

Brakes

Conventional Brakes	19-1
Anti-lock Brake System (ABS)	19-25

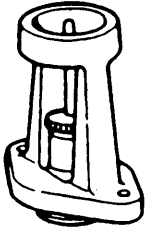


Conventional Brakes

Special Tools	19-2	Rear Drum Brake	
Component Locations		Index/Inspection	19-18
Index	19-3	Inspection	19-19
Inspection and Adjustment		Brake Shoe Replacement	19-20
Brake System Rubber Parts		Brake Hoses/Lines	
and Brake Booster	19-4	Inspection/Torque Specifications	19-22
Brake Pedal	19-5	Hose Replacement	19-23
Parking Brake	19-6	Parking Brake Cable	
Bleeding	19-7	Inspection and Replacement	19-24
Brake System Indicator	19-8		
Front Brake Pads			
Inspection and Replacement	19-9		
Front Brake Disc			
Disc Runout Inspection	19-11		
Disc Thickness and Parallelism			
Inspection	19-11		
Front Brake Caliper			
Disassembly	19-12		
Reassembly	19-13		
Master Cylinder/Brake Booster			
Removal/Installation	19-15		
Pushrod Clearance Adjustment	19-16		
Brake Booster Inspection	19-17		



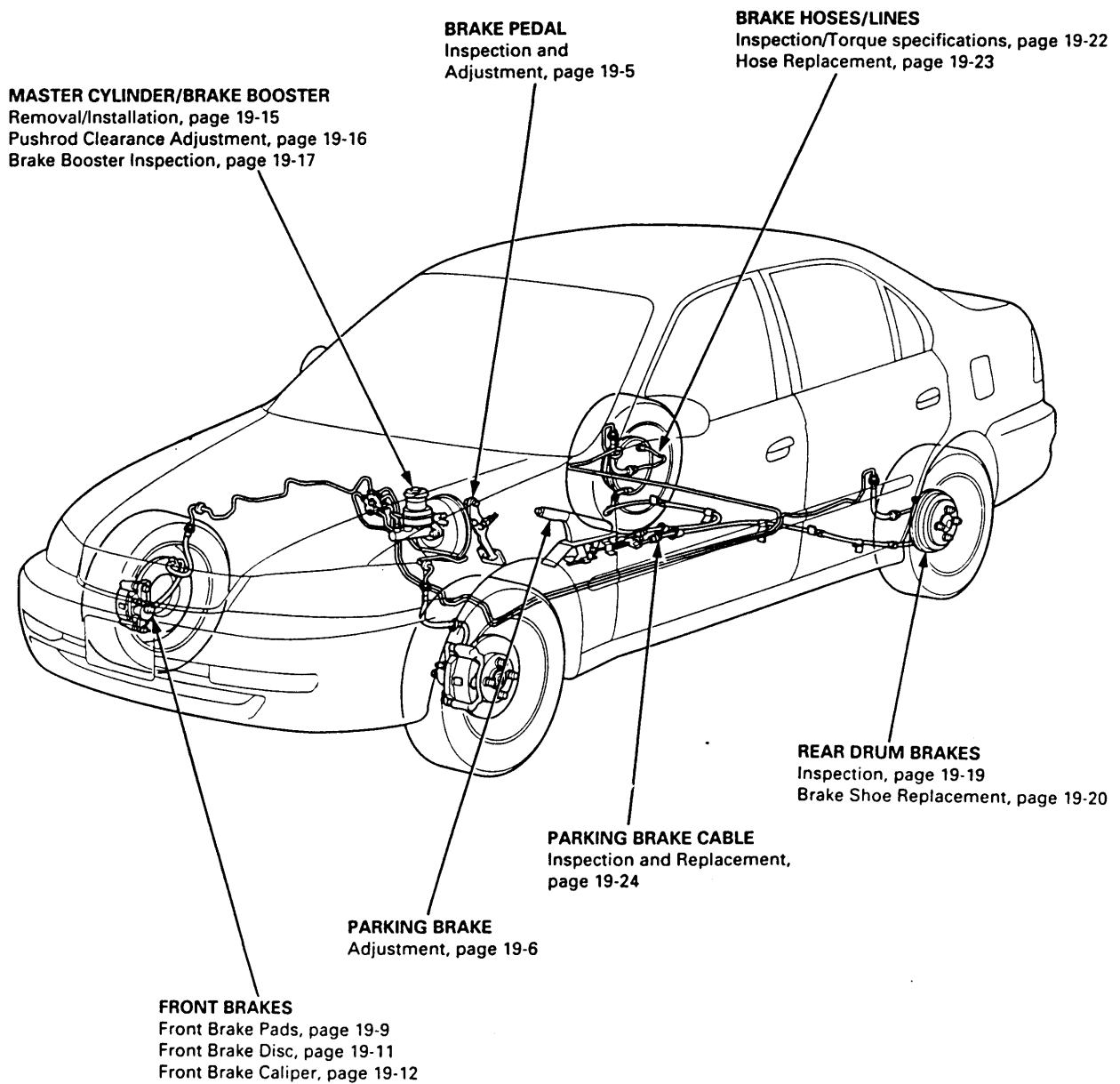
Special Tools

Ref. No.	Tool Number	Description	Qty	Page Reference
①	07JAG – SD40100	Pushrod Adjustment Gauge	1	19-16
 ①				

Component Locations



Index



Inspection and Adjustment

Brake System Rubber Parts and Brake Booster

A Brake Booster

Check brake operation by applying the brakes. If the brakes do not work properly, check the brake booster. Replace the brake booster as an assembly if it does not work properly or if there are signs of leakage.

B Piston Cup and Pressure Cup Inspection

- Check brake operation by applying the brakes. Visually check for damage or signs of fluid leakage. Replace the master cylinder as an assembly if the pedal does not work properly or if there is damage or signs of fluid leakage.
- Check for a difference in brake pedal stroke between quick and slow brake applications. Replace the master cylinder if there is a difference in pedal stroke.

C Brake Hoses

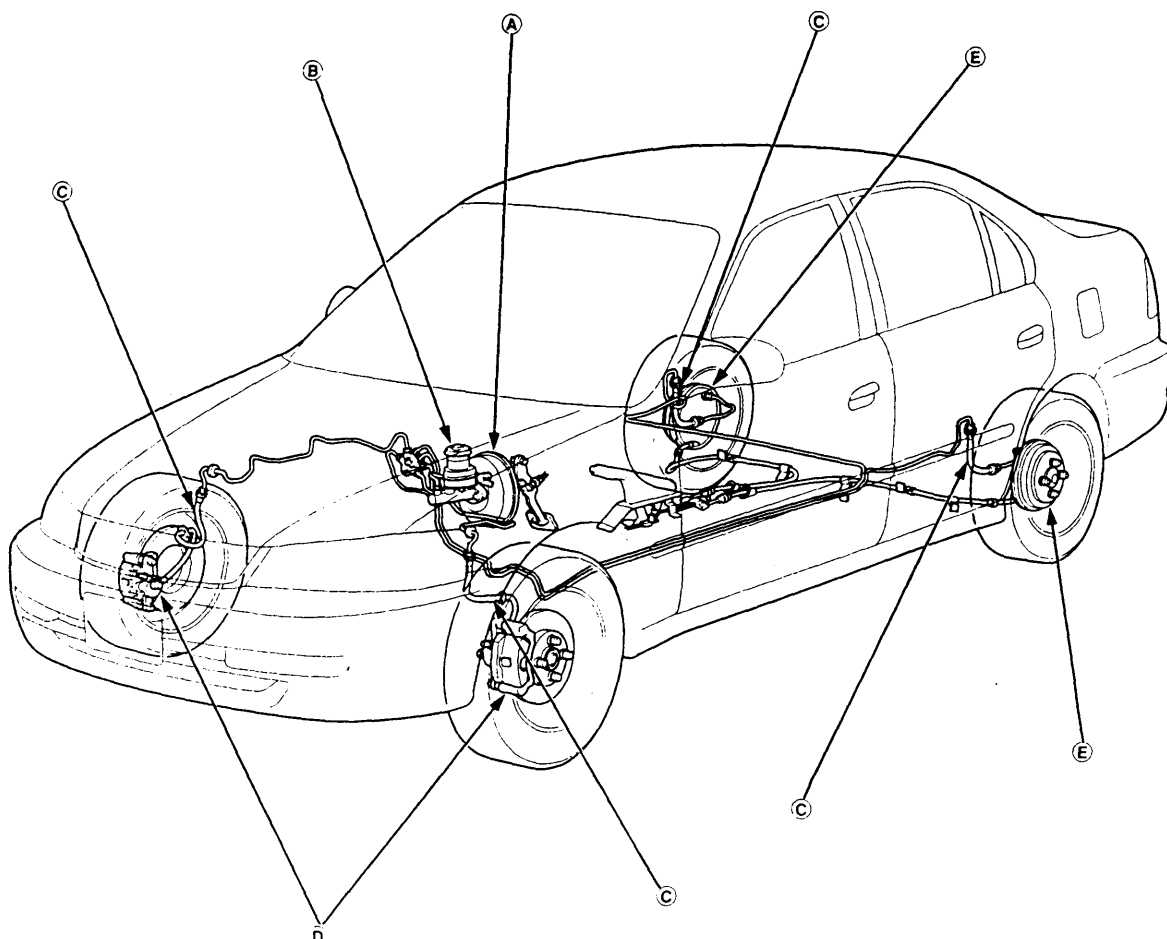
Visually check for damage or signs of fluid leakage. Replace the brake hose with a new one if it is damaged or leaking.

