click to enlarge](#)

Be very careful not to damage the sensor during installation. If the teeth on the sensor are damaged, brake performance will be affected.

7. With the CV-joint installed in the tool, place a steel plate across the CV-joint back face. Press the CV-joint until the joint bottoms out in the tool; the ring will then be properly installed.



With the CV-joint installed in the tool, place a steel plate across the CV-joint back face. Press the CV-joint until the joint bottoms out in the tool; at that point, the ring will be properly installed

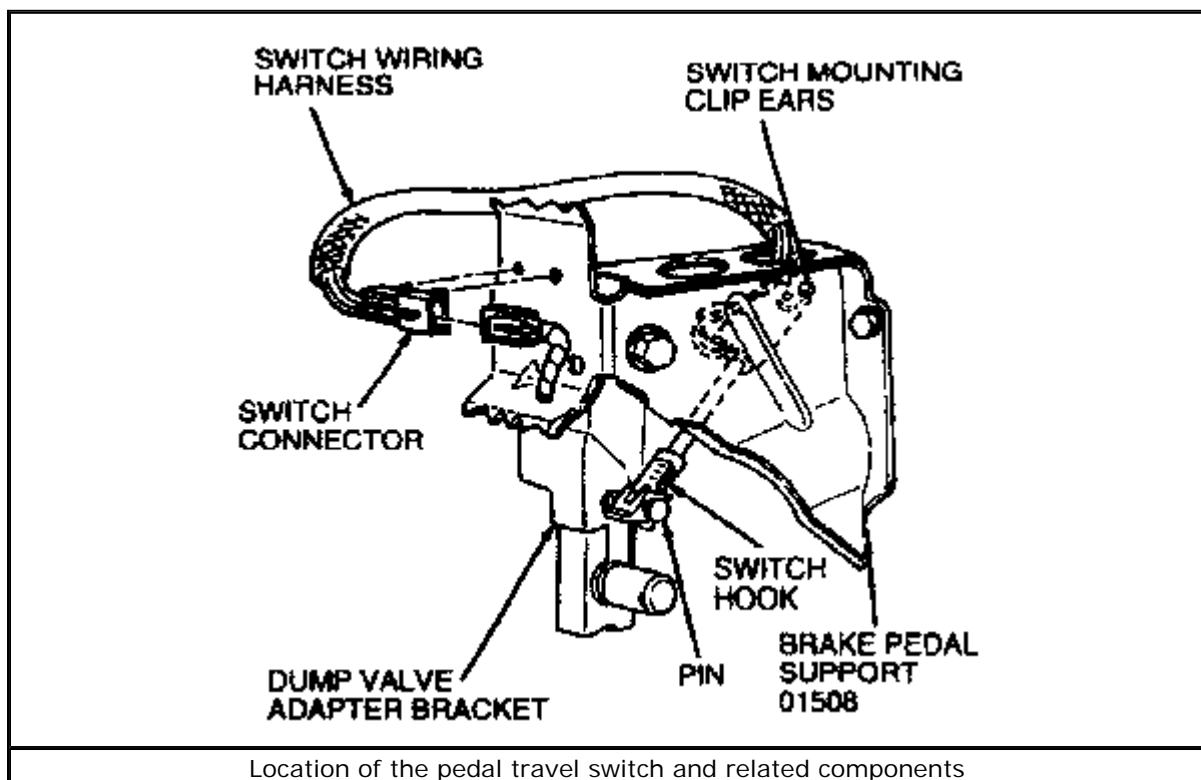
[Click to enlarge](#)

8. Install the outboard CV-joint. For details, please refer to the procedure in *Section 7* of this manual.
9. Carefully lower the vehicle.

Pedal Travel Switch

REMOVAL & INSTALLATION

1. Disconnect the negative battery cable.
2. Detach the wiring harness lead at the switch connector.
3. Using a suitable prytool, carefully pry the connector's locator pins from the holes in the brake pedal support.
4. Unsnap the switch hook from the pin on the dump valve adapter bracket.
5. Using needlenose pliers, squeeze the tabs on the switch mounting clip, then push the clip through the hole in the pedal support bracket.
6. Remove the switch by feeding the switch harness through the hole in the top of the pedal support bracket.



Location of the pedal travel switch and related components

[Click to enlarge](#)

To install:

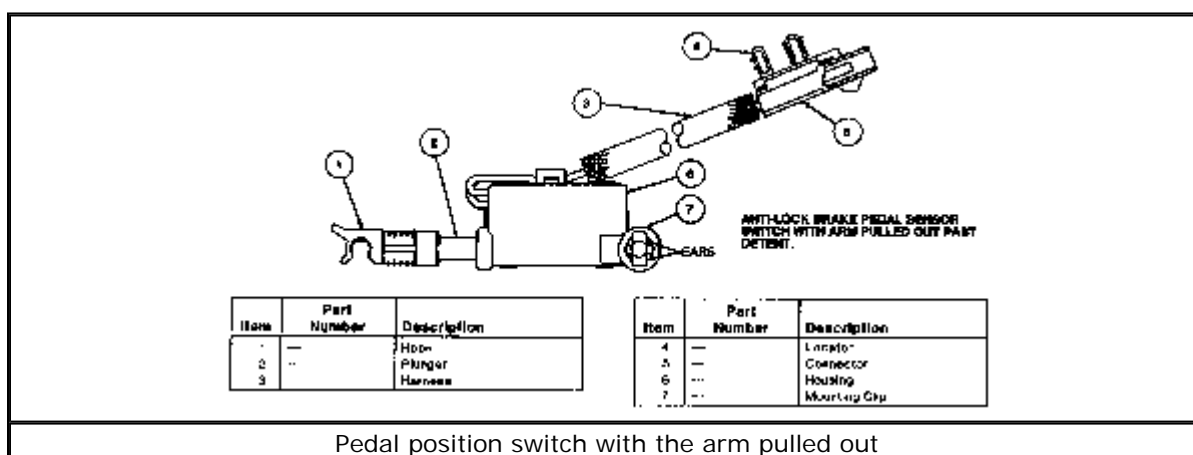
Make sure the wiring from the harness is restricted from coming in

contact with the steering universal joint.

7. Feed the switch harness through the forward hole in the top of the pedal support bracket. Route the harness around the left-hand side of the support, then install the locator pins to the holes in the brake pedal support with the open side of the connector facing the center of the vehicle.
8. Attach the switch connector to the wiring harness.
9. Insert a switch mounting clip to the hole in the pedal support bracket, then press firmly toward the brake pedal support sidewall until a click is heard.
10. Route and attach the switch, then make sure the mounting clip tabs are fully engaged.

Any time the switch is unhooked from the pin, the following resetting procedure should be used to make sure the switch is adjusted properly.

11. Adjust the switch as follows:
 1. Push the switch plunger fully into the switch housing as shown in the accompanying figure. This zeroes out the switch adjustment so that it can be automatically reset to the correct dimension during the following steps.
 2. Slowly pull the arm back out of the switch housing past the detent point. At this point, it should be impossible to reattach the arm to the pin unless the brake pedal is forced down.
 3. To complete the adjustment, press the brake pedal until the switch hook can be snapped onto the pin. Snap the hook onto the pin and pull the brake pedal back up to its normal at-rest position. This automatically sets the switch to the proper adjustment.



[Click to enlarge](#)

12. Connect the negative battery cable.

Electronic Control Unit (ECU)/Anti-Lock Brake (ABS) Control Module

REMOVAL & INSTALLATION

The ECU or ABS module is located on the front right side of the engine compartment next to the windshield washer bottle, except on Taurus SHO. On Taurus SHO it is mounted on the top of the front left brake anti-lock sensor.

1. **Disconnect the negative battery cable.**
2. **Disengage the 55-pin connector from the ECU/ABS module. Unlock the connector by completely pulling up the lever. Move the top of the connector away from the ECU/ABS module until all terminals are clear, then pull the connector up out of the slots in the ECU/ABS module.**
3. **Remove the screws attaching the ECU/ABS module, then remove the ECU/ABS module from the vehicle.**
4. **Install in the reverse order of removal. Fasten the 55-pin connector by installing the bottom part of the connector into the slots in the ECU/ABS module and pushing the top portion of the connector into the module. To ensure proper installation, pull the locking lever completely down. Tighten the retaining screws to 15-20 inch lbs. (1.7-2.3 Nm).**

Filling and Bleeding

PROCEDURE

When any part of the hydraulic system has been disconnected for service, air may enter the system and cause spongy pedal action. Bleed the system after it has been opened to be sure that all air is expelled.

The anti-lock brake system must be bled in 2 steps; both the master cylinder and hydraulic control unit reservoir must be bled using Rotunda Anti-Lock Brake Breakout Box/Bleeding Adapter tool No. T90P-50-ALA or equivalent. If this procedure is not followed, air will be trapped in the hydraulic control unit, and will eventually lead to a spongy brake pedal.

1. **Disconnect the 55-pin plug from the electronic control unit/ABS control module, then install Anti-Lock Brake Breakout Box/Bleeding Adapter tool No. T90P-50-ALA or equivalent to the wire harness 55-pin plug.**
 1. **Place the Bleed/Harness switch in the BLEED position.**
 2. **Turn the ignition to the ON position. At this point the red OFF light should come ON.**
 3. **Push the motor button on the adapter down to start the pump motor. The red OFF light will turn OFF, and the green ON light will turn ON. The pump motor will run for 60 seconds after the motor button is pushed. If the pump motor is to be turned off for any reason before the 60 seconds have elapsed, push the abort button to turn the pump motor off.**
 4. **After 20 seconds of pump motor operation, push and hold the valve button down. Hold the valve button down for 20 seconds, then release it.**
 5. **The pump motor will continue to run for an additional 20 seconds after the valve button is released.**
2. **The brake lines can now be bled in the normal fashion. Bleed the brake system by removing the rubber dust cap from the caliper fitting at the right rear of the**

vehicle. Place a suitable box wrench on the bleeder fitting and attach a rubber drain tube to the fitting. The end of the tube should fit snugly around the bleeder fitting. Submerge the other end of the tube in a container partially filled with clean brake fluid and loosen the fitting $\frac{3}{4}$ turn.

3. Have an assistant push the brake pedal down slowly through its full travel. Close the bleeder fitting and allow the pedal to slowly return to its full release position. Wait 5 seconds and repeat the procedure until no bubbles appear at the submerged end of the bleeder tube. Secure the bleeder fitting and remove the bleeder tube. Install the rubber dust cap on the bleeder fitting.
4. Repeat the bleeding procedure at the left front, left rear and right front (in that order). Refill the master cylinder reservoir after each caliper has been bled, and install the master cylinder cap and gasket. When brake bleeding is completed, the fluid level should be filled to the maximum level indicated on the reservoir.
5. Always make sure the disc brake pistons are returned to their normal positions by depressing the brake pedal several times until normal pedal travel is established. If the pedal feels spongy, repeat the bleeding procedure.

Power Brake Booster

REMOVAL & INSTALLATION

1. Disconnect the negative battery cable. Pump the brake pedal until all vacuum is removed from the booster. This will prevent the O-ring from being sucked into the booster during disassembly.
2. Disconnect the manifold vacuum hose from the booster check valve, and the electrical connector from the master cylinder reservoir cap.
3. Remove the brake lines from the primary and secondary outlet ports of the master cylinder, then remove the Hydraulic Control Unit (HCU) supply hose. Plug the ports and reservoir feed to prevent brake fluid from leaking onto paint and wiring.
4. Under the instrument panel, remove the stop light switch wiring connector from the switch. Disengage the pedal travel switch from the stud. Remove the hairpin retainer and outer nylon washer from the pedal pin. Slide the stop light switch off the brake pedal just far enough for the outer arm to clear the pin. Remove the switch.
5. Remove the booster-to-dash panel attaching nuts. Slide the bushing and booster pushrod off the brake pedal pin.
6. Move the booster forward until the booster studs clear the dash panel. Remove the booster and master cylinder assembly.
7. Place the booster and master cylinder assembly on a bench. Unfasten the 2 nuts attaching the master cylinder to the booster, then remove the master cylinder.

To install:

8. Slide the master cylinder onto the booster studs. Make sure the O-ring is in place in the groove on the master cylinder and install the 2 attaching nuts. Tighten the nuts to 13-25 ft. lbs. (18-34 Nm).
9. Under the instrument panel, install the booster pushrod and bushing on the brake pedal pin. Fasten the booster to the dash panel with self-locking nuts. Tighten the nuts to 13-25 ft. lbs. (18-34 Nm).
10. Position the stop light switch so it straddles the booster pushrod with the switch slot towards the pedal blade, and with the hole just clearing the pin. Slide the switch completely onto the pin.

11. **Install the outer nylon washer on the pin, then secure all parts to the pin with the hairpin retainer. Make sure the retainer is fully installed and locked over the pedal pin. Attach the stoplight switch wiring connector.**
 12. **Install and adjust the pedal travel switch, as detailed earlier in this section.**
 13. **Connect the brake lines to the master cylinder, then tighten to 10-18 ft. lbs. (14-24 Nm). Attach the HCU supply hose to the reservoir.**
 14. **Connect the manifold vacuum hose to the booster check valve, then engage the electrical connector to the master cylinder reservoir cap.**
 15. **Connect the negative battery cable, then bleed the brake system.**
-

Chilton® Automotive Information Systems. © 2004 Thomson Delmar Learning.

SPECIFICATION CHARTS

BRAKE SPECIFICATIONS											
All measurements in inches unless noted											
Year	Model	Master Cylinder Bore	Brake Disc			Brake Drum Diameter			Minimum Lining Thickness		
			Original Thickness	Minimum Thickness	Maximum Runout	Original Inside Diameter	Max. Wear Limit	Maximum Diameter	Front	Rear	
1986	Taurus 1	C.875	NA	0.896	0.002	8.58	8.93	9.92	0.125	0.300	
	Taurus 2	C.875	NA	0.896	0.002	8.81	9.09	9.90	0.125	0.300	
	Sable	C.875	NA	0.896	0.002	8.88	8.83	9.92	0.125	0.300	
	Sable 2	C.875	NA	0.896	0.002	9.54	9.99	9.92	0.125	0.300	
1987	Taurus 1	C.875	NA	0.896	0.002	8.96	8.89	9.92	0.125	0.300	
	Taurus 2	C.875	NA	0.896	0.002	8.94	8.88	9.90	0.125	0.300	
	Sable	C.875	NA	0.896	0.002	8.96	8.88	9.92	0.125	0.300	
	Sable 2	C.875	NA	0.896	0.002	9.61	9.59	9.90	0.125	0.300	
1988	Taurus 1	C.875	NA	0.896	0.002	8.88	8.90	9.92	0.125	0.300	
	Taurus 2	C.875	NA	0.896	0.002	8.84	8.96	9.90	0.125	0.300	
	Sable 1	C.875	NA	0.896	0.002	8.83	8.90	9.92	0.125	0.300	
	Sable 2	C.875	NA	0.896	0.002	8.84	8.88	9.90	0.125	0.300	
1989	Taurus 1	C.875	NA	0.896	0.002	8.85	8.92	9.92	0.125	0.300	
	Taurus 2	C.875	NA	0.896	0.002	8.84	8.96	9.90	0.125	0.300	
	Taurus SHD	F. 0.875	NA	0.972	0.002	-	-	-	0.125	0.300	
	Taurus SHD	R	-	-	0.900	0.002	-	-	-	0.125	
	Sable 1	C.875	NA	0.896	0.002	8.86	8.93	9.92	0.125	0.300	
	Sable 2	C.875	NA	0.896	0.002	8.84	8.89	9.90	0.125	0.300	
1990	Taurus 1	C.875	NA	0.872	0.002	8.86	8.83	9.92	0.125	0.300	
	Taurus 2	C.875	NA	0.872	0.002	8.84	8.89	9.90	0.125	0.300	
	Taurus SHC	F	C.875	NA	0.912	0.002	-	-	-	0.125	0.300
	Taurus SHC	R	-	-	0.900	0.002	-	-	-	0.125	
	Sable	F	1.000	1.004	0.867	0.003	-	NA	-	0.125	0.300
	Sable	R	-	0.900	0.800	0.002	-	-	-	0.125	
1991	Taurus 1	C.875	NA	0.872	0.002	8.86	8.93	9.92	0.125	0.300	
	Taurus 2	C.875	NA	0.872	0.002	8.84	8.89	9.90	0.125	0.300	
	Taurus SHC	F	C.875	NA	0.912	0.002	-	-	-	0.125	0.300
	Taurus SHC	R	-	-	0.900	0.002	-	-	-	0.125	
	Sable	F	1.000	1.004	0.874	0.003	-	NA	-	0.125	0.300
	Sable	R	-	0.900	0.800	0.002	-	-	-	0.125	
1992	Taurus 1	C.875	NA	0.872	0.002	8.86	8.93	9.92	0.125	0.300	
	Taurus 2	C.875	NA	0.872	0.002	8.84	8.89	9.90	0.125	0.300	
	Taurus SHC	F	C.875	NA	0.912	0.002	-	-	-	0.125	0.300
	Taurus SHC	R	-	-	0.900	0.002	-	-	-	0.125	
	Sable	F	1.000	1.004	0.874	0.003	-	NA	-	0.125	0.300
	Sable	R	-	0.900	0.800	0.002	-	-	-	0.125	
1993	Taurus 1	C.875	NA	0.872	0.002	8.88	8.93	9.92	0.125	0.300	
	Taurus 2	C.875	NA	0.872	0.002	8.84	8.89	9.90	0.125	0.300	
	Taurus SHC	F	C.875	NA	0.912	0.002	-	-	-	0.125	0.300
	Taurus SHC	R	-	-	0.900	0.002	-	-	-	0.125	
	Sable	F	1.000	1.004	0.874	0.003	-	NA	-	0.125	0.300
	Sable	R	-	0.900	0.800	0.002	-	-	-	0.125	
1994	Taurus	1.000	1.004	0.874	0.003	-	NA	-	0.125	0.300	
	Taurus SHC	1.000	1.004	0.874	0.003	-	NA	-	0.125	0.300	
	Sable	1.000	1.004	0.874	0.003	-	NA	-	0.125	0.300	
	Sable	1.000	1.004	0.874	0.003	-	NA	-	0.125	0.300	

Brake Specifications

[Click to enlarge](#)

BRAKE SPECIFICATIONS

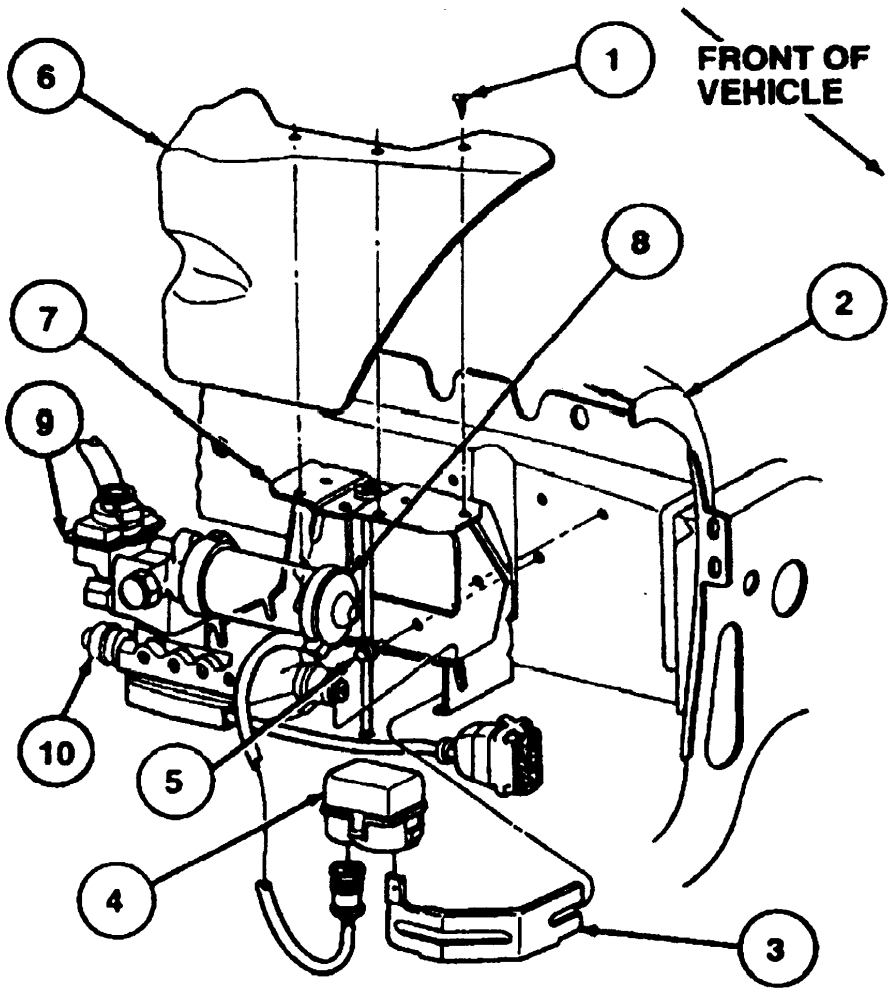
All measurements in inches unless noted

Year	Model	Master Cylinder Bore	Brake Disc			Brake Drum Diameter			Minimum Lining Thickness	
			Original Thickness	Minimum Thickness	Maximum Runout	Original Inside Diameter	Max. Wear Limit	Maximum Diameter	Front	Rear
1984	Sabre	R	0.840	0.500	0.002	-	-	-	-	0.125
1985	Tri-5	R	0.900	0.500	0.002	8	NA	9	0.040	0.125
	Tri-5 S-10	R	0.900	0.500	0.002	-	-	-	0.040	0.125
	Sabre	R	0.840	0.500	0.002	-	-	-	-	0.125
	Sabre	R	-	-	-	4	NA	4	-	0.030

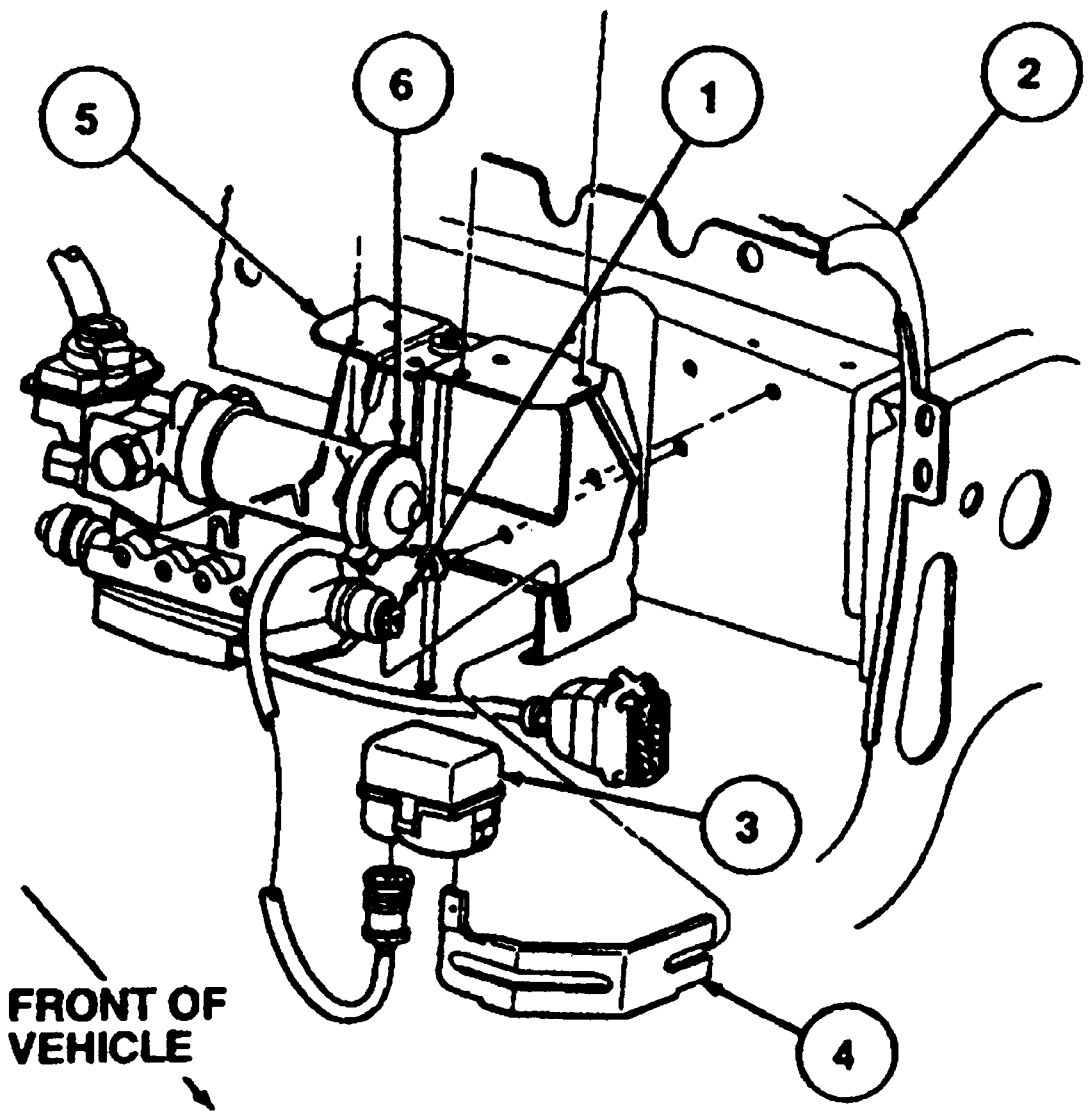
NA - Not Available
 F - Front
 R - Rear
 1 - Wear
 2 - Runout
 3 - Disc runout
 4 - Wheel rim
 5 - Face - 500
 6 - Face - 500
 7 - Face - 500
 8 - Face - 500
 9 - Wheel rim
 10 - Wheel rim
 11 - Wheel rim
 12 - Wheel rim

