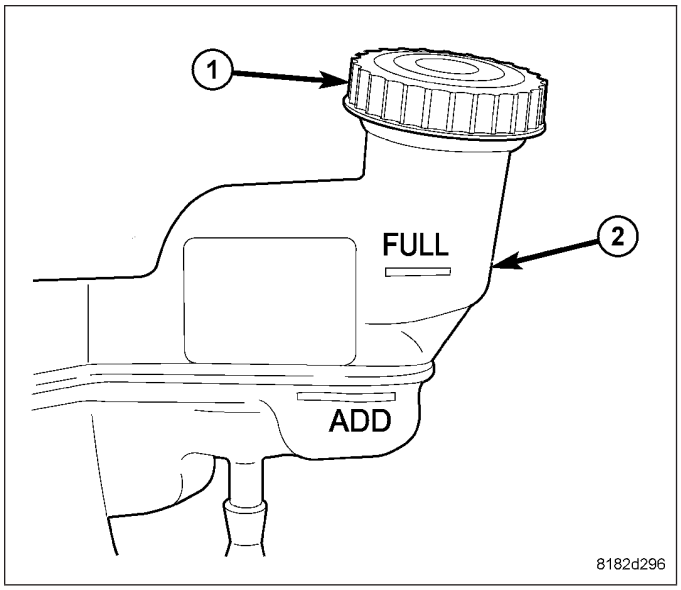
6. Bleed the remaining wheel circuits in the same manner until all air is removed from the brake system. Monitor the fluid level in the master cylinder reservoir (2) to make sure it does not go dry.
7. Check and adjust brake fluid level to the FULL mark.
8. Check the brake pedal travel. If pedal travel is excessive or has not been improved, some air may still be trapped in the system. Re-bleed the brakes as necessary.
9. Test drive the vehicle to verify the brakes are operating properly and pedal feel is correct.

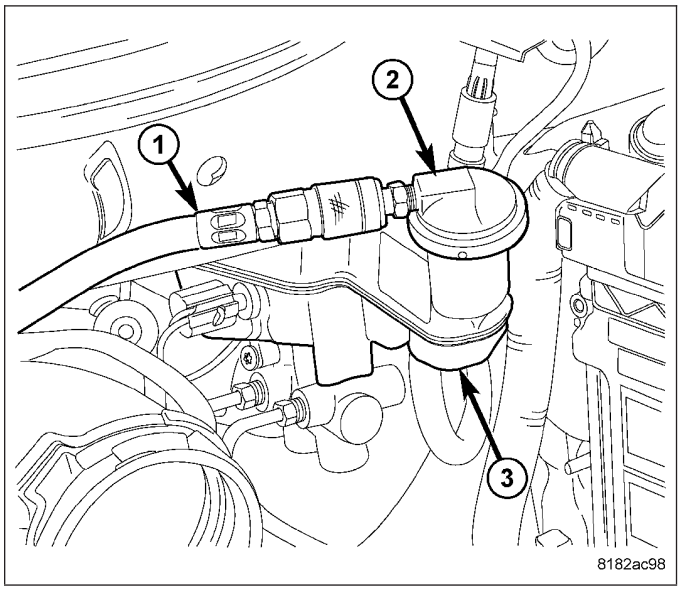


PRESSURE BLEEDING

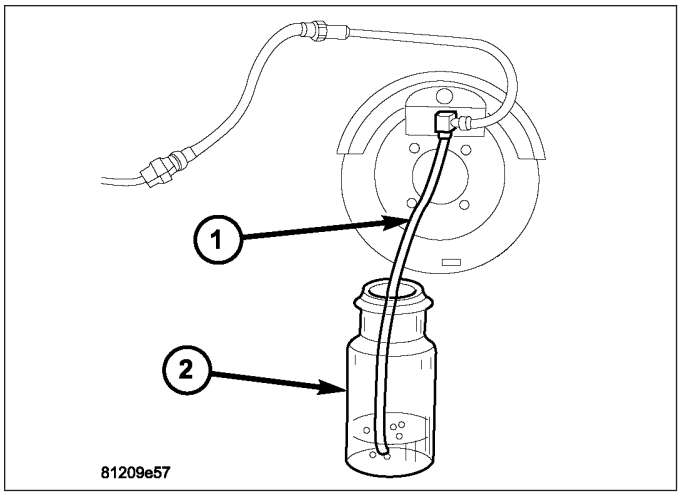
NOTE: Follow pressure bleeder manufacturer's instructions for use of pressure bleeding equipment.

Following the same wheel circuit sequence as prescribed for manual bleeding.