D Caliper Piston Seal and Piston Boots

Check brake operation by applying the brakes. Visually check for damage or signs of fluid leakage. If the pedal does not operate properly, the brakes drag, or there is damage or signs of fluid leakage, disassemble and inspect the brake caliper. Replace the boots and seals with new ones whenever the brake caliper is disassembled.

E Wheel Cylinder Piston Cup and Dust Cover

Check brake operation by applying the brakes. Visually check for damage or signs of fluid leakage. If the pedal does not operate properly, the brakes drag, or there is damage or signs of fluid leakage, inspect the wheel cylinder. If necessary, replace the wheel cylinder as an assembly.

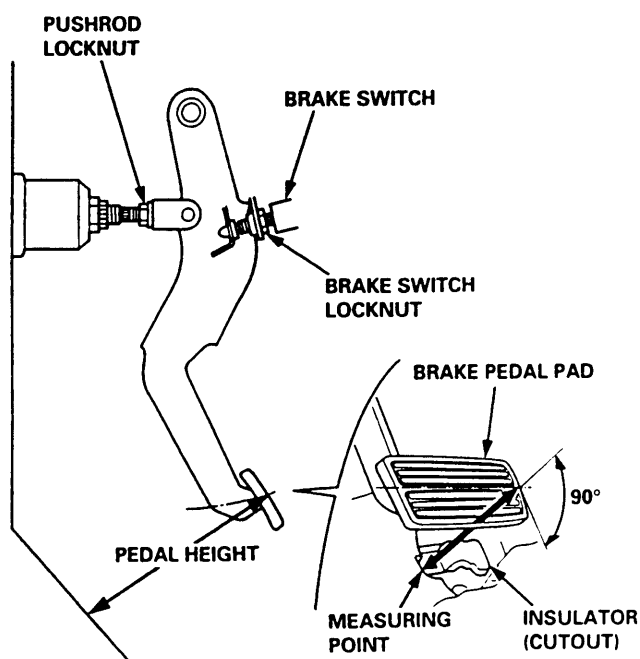




Brake Pedal

Pedal Height

1. Disconnect the brake switch connector, loosen the brake switch locknut, and back off the brake switch until it is no longer touching the brake pedal.
2. Turn up the carpet. At the insulator cutout, measure the pedal height from the right side center of the pedal pad.



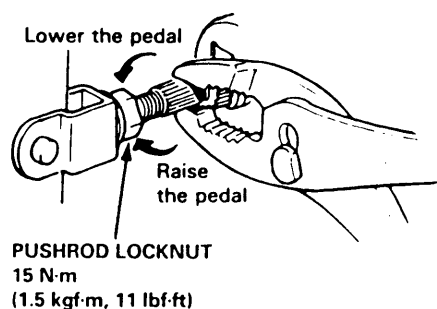
Standard Pedal Height (with carpet removed):

M/T: 156.5 mm (6.16 in)

A/T: 161 mm (6.34 in)

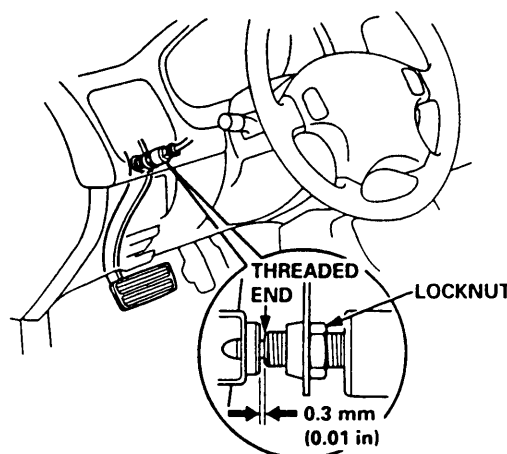
3. Loosen the pushrod locknut, and screw the pushrod in or out with pliers until the standard pedal height from the floor is reached. After adjustment, tighten the locknut firmly.

NOTE: Do not adjust the pedal height with the pushrod depressed.



4. Screw in the brake switch until its plunger is fully depressed (threaded end touching the pad on the pedal arm). Then back off the switch 1/4 turn to make 0.3 mm (0.01 in) of clearance between the threaded end and pad. Tighten the locknut firmly. Connect the brake switch connector.

CAUTION: Make sure that the brake lights go off when the pedal is released.



5. Check the brake pedal free play as described below.

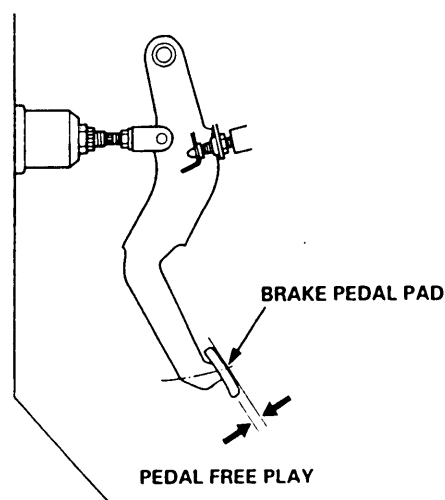
Pedal Free Play

1. With the engine off, inspect the play on the pedal pad by pushing the pedal by hand.

Free Play: 1 – 5 mm (1/16 – 3/16 in)

2. If the pedal free play is out of specification, adjust the brake switch.

CAUTION: If the pedal free play is insufficient, it may result in brake drag.



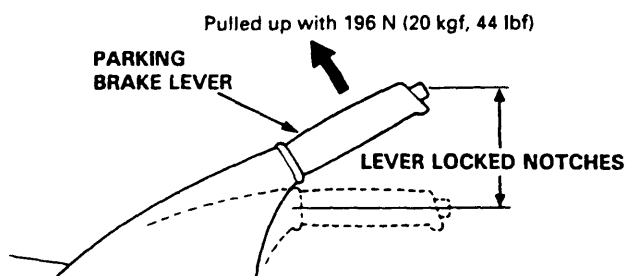
Inspection and Adjustment

Parking Brake

Inspection

1. Pull the parking brake lever with 196 N (20 kgf, 44 lbf) force to fully apply the parking brake. The parking brake lever should be locked within the specified notches.

Lever Locked Notches: 6 – 9



2. Adjust the parking brake if the lever notches are out of specification.

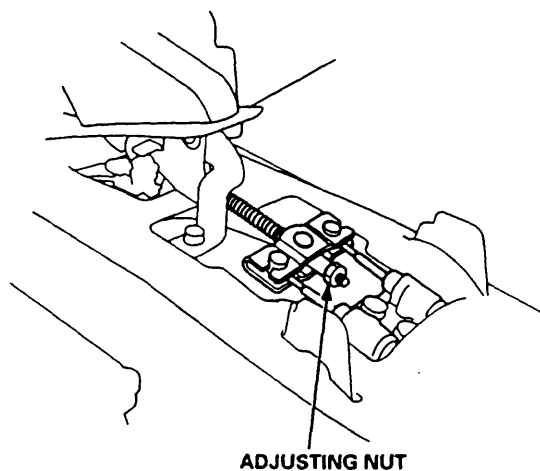
Adjustment

NOTE: After rear brake shoe servicing, loosen the parking brake adjusting nut, start the engine, and depress the brake pedal several times to set the self-adjusting brake before adjusting the parking brake.

