REAR DRUM BRAKES

CAUTION

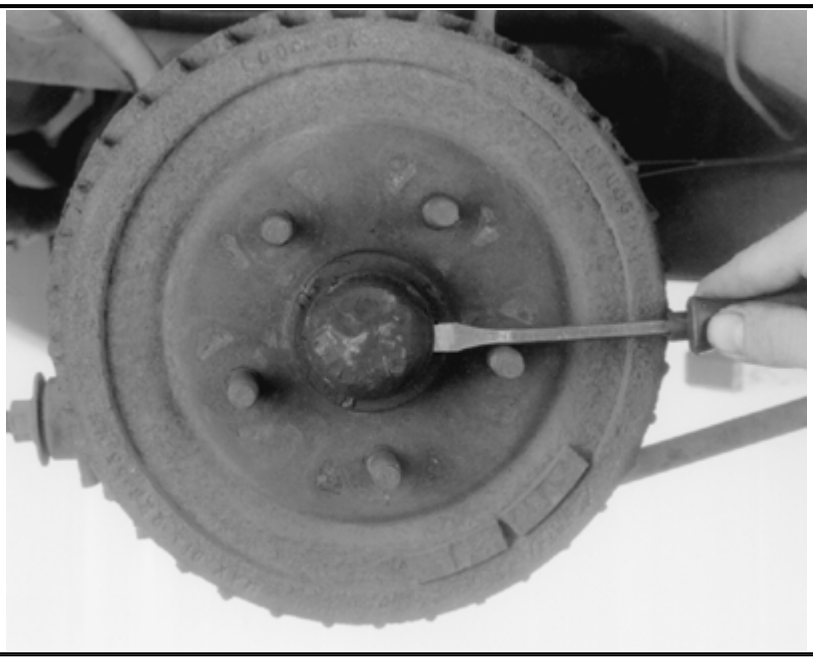
Brake shoes may contain asbestos, which has been determined to be a cancer causing agent. Never clean the brake surfaces with compressed air! Avoid inhaling any dust from any brake surface! When cleaning brake surfaces, use a commercially available brake cleaning solvent.