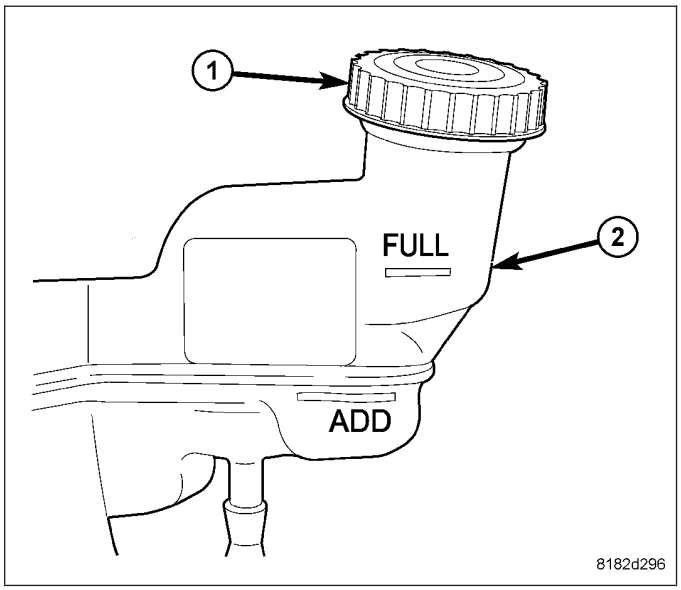
1. Attach Master Cylinder Cap (2), Special Tool 6921, in place of the filler cap on the master cylinder reservoir (3).
2. Attach Bleeder Tank (1), Special Tool C-3496-B, or an equivalent, to the Master Cylinder Cap 6921.



3. Attach a clear plastic hose (1) to the bleeder screw and feed the hose into a clear jar (2) containing enough fresh brake fluid to submerge the end of the hose.
4. Open the bleeder screw at least one full turn or more to obtain a steady stream of brake fluid.
5. After approximately 4–8 ounces of fluid have been bled through the brake circuit and an air-free flow is maintained in the clear plastic hose and jar, close the bleeder screw.
6. Repeat this procedure at all the remaining bleeder screws.



7. Check and adjust brake fluid level to the FULL mark on the reservoir (2).
8. Check the brake pedal travel. If pedal travel is excessive or has not been improved, some air may still be trapped in the system. Re-bleed the brakes as necessary.
9. Test drive the vehicle to verify the brakes are operating properly and pedal feel is correct.



SPECIFICATIONS

BRAKE ACTUATION

ACTUATION:	
Vacuum Operated Power Brakes	Standard
Hydraulic System	Dual-Diagonally Split
BRAKE PEDAL:	
Pedal Ratio	3.3:1
POWER BRAKE BOOSTER:	
Type	Vacuum Assist
Mounting Studs	M8 x 1.25
Diaphragm Size/Type	250 mm /Single Diaphragm
MASTER CYLINDER ASSEMBLY:	
Type	Compact
Body Material	Anodized Aluminum
Reservoir Material	Polypropelene
Bore and Stroke	20.6 mm x 42 mm (0.812 in. x 1.654 in.)
Displacement Split	50 / 50
MASTER CYLINDER FLUID OUTLET PORTS:	
Tube Fitting Type	ISO Flare
Primary Tube Nut Thread - With ABS	M12 x 1
Primary Tube Nut Thread - Without ABS	M10 x 1
Secondary Tube Nut Thread - All	M12 x 1
PROPORTIONING VALVE:	
Material	Aluminum/Steel
Function	Fixed Pressure Proportioning
Outlet Tube Fitting Type	ISO Flare
Outlet Tube Nut Threads - Primary	M12 x 1
Outlet Tube Nut Threads - Secondary	M10 x 1
ABS HYDRAULIC CONTROL UNIT PORTS:	
Tube Fitting Type	ISO Flare
Inlet Port Threads (Both)	M12 x 1
Outlet Port Threads-Left Front and Left Rear	M12 x 1
Outlet Port Threads-Right Front and Right Rear	M10 x 1

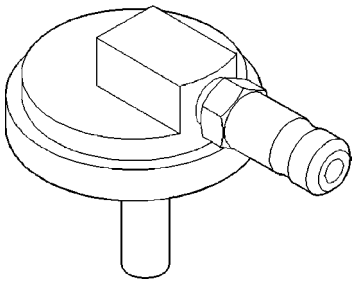
BRAKE FASTENER TORQUE

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
ABS ICU Mounting Bolt (To Bracket)	11	—	97
ABS ICU Mounting Pins	11	—	97
ABS ICU Mounting Bracket Screws (To Frame)	23	17	203
ABS ABM Mounting Screws (To HCU)	2	—	17
ABS Dynamics Sensor Mounting Nuts	9	6.5	80
ABS Wheel Speed Sensor Head Mounting Screw - Front	12	9	106
ABS Wheel Speed Sensor Head Mounting Screw - Rear	10	7	89
ABS Wheel Speed Sensor Routing Bracket Mounting Screw	18	13	160