1. Raise the rear wheels off the ground, and support the vehicle on safety stands.

⚠ WARNING Block the front wheels before jacking up the rear of the vehicle.

2. Remove the rear console (see section 20).
3. Pull the parking brake lever up one notch.
4. Tighten the adjusting nut until the rear wheels drag slightly when turned.



5. Release the parking brake lever fully, and check that the rear wheels do not drag when turned. Readjust if necessary.
6. Make sure that the parking brakes are fully applied when the parking brake lever is pulled up fully.
7. Reinstall the rear console.



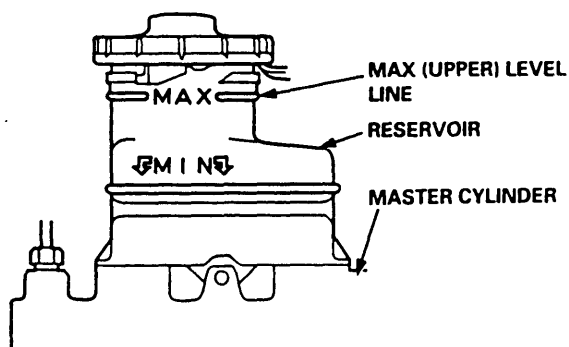
Bleeding

CAUTION:

- Always use Genuine Honda DOT 3 Brake Fluid. Using a non-Honda brake fluid can cause corrosion and decrease the life of the system.
- Make sure no dirt or other foreign matter is allowed to contaminate the brake fluid.
- Do not spill brake fluid on the vehicle, it may damage the paint; if brake fluid does contact the paint, wash it off immediately with water.

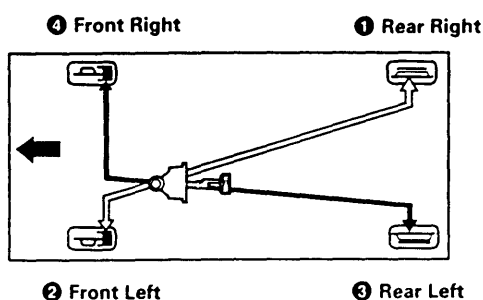
NOTE: The reservoir on the master cylinder must be at the MAX (upper) level mark at the start of bleeding procedure and checked after bleeding each brake caliper. Add fluid as required.

1. Make sure the brake fluid level in the reservoir is at the MAX (upper) level line.

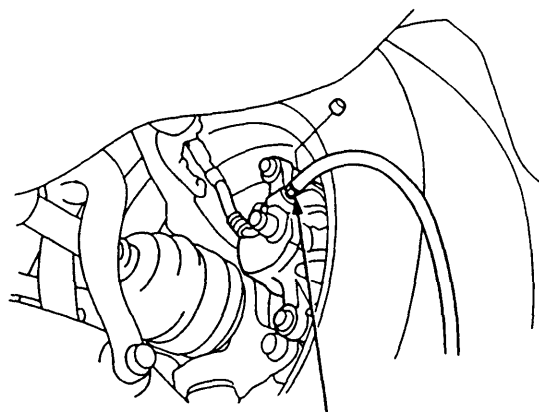


2. Have someone slowly pump the brake pedal several times, then apply steady pressure.
3. Loosen the brake bleed screw to allow air to escape from the system. Then tighten the bleed screw securely.
4. Repeat the procedure for each wheel in the sequence shown below until air bubbles no longer appear in the fluid.
5. Refill the reservoir of master cylinder to the MAX (upper) level line.

BLEEDING SEQUENCE:

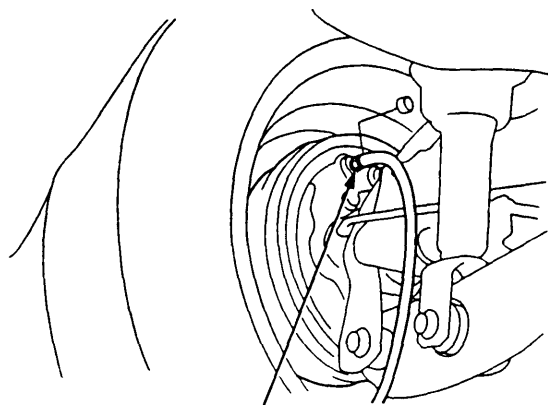


FRONT:



BLEED SCREW
9 N·m (0.9 kgf-m, 6.5 lbf-ft)

REAR:

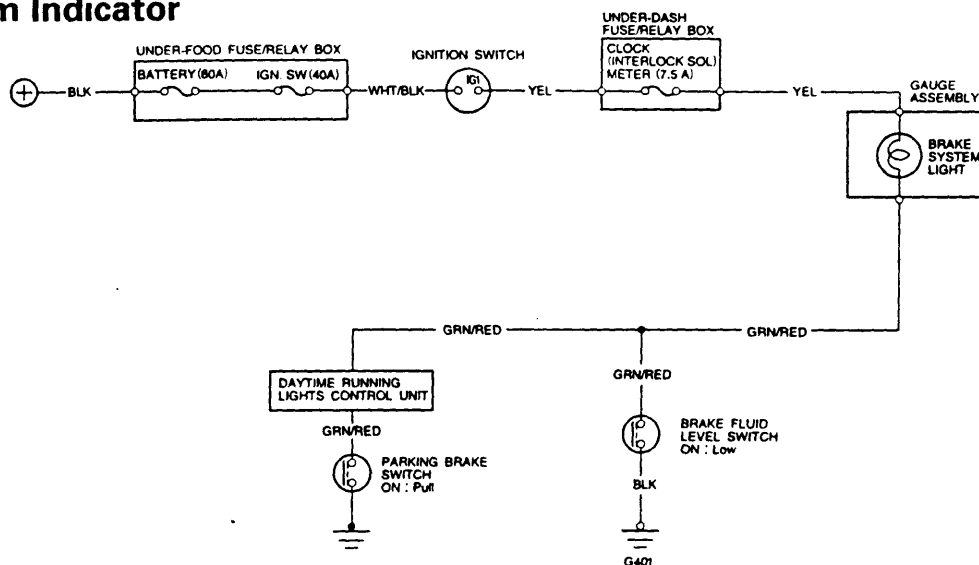


BLEED SCREW
7 N·m (0.7 kgf-m, 5 lbf-ft)

Inspection and Adjustment

Brake System Indicator

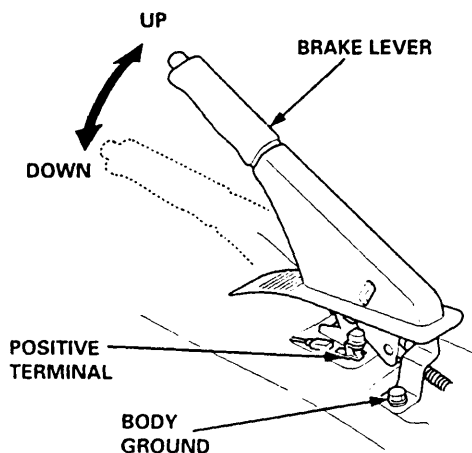
Circuit Diagram



Parking Brake Switch Test

1. Remove the rear console, and disconnect the connector from the switch.
2. Check for continuity between the terminals in each switch position according to the table.