Brake Specifications

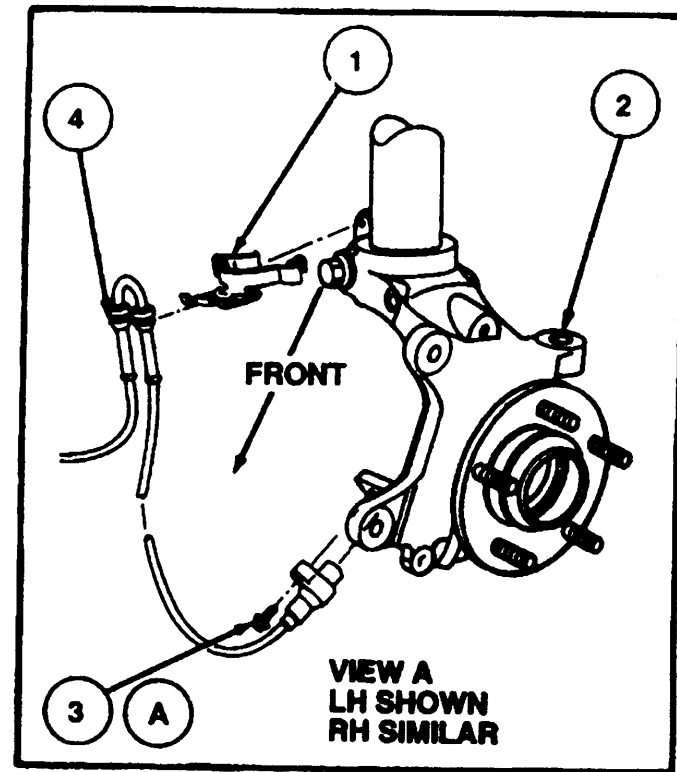
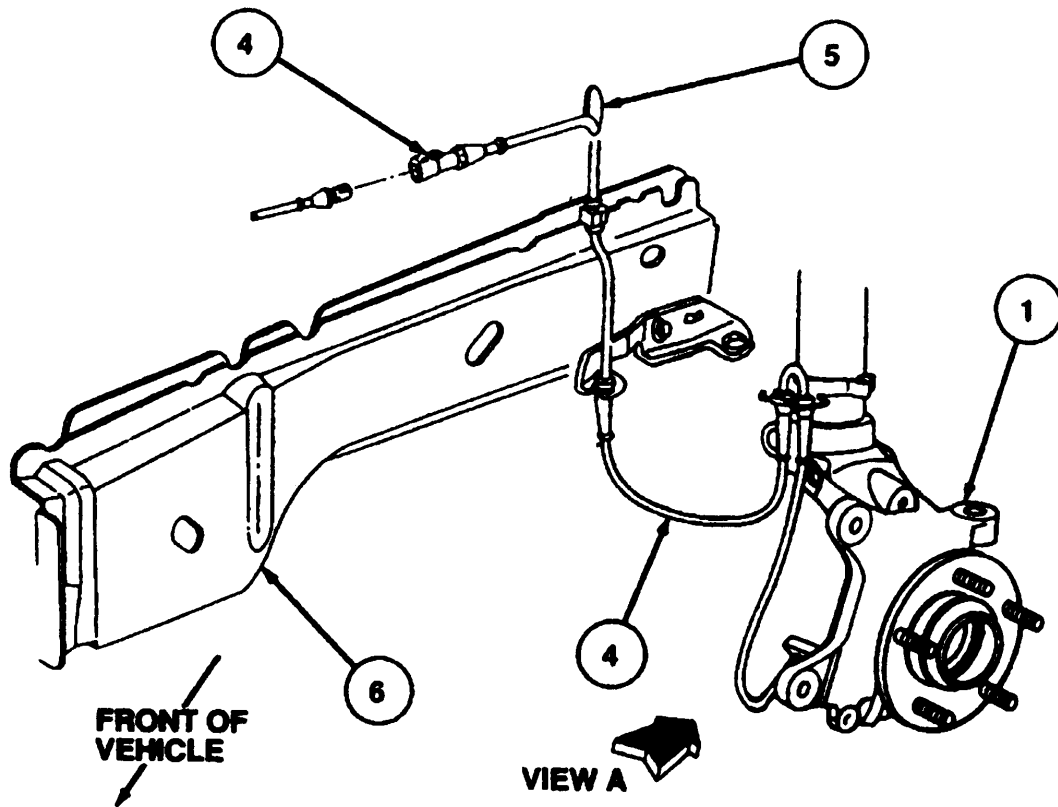
[Click to enlarge](#)



Item	Part Number	Description
1	N805636S	Push Pin (3 Req'd)
2	16138	Radiator Support
3	2C303	Anti-Lock Brake Pump Bracket
4	—	Pump Relay (Part of 2C303)
5	N606688S56	Bolt (3 Req'd)
6	2C314	Acid Shield
7	2C304	Anti-Lock Brake Hydraulic Control Bracket
8	2C256	Pump Motor
9	2C246	Hydraulic Control Unit Reservoir
10	2C266	Brake Pressure Control Valve Block



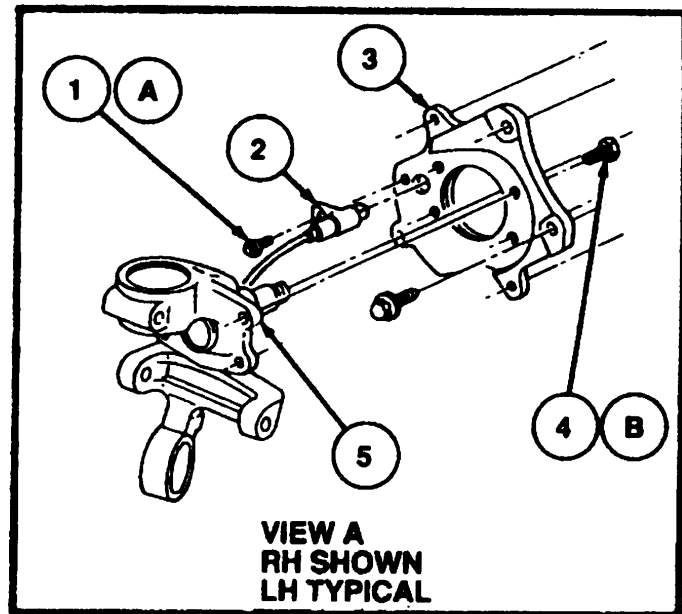
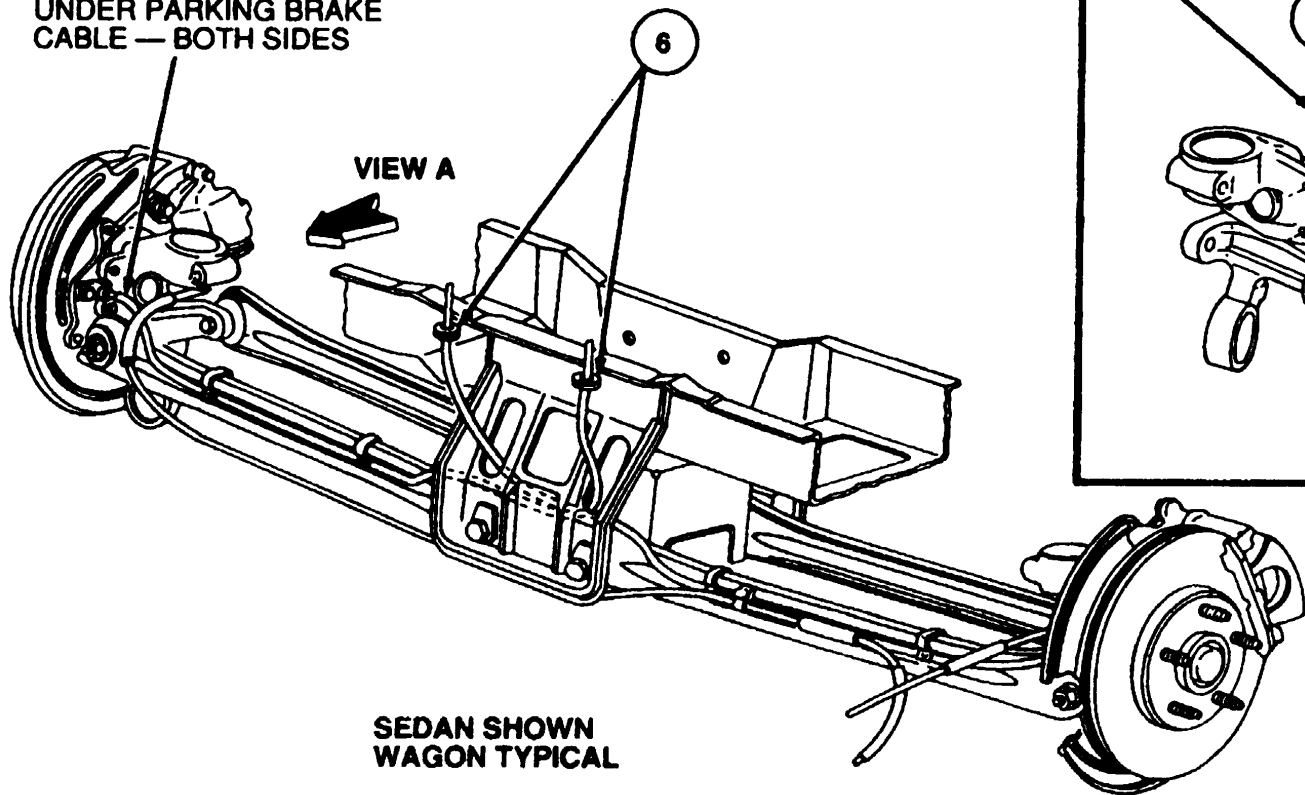
Item	Part Number	Description
1	N606688-S56	Bolt (3 Req'd)
2	16138	Radiator Support
3	2C303	Anti-Lock Brake Pump Bracket
4	—	Relay Bracket (Part of 2C303)
5	2C304	Anti-Lock Brake Hydraulic Control Bracket
6	2C256	Pump Motor



Item	Part Number	Description
1	2C194	Retainer Clip
2	3105	Front Wheel Spindle Assy
3	N805151-S100	Bolt
4	2C204	Front Brake Anti-Lock Sensor

Item	Part Number	Description
5	—	Hole in Spring Tower
6	—	LH Side Member
A	—	Tighten to 4.5-6.8 N·m (40-60 Lb·In)

ROUTE ANTI-LOCK WIRE
UNDER PARKING BRAKE
CABLE — BOTH SIDES



SEDAN SHOWN
WAGON TYPICAL

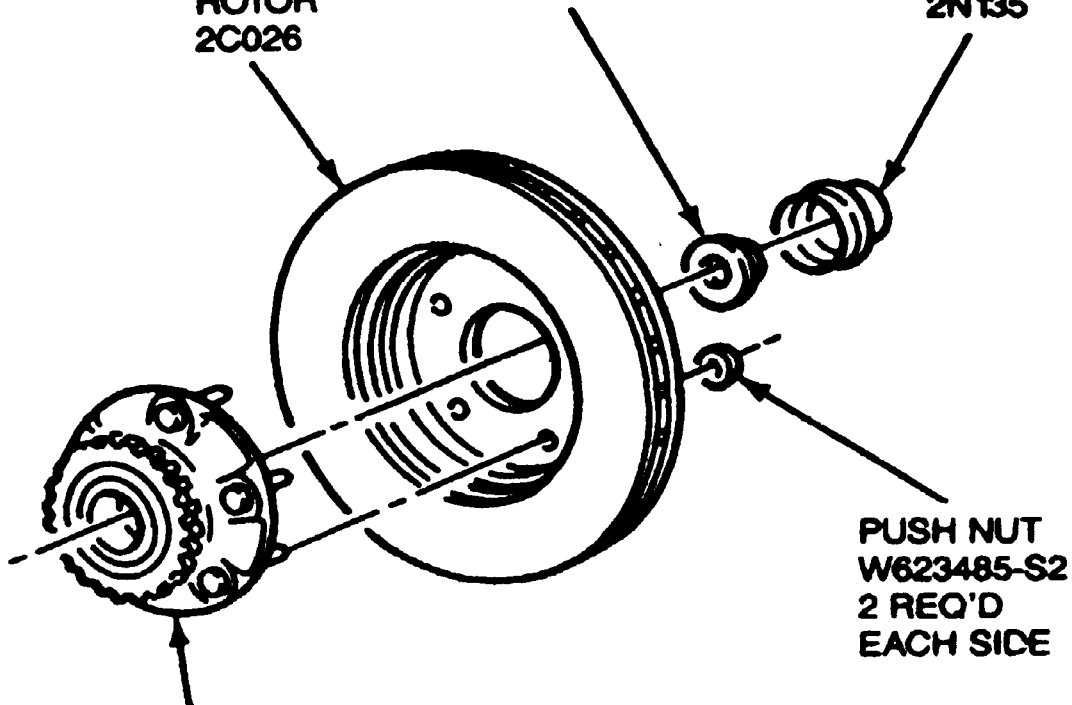
Item	Part Number	Description
1	N805151-S100	Bolt
2	2C190	RH Rear Brake Anti-Lock Sensor Assy
3	2C101	Left Hand Rear Disc Brake Adapter
	2C100	Right Hand Rear Disc Brake Adapter

Item	Part Number	Description
4	N805086-S100	Bolt (4 Req'd)
5	—	Rear Knuckle Assy
6	—	Floor Grommets
A	—	Tighten to 4.5-6.8 N-m (40-60 Lb-In)
B	—	Tighten to 60-80 N-m (45-60 Lb-Ft)