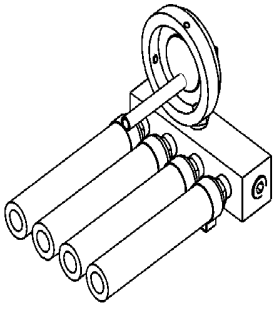
DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Brake Flex Hose Banjo Bolt - Front Caliper	24	18	210
Brake Flex Hose Fitting- Rear Caliper	15	11	133
Brake Pedal/Booster Mounting Nuts	23	17	200
Brake Tube Nuts	17	12.5	150
Disc Brake Caliper Adapter Bracket (To Knuckle) - Front	108	80	—
Disc Brake Caliper Adapter Bracket (To Knuckle) - Rear	72	53	—
Disc Brake Caliper Guide Pin Bolts - Front	43	32	—
Disc Brake Caliper Guide Pin Bolts - Rear	43	32	—
Disc Brake Caliper Bleeder Screw	8	6	71
Drum Brake Wheel Cylinder Mounting Screws	13	—	115
Drum Brake Wheel Cylinder Bleeder Screw	10	—	89
Fluid Reservoir Mounting Screw	5.5	4	48
Master Cylinder Mounting Nuts	25	18	221
Parking Brake Lever Mounting Nuts	28	21	250
Proportioning Valves	30	22	—
Wheel Mounting (Lug) Nuts	135	100	—

SPECIAL TOOLS

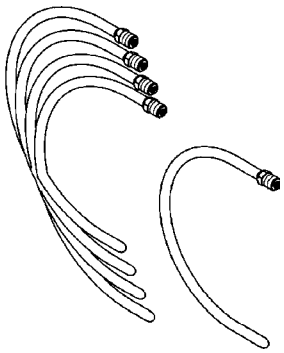
BASE BRAKE SYSTEM



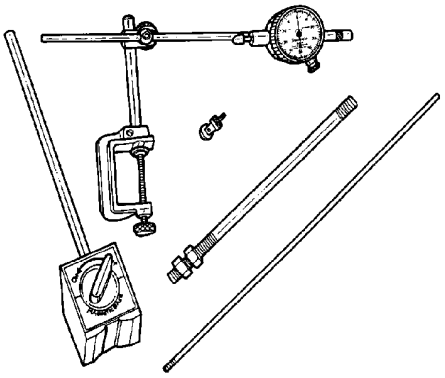
Cap, Master Cylinder 6921



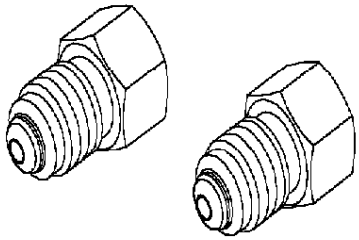
Adapter, Bleeder Tubes 9705

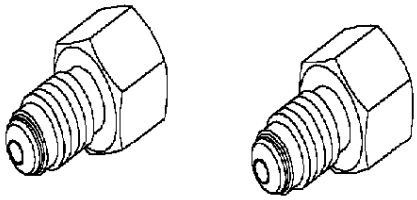


Bleeder Tubes 8358



Dial Indicator C-3339A



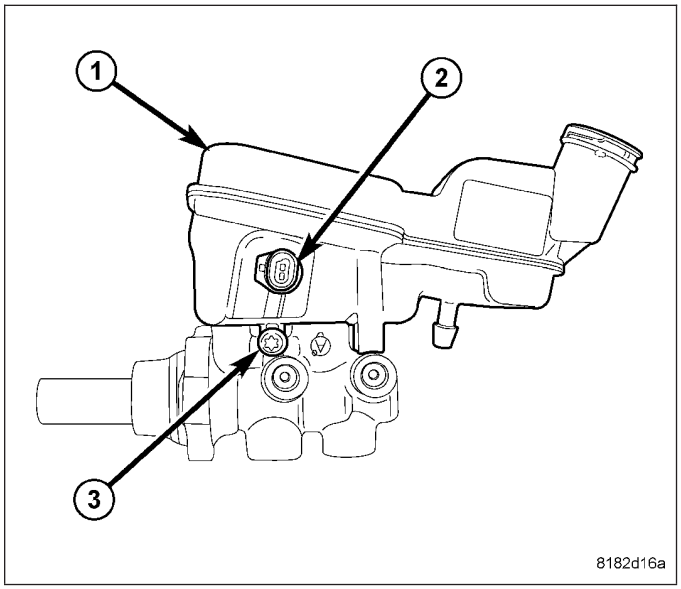


Adapters, Bleeder Tube 8822

SWITCH-BRAKE FLUID LEVEL

DESCRIPTION

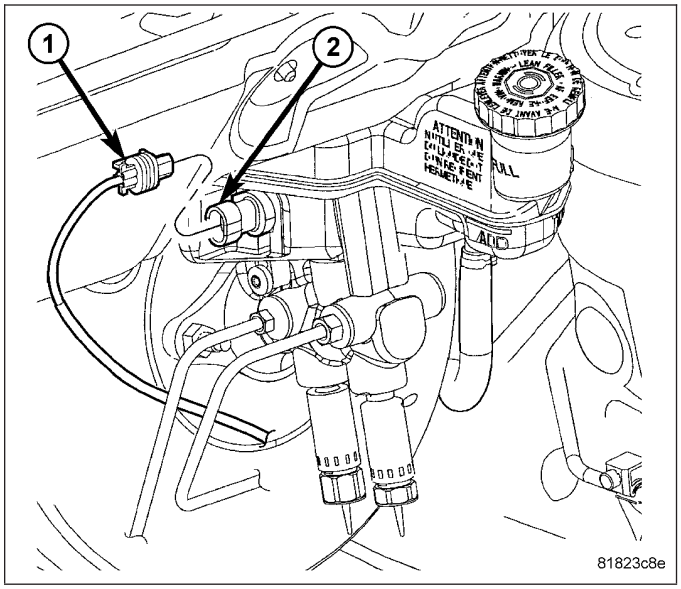
The brake fluid level switch (2) is mounted through the center of the fluid reservoir (1). The switch can be serviced separately from the master cylinder fluid reservoir.