Terminal	Positive Terminal	Body Ground
Position		
BRAKE LEVER UP		
BRAKE LEVER DOWN		

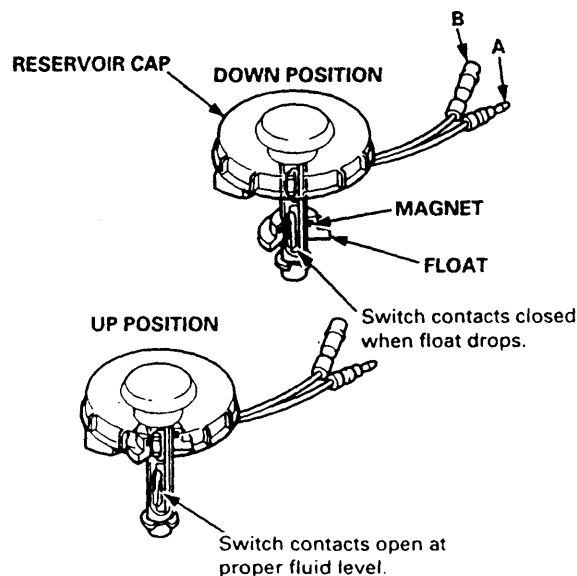


NOTE: If the parking brake switch is OK, but the brake system indicator does not function, perform the input test for the daytime running lights control unit (see section 23).

Brake Fluid Level Switch Test

1. Remove the reservoir cap. Check that the float moves up and down freely; if it doesn't, replace the reservoir cap assembly.
2. Check for continuity between the terminals in each switch position according to the table.

Terminal	A	B
Position		
FLOAT UP		
FLOAT DOWN		



Front Brake Pads

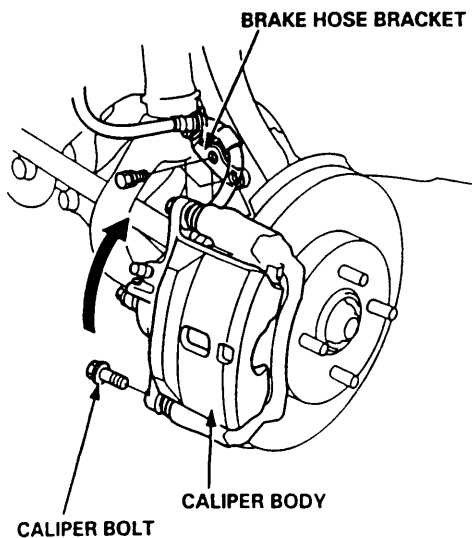


Inspection and Replacement

⚠ WARNING

- Never use an air hose or dry brush to clean brake assemblies.
- Use an OSHA approved vacuum cleaner to avoid breathing brake dust.

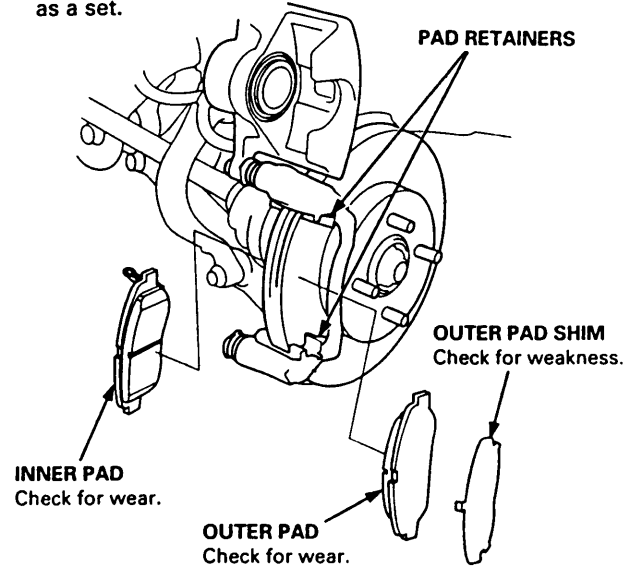
1. Loosen the front wheel nuts slightly, then raise the vehicle, and support it on safety stands.
2. Remove the brake hose bracket from the knuckle.
3. Remove the caliper bolt, and pivot the caliper up out of the way.



NOTE: Check the hoses and pin boots for damage and deterioration.

4. Remove the pad shim, pad retainers and pads.

NOTE: When the caliper is equipped with an outer pad shim, replace the shim together with the pads as a set.

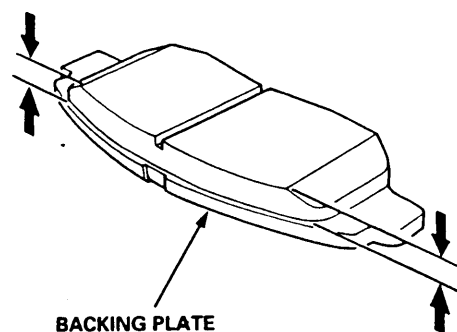


5. Using vernier calipers, measure the thickness of each brake pad lining.

Brake Pad Thickness:

Standard: 9.5 – 10.5 mm (0.37 – 0.41 in)

Service Limit: 1.6 mm (0.06 in)



NOTE: Measurement does not include pad backing plate thickness.

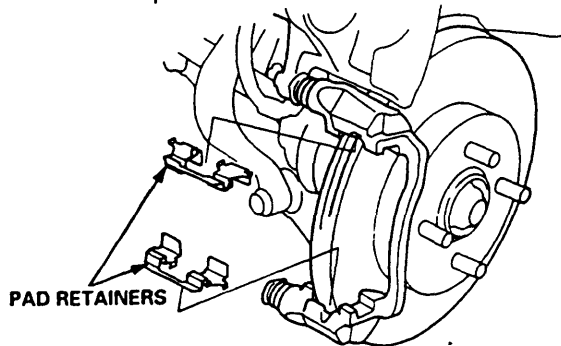
6. If the brake pad thickness is less than service limit, replace the front pads as a set.

(cont'd)

Front Brake Pads

Inspection and Replacement (cont'd)

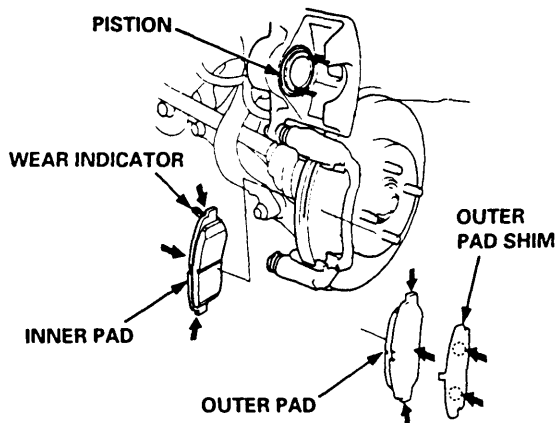
7. Clean the caliper thoroughly; remove any rust, and check for grooves and cracks.
8. Check the brake disc for damage and cracks.
9. Install the pad retainers.



10. Apply grease to the points indicated by the arrows in the following illustration:

NOTE: Use the pad grease included in the pad set or Molykote M77 grease, and apply a thin coat of grease evenly to the designated points.

- Piston end and inner pad contact surface
- Pad and caliper bracket contact surface
- Outer pad and caliper body contact surface
- Outer pad shim and outer pad contact surface
- Outer pad shim and caliper body contact surface



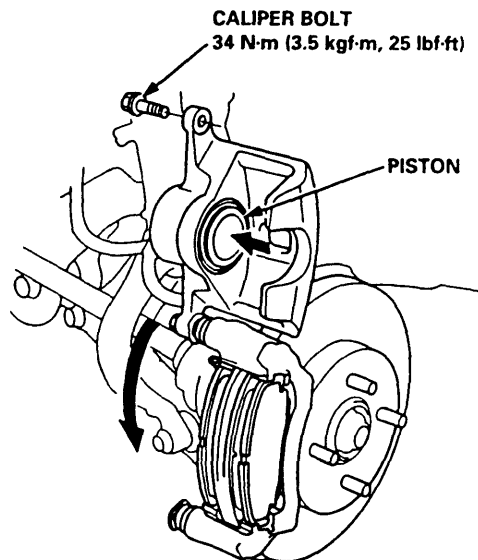
11. Install the brake pads and pad shim correctly.

⚠ WARNING

- When reusing the pads, always reinstall the brake pads in their original positions to prevent loss of braking efficiency.
- Contaminated brake discs or pads reduce stopping ability. Keep grease off the discs and pads.

NOTE: Install the pad with the wear indicator on the inside.

12. Push in the piston so that the caliper will fit over the pads. Make sure that the piston boot is in position to prevent damaging it when pivoting the caliper down.



13. Pivot the caliper down into position, then install caliper bolt and tighten it.

CAUTION: Be careful not damage the pin boot when pivoting the caliper down.