Brake Drums

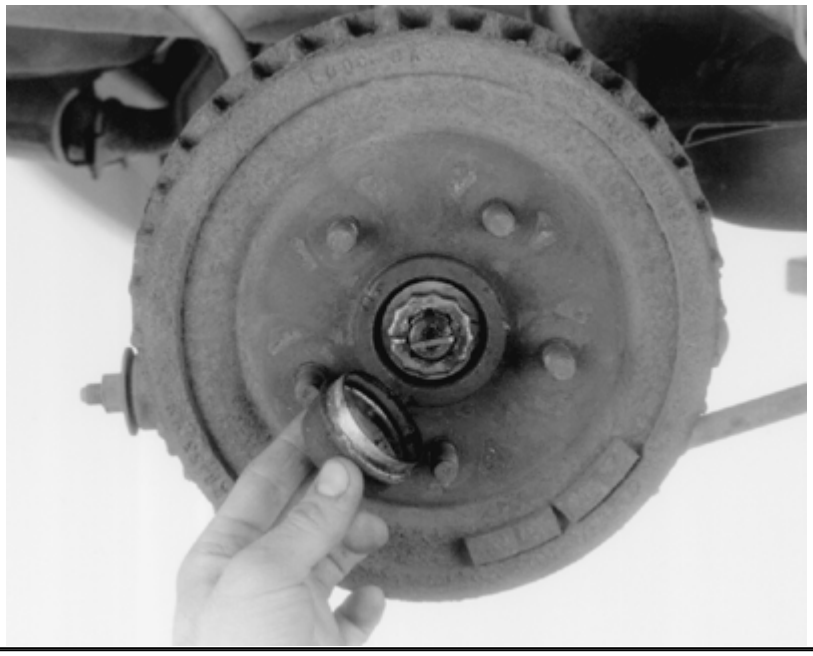
REMOVAL & INSTALLATION

1986-89 Vehicles

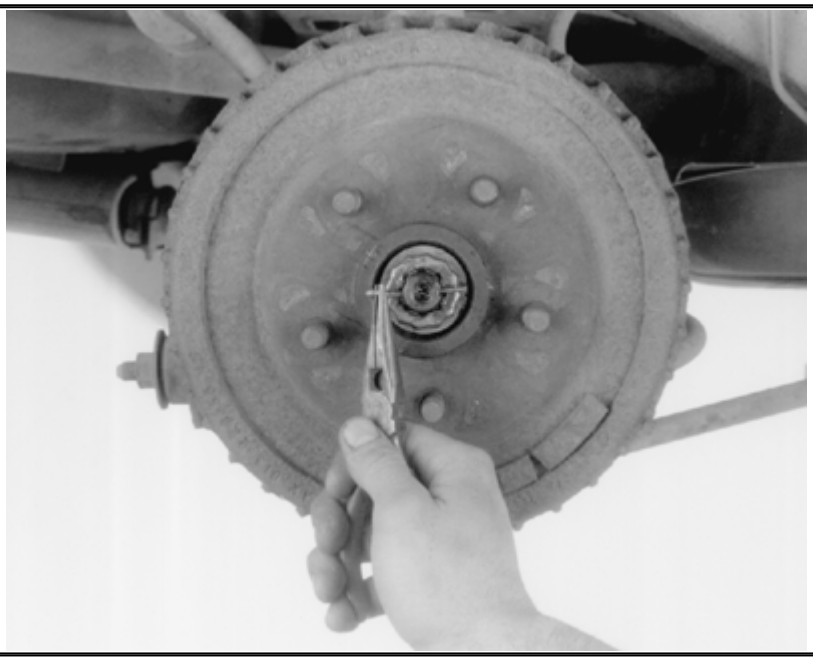
1. **Raise and safely support the vehicle.**
2. **Remove the wheel cover or nut covers, as required. Remove the wheel and tire assembly.**
3. **Remove the grease cap from the hub. Remove the cotter pin, nut lock, adjusting nut and keyed flat washer from the spindle. Remove the outer bearing and discard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



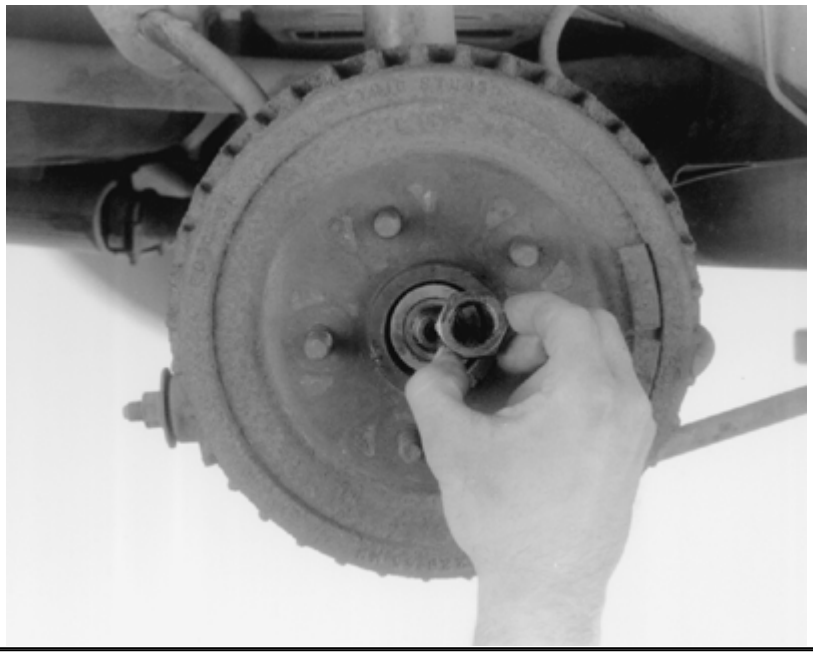
After removing the wheel and tire assembly, pry the grease cap from the hub. Be careful not to distort or damage the flange



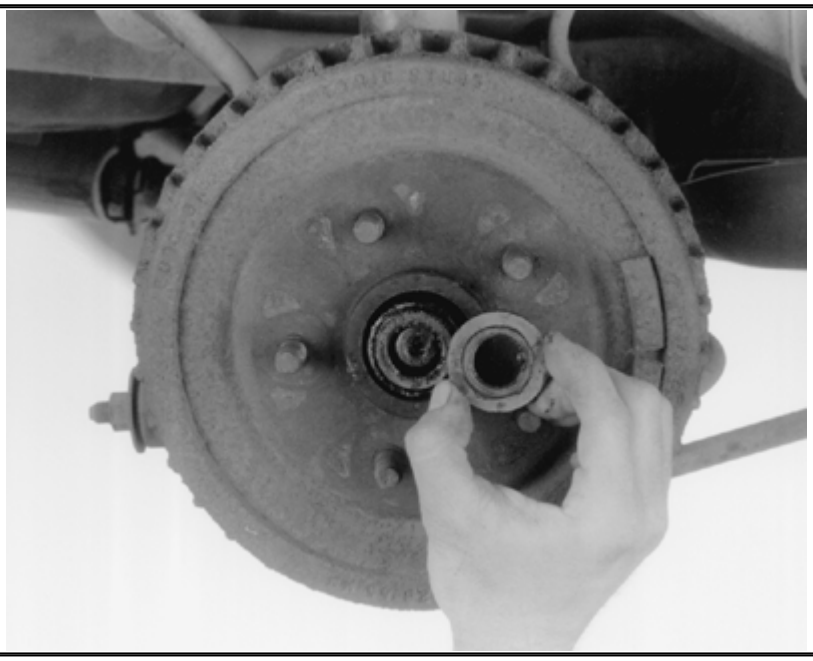
After removing the grease cap, unbend the cotter pin