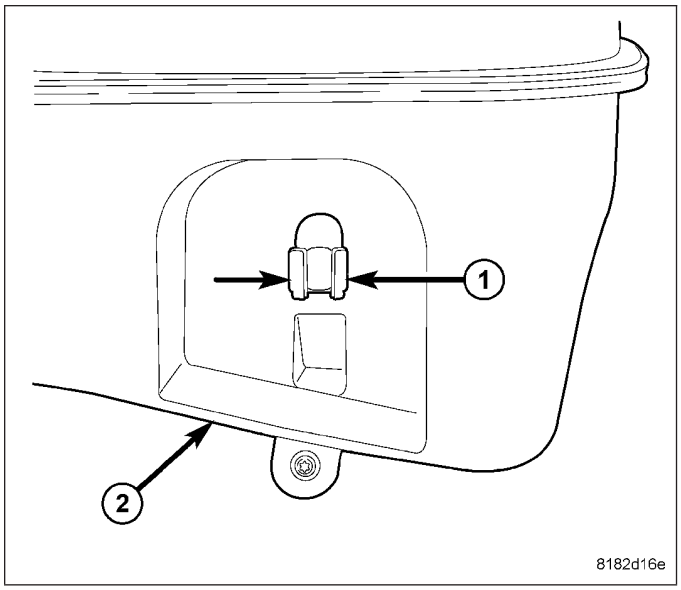
REMOVAL

NOTE: Before proceeding, (Refer to 5 - BRAKES - WARNING) (Refer to 5 - BRAKES - CAUTION).

1. Remove the wiring harness connector (1) from the brake fluid level switch (2) in the master cylinder brake fluid reservoir.

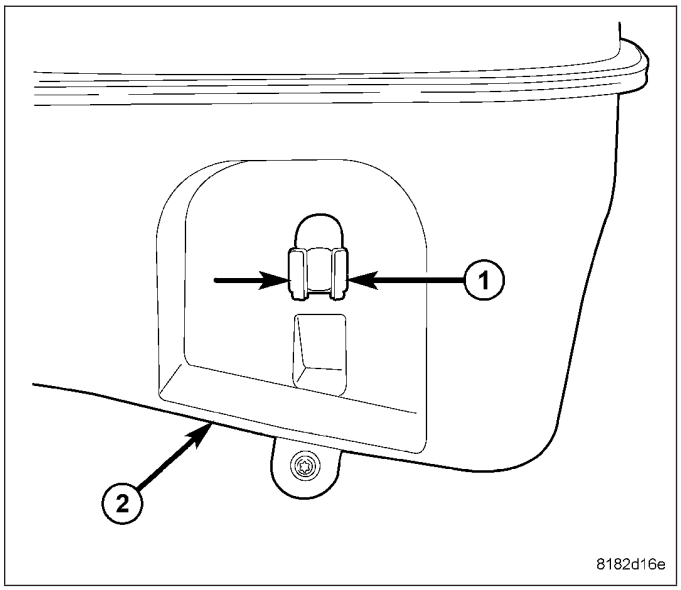


2. Push together the retaining tabs (1) holding the brake fluid level switch in place in the brake fluid reservoir (2).
3. Pull the brake fluid level switch out the right side of the reservoir.

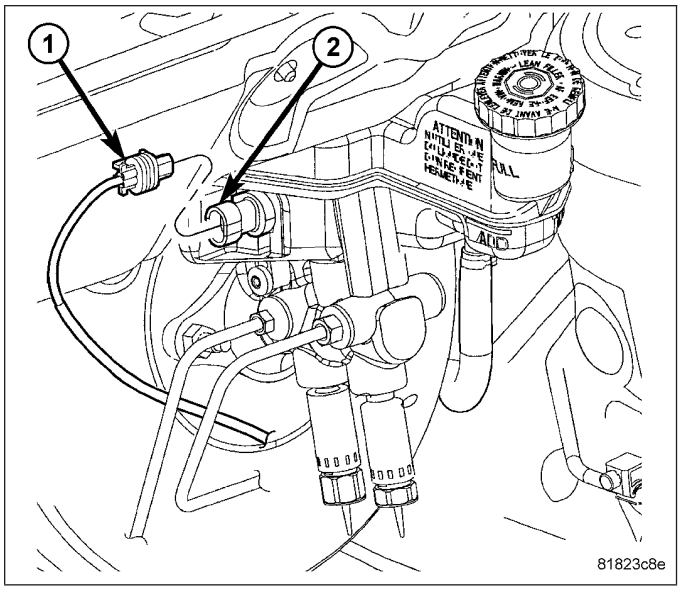


INSTALLATION

1. Align the brake fluid level switch with its mounting hole on the right side of the master cylinder brake fluid reservoir. Push the switch into the fluid reservoir until the switch retaining tabs (1) are expanded on the opposite side of the reservoir (2), locking it in place.