14. Install the brake hose bracket on the knuckle.

NOTE: Inspect the brake hose for interference or twisting.

15. Depress the brake pedal several times to make sure the brakes work, then test-drive.

NOTE: Engagement of the brake may require a greater pedal stroke immediately after the brake pads have been replaced as a set. Several applications of the brake pedal will restore the normal pedal stroke.

16. After installation, check for leaks at hose and line joints or connections, and retighten if necessary.



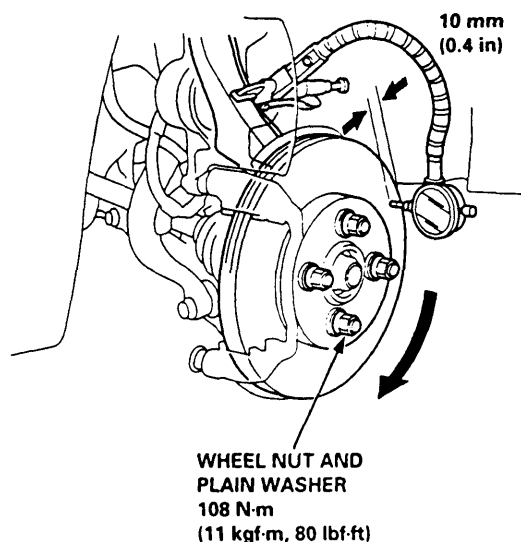
Front Brake Disc

Disc Runout Inspection

1. Loosen the front wheel nuts slightly, then raise the vehicle, and support it on safety stands. Remove the front wheels.
2. Remove the brake pads (see page 19-9).
3. Inspect the disc surface for damage and cracks. Clean the disc thoroughly and remove all rust.
4. Use wheel nuts and suitable plain washers to hold the disc securely against the hub, then mount a dial indicator as shown, and measure the runout at 10 mm (0.4 in) from the outer edge of the disc.

Brake Disc Runout:

Service Limit: 0.10 mm (0.004 in)



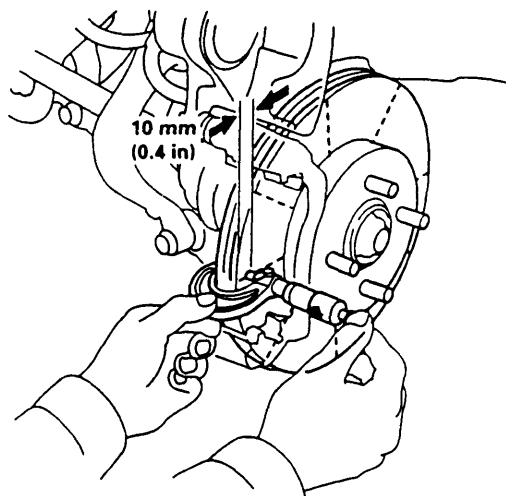
5. If the disc is beyond the service limit, refinish the brake disc with an on-car brake lathe. The Kwik-Lathe produced by Kwik-way manufacturing Co. and the "Front Brake Disc Lathe" offered by Snap-on Tools Co. are approved for this operation.

Max. Refinish Limit: 19.0 mm (0.75 in)

NOTE: A new disc should be refinished if its runout is greater than 0.10 mm (0.004 in)

Disc Thickness and Parallelism Inspection

1. Loosen the front wheel nuts slightly, then raise the vehicle, and support it on safety stands. Remove the front wheels.
2. Remove the brake pads (see page 19-9).
3. Using a micrometer, measure disc thickness at eight points, approximately 45° apart and 10 mm (0.4 in) in from the outer edge of the disc.



Brake Disc Thickness:

Standard: 20.9 – 21.8 mm (0.82 – 0.86 in)

Max. Refinishing Limit: 19.0 mm (0.75 in)

NOTE: Replace the brake disc if the smallest measurement is less than the max. refinishing limit.

Brake Disc Parallelism: 0.015 mm (0.0006 in) max.

NOTE: This is the maximum allowable difference between the thickness measurements.

4. If the disc is beyond the service limit for parallelism, refinish the brake disc with an on-car brake lathe. The Kwik-Lathe produced by Kwik-Way Manufacturing Co. and the "Front Brake Disc Lathe" offered by Snap-on Tools Co. are approved for this operation.

NOTE: See section 18 for brake disc replacement.

Front Brake Caliper

Disassembly

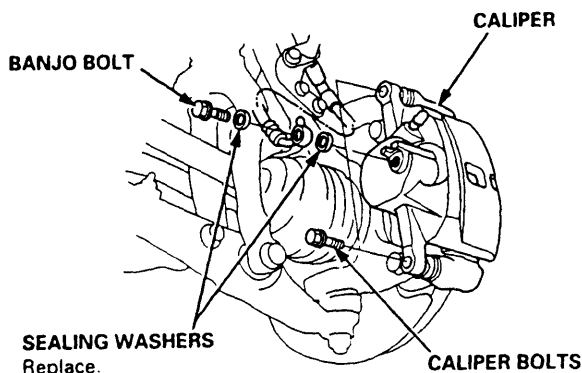
⚠ WARNING

- Never use an air hose or dry brush to clean brake assemblies.
- Use an OSHA approved vacuum cleaner to avoid breathing brake dust.

CAUTION:

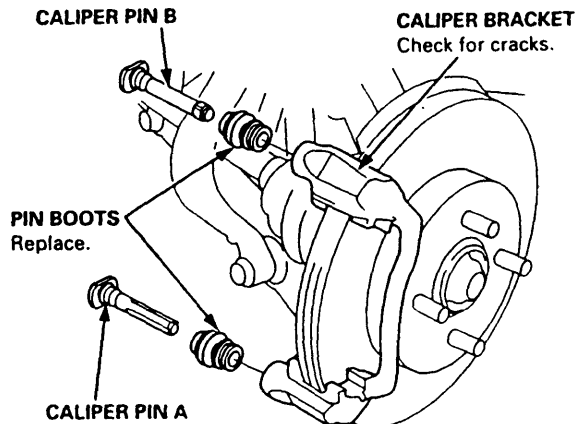
- Do not spill brake fluid on the vehicle; it may damage the paint; if brake fluid does contact the paint, wash it off immediately with water.
- To prevent spills, cover the hose joints with rags or shop towels.
- Clean all parts in brake fluid and air dry; blow out all passages with compressed air.

1. Remove the banjo bolt, and disconnect the brake hose from the caliper.



2. Remove the caliper bolts, then remove the caliper from the bracket.

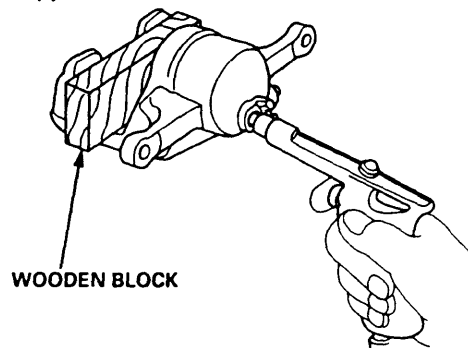
3. Remove the caliper pins and pin boots from the caliper bracket.



4. If necessary, apply compressed air to the caliper fluid inlet to get the piston out. Place a shop rag or wooden block as shown to cushion the piston when it is expelled. Use low pressure air in short spurts.

⚠ WARNING

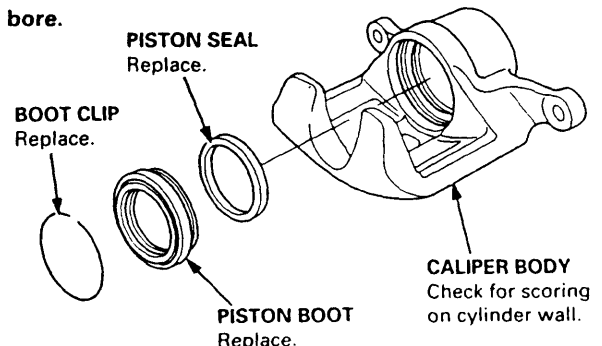
- Do not place your fingers in front of the piston.
- Do not use high air pressure; use an OSHA approved 30 PSI nozzle.



5. Remove the piston from the caliper, and check the piston for scoring.

6. Remove the boot clip, piston boot and piston seal.

CAUTION: Take care not to damage the cylinder bore.