**NUT
4B423
2 REQ'D
TIGHTEN TO
257-352 N·m
(190-260 LB-FT)**

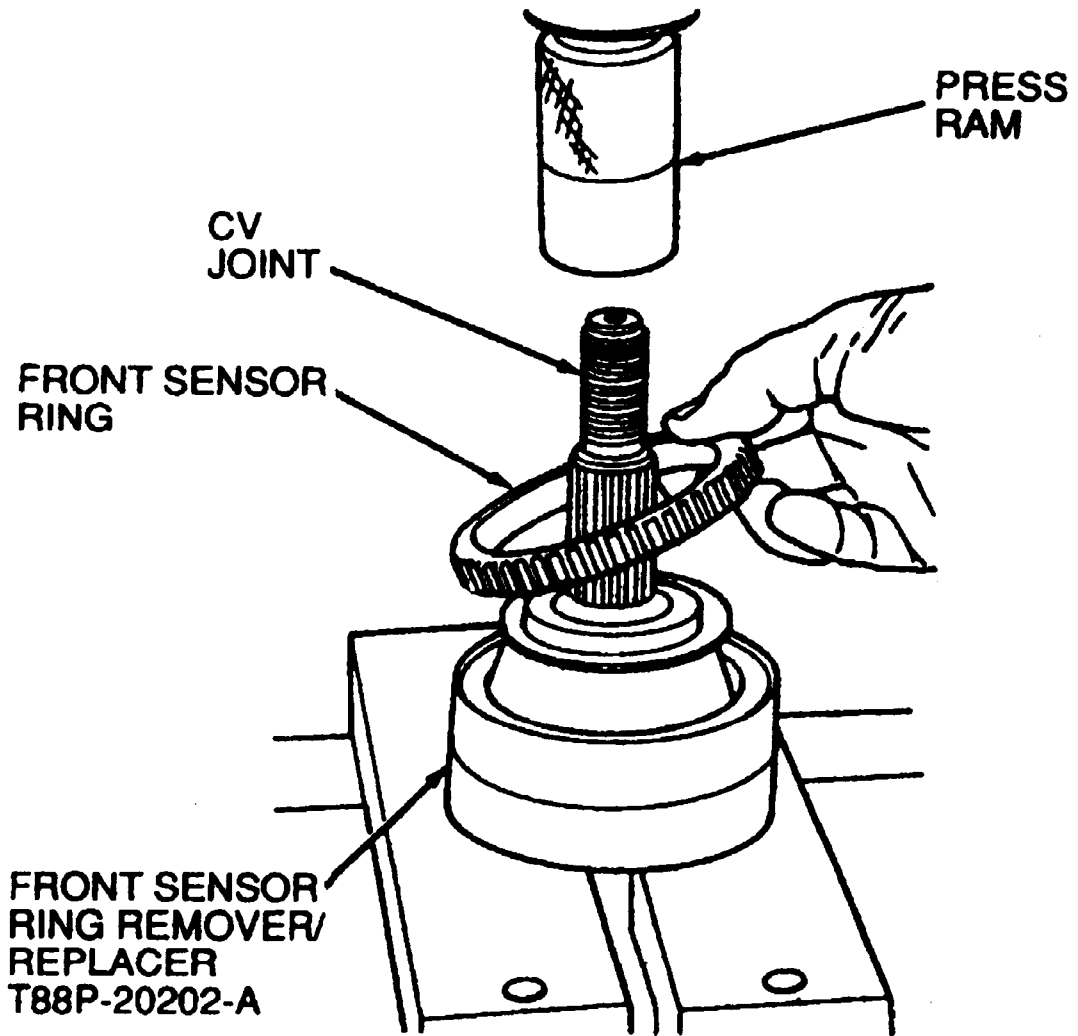
**ROTOR
2C026**

**DUST CAP
2N135**



**PUSH NUT
W623485-S2
2 REQ'D
EACH SIDE**

**HUB AND
BEARING ASSY
2B664**

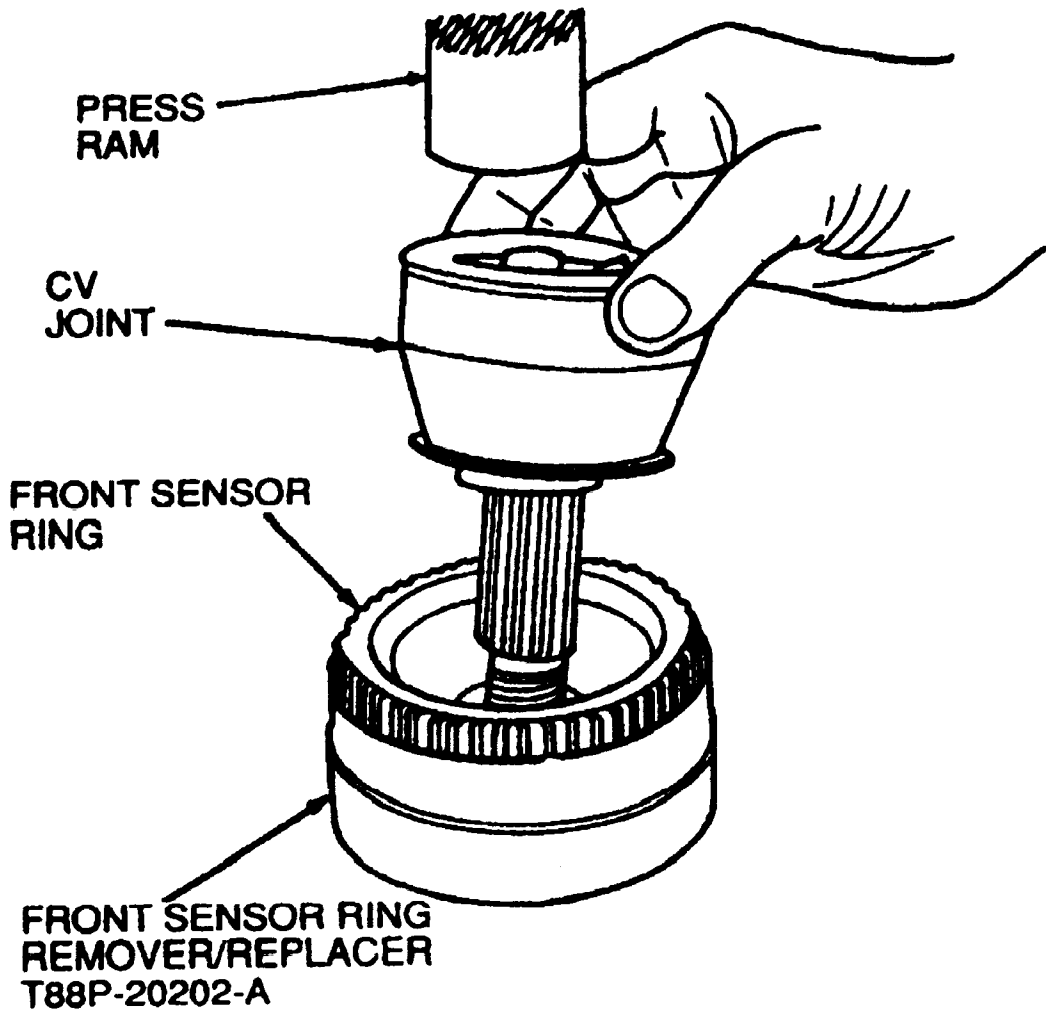


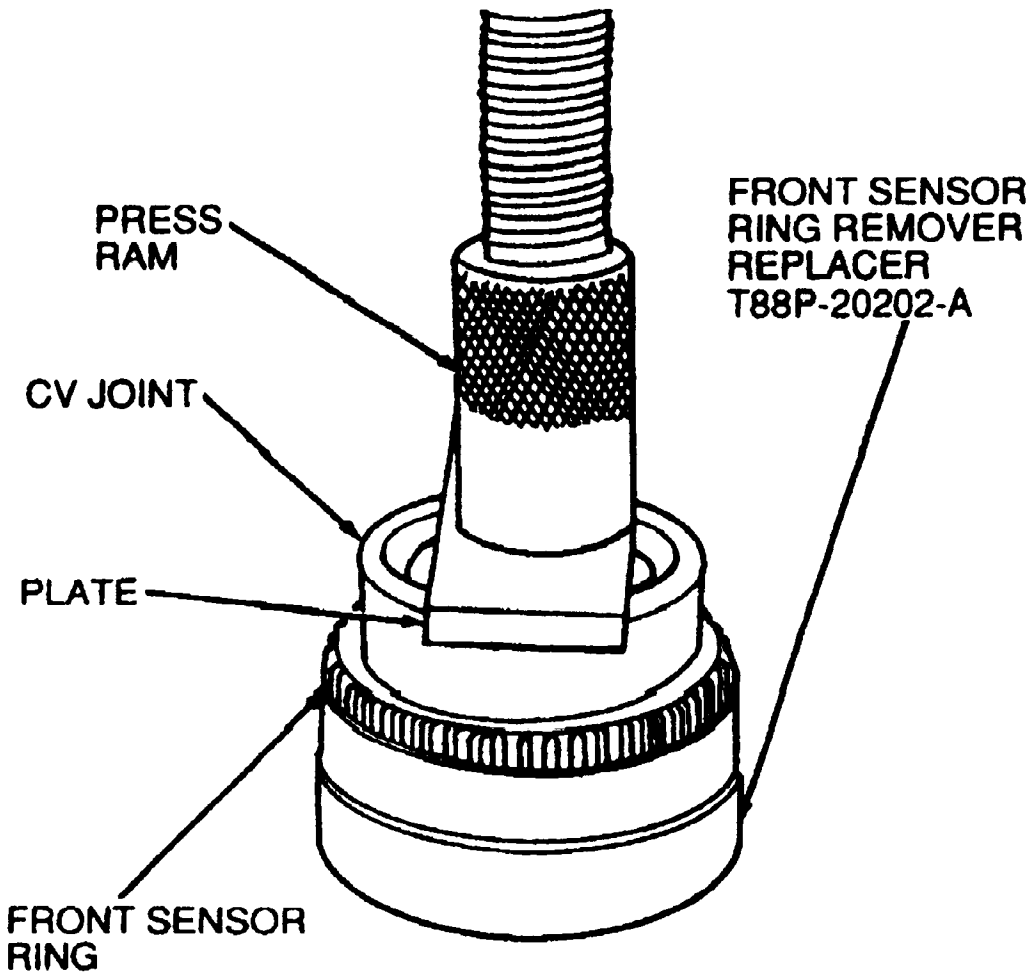
**PRESS
RAM**

**CV
JOINT**

**FRONT SENSOR
RING**

**FRONT SENSOR
RING REMOVER/
REPLACER
T88P-20202-A**





**SWITCH WIRING
HARNESS**

**SWITCH MOUNTING
CLIP EARS**

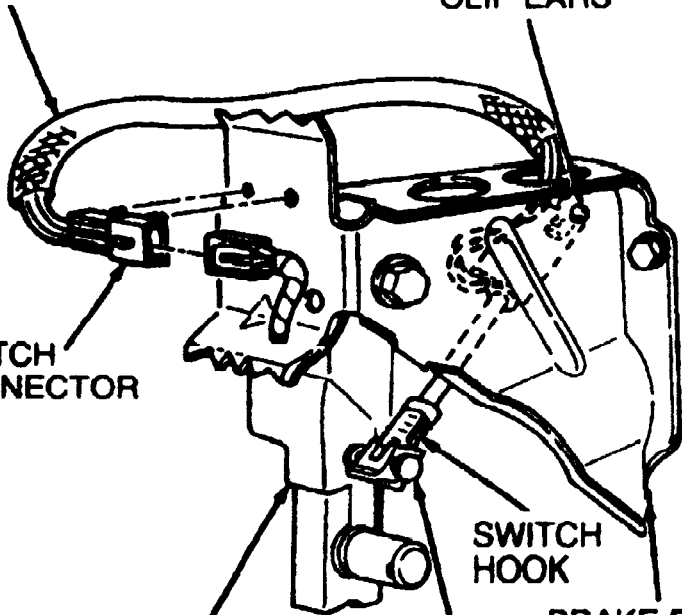
**SWITCH
CONNECTOR**

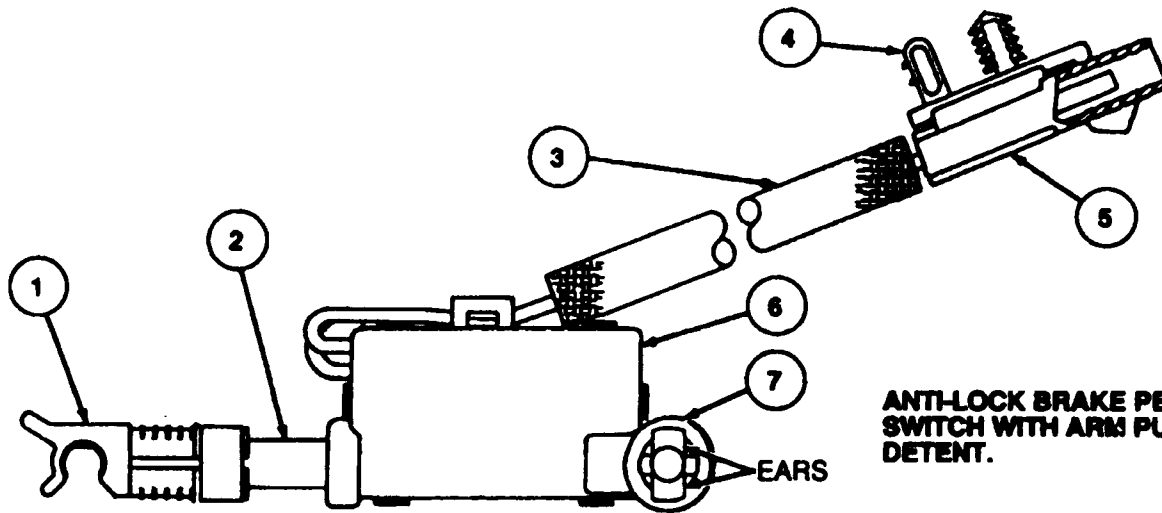
**SWITCH
HOOK**

**DUMP VALVE
ADAPTER BRACKET**

PIN

**BRAKE PEDAL
SUPPORT
01508**



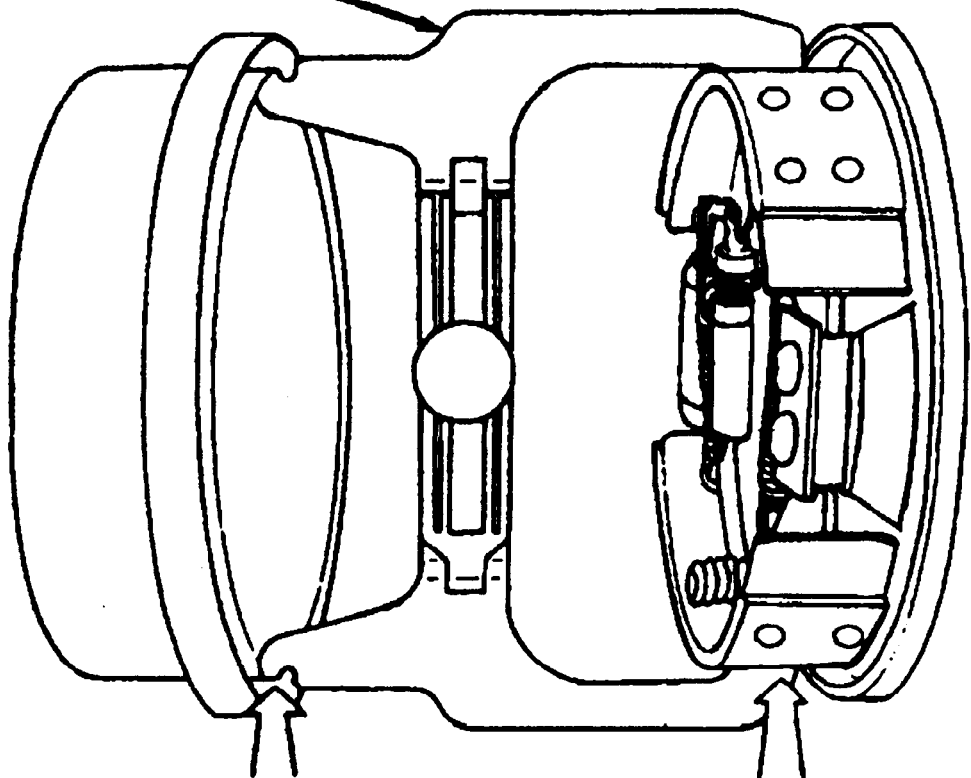


ANTI-LOCK BRAKE PEDAL SENSOR SWITCH WITH ARM PULLED OUT PAST DETENT.

Item	Part Number	Description
1	—	Hook
2	—	Plunger
3	—	Harness

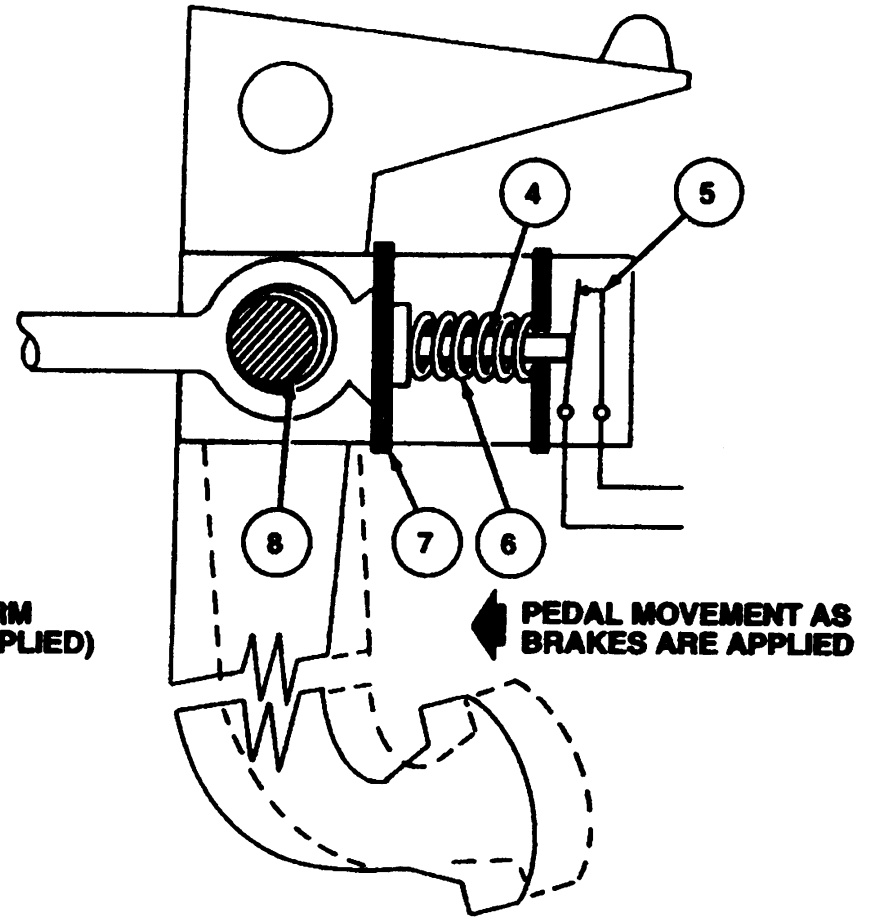
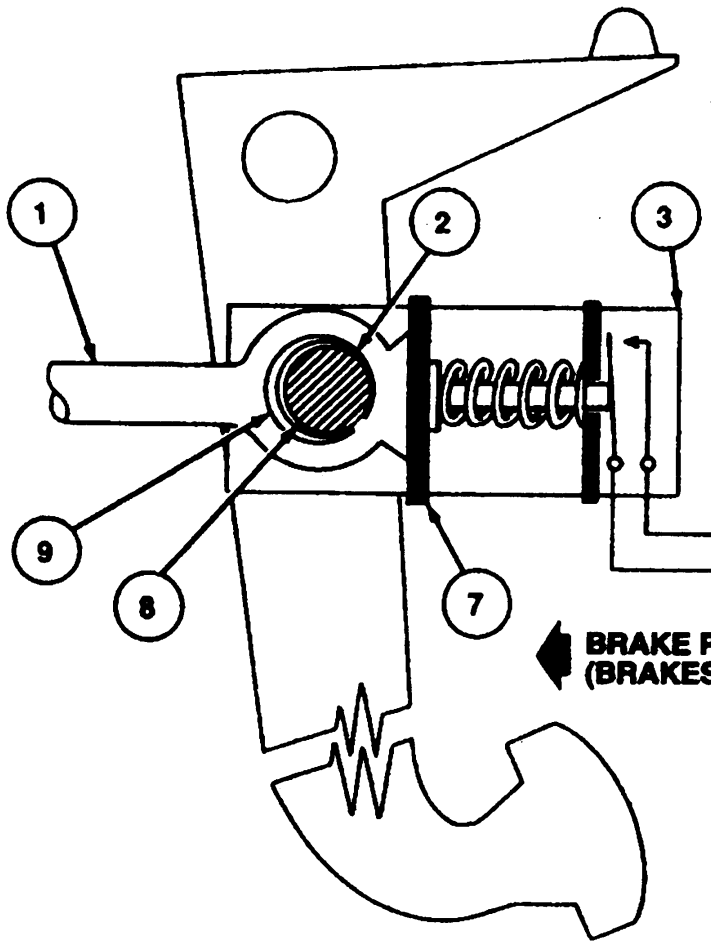
Item	Part Number	Description
4	—	Locator
5	—	Connector
6	—	Housing
7	—	Mounting Clip

**BRAKE ADJUSTMENT GAUGE
D81L-1103-A**



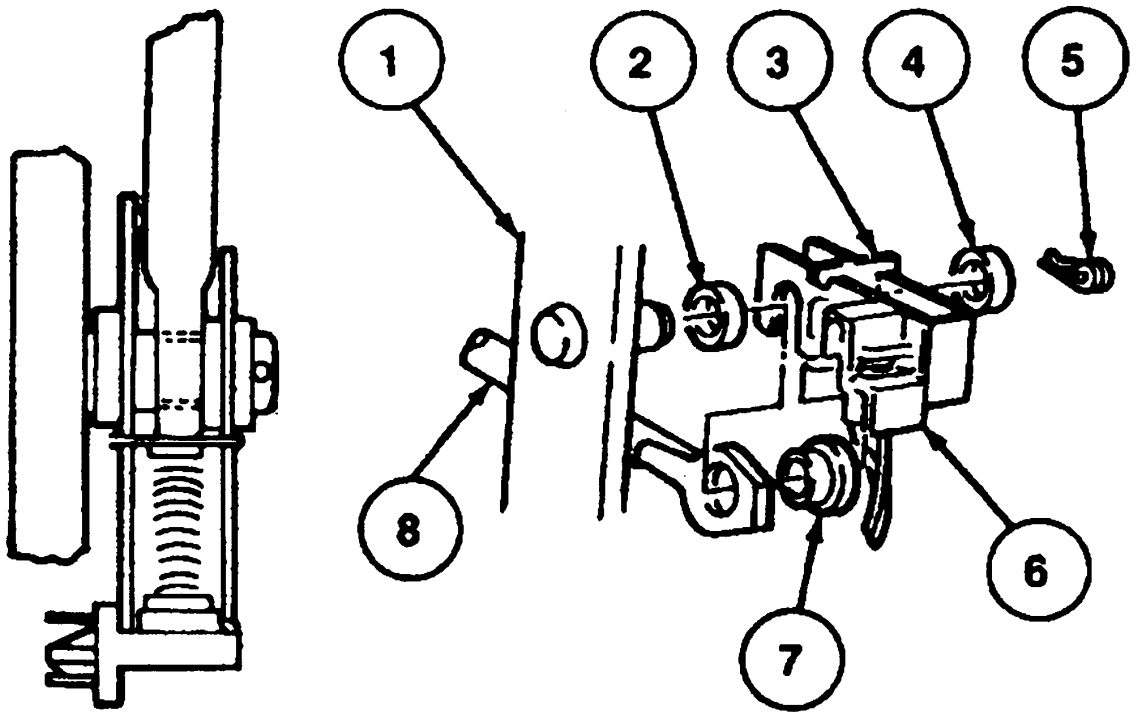
**SET TO DRUM DIAMETER HERE
225mm (8.8 INCH) AND 250mm
(9.8 INCH) REAR BRAKE**

**FIND CORRECT
SHOE DIAMETER
HERE**

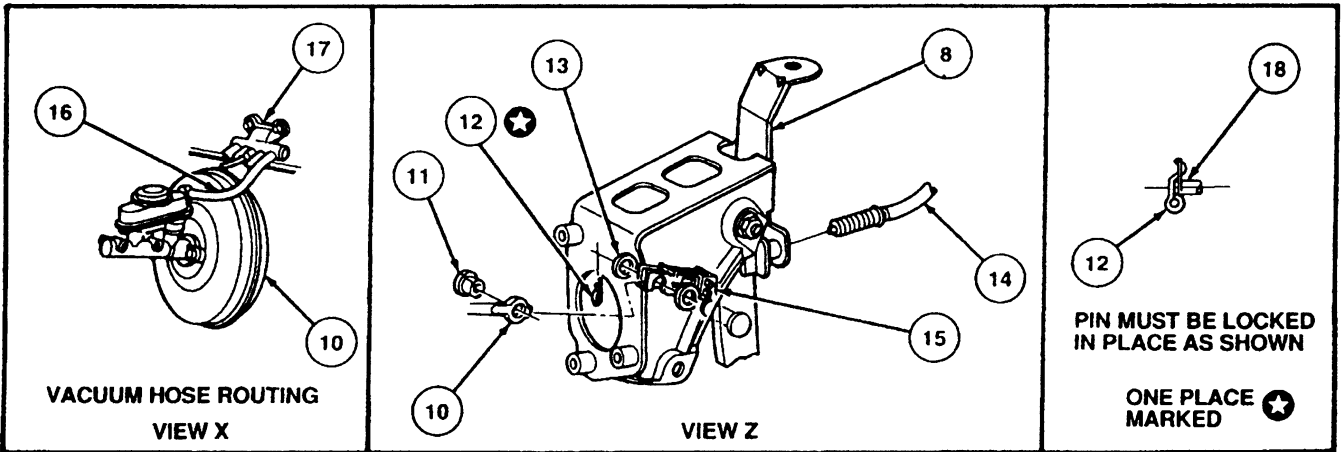
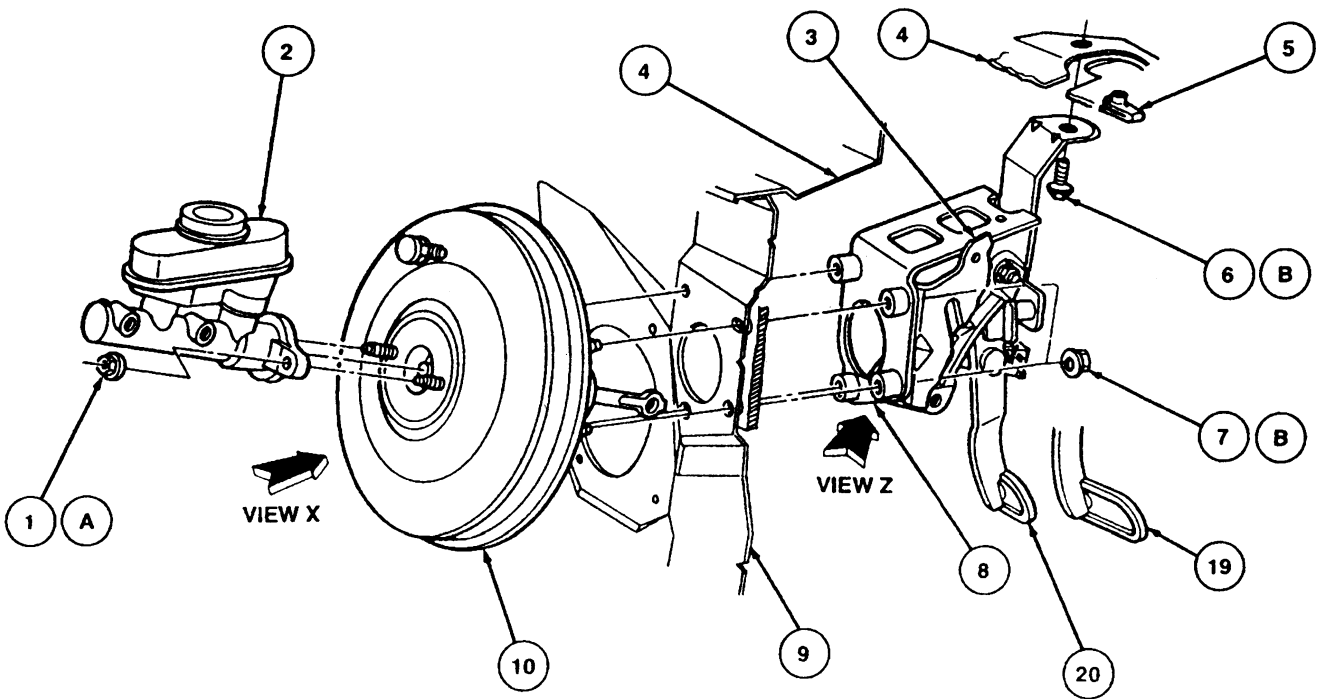


Item	Part Number	Description
1	—	Power Brake Booster Push Rod (Part of 2005)
2	380699-S100	Brake Pedal Arm Pin
3	13480	Stoplight Switch
4	—	Pin (Part of 13480)
5	—	Contacts (Part of 13480)

Item	Part Number	Description
6	—	Spring (Part of 13480)
7	—	Switch Pressure Plate (Part of 13480)
8	2474	Brake Master Cylinder Push Rod Bushing
9	2B129	Brake Master Cylinder Push Rod Spacer



Item	Part Number	Description
1	2455	Brake Pedal
2	—	Inside Nylon Washer (White) (Part of 13480)
3	13480	Stoplight Switch
4	—	Outer Nylon Washer (White) (Part of 13480)
5	—	Hairpin Retainer (Part of 13480)
6	—	Wire Harness Connector
7	—	Nylon Bushing (Black) (Part of 13480)
8	—	Master Cylinder Push Rod (Part of 2140)



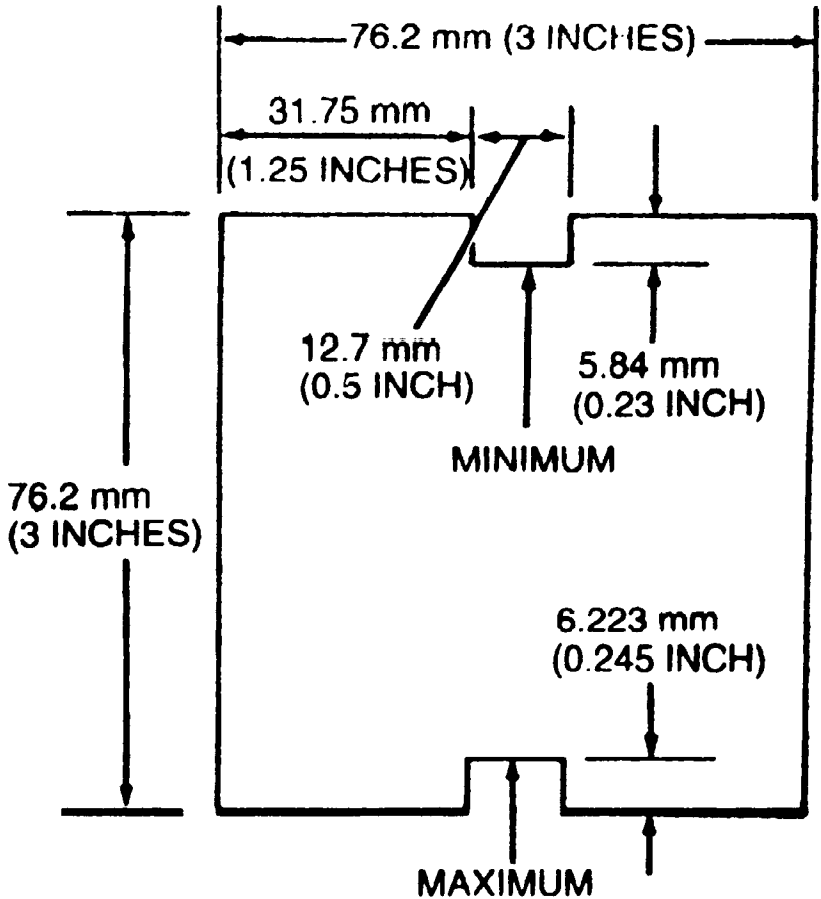
Item	Part Number	Description
1	382802-S191	Nut
2	2140	Brake Master Cylinder
3	7B633	Clutch Pedal and Bracket
4	—	Cowl
5	N800538-S100	U-Nut
6	N606689-S2	Bolt

Item	Part Number	Description
7	N620481-S2	Nut
8	01508	Pedal Support Bracket
9	01610	Dash Panel
10	—	Push Rod (Part of 2005)
11	2474	Brake Master Cylinder Push Rod Bushing

Item	Part Number	Description
12	380699-S100	Clip
13	2B129	Washer
14	—	Vacuum Tube
15	13480	Stoplight Switch
16	381298-SX42A	Vacuum Hose to Check Valve
17	9C490	Vacuum Outlet Manifold
18	—	Pin (Part of 2455)

Item	Part Number	Description
19	2455	Brake Pedal (Automatic Transaxle)
20	2455	Brake Pedal (Manual Transaxle)
A	—	Tighten to 21-29 N·m (16-21 Lb·Ft)
B	—	Tighten to 16-29 N·m (12-21 Lb·Ft)