2. Connect the wiring harness connector (1) to the switch (2).



HYDRAULIC/MECHANICAL

DESCRIPTION

DISC BRAKES

There are several brake packages available featuring either a disc/drum combination or a disc/disc combination.

- “15-inch” vented front disc/9-inch rear drum (BRA)
- “15-inch” vented front disc/9-inch rear drum with ABS (BRK)
- “16-inch” vented front disc/9-inch rear drum with ABS (BRJ)
- “16-inch” vented front disc/”14-inch” solid rear disc with ABS (BRF)
- “16-inch” vented front disc/”14-inch” solid rear disc with ESP (BRF)

Only one package is available on Export vehicles, that is a “16-inch” vented front disc/”14-inch” (BR1) solid rear disc with ABS. It is like the BRF brake package, except the front brake linings are different.

“15-INCH” FRONT DISCS

“15-inch” front disc brakes (so called because they are designed to fit inside 15-inch or larger wheels) feature 2.2 inch (57 mm) single-piston floating calipers acting on 10.8 x 1.0 in. (276 x 26 mm) vented disc rotors.

“16-INCH” FRONT DISCS

“16-inch” front disc brakes (so called because they are designed to fit inside 16-inch or larger wheels) feature 2.2 inch (57 mm) single-piston floating calipers acting on 11.5 x 1.0 in. (294 x 26 mm) vented disc rotors.

“14-INCH” REAR DISCS

“14-inch” rear disc brakes feature 1.4 inch (35 mm) single-piston floating calipers acting on 10.3 x 0.39 in. (262 x 10 mm) solid disc rotors.

Each disc brake assembly consists of the following major components:

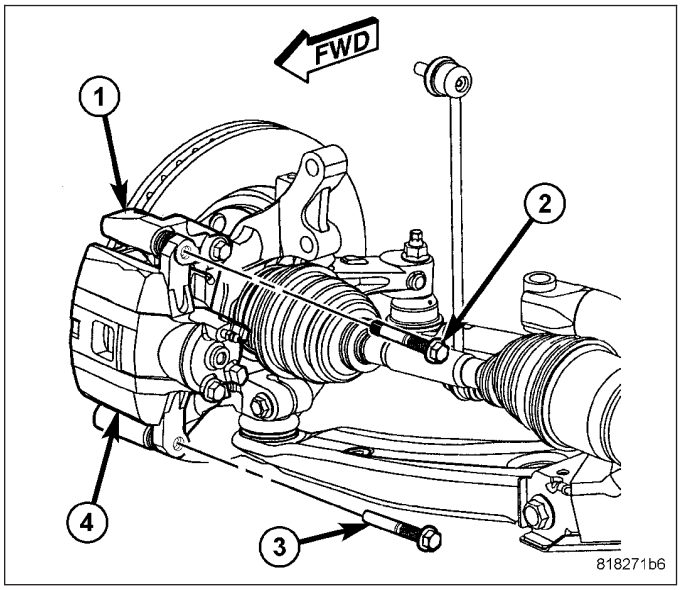
- Caliper
- Caliper adapter bracket
- Pads (Shoe and lining assemblies)
- Rotor

All calipers are the low-drag type. New technology caliper construction allows minimal drag of the pads on the discs with low clearance to the rotors to maintain maximum pedal feel and responsiveness.

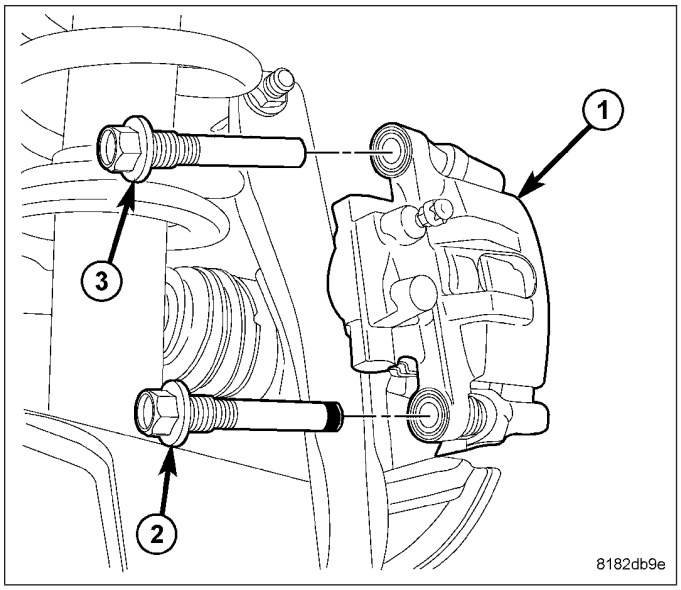
All calipers are coated, giving them a bright appearance. This coating offers corrosion protection and a long-term neat appearance. Steel pistons are used in all calipers.

The main difference between the two front disc brakes packages are rotor size (diameter) and caliper adapter bracket (1) length.