Reassembly

⚠ WARNING

- Never use an air hose or dry brush to clean brake assemblies.
- Use an OSHA approved vacuum cleaner to avoid breathing brake dust.
- Contaminated brake discs or pads reduce stopping ability.
- When reusing the pads, always reinstall the brake pads in their original positions to prevent loss of braking efficiency.

CAUTION:

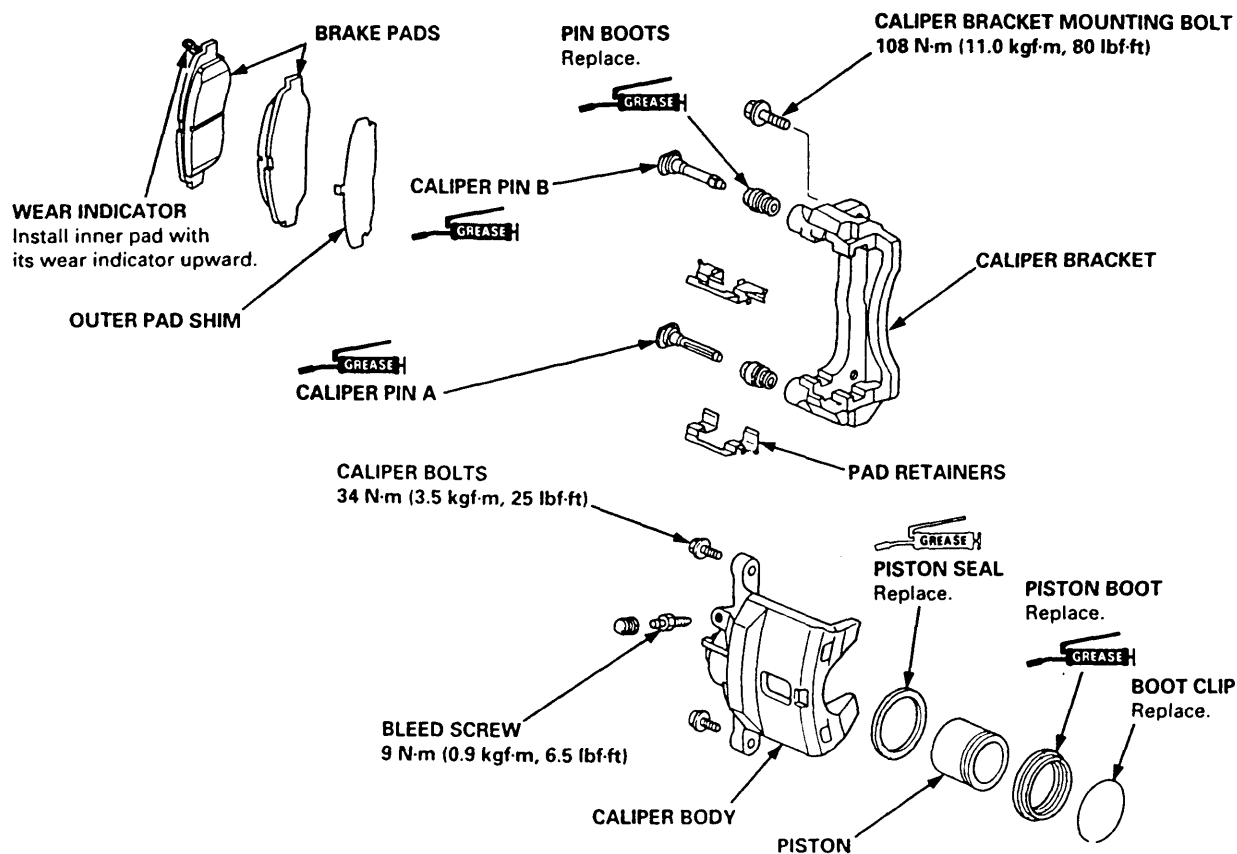
- Do not spill brake fluid on the vehicle; it may damage the paint; if brake fluid does contact the paint, wash it off immediately with water.
- Clean all parts in brake fluid and air dry; blow out all passages with compressed air.
- Before reassembling, check that all parts are free of dust and other foreign particles.
- Replace parts with new ones whenever specified to do so.
- Make sure no dirt or other foreign matter is allowed to contaminate the brake fluid.
- Always use Genuine Honda DOT 3 Brake Fluid. Using a non-Honda brake fluid can cause corrosion and decrease the life of the system.

NOTE:

- Coat the piston, piston seal, and caliper bore with clean brake fluid.
- Replace all rubber parts with new ones whenever disassembled.

 **GREASE**: Use recommended rubber grease in the caliper seal set.

 **GREASE**: Use recommended seal grease in the caliper seal set.



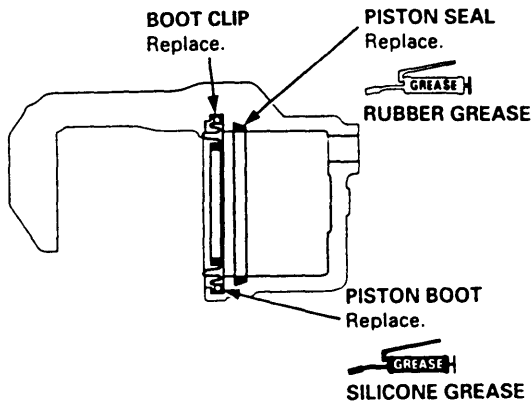
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Front Brake Caliper

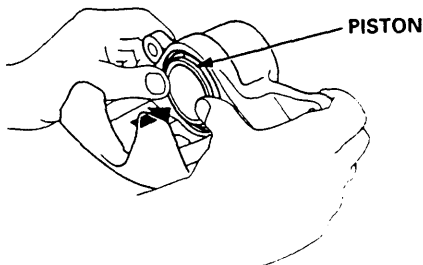
Reassembly (cont'd)

1. Clean the piston and caliper bore with brake fluid, and inspect for wear and damage.
2. Coat the new piston seal with the recommended rubber grease in the caliper seal set, and install the seal in the cylinder groove.
3. Apply the recommended seal grease in the caliper seal set to the sealing lips and inside of a new piston boot, and secure install it in the caliper with the new boot clip.

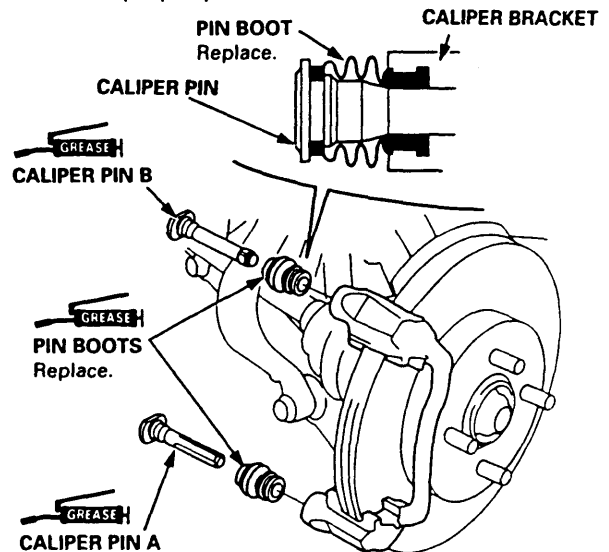
CAUTION: Be careful not to damage the caliper cylinder wall.



4. Lubricate the caliper and piston with brake fluid, then install the piston in the cylinder with the dished end facing in.



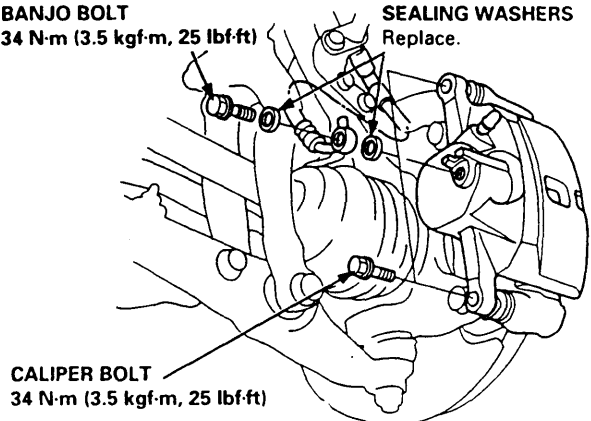
5. Apply the recommended seal grease in the caliper seal set to the sliding surface of the pins and the inside of the new pin boots.
6. Install the pin boots into the grooves in the caliper bracket properly.