GAUGE DIMENSIONS

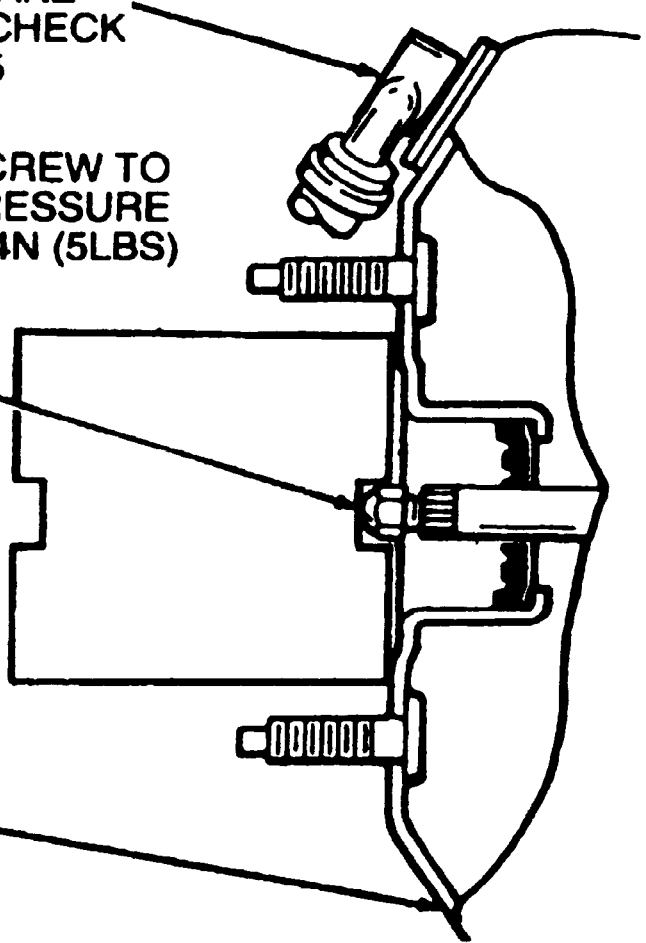


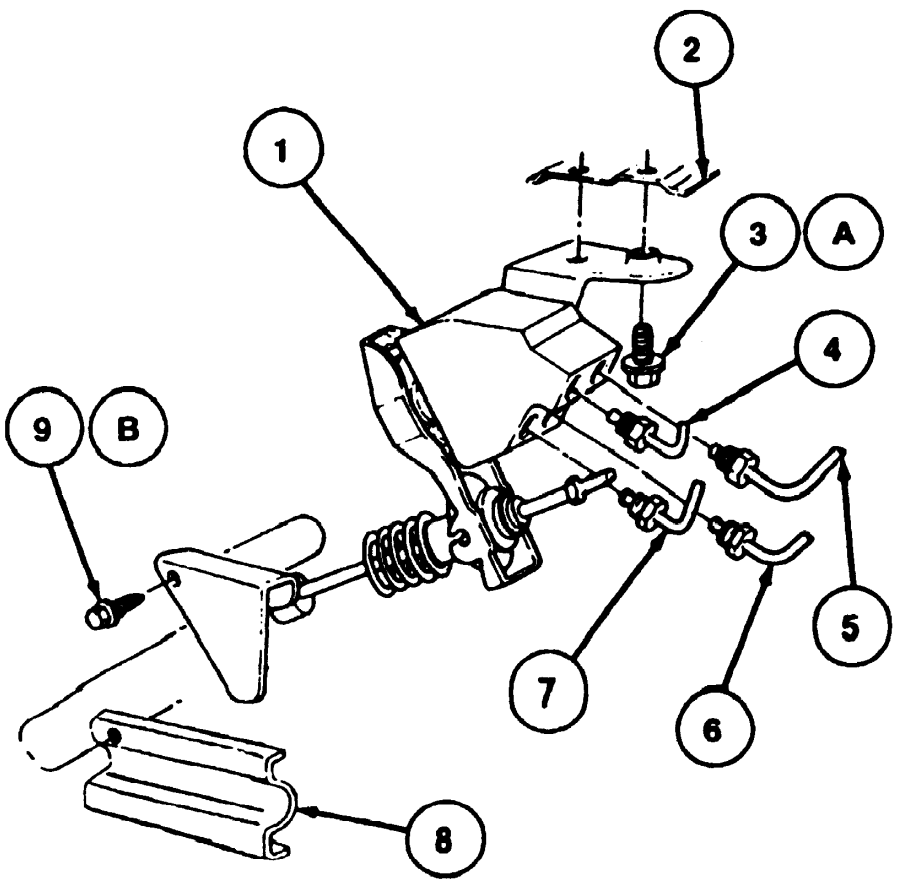
**POWER BRAKE
BOOSTER CHECK
VALVE 2365**

**ADJUST PUSH ROD SCREW TO
PROVIDE A SLIGHT PRESSURE
APPROXIMATELY 22.24N (5LBS)
AGAINST THE GAUGE**

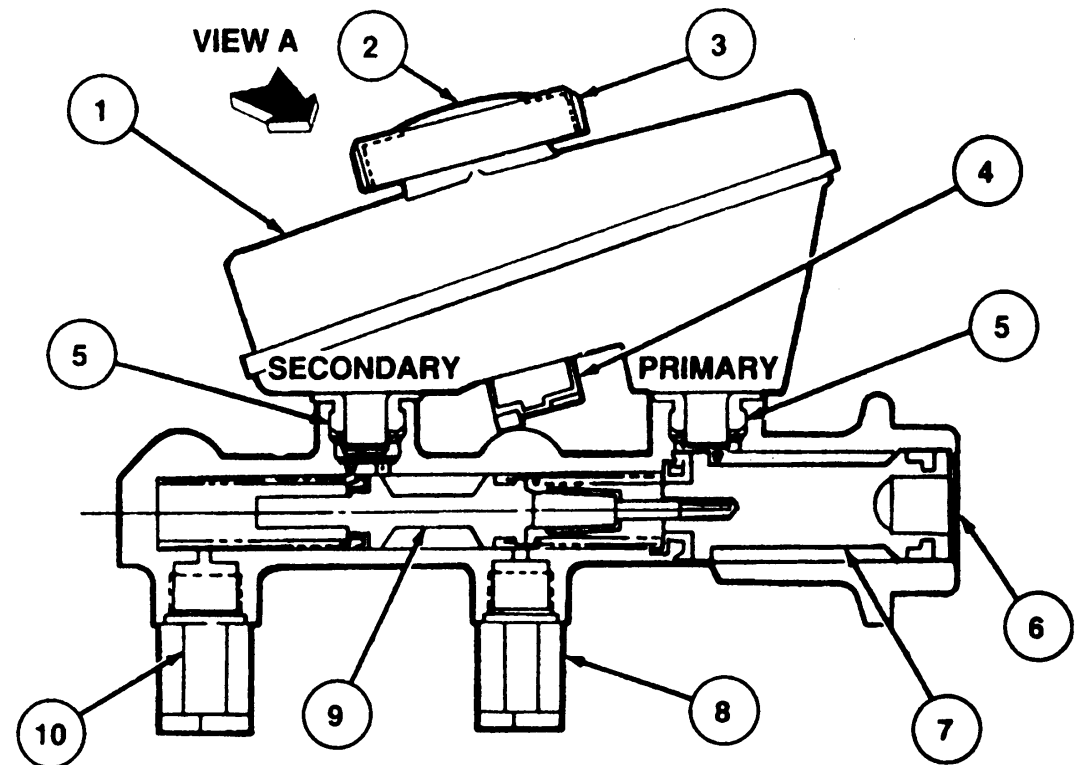
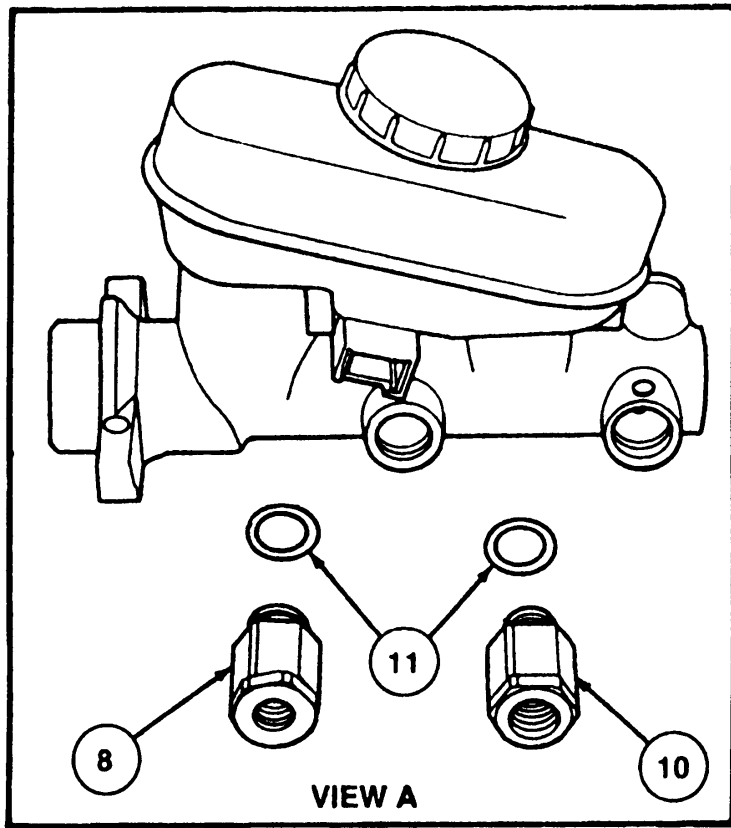
**POWER BRAKE
BOOSTER 2005**

PUSH ROD ADJUSTMENT





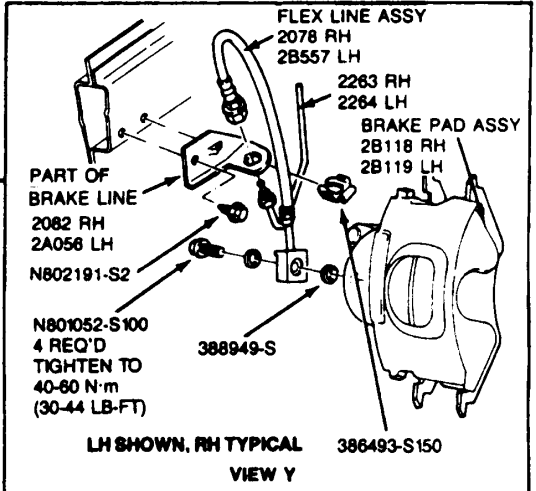
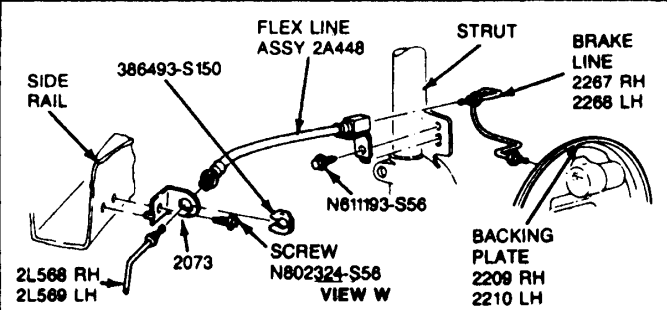
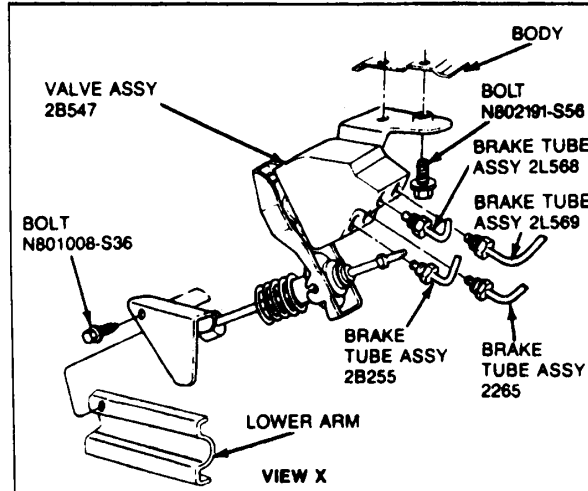
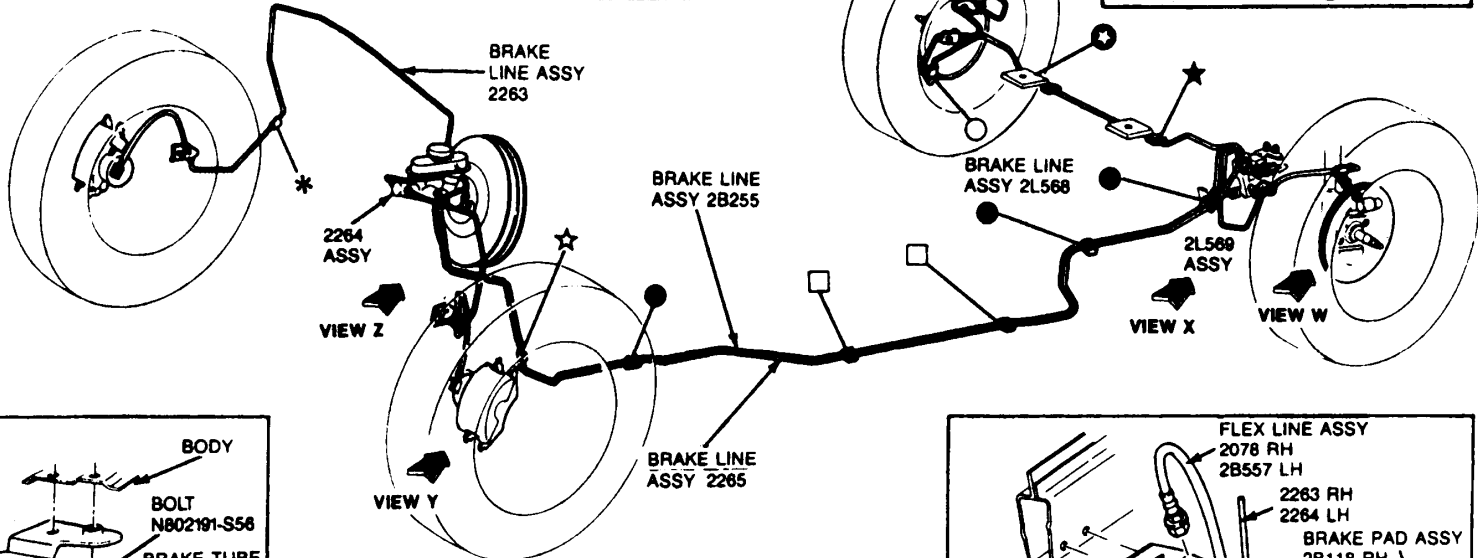
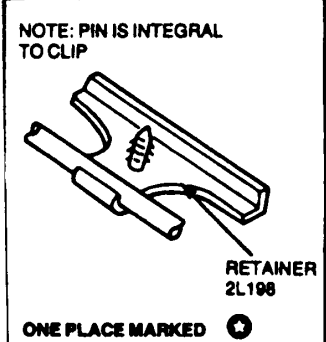
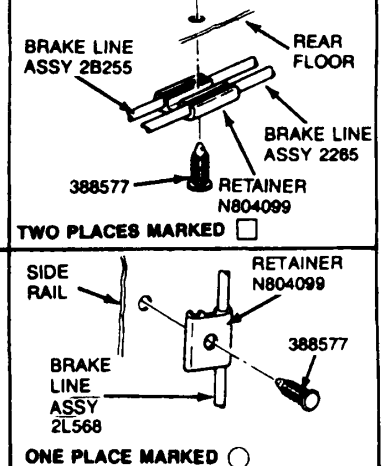
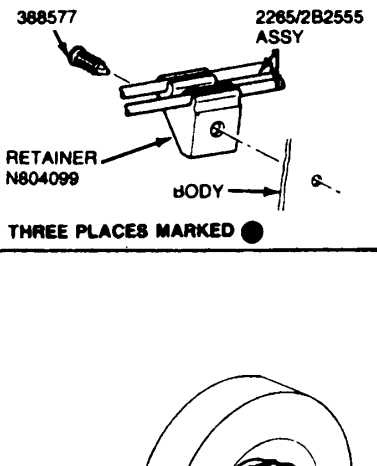
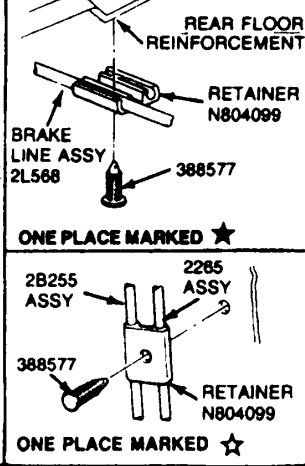
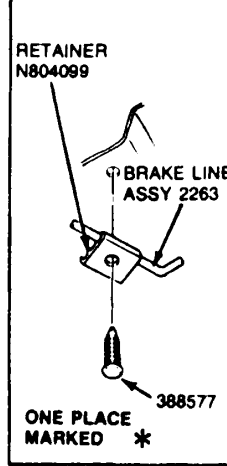
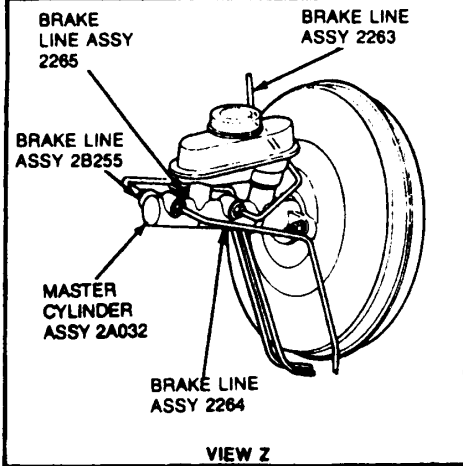
Item	Part Number	Description
1	2B547	Brake Load Sensor Proportioning Valve
2	—	Body
3	N802191-S56	Bolt
4	2L568	Brake Tube Assy
5	2L569	Brake Tube Assy
6	2265	Brake Tube Assy
7	2B255	Brake Tube Assy
8	5500	Rear Suspension Arm and Bushing
9	N804846-S56	Bolt
10	—	Lower Adjusting Screw
11	—	Red Plastic Gauge (Not Shown)
A	—	Tighten to 11.4-15.6 N·m (8-12 Lb·Ft)
B	—	Tighten to 6-8 N·m (4-6 Lb·Ft)

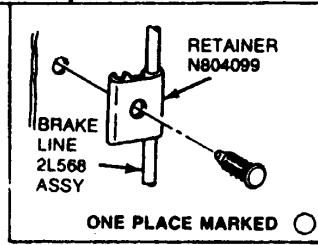
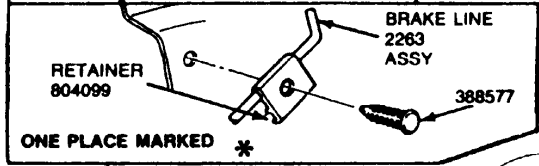
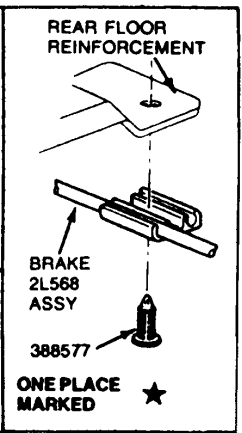
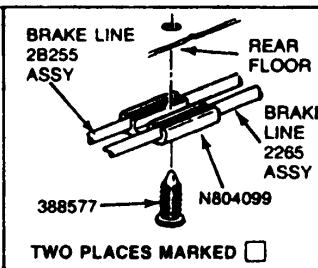
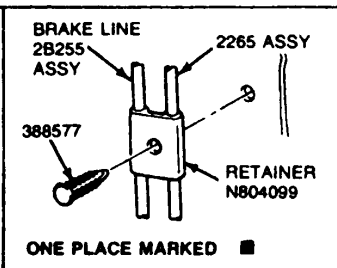
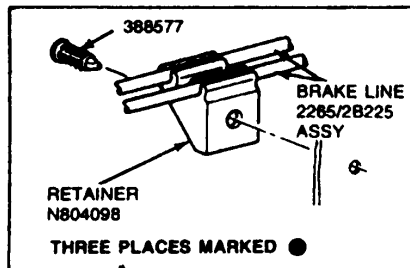
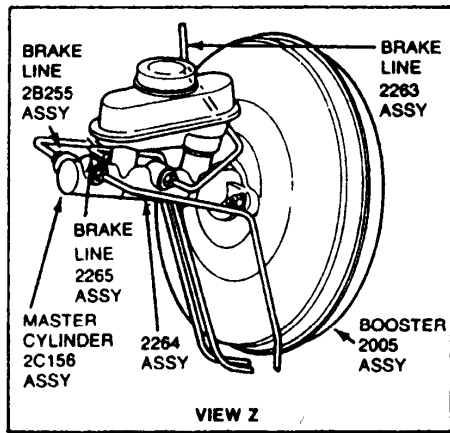


NOTE: ILLUSTRATION HAS BEEN ROTATED 90 DEGREES FOR CLARITY.

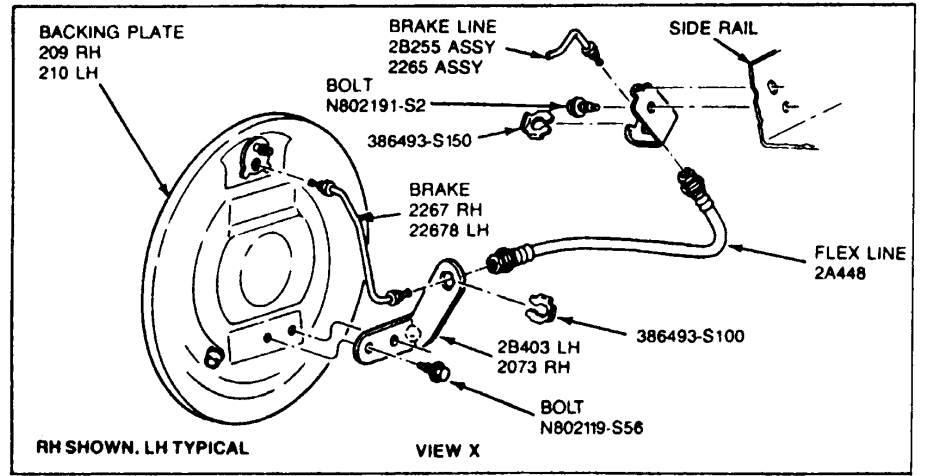
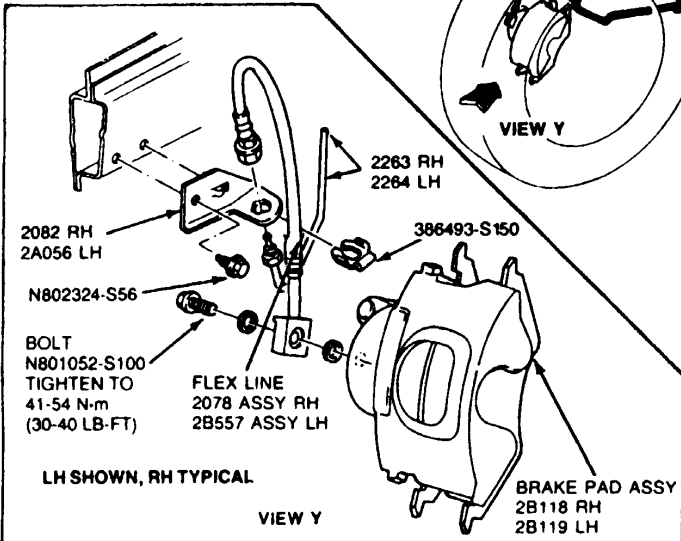
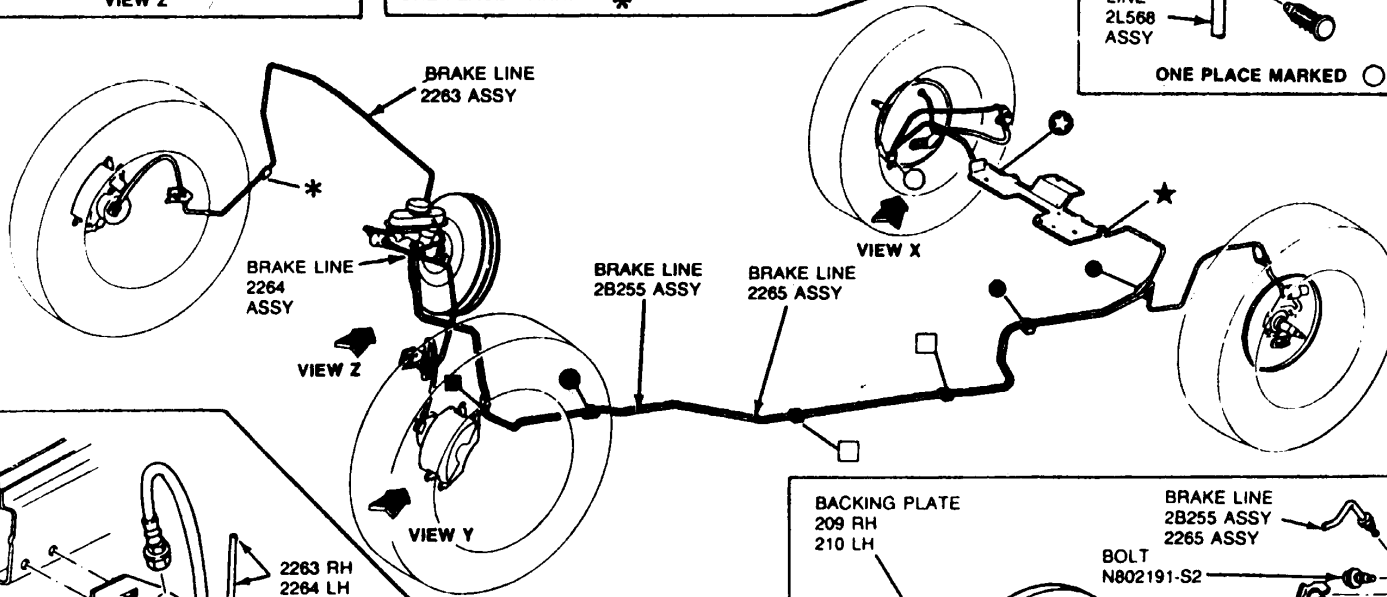
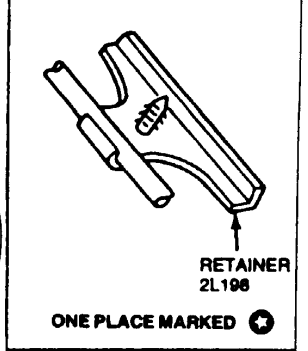
Item	Part Number	Description
1	2K478	Brake Master Cylinder Reservoir
2	—	Cap and Gasket Assy (Part of 2K478)
3	—	Cap Vent Slot (2 places)
4	—	Reed Switch Assy (Part of 2K478)
5	—	Grommet (Part of 2K478)
6	—	Snap Ring