The caliper guide pin bolts are of special interest. There are two different caliper guide pin bolts used at each brake caliper, one of which has a special sleeve at the tip of the guide pin. It is there for anti-rattle and noise suppression issues and must be placed correctly to work properly. At each front brake caliper (4) this bolt (2) is placed at the upper location.



At each rear brake caliper (1) this bolt (2) is placed at the lower location.



Front disc brakes are equipped with an audible wear indicator on the right side inboard brake pad only. The left side pads do not include an audible wear indicator.

Rear disc brakes are equipped with audible wear indicators on both left side and right side inboard brake pads.

When the brake pads are replaced, only brake pads meeting the Original Equipment Manufacturer (OEM) formulation (such as Mopar® replacement parts) should be used.

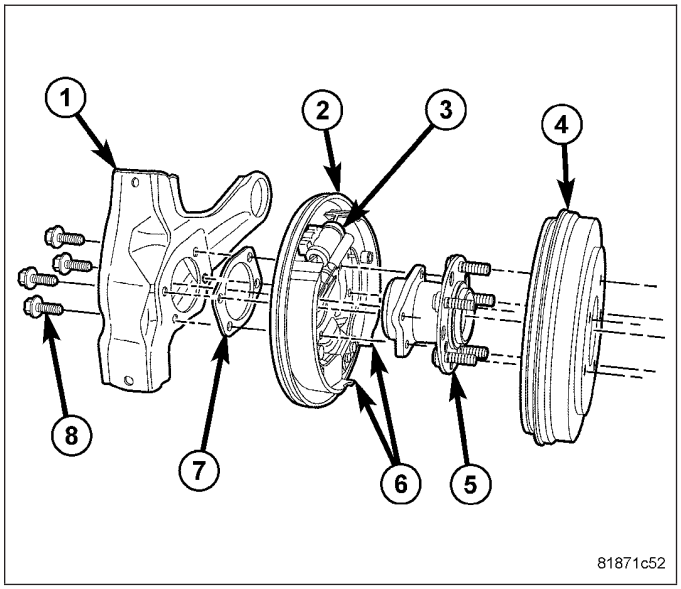
All brake rotors are fully coated with zinc dust, water-soluble, environmentally friendly corrosion preventive. Both the friction surfaces and the vents are coated. During initial brake applications of a new rotor, the brake pads scrub the coating off the friction surfaces, ensuring that the remainder will be rust free. Coating the vents also ensures that there will not be a loss of heat capacity over time.

REAR DRUM BRAKES

All rear drum brake equipped vehicles feature 9 inch (229 mm) rear drum brakes. The drum brakes are all two-shoe (7), internal-expanding type with an automatic adjuster screw.

Each rear drum brake consists of these major components as well as the attaching hardware:

- Adjuster
- Drum (4)
- Shoes (6)
- Support Plate (2)
- Wheel Cylinder (3)



The rear drum brakes also serve as part of the parking brake system. (Refer to 5 - BRAKES/PARKING BRAKE - DESCRIPTION)

DIAGNOSIS AND TESTING

DRUM BRAKE AUTOMATIC ADJUSTER

To properly test the drum brake automatic adjuster, the aide of a helper inside the vehicle to apply the brakes will be necessary.

1. Raise and support the vehicle. (Refer to LUBRICATION & MAINTENANCE/HOISTING - STANDARD PROCEDURE).
2. Remove the access plug from the rear adjustment slot in each brake support plate.
3. Insert a thin screwdriver in the adjustment slot and push back the adjustment lever. With the lever in this position, back the star wheel adjustment off approximately 10 notches. This will eliminate the possibility that the brake is at full adjustment, and can be adjusted no further.
4. Remove the screwdriver from the adjustment slot.
5. Watch the star wheel through the adjustment slot, while a helper applies the brake pedal. As the brake shoes apply, the adjustment lever should move downward, turning the star wheel. A definite rotation of the adjuster star wheel can be observed if the automatic adjuster is working properly.

If the star wheel does not move as indicated, the brake drum needs to be removed and further inspection of the rear brakes is necessary.

6. If the star wheel is operating properly, readjust the brakes. (Refer to 5 - BRAKES/HYDRAULIC/MECHANICAL/BRAKE PADS/SHOES - ADJUSTMENTS).
7. Reinstall the adjustment slot access plug.
8. Lower the vehicle.