7. Insert pin A and pin B into the caliper bracket.
8. Install the pin boots into the grooves in the pins properly.
9. Install the brake pads in their original positions (see page 19-10).
10. Push in the piston so that the caliper will fit over the pads, and install the caliper.
11. Tighten the caliper bolts.
12. Connect the brake hose to the caliper with new sealing washers, and tighten the banjo bolt.

BANJO BOLT
34 N·m (3.5 kgf·m, 25 lbf·ft)

SEALING WASHERS
Replace.



13. Fill the brake reservoir and bleed the brake system (see page 19-7).
14. Perform the following checks.
 - Check for leaks at hose and line joints and connections, and retighten if necessary.
 - Check for brake hoses for interference and twisting.



CAUTION:

1. Disconnect the brake fluid level switch connectors.
2. Remove the reservoir cap from the master cylinder.
3. The brake fluid may be sucked out through the top of the master cylinder reservoir with a syringe.
4. Disconnect the brake lines from the master cylinder.
5. Remove the master cylinder mounting nuts and washers.
6. Remove the master cylinder from the brake booster.
7. Disconnect the vacuum hose from the brake booster.
8. Remove the cotter pin and clevis pin from the clevis.

9. Remove the four booster mounting nuts.
10. Pull the brake booster forward until the clevis is clear of the bulkhead.
11. Remove the brake booster from the engine compartment.
12. Install the brake booster and master cylinder in the reverse order of removal.

CAUTION:

- NOTE:** If replacing the master cylinder or brake booster, check and adjust the pushrod clearance before installing the master cylinder (see page 19-19).

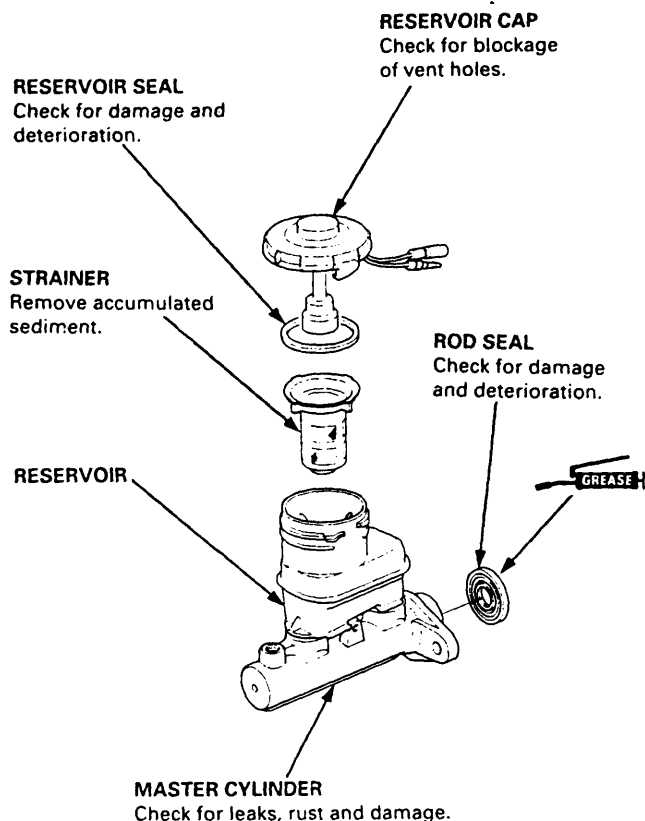
-
- Diagram Labels:**
- BRAKE BOOSTER** (With ABS: 7" + 8" tandem brake booster)
 - GREASE**
 - CLEVIS PIN**
 - BRAKE FLUID LEVEL SWITCH CONNECTORS**
 - MASTER CYLINDER**
 - VACUUM HOSE**
 - COTTER PIN** Replace.
 - CLEVIS**
 - 13 N·m (1.3 kgf·m, 9 lbf·ft)**
 - To Rear Wheel Cylinders**
 - To Front Caliper (Without ABS)**
 - To Front Caliper (Without ABS)**
 - PROPORTIONING CONTROL VALVE**
 - 15 N·m (1.5 kgf·m, 11 lbf·ft)** (With ABS: To modulator unit)
 - 15 N·m (1.5 kgf·m, 11 lbf·ft)**

Master Cylinder/Brake Booster

Inspection/Disassembly

CAUTION:

- Do not spill brake fluid on the vehicle; it may damage the paint; if brake fluid does contact the paint, wash it off immediately with water.
- Before reassembling, check that all parts are free of dust and other foreign particles.
- Do not try to disassemble the master cylinder assembly. Replace the master cylinder assembly with a new part if necessary.
- Make sure no dirt or other foreign matter is allowed to contaminate the brake fluid.

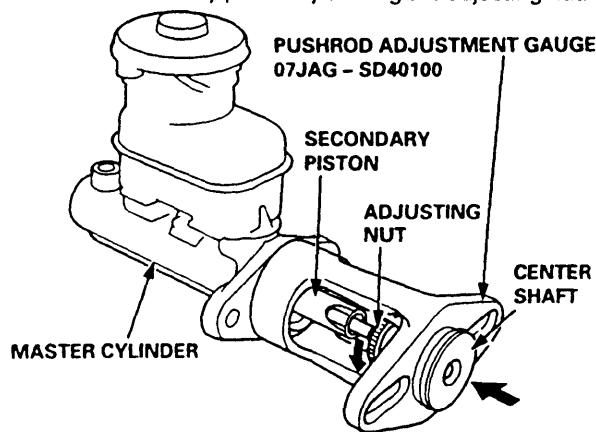


Pushrod Clearance Adjustment

NOTE:

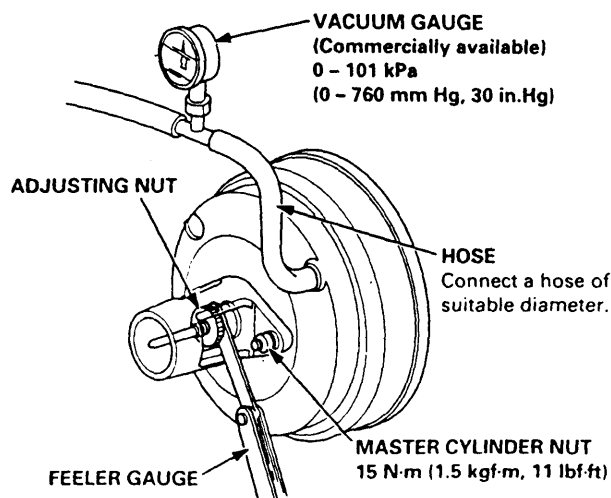
- Master cylinder pushrod-to-piston clearance must be checked and adjustments made, if necessary, before installing master cylinder.
- ABS type is shown, conventional brake type is similar.

1. Set the special tool on the master cylinder body; push in the center shaft until the top of it contacts the end of the secondary piston by turning the adjusting nut.



2. Without disturbing the center shaft's position, install the special tool upside down on the booster.
3. Install the master cylinder nuts and tighten to the specified torque.
4. Connect the booster in-line with a vacuum gauge 0 - 101 kPa (0 - 760 mmHg, 30 in.Hg) to the booster's engine vacuum supply, and maintain an engine speed that will deliver 66 kPa (500 mmHg, 20 in.Hg) vacuum.
5. With a feeler gauge, measure the clearance between the gauge body and the adjusting nut as shown.

Clearance: 0 - 0.4 mm (0 - 0.02 in)





Brake Booster Inspection

NOTE: If the clearance between the gauge body and adjusting nut is 0.4 mm (0.02 in), the pushrod-to-piston clearance is 0 mm. However, if the clearance between the gauge body and adjusting nut is 0 mm, the pushrod-to-piston clearance is 0.4 mm (0.02 in) or more. Therefore it must be adjusted and rechecked.