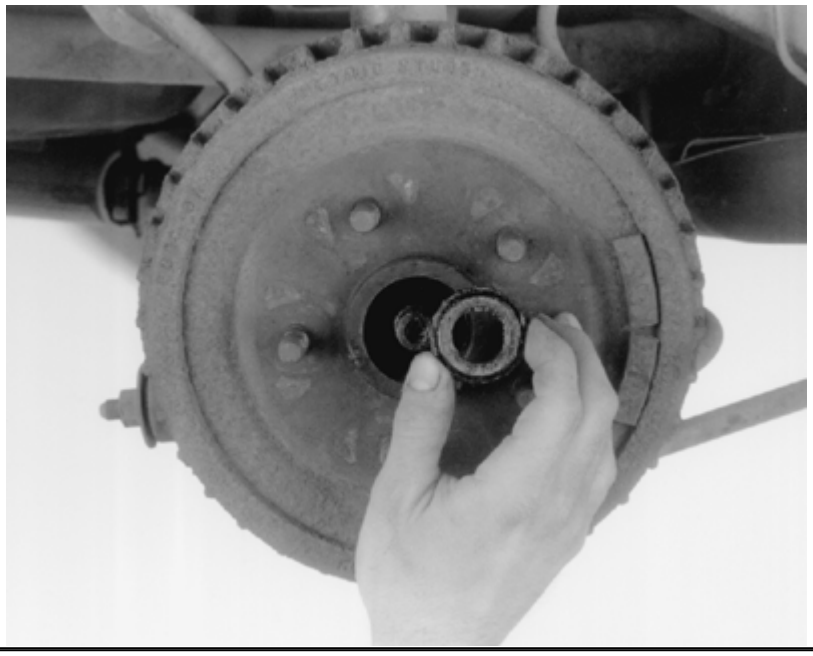
Grasp the cotter pin with needle-nose pliers and pull or pry it free of the spindle. Discard the cotter pin and replace it with a new one during installation