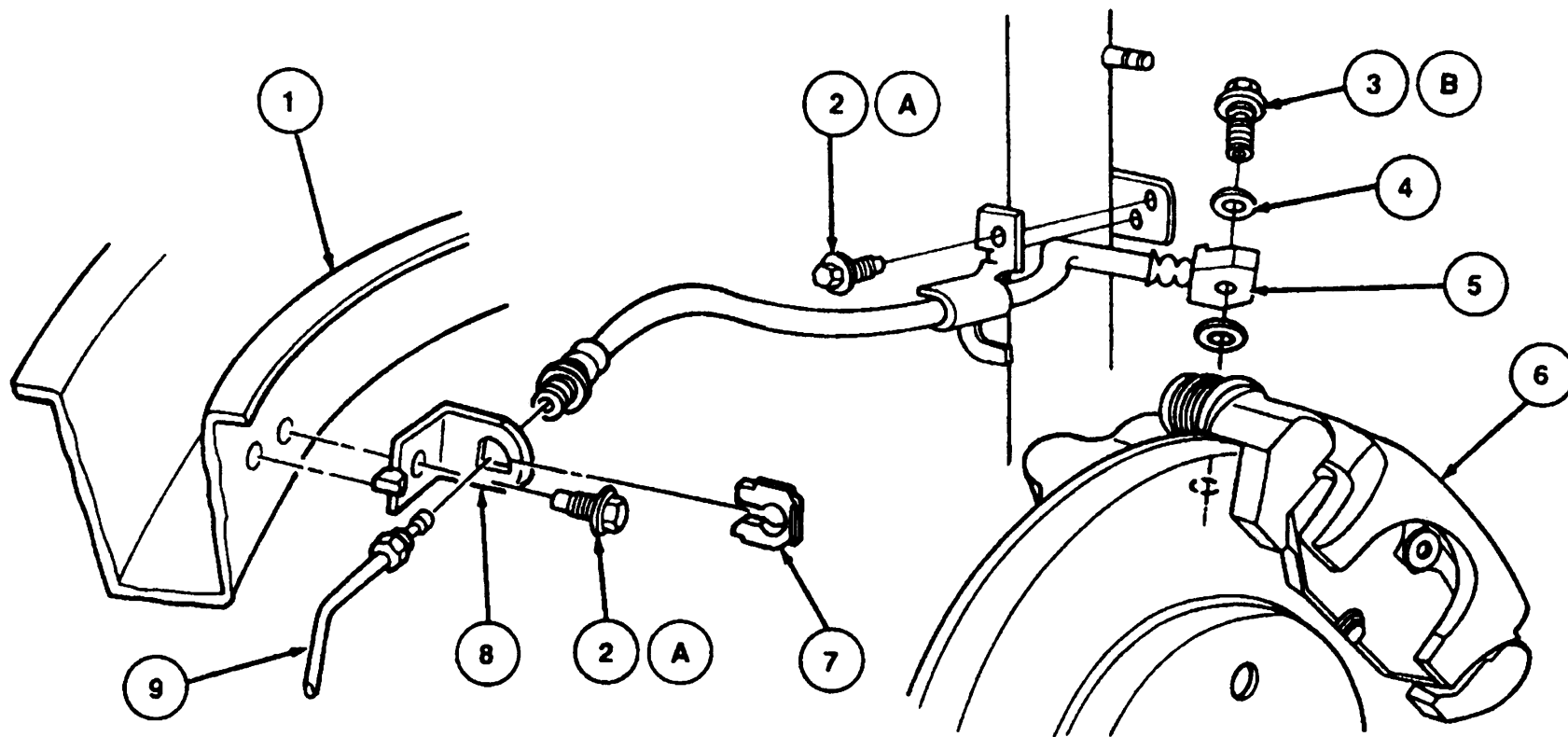
Item	Part Number	Description
7	—	Primary Piston Assy (Part of 2140)
8	2B091	LH Brake Pressure Control Valve
9	—	Secondary Piston Assy (Part of 2140)
10	2B091	RH Brake Pressure Control Valve
11	—	O-Ring (Part of 2B091)





NOTE: PIN IS INTEGRAL TO CLIP

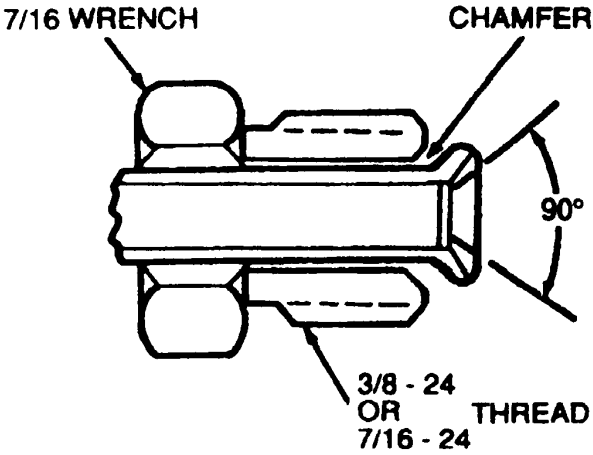




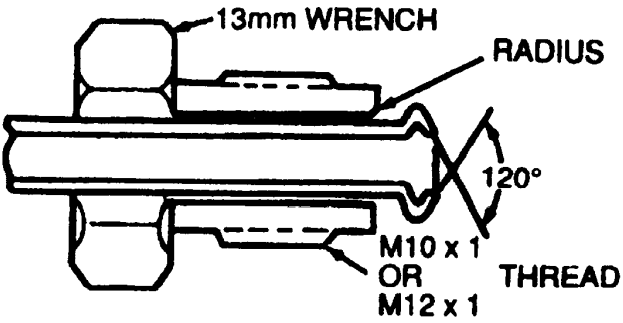
Item	Part Number	Description
1	—	Side Rail
2	W611635-S150	Screw
3	N801052-S100	Screw
4	388949-S	Washer (2 Req'd)
5	2A442 RH 2A478 LH	Hose Assy
6	2553	Rear Disc Brake Caliper

Item	Part Number	Description
7	386493-S150	Clip (2 Req'd)
8	2073	Bracket (2 Req'd)
9	2C287	Brake Line Assy
A	—	Tighten to 11-16 N·m (8-12 Lb-Ft)
B	—	Tighten to 41-54 N·m (30-40 Lb-Ft)

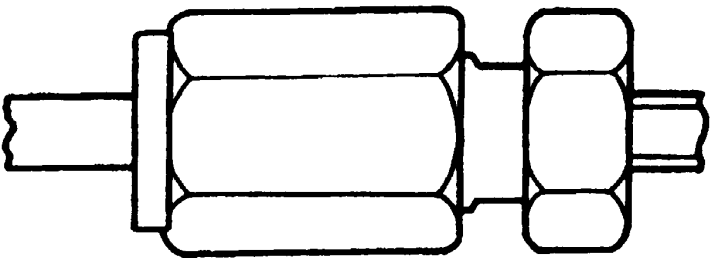
- SAE double 45-degree flare.



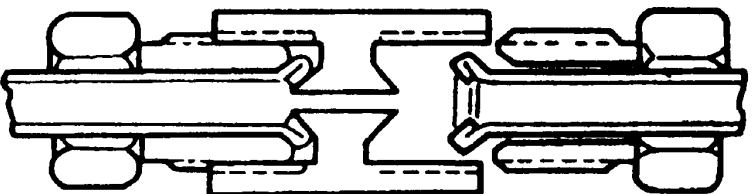
- ISO Metric flare.

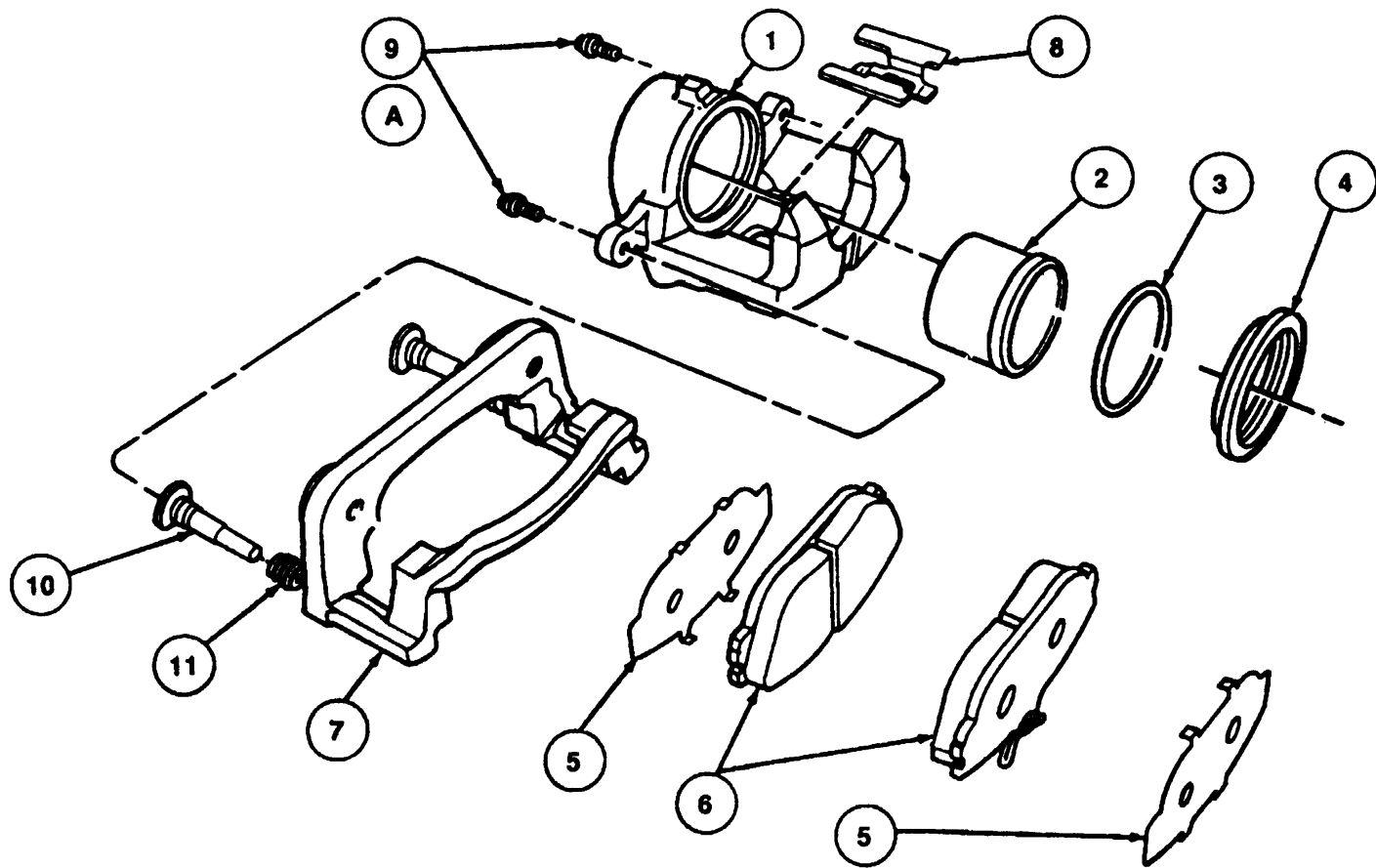


- Tube to tube connection.



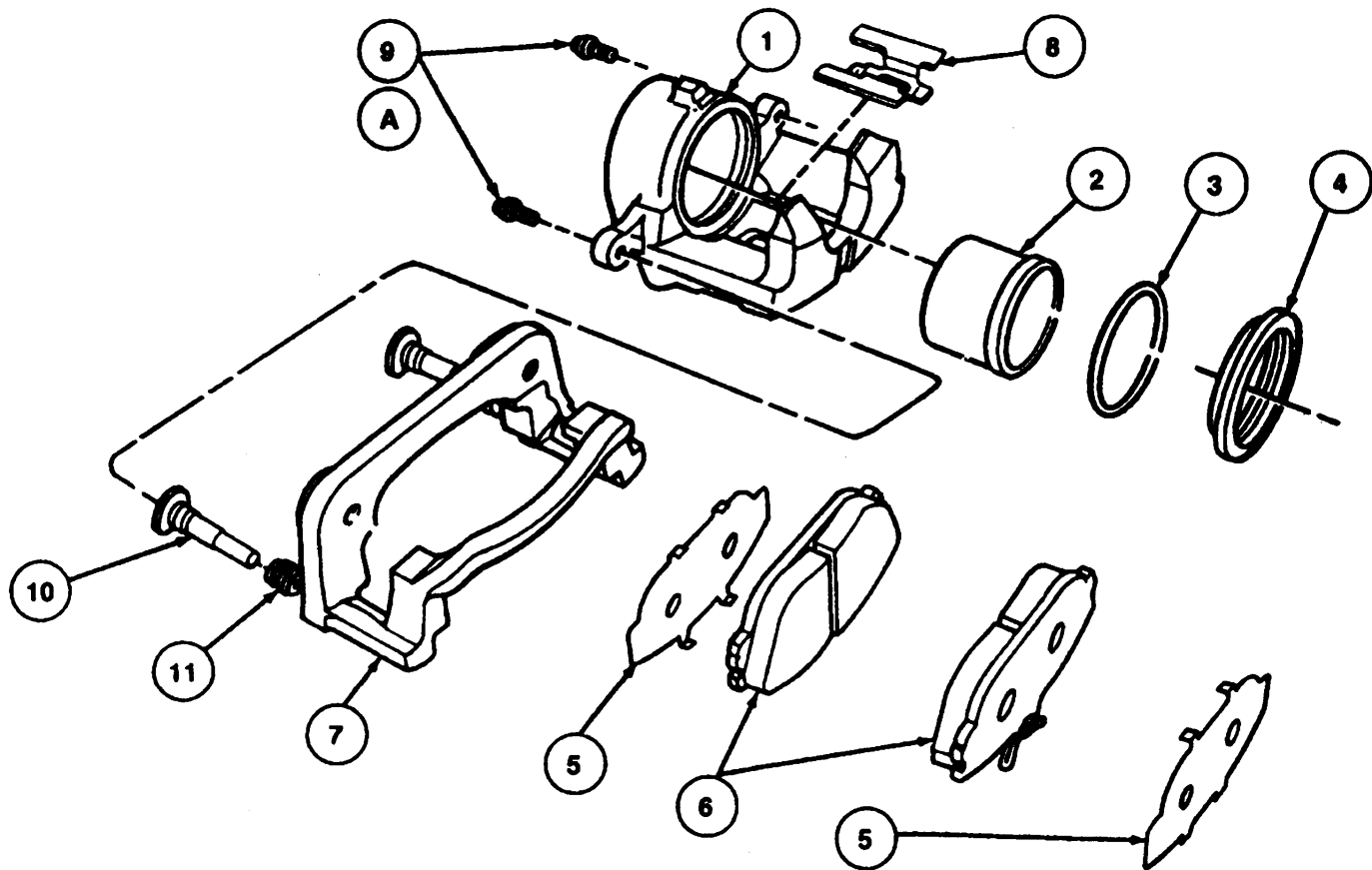
- SAE double 45 Union (repair).





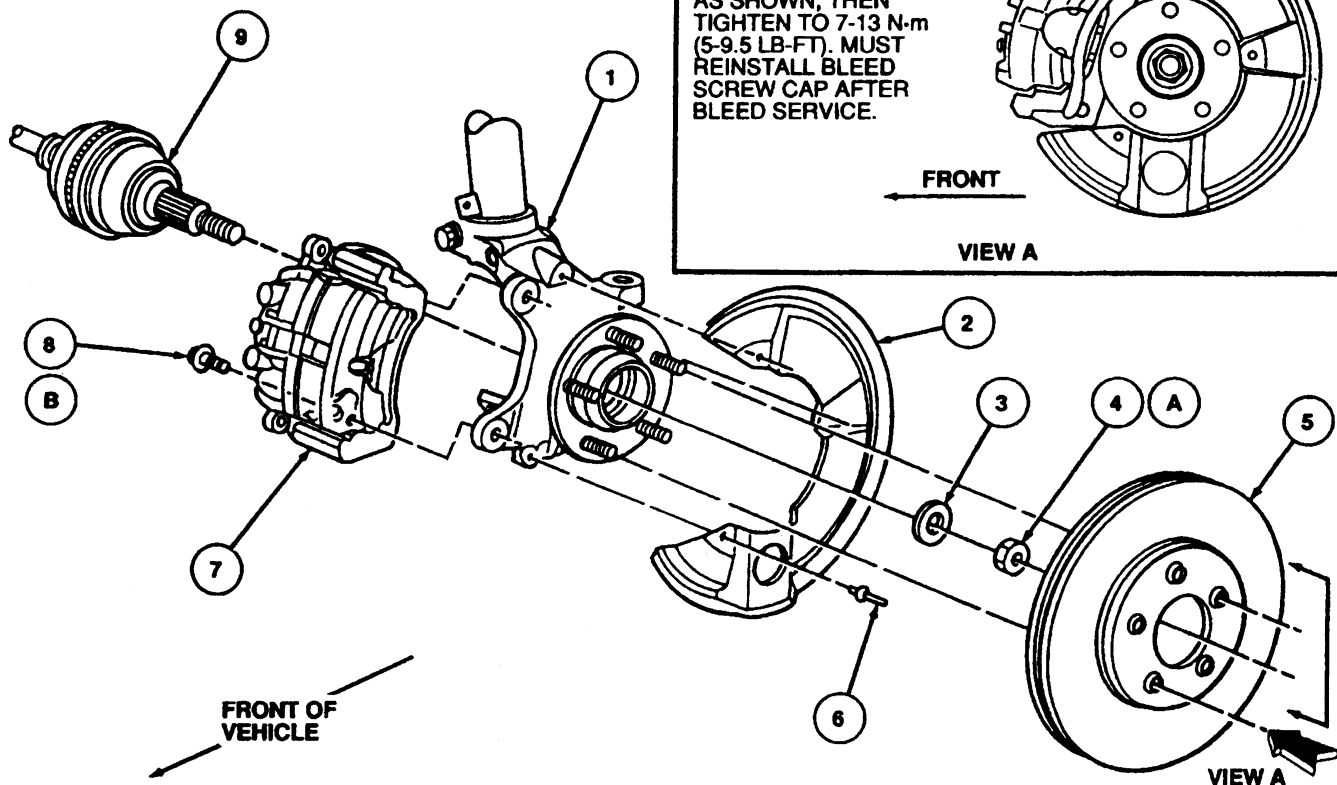
Item	Part Number	Description
1	2B120	Disc Brake Caliper
2	2196	Caliper Piston
3	2B115	Brake Piston Seal
4	2207	Piston Boot
5	2B321	Front Wheel Disc Brake Shoe Insulator (2 Req'd)
6	2018	Shoe and Lining Assy
7	2B292	Front Disc Brake Caliper Anchor Plate

Item	Part Number	Description
8	2068	Brake Shoe Hold-Down Spring
9	2N386	Rear Brake Pin Retainer (2 Req'd)
10	2B296	Disc Brake Caliper Locating Pin (2 Req'd)
11	2A492	Brake Cylinder Retainer Boot
A	—	Tighten to 31-38 N·m (23-28 Lb·Ft)



Item	Part Number	Description
1	2B120	Disc Brake Caliper
2	2196	Caliper Piston
3	2B115	Brake Piston Seal
4	2207	Front Disc Brake Caliper Boot
5	2B321	Front Wheel Disc Brake Shoe Insulator (2 Req'd)
6	2001	Shoe and Lining Assy
7	2B292	Front Disc Brake Caliper Anchor Plate

Item	Part Number	Description
8	2068	Brake Shoe Hold-Down Spring
9	2N386	Rear Brake Pin Retainer (2 Req'd)
10	2B296	Disc Brake Caliper Locating Pin (2 Req'd)
11	2A492	Brake Slide Pin Boot
A	—	Tighten to 31-38 N-m (23-28 Lb-Ft)

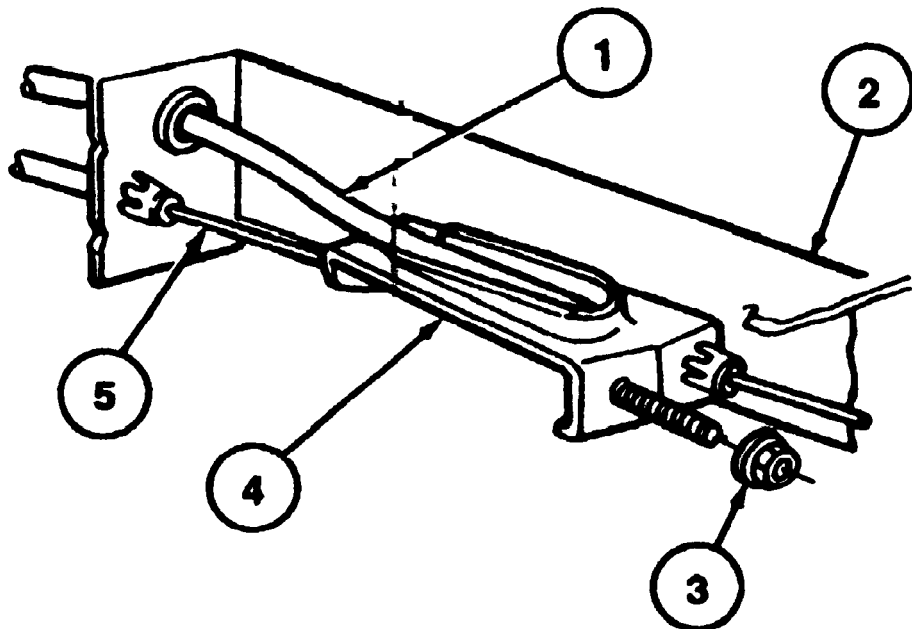


Item	Part Number	Description
1	3K206	Front Wheel Hub and Spindle
2	2K004	Front Disc Brake Rotor Shield
3	N801338-S101	Washer
4	N804199-S191	Retainer Nut
5	1125	Front Disc Brake Rotor

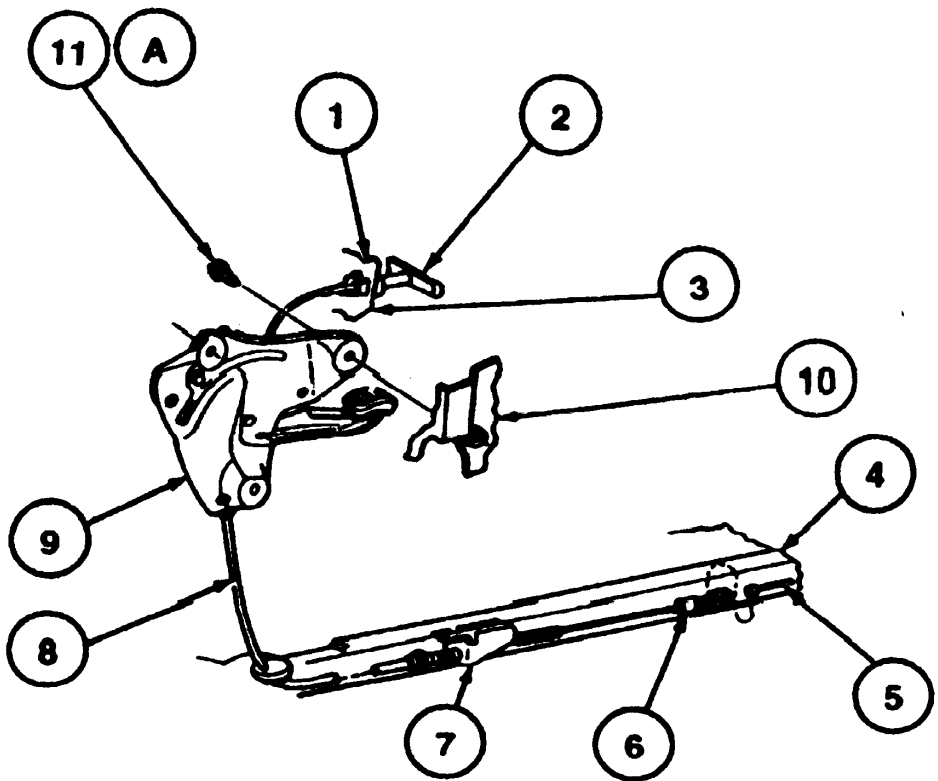
Item	Part Number	Description
6	N806685-S100	Rivet
7	2B120	Disc Brake Caliper Assy
8	N807146-S100	Bolt (2 Req'd)
9	3B436	Front Wheel Driveshaft and Joint

Item	Part Number	Description
A	—	Tighten to 230-275 N-m (170-202 Lb-Ft)

Item	Part Number	Description
B	—	Tighten to 115.2 N-m (85 Lb-Ft)