PADS-FRONT BRAKE

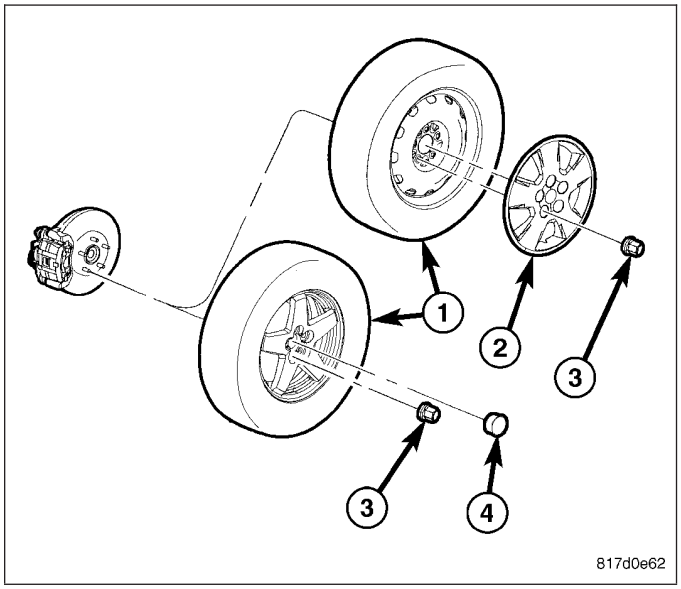
REMOVAL

NOTE: Before proceeding, (Refer to 5 - BRAKES - WARNING) (Refer to 5 - BRAKES - CAUTION).

1. Raise and support the vehicle. (Refer to LUBRICATION & MAINTENANCE/HOISTING - STANDARD PROCEDURE)

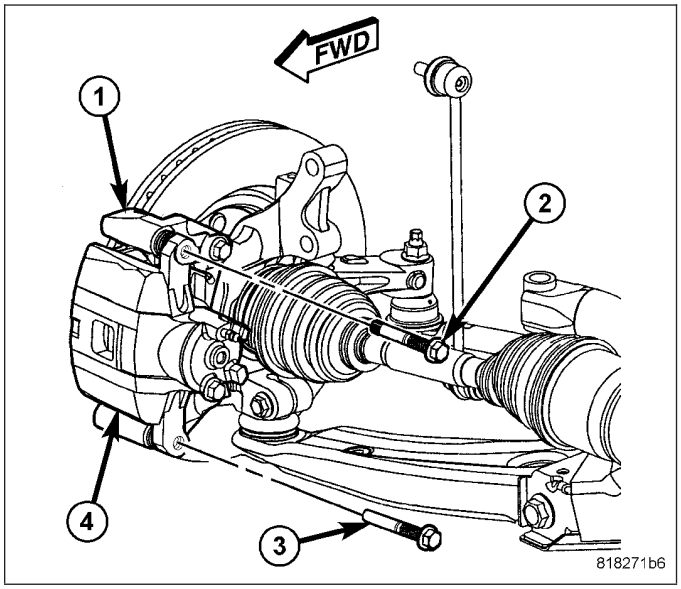
NOTE: Perform Step 2 through Step 5 on each side of the vehicle to complete pad set removal.

2. Remove the wheel mounting nuts (3), then the tire and wheel assembly (1).

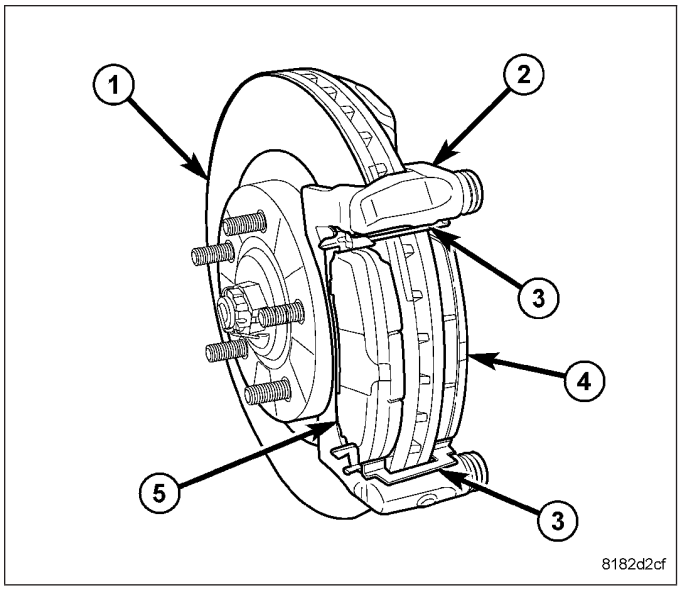


CAUTION: When removing the caliper guide pin bolts (2, 3) note that one (upper) has a special sleeve on the end. It important that his bolt be installed in the upper mounting hole when the caliper is installed.

3. Remove the two brake caliper guide pin bolts (2, 3).
4. Remove the disc brake caliper (4) from the disc brake adapter bracket (1) and hang it out of the way using wire or a bungee cord. Use care not to overextend the brake hose when doing this.



5. Remove the brake pads (4, 5) from the caliper adapter bracket (2).



CLEANING

WARNING: Dust and dirt accumulating on brake parts during normal use may contain asbestos fibers from production or aftermarket brake linings. Breathing excessive concentrations of asbestos fibers can cause serious bodily harm. Exercise care when servicing brake parts. Do not sand or grind brake lining unless equipment used is designed to contain the dust residue. Do not clean brake parts with compressed air or by dry brushing. Cleaning should be done by dampening the brake components with a fine mist of water, then wiping the brake components clean with a dampened cloth. Dispose of cloth and all residue containing asbestos fibers in an impermeable container with the appropriate label. Follow practices prescribed by the Occupational Safety And Health Administration (OSHA) and the Environmental Protection Agency (EPA) for the handling, processing, and disposing of dust or debris that may contain asbestos fibers.