Remove the adjusting nut from the spindle

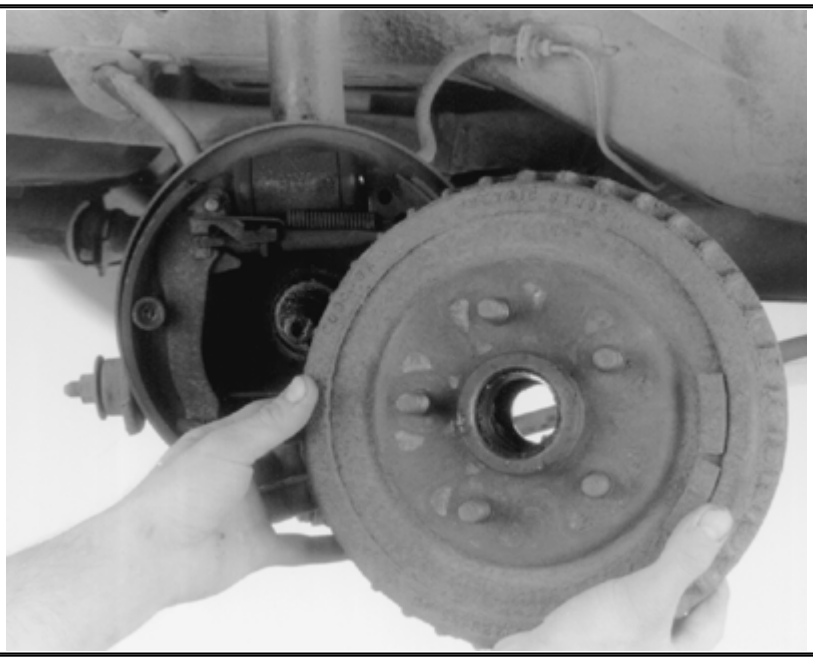


Remove the keyed washer from the spindle



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.**

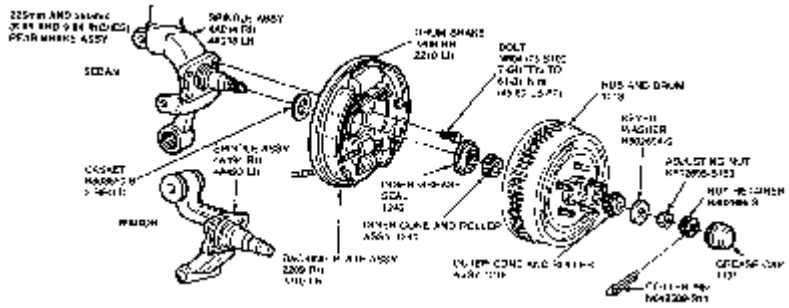


Remove the hub and drum assembly from the spindle

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.**



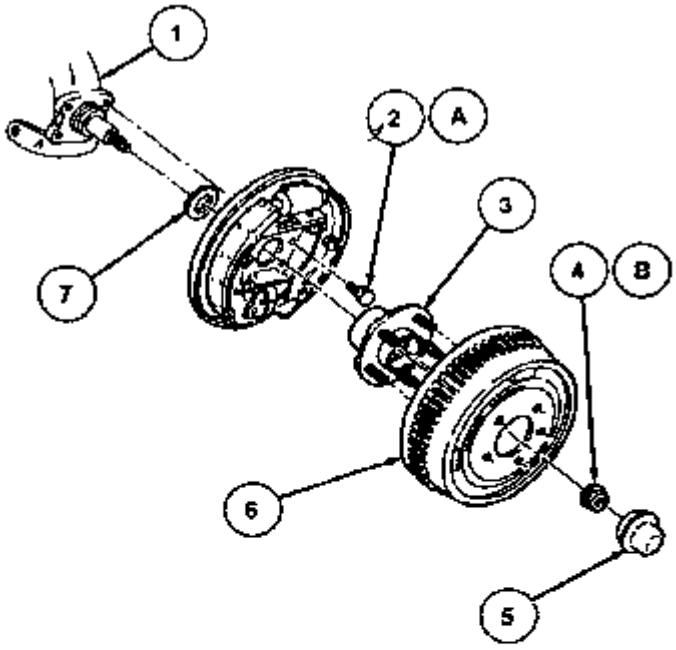
Exploded view of the rear brake drum and related components-1986-89 vehicles

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.**



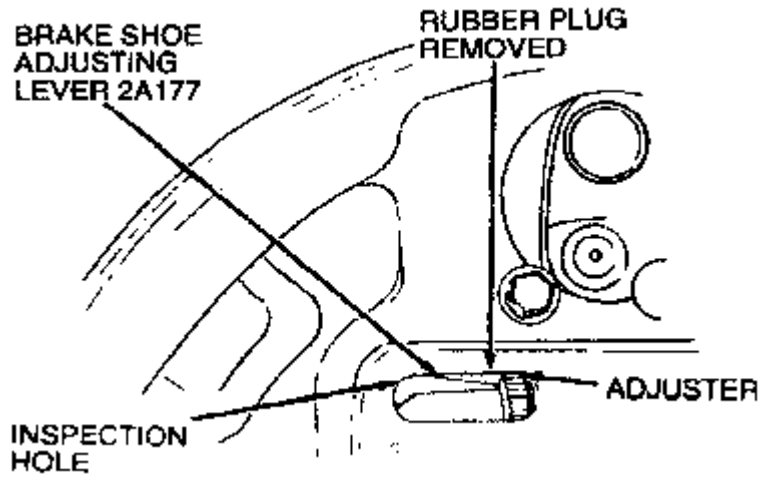
Item	Part Number	Description
1	4A013	Rear Wheel Spindle
2	N804175-S100	Bolt (4 Req'd Each Side)
3	1104	Wheel Hub
4	4B477	Rear Axle Wheel Hub Retainer (2 Req'd)
5	—	Rear Hub Cap Grease Seal
6	1126	Brake Drum
7	N803650-S	Gasket
A	—	Tighten to 60-80 N-m (45-60 Lb-Ft)
B	..	Tighten to 255-345 N-m (188-254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



The brake shoe adjuster is accessible through an inspection hole in the backing plate

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 $^{1}/_{32}$ 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.

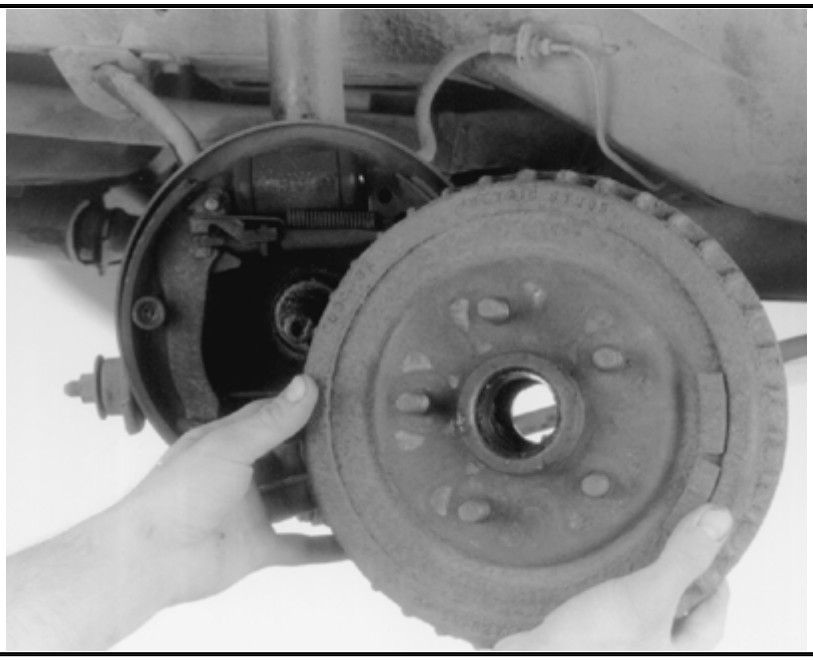
Check the condition of the brake shoes and linings, retracting springs, hold-down springs and the brake drum for signs of overheating. If the shoes and linings have a slight blue coloring (indicating overheating), the retracting springs and hold-down springs should be replaced. If they're not replaced,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