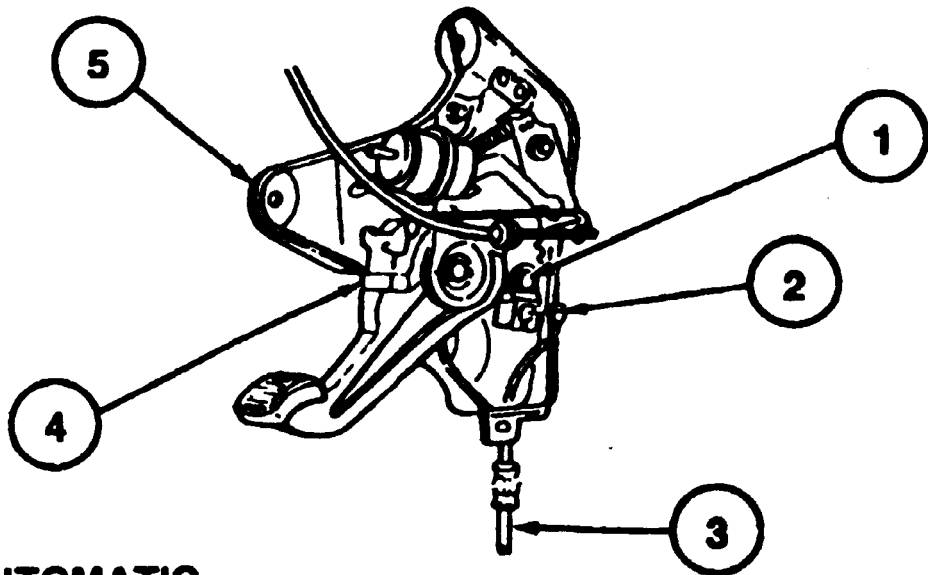


Item	Part Number	Description
1	2A635	LH Parking Brake Rear Cable and Conduit
2	10116	Inner Floor Side Member
3	W5202A2-S60	Adjuster Nut
4	2K390	Rear Parking Brake Cable Adjuster
5	2A635	RH Parking Brake Rear Cable and Conduit



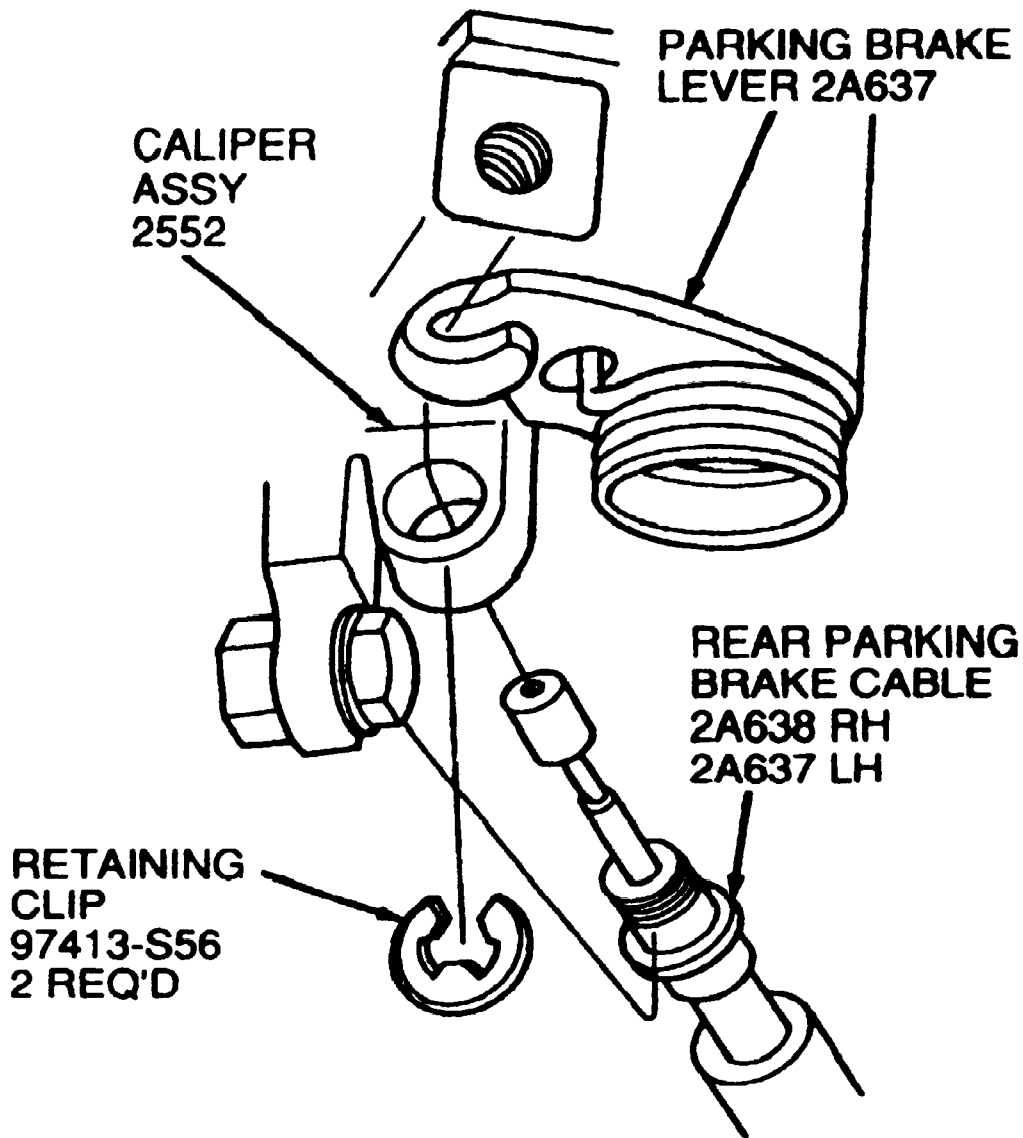
**AUTOMATIC AND MANUAL PARKING
BRAKE RELEASE HANDLE**

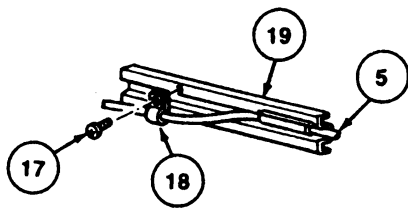
Item	Part Number	Description
1	391115-S411	Clip
2	2760	Parking Brake Release Handle
3	04320	Instrument Panel
4	11135	Front Floor Pan
5	2A635	Parking Brake Rear Cable and Conduit
6	2A709	Cable Connector
7	2K390	Rear Parking Brake Cable Adjuster
8	2853	Front Parking Brake Cable and Conduit
9	2780	Parking Brake Control
10	02344	Cowl Side Trim Panel
11	N800377-S2	Bolt (3 Req'd)
A	—	Tighten to 23-35 N·m (17-26 Lb·Ft)



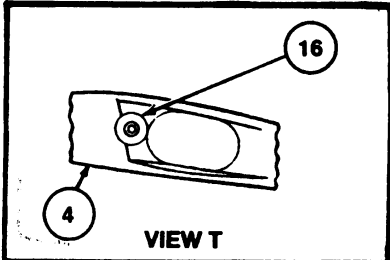
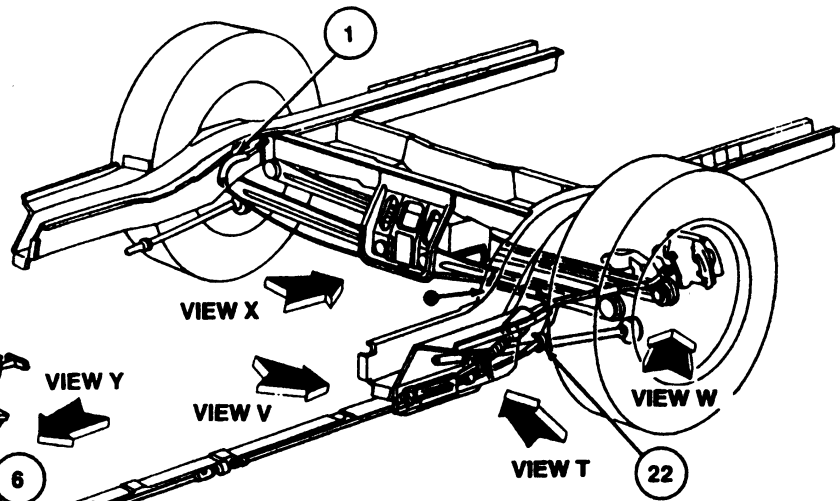
**AUTOMATIC
RELEASE**

Item	Part Number	Description
1	—	Clevis (Part of 2780)
2	—	Cable End (Part of 2853)
3	2853	Front Parking Brake Cable and Conduit
4	15A851	Parking Brake Signal Switch and Bracket
5	2780	Parking Brake Control

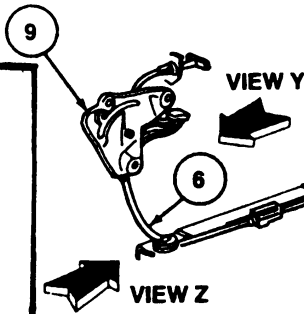




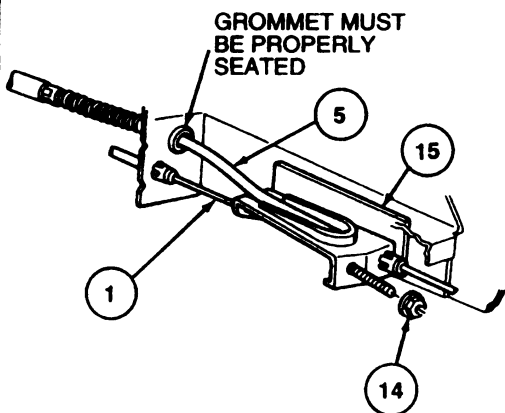
ONE PLACE MARKED ●



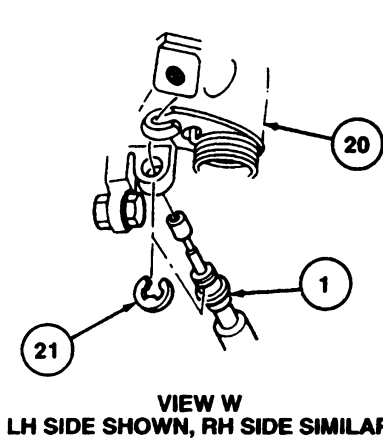
VIEW T



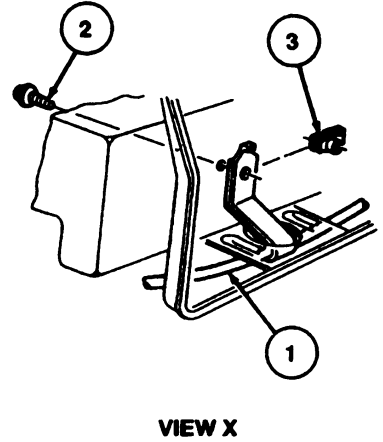
VIEW Z



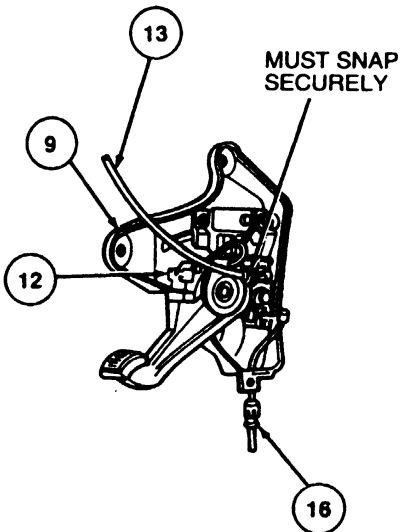
VIEW V



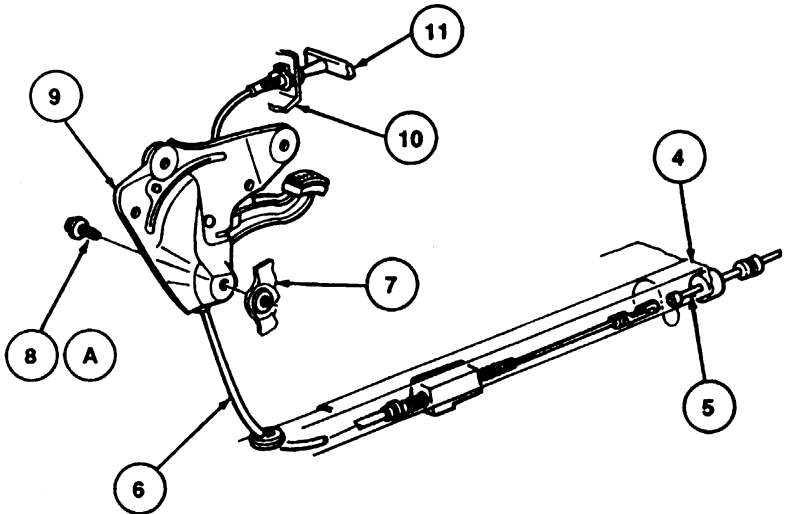
VIEW W
LH SIDE SHOWN, RH SIDE SIMILAR



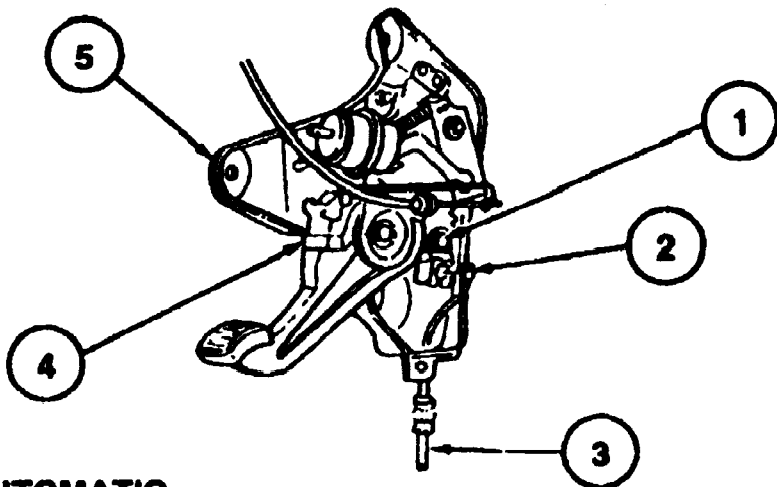
VIEW X



VIEW Y



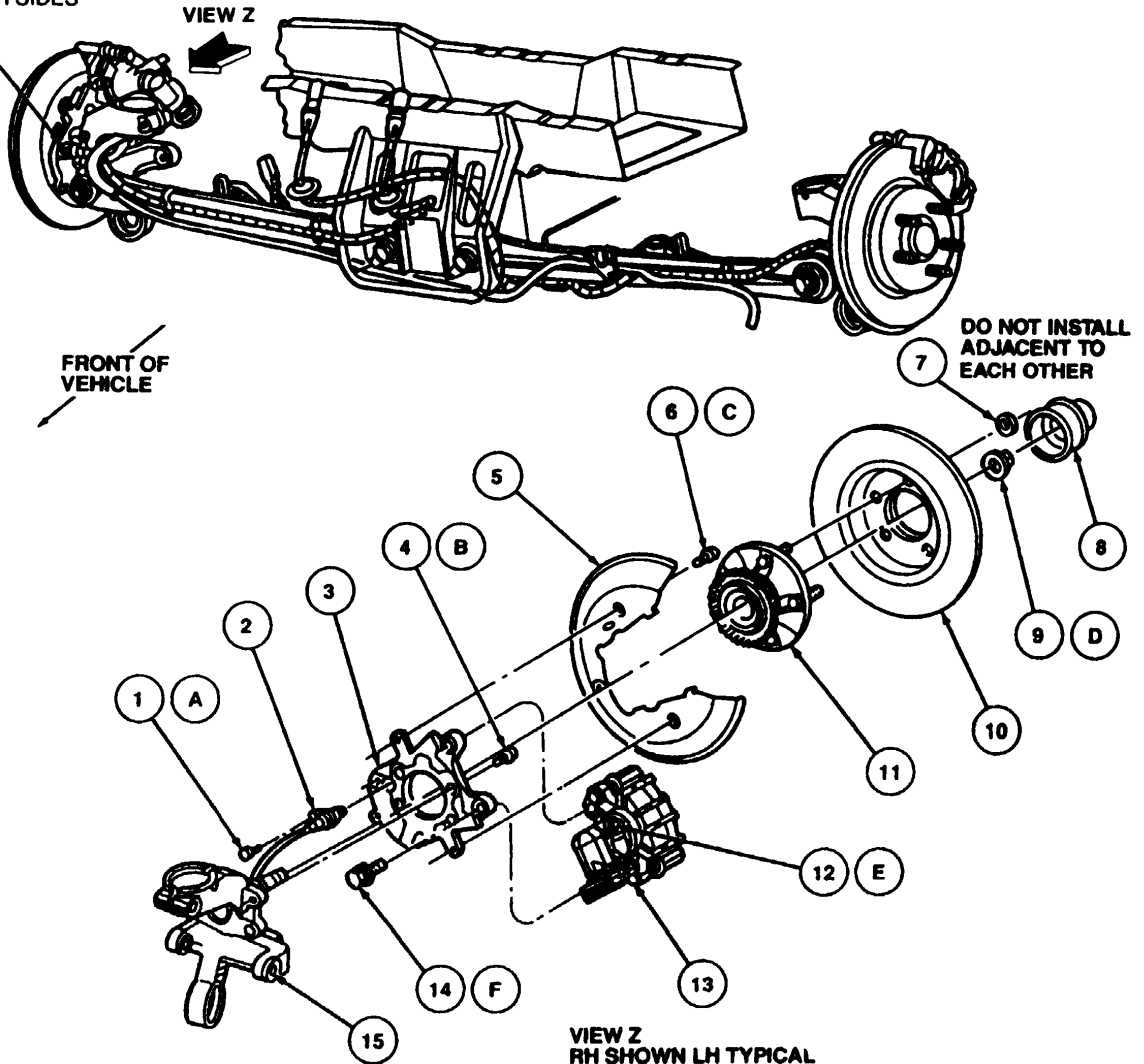
VIEW Z



**AUTOMATIC
RELEASE**

Item	Part Number	Description
1	—	Clevis (Part of 2780)
2	—	Cable End (Part of 2853)
3	2853	Front Parking Brake Cable and Conduit
4	15A851	Parking Brake Signal Switch and Bracket
5	2760	Parking Brake Control

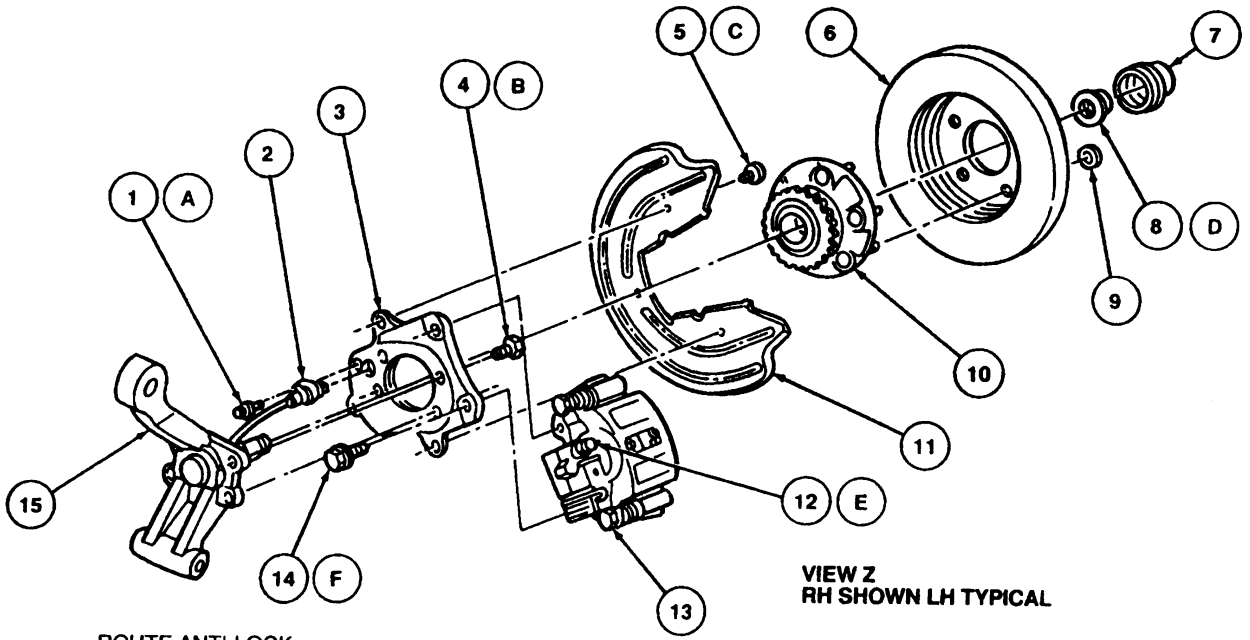
ROUTE ANTI-LOCK WIRE
UNDER PARKING BRAKE
CABLE-BOTH SIDES



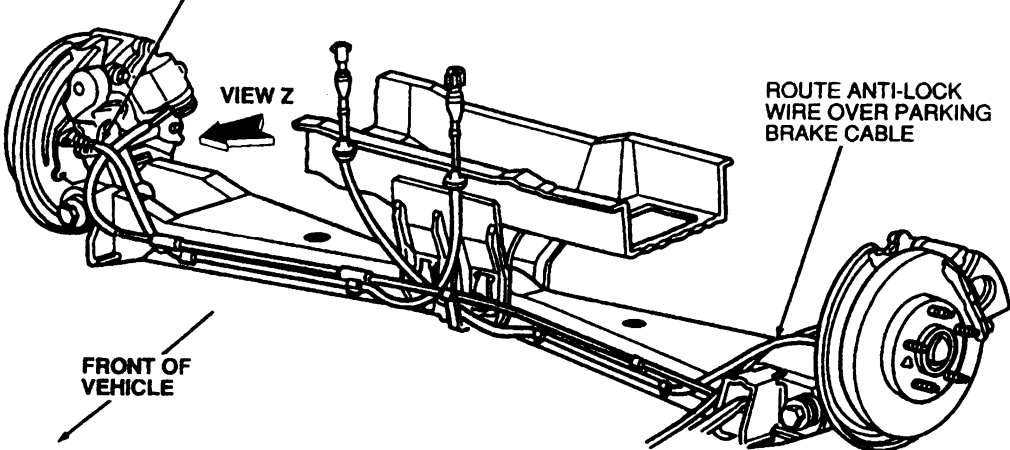
VIEW Z
RH SHOWN LH TYPICAL

Item	Part Number	Description
1	N805151-S100	Bolt
2	2C216 (LH) 2C190 (RH)	Rear Brake Anti-Lock Sensor
3	2C101 (LH) 2C100 (RH)	Rear Disc Brake Adapter
4	N805086-S100	Bolt (4 Req'd)
5	2C028	Rear Wheel Disc Brake Shield
6	N802726-S2	Screw (3 Req'd)
7	4B477	Retainer Nut (2 Req'd)
8	1N135	Front Hub Cap Grease Seal
9	4B477	Rear Axle Wheel Hub Retainer
10	2C026	Rear Disc Brake Rotor

Item	Part Number	Description
11	1104	Wheel Hub
12	2208	Wheel Cylinder Bleeder Screw
13	2552 2553	Rear Disc Brake Caliper
14	N807146-S181	Bolt (2 Req'd)
15	4A013	Rear Wheel Spindle
A	—	Tighten to 4.5-6.8 N-m (40-60 Lb-in)
B	—	Tighten to 59-81 N-m (44-60 Lb-Ft)
C	—	Tighten to 8-12 N-m (6-9 Lb-Ft)
D	—	Tighten to 255-345 N-m (188-254 Lb-Ft)
E	—	Tighten to 8-13 N-m (7-11 Lb-in)
F	—	Tighten to 87-119 N-m (64-88 Lb-Ft)