INSPECTION

Visually inspect brake pads for uneven lining wear. Also inspect for excessive lining deterioration. Check the clearance between the tips of the wear indicators (if equipped) on the pads and the brake rotors.

If a visual inspection does not adequately determine the condition of the lining, a physical check will be necessary. To check the amount of lining wear, remove the disc brake pads from the vehicle.

Measure brake pad minimum thickness. Brake pads must be replaced when usable material on a brake pad lining measured at its thinnest point measures one millimeter (0.04 inches) or less.

NOTE: It is important to inspect both front and rear brake pads during the same inspection. Typically, front and rear brake pads wear out at the same time.

Replace **both** disc brake pads (inboard and outboard) at each caliper. It is also necessary to replace the pads on the opposite side of the vehicle as well as the pads failing inspection to maintain proper braking characteristics.

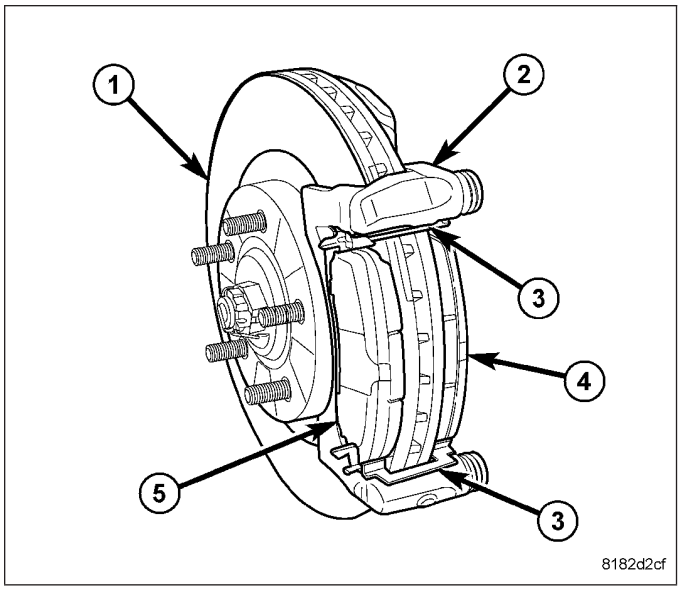
If the brake pad assemblies do not require replacement, be sure to reinstall the brake pads in the original position they were removed from.

INSTALLATION

NOTE: Perform Step 1 through Step 5 on each side of the vehicle to complete pad set installation, then proceed to Step 6.

NOTE: Make sure that the audible wear indicators (if equipped) are placed toward the top when the inboard brake pads are installed on each side of the vehicle.

1. Place the brake pads (4, 5) in the abutment shims (3) clipped into the disc brake caliper adapter bracket (2) as shown. Place the pad with the wear indicator attached on the inboard side (2).
2. Completely retract the caliper piston back into the bore of the caliper.

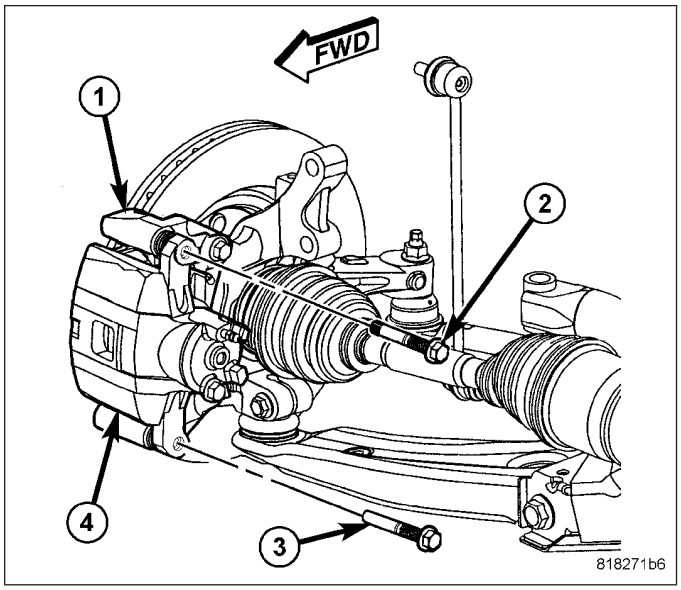


CAUTION: Use care when installing the caliper (4) onto the adapter bracket (1) to avoid damaging the boots.

3. Install the disc brake caliper over the brake pads on the brake caliper adapter bracket.

CAUTION: When installing the caliper guide pin bolts (2, 3) make sure that the one that has a special sleeve on the end is installed in the upper mounting hole.

4. Align the caliper guide pin bolt holes with the adapter bracket. Install the upper (with special sleeve) (2) and lower (3) caliper guide pin bolts. Tighten the guide pin bolts to 43 N·m (32 ft. lbs.).



5. Install tire and wheel assembly (1) (Refer to 22 - TIRES/WHEELS - INSTALLATION). Install and tighten wheel mounting nuts (3) to 135 N·m (100 ft. lbs.).
6. Lower the vehicle.