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

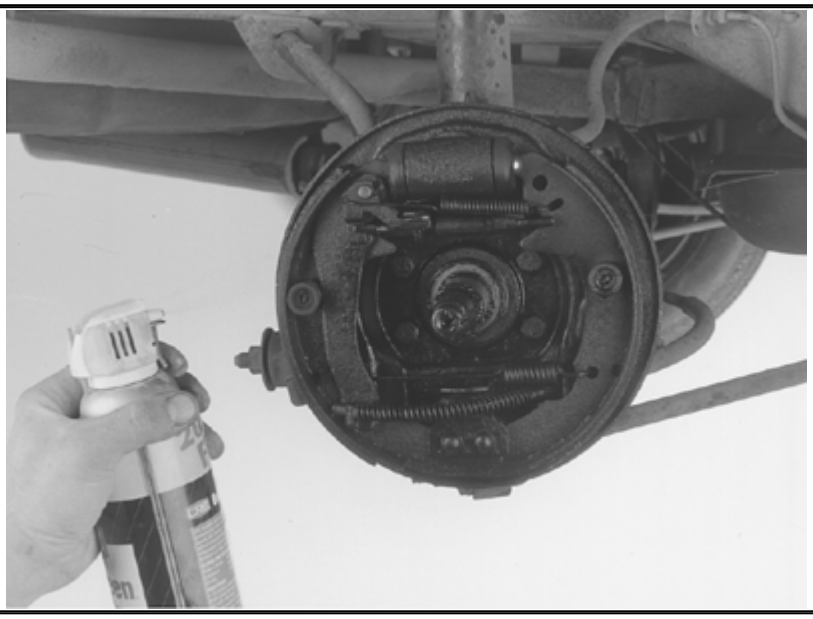
REMOVAL & INSTALLATION

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.**



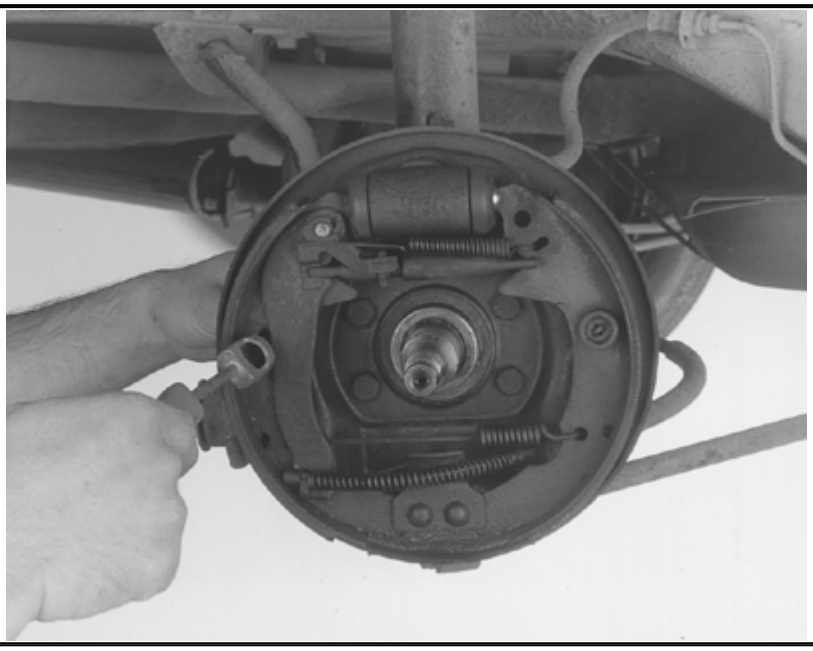
Remove the rear hub and drum assembly from the spindle



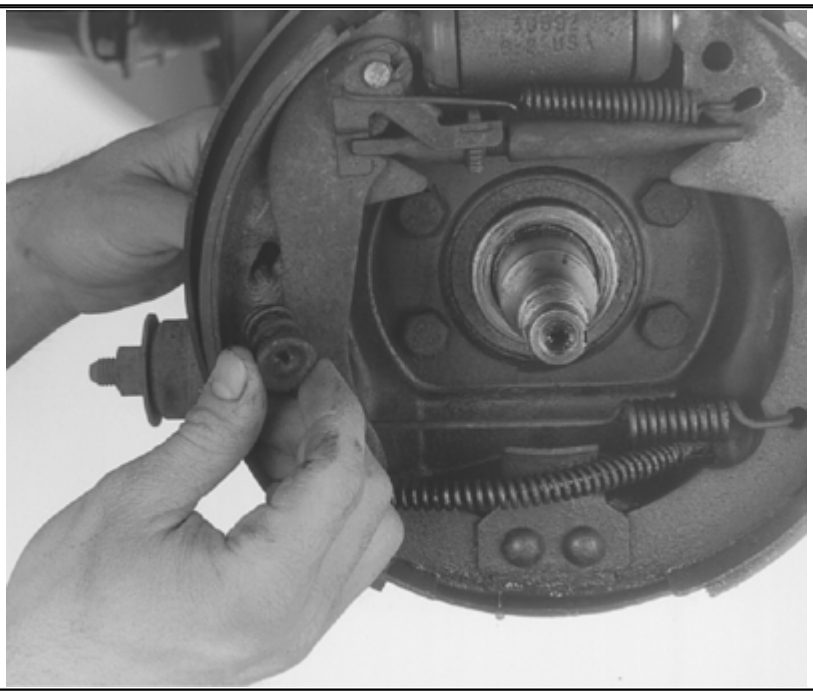
Use an evaporative spray brake cleaner to remove brake dust from the components

3. **For 1993-95 vehicles, remove the parking brake cable and conduit from the parking brake lever. For vehicles though 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.