ROUTE ANTI-LOCK
WIRE OVER PARKING
BRAKE CABLE

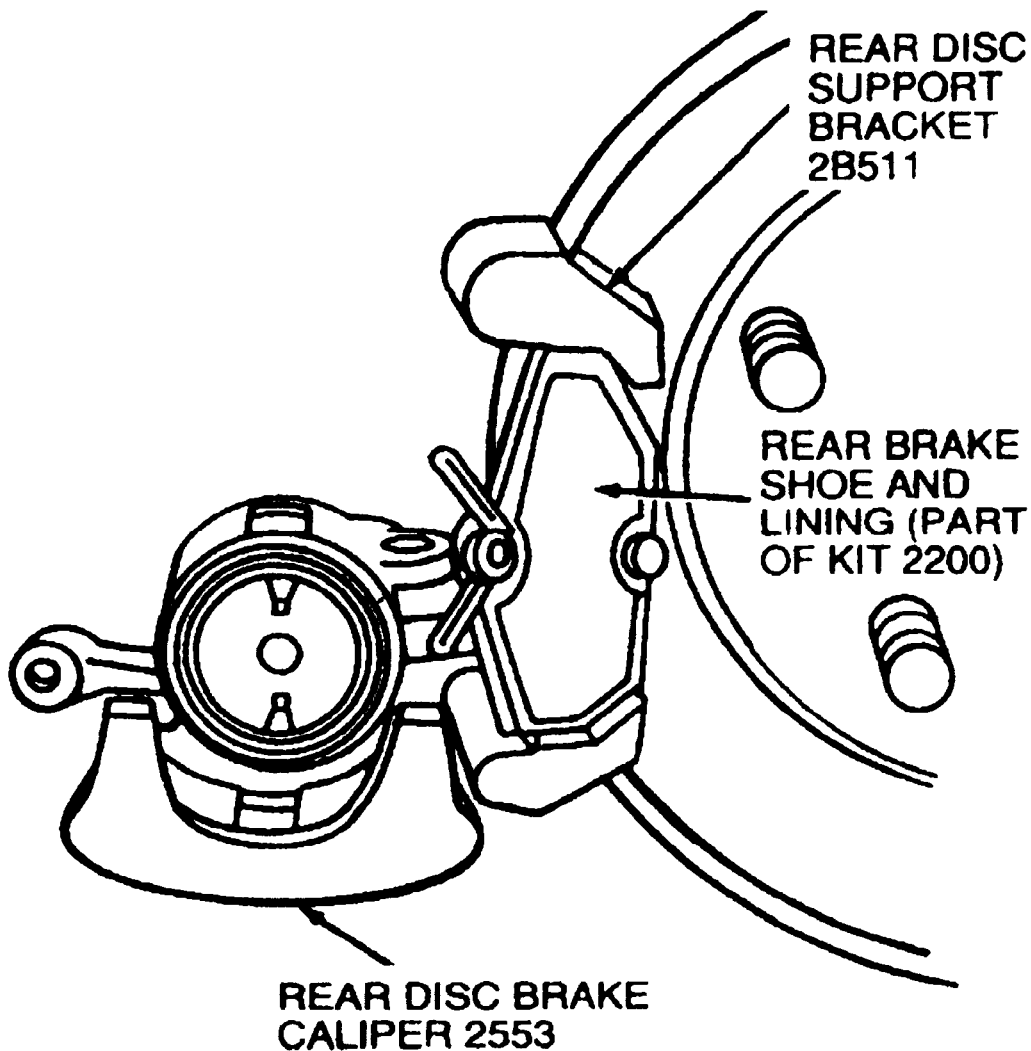


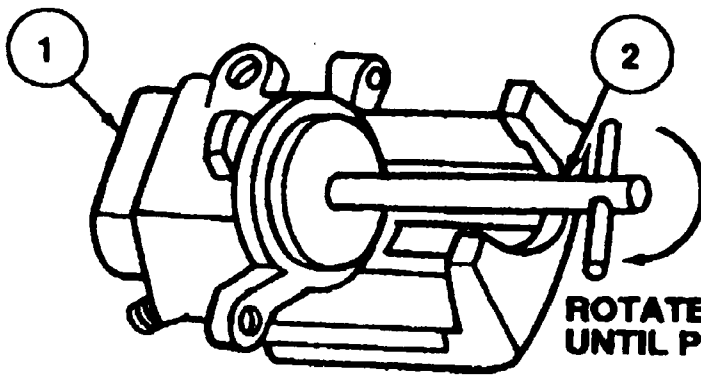
Item	Part Number	Description
1	N605518-S100	Bolt
2	2C190 LH 2C190 RH	Rear Brake Anti-Lock Sensor
3	2C100 RH 2C101 LH	Rear Disc Brake Adapter

Item	Part Number	Description
4	N805086-S100	Bolt (4 Req'd)
5	N602726-S2	Screw (3 Req'd)
6	2C026	Rear Disc Brake Rotor (2 Req'd)

Item	Part Number	Description
7	1N135	Front Wheel Hub Cap Grease Seal (2 Req'd)
8	4B477	Rear Axle Wheel Hub Retainer
9	W623485-S2	Retainer Nut (2 Req'd)
10	1104	Wheel Hub Assy
11	2C028	Rear Wheel Disc Brake Shield (2 Req'd)
12	2208	Wheel Cylinder Bleeder Screw
13	2552 (RH) 2553 (LH)	Rear Disc Brake Caliper
14	N805163-S150	Bolt (2 Req'd)

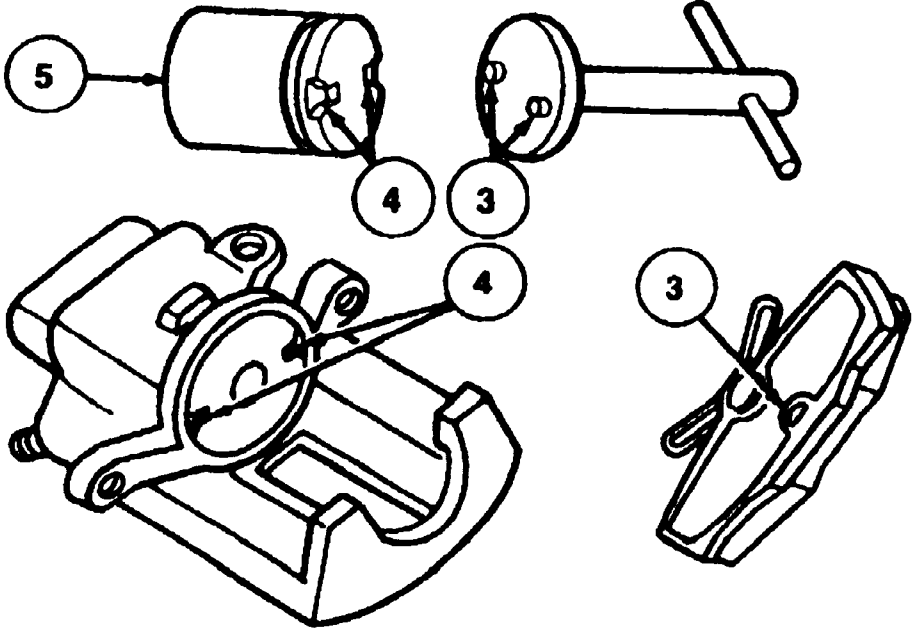
Item	Part Number	Description
15	4A013	Rear Wheel Spindle
A	—	Tighten to 4.8-6.8 N-m (40-60 Lb-In)
B	—	Tighten to 59-81 N-m (44-60 Lb-Ft)
C	—	Tighten to 8-12 N-m (71-106 Lb-In)
D	—	Tighten to 255-345 N-m (188-254 Lb-Ft)
E	—	Tighten to 8-13 N-m (71-115 Lb-In)
F	—	Tighten to 87-119 N-m (64-88 Lb-Ft)



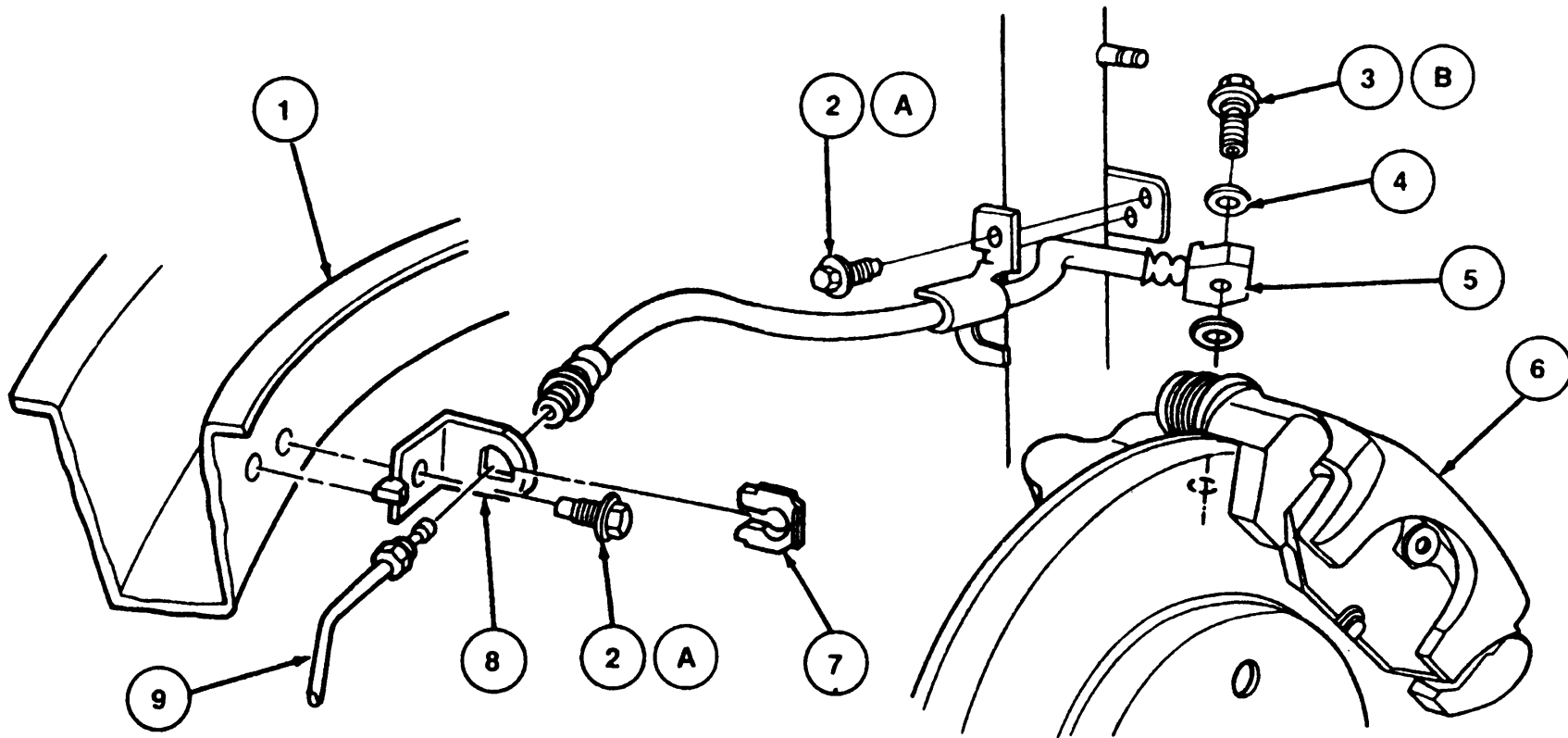


**ROTATE CLOCKWISE
UNTIL PISTON SEATS**

**ALIGN NIBS ON
TOOL WITH SLOTS
IN PISTON**



Item	Part Number	Description
1	2553	Rear Disc Brake Caliper Housing
2	T87P-2588-A	Rear Caliper Piston Adjuster
3	—	Nibs
4	—	Slots
5	2B588	Rear Disc Brake Piston and Adjuster



Item	Part Number	Description
1	—	Side Rail
2	W611635-S150	Screw
3	N801052-S100	Bolt
4	388949-S	Washer (2 Req'd)
5	2A442 RH 2A478 LH	Rear Wheel Brake Hose Assy
6	2553	Rear Disc Brake Caliper (LH)

Item	Part Number	Description
7	386493-S150	Clip (2 Req'd)
8	2073	Rear Brake Hose Support Bracket (2 Req'd)
9	2C287	Brake Line Assy
A	—	Tighten to 11-16 N·m (8-11 Lb-Ft)
B	—	Tighten to 41-54 N·m (30-40 Lb-Ft)

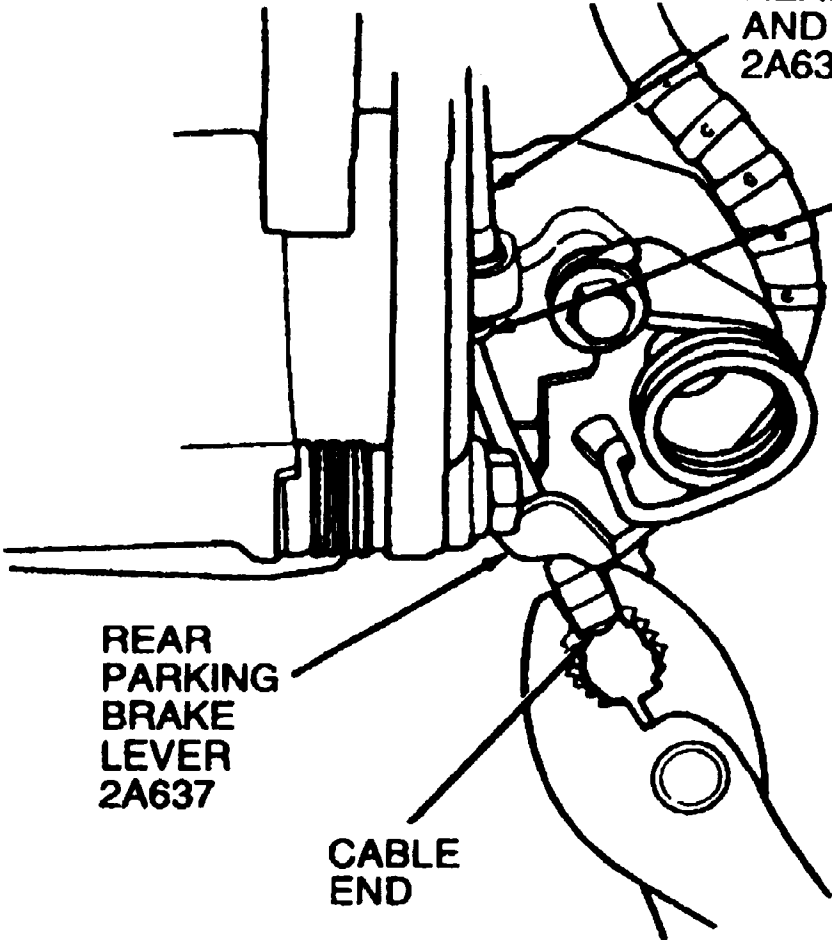
**PARKING BRAKE
REAR CABLE
AND CONDUIT
2A635**

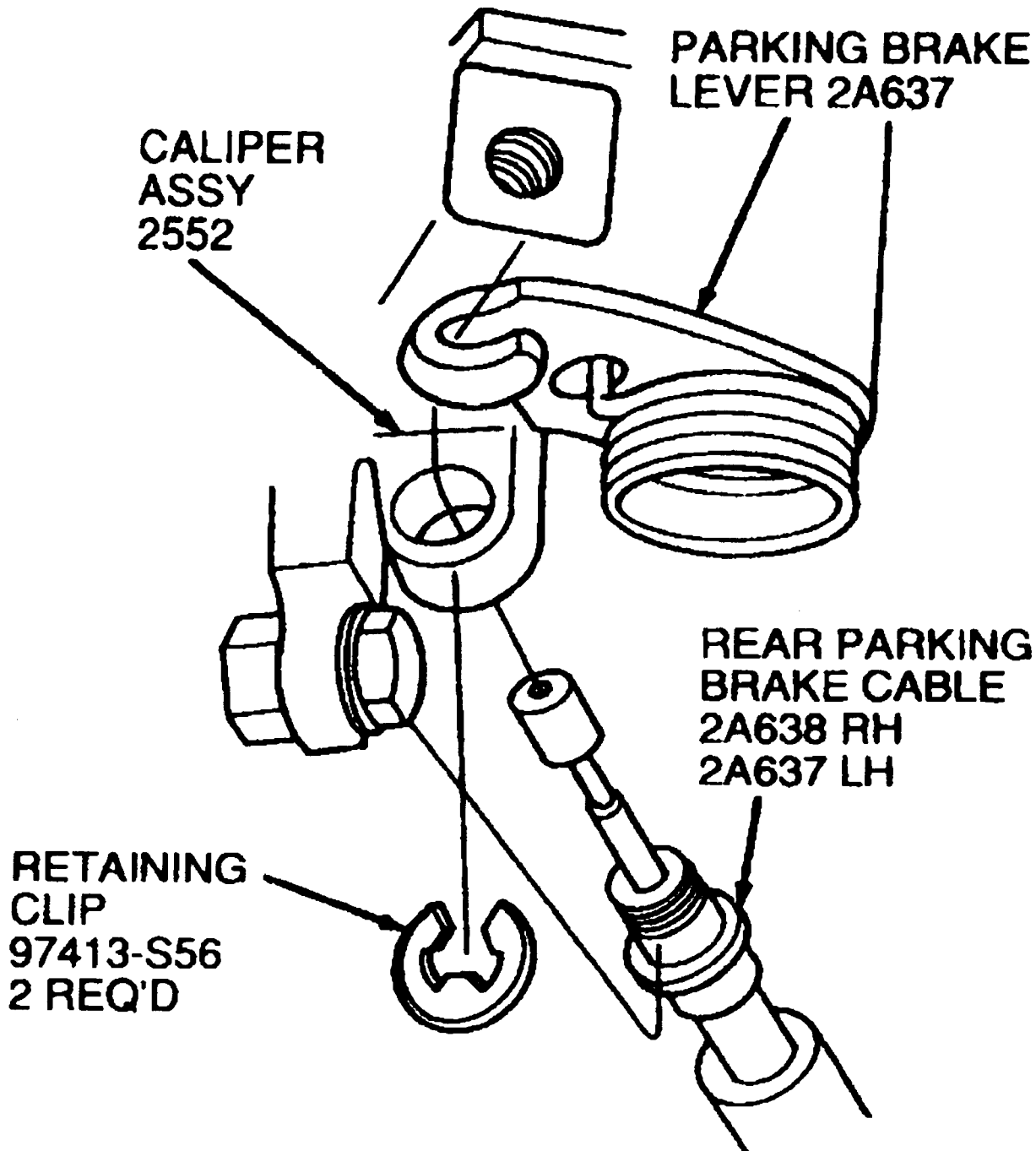
**RETAINING
CLIP
97413-S56**

**REAR
PARKING
BRAKE
LEVER
2A637**

**CABLE
END**

**FRONT OF
VEHICLE**



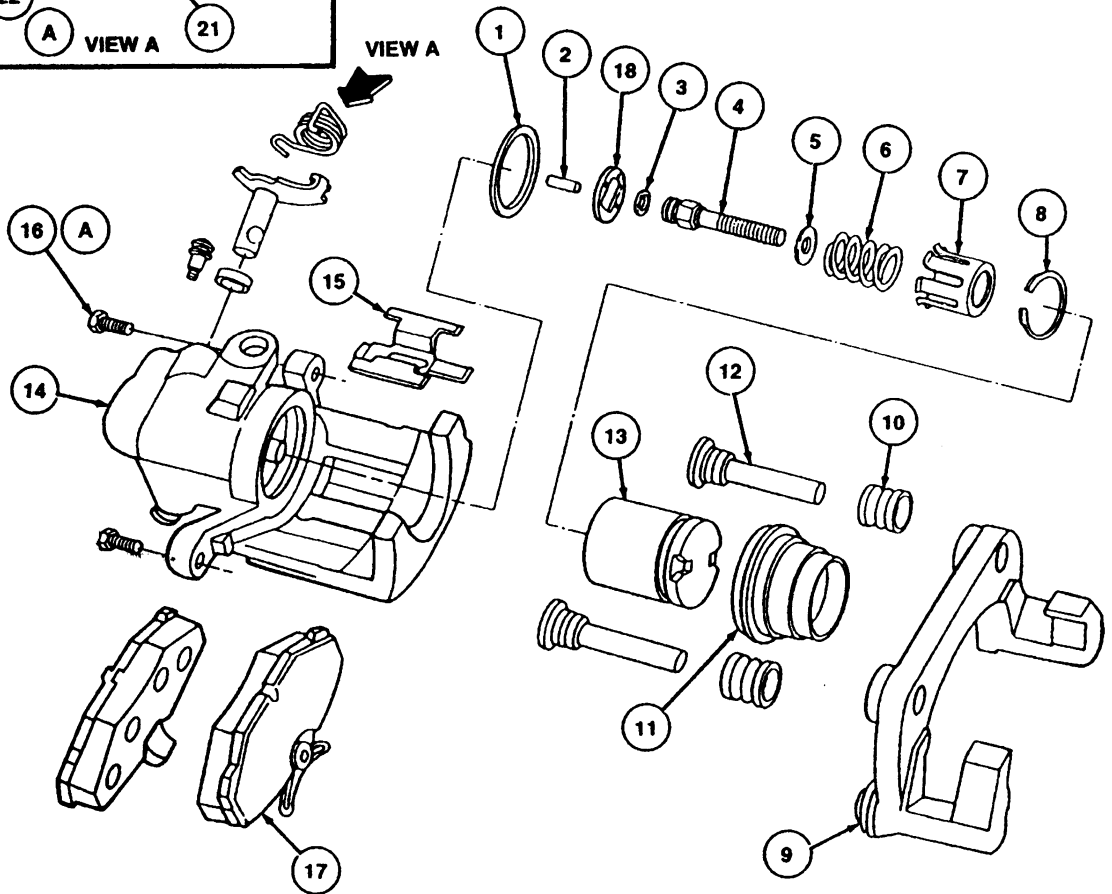
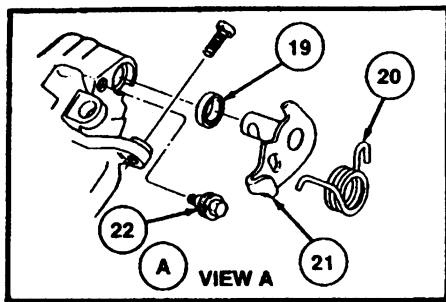


**PARKING BRAKE
LEVER 2A637**

**CALIPER
ASSY
2552**

**REAR PARKING
BRAKE CABLE
2A638 RH
2A637 LH**

**RETAINING
CLIP
97413-S56
2 REQ'D**



Item	Part Number	Description
1	2N182	Piston Seal
2	—	Pin (Part of 2B296)
3	2L594	Rear Brake Caliper Piston Seal
4	2N139	Push Rod
5	1N020	Flatwasher
6	2L035	Right Hand Anti-Rattle Spring
7	2A787	Parking Brake Spring Retainer
8	2A746	Parking Brake Lever Pin Retainer Clip (Circlip)

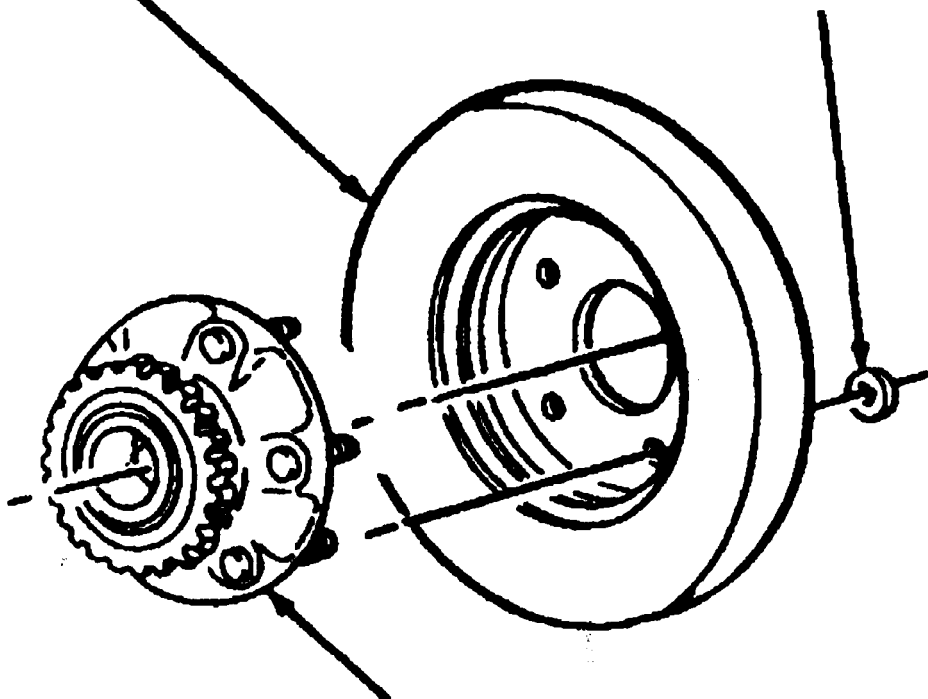
Item	Part Number	Description
9	2B511 (RH) 2B512 (LH)	Rear Disc Support Bracket
10	2A492	Slider Pin Boot Seal (2 Req'd)
11	2206	Piston Dust Boot
12	2B296	Disc Brake Caliper Locating Pin (2 Req'd)
13	2B588	Rear Disc Brake Piston and Adjuster
14	2552 (RH) 2553 (LH)	Rear Disc Brake Caliper
15	2B164	Anti-Rattle Clip

Item	Part Number	Description
16	2N386	Rear Brake Pin Retainer
17	2200	Rear Brake Shoes and Linings
18	2N183	Locating Washer
19	2B595	Parking Brake Lever Shaft Seal

Item	Part Number	Description
20	2456	Parking Brake Return Spring
21	2A637 (RH) 2A638 (LH)	Rear Parking Brake Cable
22	2A795	Parking Brake Spring Retainer Bolt
A	—	Tighten to 31-35 N-m (23-26 Lb-Ft)