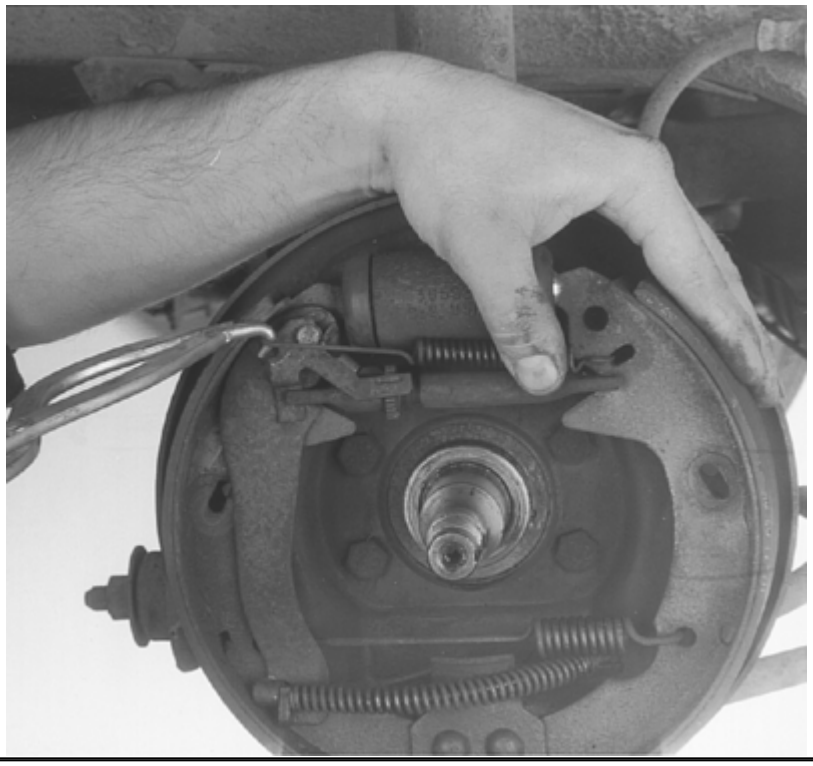


Use the brake tool to compress the hold-down spring and twist the plate to free the pin

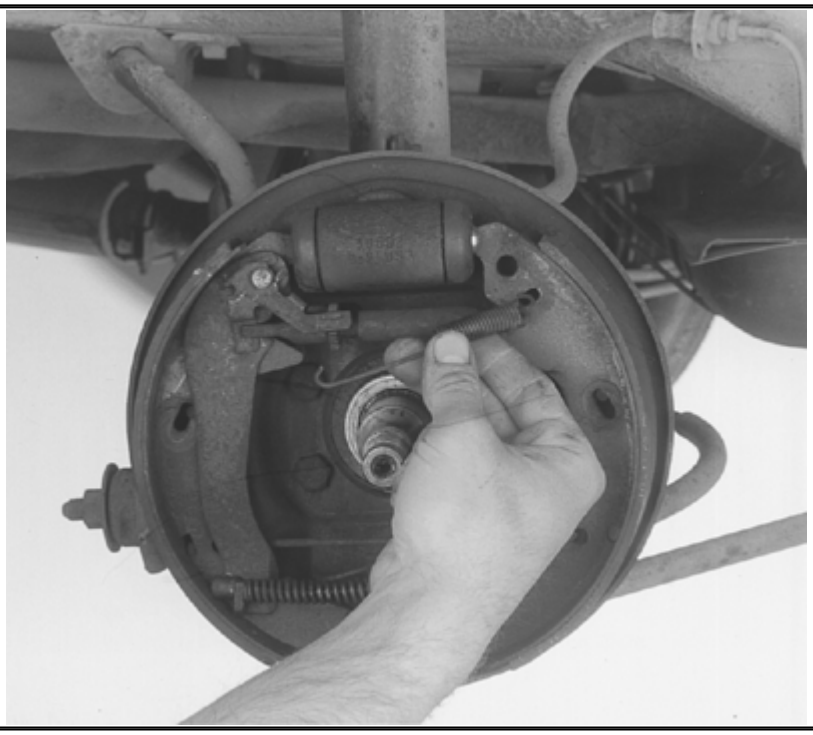


Once the pin is released, you can withdraw the spring from the backing plate

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 retracting 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 $^{1}/_{2}$ 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.

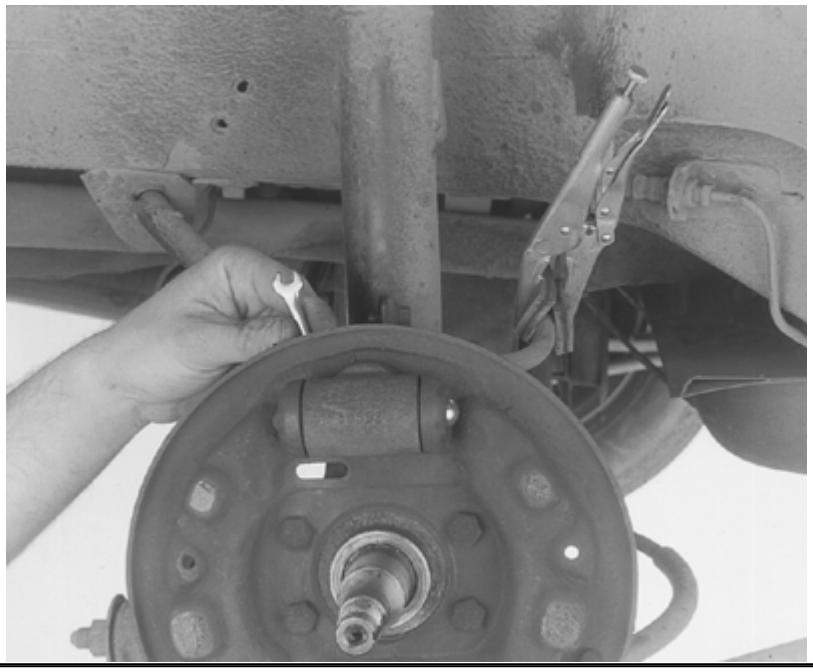
The adjuster socket blade is marked R for the right-hand or L for the left-hand brake assemblies. The R or L adjuster blade must be installed with the letter R or L in the upright position, facing the wheel cylinder, on the correct side to ensure that the deeper of the 2 slots in the adjuster socket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

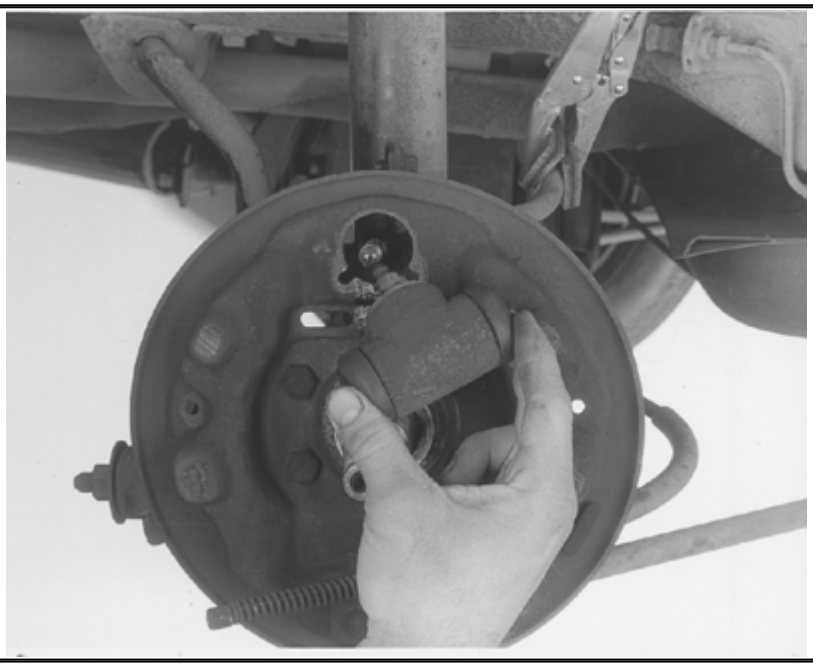
REMOVAL & INSTALLATION

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.

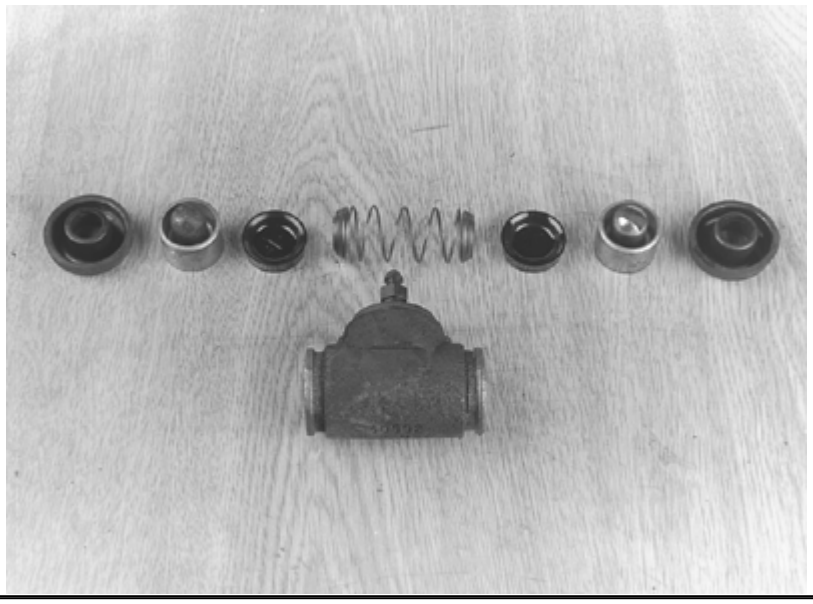
8. **Secure the wheel cylinder to the backing plate using the retaining bolts. Tighten the bolts to 8-10 ft. lbs. (10-14 Nm).**
9. **Using a tube nut wrench, install the tube nut fitting, then tighten to 11-15 ft. lbs. (15-20 Nm).**
10. **Install, then adjust the brakes, following the procedure earlier 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