REAR DISC
BRAKE
ROTOR
2C026

RETAINER NUTS
W623485-S
2 REQ'D EACH SIDE
ASSEMBLE NUTS TO
HOLD REAR DISC
BRAKE ROTOR 2C026
SECURE AGAINST
REAR HUB 1109



REAR HUB
1109

225mm AND 250mm
(8.85 AND 9.84 INCHES)
REAR BRAKE ASSY

SEDAN

GASKET
N803650-S
2 REQ'D

WAGON

SPINDLE ASSY
4A014 RH
4A013 LH

SPINDLE ASSY
4A494 RH
4A493 LH

BACKING PLATE ASSY
2209 RH
2210 LH

DRUM BRAKE
2209 RH
2210 LH

INNER GREASE
SEAL
1249

INNER CONE AND ROLLER
ASSY 1244

OUTER CONE AND ROLLER
ASSY 1216

BOLT
N804175-S100
TIGHTEN TO
61-81 N·m
(45-60 LB-FT)

HUB AND DRUM
1113

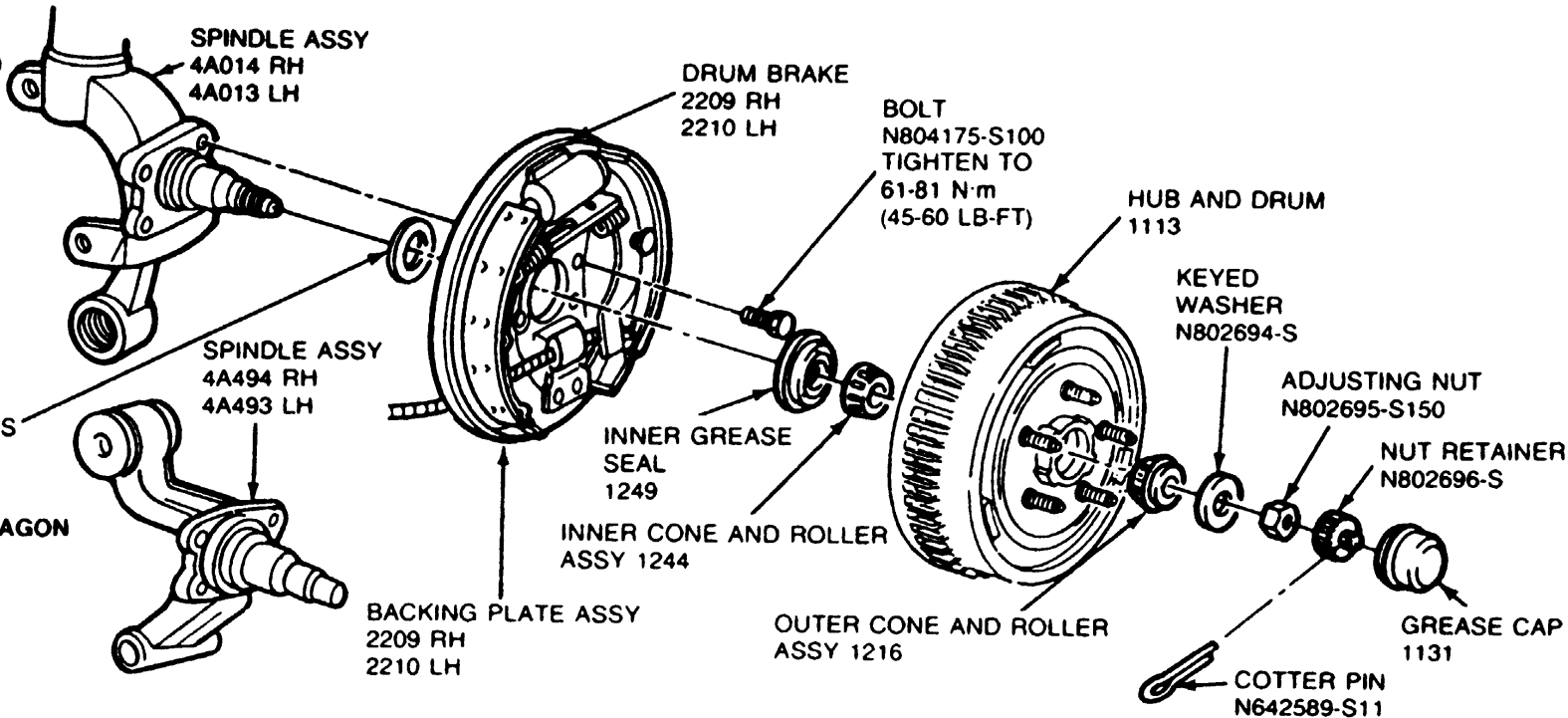
KEYED
WASHER
N802694-S

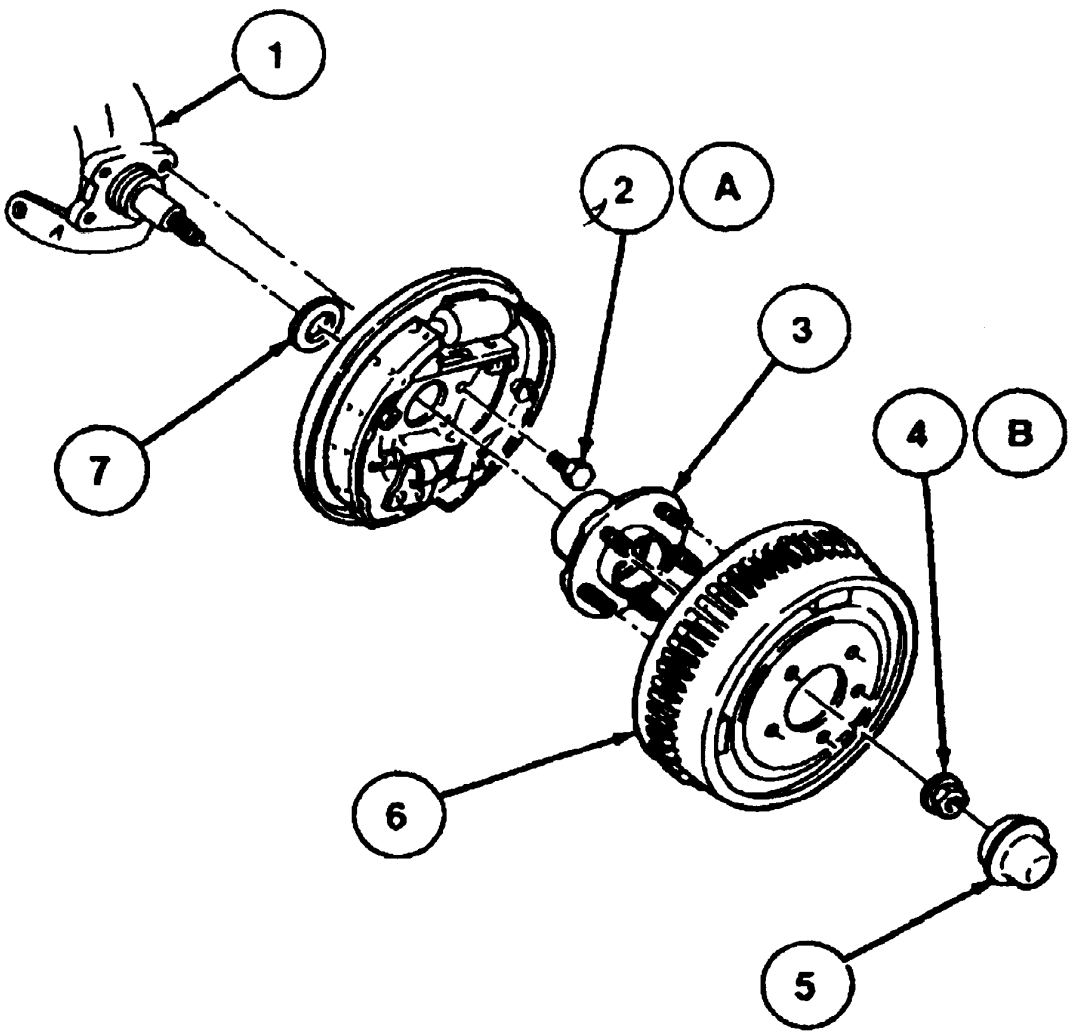
ADJUSTING NUT
N802695-S150

NUT RETAINER
N802696-S

GREASE CAP
1131

COTTER PIN
N642589-S11





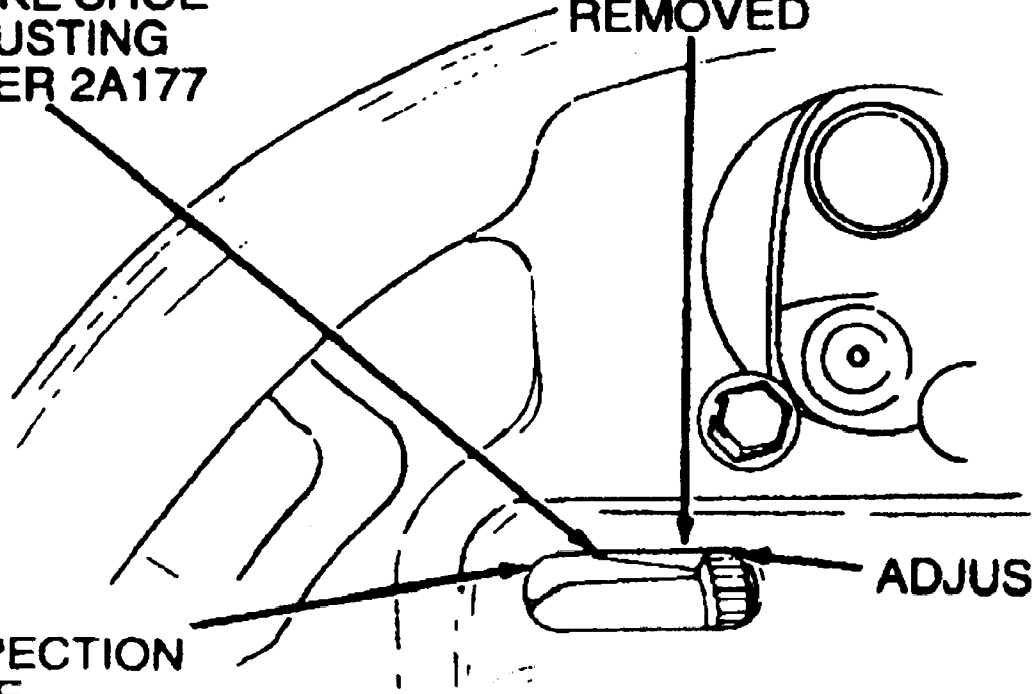
Item	Part Number	Description
1	4A013	Rear Wheel Spindle
2	N804175-S100	Bolt (4 Req'd Each Side)
3	1104	Wheel Hub
4	4B477	Rear Axle Wheel Hub Retainer (2 Req'd)
5	—	Rear Hub Cap Grease Seal
6	1126	Brake Drum
7	N803650-S	Gasket
A	—	Tighten to 60-80 N-m (45-60 Lb-Ft)
B	—	Tighten to 255-345 N-m (188-254 Lb-Ft)

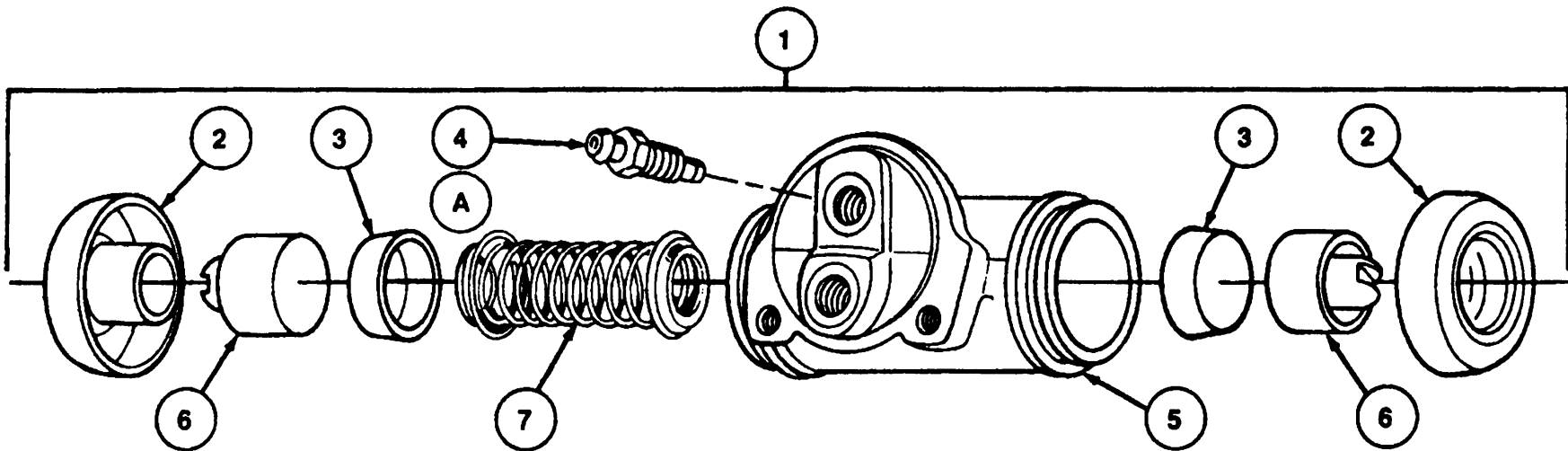
**BRAKE SHOE
ADJUSTING
LEVER 2A177**

**RUBBER PLUG
REMOVED**

**INSPECTION
HOLE**

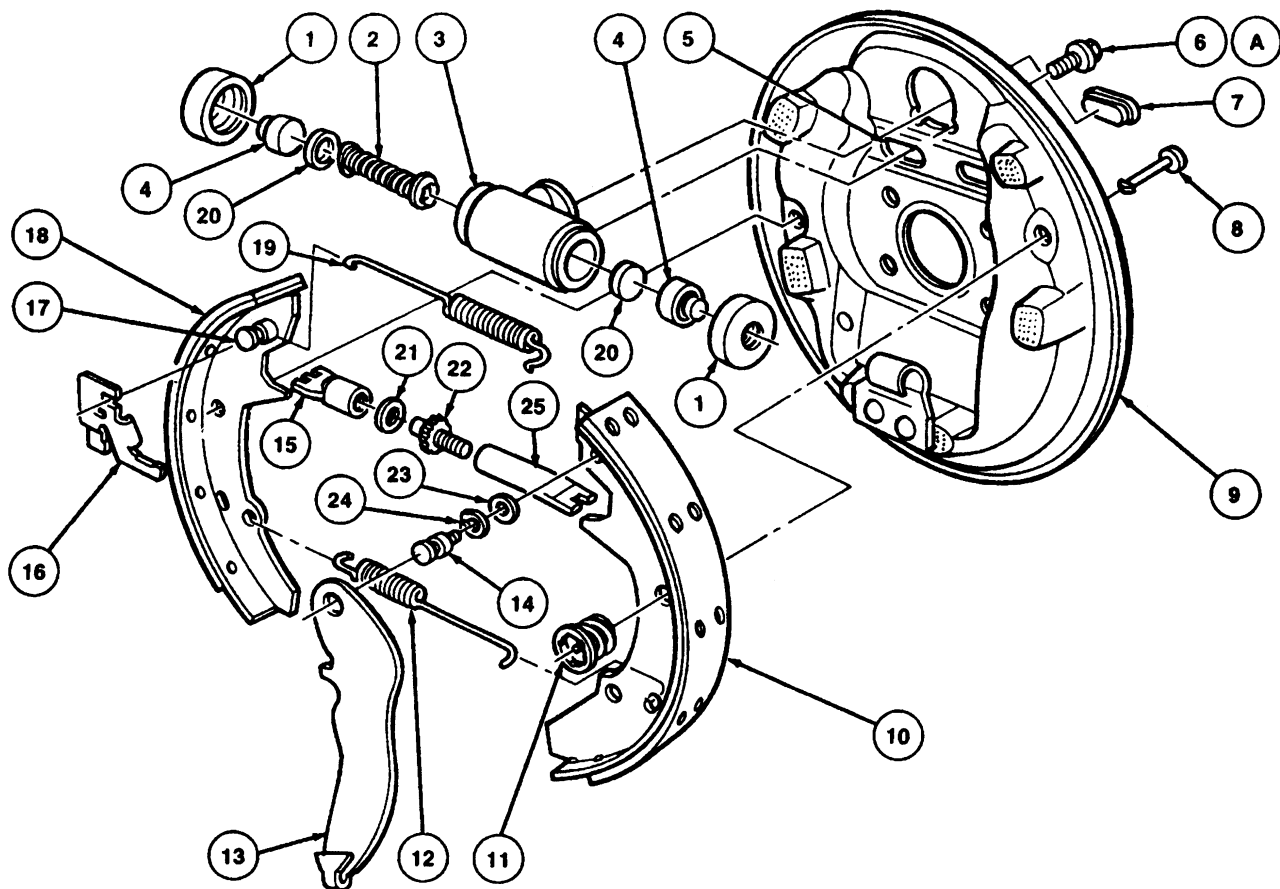
ADJUSTER





Item	Part Number	Description
1	2261	Rear Wheel Cylinder
2	—	Boot (Part of 2261)
3	—	Cup (Part of 2261)
4	—	Wheel Cylinder Bleeder Screw (Part of 2261)
5	—	Cylinder Housing (Part of 2261)

Item	Part Number	Description
6	—	Piston (Part of 2261)
7	—	Return Spring and Cup Expander Assy (Part of 2261)
A	—	Tighten to 10-20 N·m (7.5-15 Lb·Ft)



Item	Part Number	Description
1	—	Boot (Part of 2261)
2	—	Spring Expander (Part of 2261)
3	2261	Rear Wheel Cylinder
4	—	Piston and Insert (Part of 2261)
5	—	Shoe Adjustment Access Hole
6	N801327	Wheel Cylinder Retaining Screw (2 Req'd)
7	2092	Brake Adjusting Hole Cover
8	2069	Brake Shoe Hold Down Spring Pin
9	2211	Brake Backing Plate
10	—	Trailing Shoe and Lining (Part of 2200)
11	2068	Brake Shoe Hold-Down Spring
12	2035	Lower Brake Shoe Retracting Spring
13	2A637 (RH) 2A638 (LH)	Parking Brake Lever

Item	Part Number	Description
14	2107	Parking Brake Lever Pin (Inner)
15	2048	Brake Shoe Adjusting Screw Socket
16	2A177 (LH) 2A176 (RH)	Brake Shoe Adjusting Lever
17	2107	Parking Brake Lever Pin
18	—	Leading Shoe and Lining (Part of 2001)
19	2049	Brake Shoe Adjusting Screw Spring
20	—	Cup (Part of 2261)
21	384373-S	Washer
22	—	Adjusting Screw (Part of 2261)
23	356297-S2	Washer
24	2106	Parking Brake Lever Pin Retainer
25	—	Adjusting Pivot Nut (Part of 2048)
A	—	Tighten to 10-14 N·m (8-10 Lb·in)

BRAKE SPECIFICATIONS

All measurements in inches unless noted

Year	Model		Master Cylinder Bore	Brake Disc			Brake Drum Diameter			Minimum Lining Thickness	
				Original Thickness	Minimum Thickness	Maximum Runout	Original Inside Diameter	Max. Wear Limit	Maximum Machine Diameter	Front	Rear
1986	Taurus	1	0.875	NA	0.896	0.002	8.86	8.93	8.92	0.125	0.030
	Taurus	2	0.875	NA	0.896	0.002	9.84	9.99	9.90	0.125	0.030
	Sable	1	0.875	NA	0.896	0.002	8.86	8.93	8.92	0.125	0.030
	Sable	2	0.875	NA	0.896	0.002	9.84	9.99	9.90	0.125	0.030
1987	Taurus	1	0.875	NA	0.896	0.002	8.86	8.93	8.92	0.125	0.030
	Taurus	2	0.875	NA	0.896	0.002	9.84	9.89	9.90	0.125	0.030
	Sable	1	0.875	NA	0.896	0.002	8.86	8.93	8.92	0.125	0.030
	Sable	2	0.875	NA	0.896	0.002	9.84	9.89	9.90	0.125	0.030
1988	Taurus	1	0.875	NA	0.896	0.002	8.86	8.93	8.92	0.125	0.030
	Taurus	2	0.875	NA	0.896	0.002	9.84	9.89	9.90	0.125	0.030
	Sable	1	0.875	NA	0.896	0.003	8.86	8.93	8.92	0.125	0.030
	Sable	2	0.875	NA	0.896	0.002	9.84	9.89	9.90	0.125	0.030
1989	Taurus	1	0.875	NA	0.896	0.002	8.86	8.93	8.92	0.125	0.030
	Taurus	2	0.875	NA	0.896	0.002	9.84	9.89	9.90	0.125	0.030
	Taurus SHO	F	0.875	NA	0.972	0.002	-	-	-	0.125	0.030
	Taurus SHO	R	-	-	0.900	0.002	-	-	-	-	0.123
	Sable	1	0.875	NA	0.896	0.002	8.86	8.93	8.92	0.125	0.030
	Sable	2	0.875	NA	0.896	0.002	9.84	9.89	9.90	0.125	0.030
1990	Taurus	1	0.875	NA	0.972	0.002	8.86	8.93	8.92	0.125	0.030
	Taurus	2	0.875	NA	0.972	0.002	9.84	9.89	9.90	0.125	0.030
	Taurus SHO	F	0.875	NA	0.972	0.002	-	-	-	0.125	0.030
	Taurus SHO	R	-	-	0.900	0.002	-	-	-	-	0.123
	Sable	F	1.000	1.024	0.997	0.003	⁸	NA	⁹	0.125	0.030
	Sable	R	-	0.940	0.900	0.002	-	-	-	-	0.123
1991	Taurus	1	F 0.875	NA	0.972	0.002	8.86	8.93	8.92	0.125	0.030
	Taurus	2	F 0.875	NA	0.972	0.002	9.84	9.89	9.90	0.125	0.030
	Taurus SHO	F	0.875	NA	0.972	0.002	-	-	-	0.125	-
	Taurus SHO	R	-	-	0.900	0.002	-	-	-	-	0.123
	Sable	F	1.000	1.024	0.974	0.003	⁸	NA	⁹	0.125	0.030
	Sable	R	-	0.940	0.900	0.002	-	-	-	-	0.123
1992	Taurus	1	0.875	NA	0.972	0.002	8.86	8.93	8.92	0.125	0.030
	Taurus	2	0.875	NA	0.972	0.002	9.84	9.89	9.90	0.125	0.030
	Taurus SHO	³	0.875	NA	0.972	0.002	-	-	-	0.125	-
	Taurus SHO	⁴	-	-	0.900	0.002	-	-	-	-	0.123
	Sable	F	1.000	1.024	0.974	0.003	⁸	NA	⁹	0.125	0.030
	Sable	R	-	0.940	0.900	0.002	-	-	-	-	0.123
1993	Taurus	1	0.875	NA	0.972	0.002	8.86	8.93	8.92	0.125	0.030
	Taurus	2	0.875	NA	0.972	0.002	9.84	9.89	9.90	0.125	0.030
	Taurus SHO	F	0.875	NA	0.972	0.002	-	-	-	0.125	-
	Taurus SHO	R	-	-	0.900	0.002	-	-	-	-	0.123
	Sable	F	1.000	1.024	0.974	0.003	⁸	NA	⁹	0.125	0.030
	Sable	R	-	0.940	0.900	0.002	-	-	-	-	0.123
1994	Taurus		1.000	⁵	⁶	⁷	⁸	NA	⁹	0.040	¹⁰
	Taurus SHO		1.000	⁵	⁶	⁷	-	-	-	0.040	0.123
	Sable	F	1.000	1.020	0.974	0.003	⁸	NA	⁹	0.125	0.030

BRAKE SPECIFICATIONS

All measurements in inches unless noted

Year	Model		Master Cylinder Bore	Brake Disc			Brake Drum Diameter			Minimum Lining Thickness	
				Original Thickness	Minimum Thickness	Maximum Runout	Original Inside Diameter	Max. Wear Limit	Maximum Machine Diameter	Front	Rear
1994	Sable	R	-	0.940	0.900	0.002	-	-	-	-	0.123
1995	Taurus		1.000	5	6	7	8	NA	9	0.040	10
	Taurus SHO		1.000	5	6	7	-	-	-	0.040	0.123
	Sable	R	-	0.940	0.900	0.002	-	-	-	-	0.123
	Sable	R	-	-	-	-	8	NA	4	-	0.030

NOTE: Follow specifications stamped on rotor or drum if figures differ from those in this chart.

NA - Not Available

F - Front

R - Rear

1 Sedan

2 Wagon

3 Except rear disc

4 With rear disc

5 Front: 1.020

Rear: 0.940

6 Front: 0.974

Rear: 0.500

7 Front: 0.003

Rear: 0.002

8 Sedan: 8.85

Wagon: 9.84

9 Sedan: 8.91

Wagon: 9.90

10 With disc brakes: 0.123

With drum brakes: 0.030