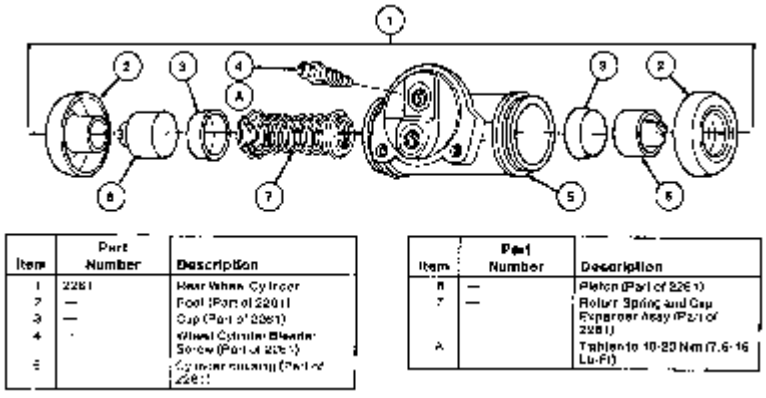
Wheel cylinders need not be rebuilt unless they are leaking or seized. To check the wheel cylinder for leakage, carefully pull the lower edge of the rubber end boot away from the cylinder. A slight amount of fluid in the boot is normal, but excessive brake fluid in the boot or running out of the boot (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	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	—	Roller Spring and Cup Expander Assy (Part of 2261)
A		Tighten to 10-20 Nm (7.6-15 Lb-Ft)

Exploded view of the wheel cylinder

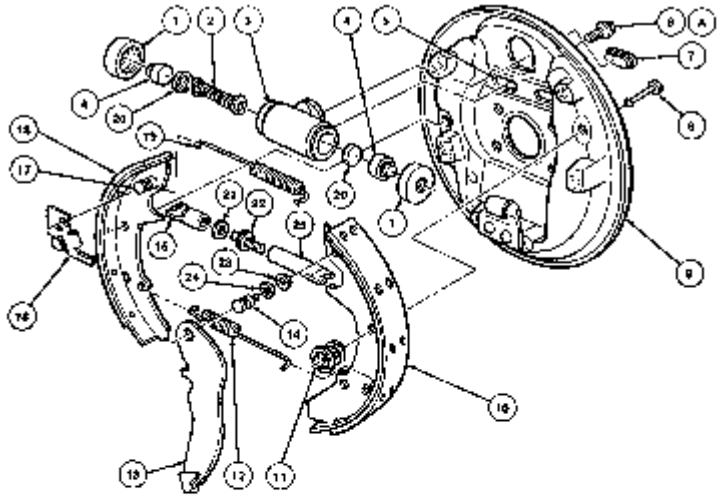
Click to enlarge

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.**



Item	Part Number	Description
1	—	Seal (Part of 2261)
2	—	Spring Expander (Part of 2261)
3	2261	Rear Wheel Cylinder
4	—	Piston and Boot (Part of 2261)
5	—	Shoe Adjustment Access Hole
6	N611227	Wheel Cylinder Retaining Screw (2 Req'd)
7	2600	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	2066	Brake Shoe Hold Down Spring
12	2056	Lower Brake Shoe Retracting Spring
13	24537 (RH) 24538 (LH)	Parking Brake Lever

Item	Part Number	Description
14	2101	Parking Brake Lever Pin (Inner)
15	2049	Brake Shoe Adjusting Screw Socket
16	2A177 (LH) 2A178 (RH)	Brake Shoe Adjusting Lever
17	2107	Parking Brake Lever Pin
18	—	Leading Shoe and Lining (Part of 2200)
19	2048	Brake Shoe Adjusting Screw Spring
20		Cup (Part of 2261)
21	N611234	Washer
22	—	Adjusting Screw (Part of 2261)
23	N611231	Washer
24	2135	Parking Brake Lever Pin Retainer
25		Adjusting Plate Nut (Part of 2246)
A	—	Tighten to 10-14 Nm (8-10 Lb-ft)

Exploded view of the rear drum brake backing plate and related components

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 $1^{7}/_{8}$ in. x $^{3}/_{4}$ 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.**