6. If clearance is incorrect, loosen the star locknut and turn the adjuster in or out to adjust.

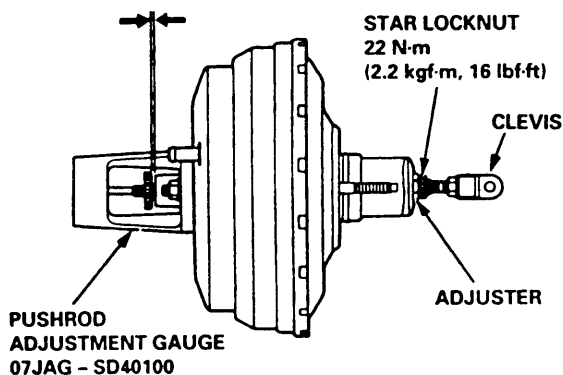
NOTE:

- Adjust the clearance while the specified vacuum is applied to the booster.
- Hold the clevis while adjusting.

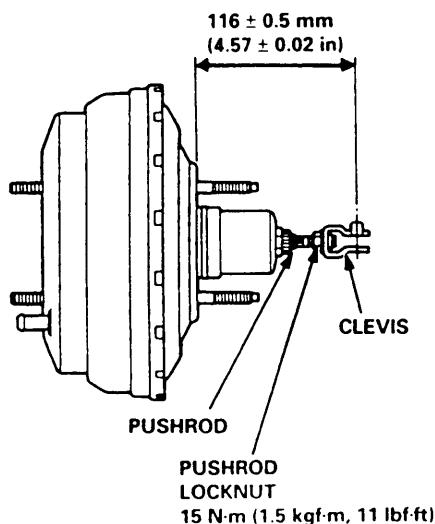
7. Tighten the star locknut securely.

8. Remove the special tool.

0 – 0.4 mm (0 – 0.02 in)



9. Adjust the pushrod length as shown if the booster is removed.



10. Install the master cylinder (see page 19-15).

Functional Test

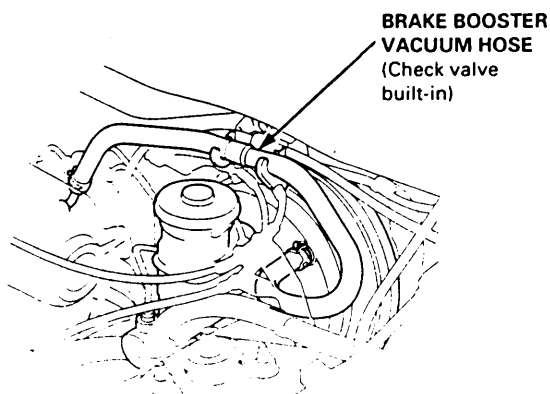
1. With the engine stopped, depress the brake pedal several times to deplete the vacuum reservoir, then depress the pedal hard and hold it for 15 seconds. If the pedal sinks, either the master cylinder is bypassing internally, or the brake system (master cylinder, lines, modulator, proportioning control valve, or caliper) is leaking.
2. Start the engine with the pedal depressed. If the pedal sinks slightly, the vacuum booster is operating normally. If the pedal height does not vary, the booster or check valve is faulty.
3. With the engine running, depress the brake pedal lightly. Apply just enough pressure to hold back automatic transmission creep. If the brake pedal sinks more than 25 mm (1.0 in.) in three minutes, the master cylinder is faulty. A slight change in pedal height when the A/C compressor cycles on and off is normal. (The A/C compressor load changes the vacuum available to the booster.)

Leak Test

1. Depress the brake pedal with the engine running, then stop the engine. If the pedal height does not vary while depressed for 30 seconds, the vacuum booster is OK. If the pedal rises, the booster is faulty.
2. With the engine stopped, depress the brake pedal several times using normal pressure. When the pedal is first depressed, it should be low. On consecutive applications, the pedal height should gradually rise. If the pedal position does not vary, check the booster check valve.

Booster Check Valve Test

1. Disconnect the brake booster vacuum hose at the booster.
2. Start the engine and let it idle. There should be vacuum. If no vacuum is available, the check valve is not working properly. Replace the brake booster vacuum hose and check valve, and retest.



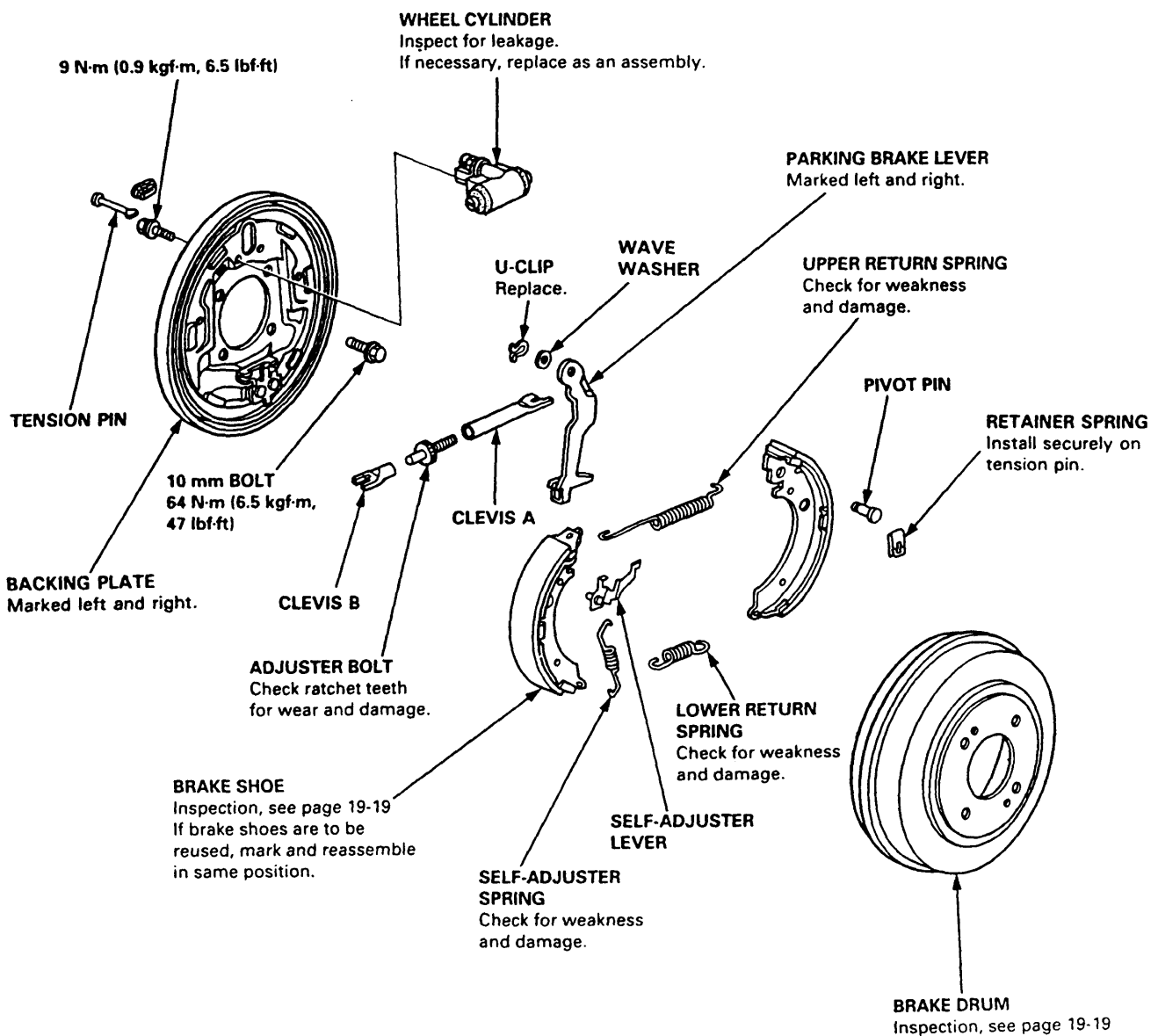
Rear Drum Brakes

Index/Inspection

⚠ WARNING

- Never use an air hose or dry brush to clean brake assemblies.
- Use an OSHA approved vacuum cleaner to avoid breathing brake dust.
- Contaminated brake linings or drums reduce stopping ability.
- Block the front wheels before jacking up the rear of the vehicle.

1. Block the front wheels, loosen the rear wheel nuts slightly, support the rear of vehicle on safety stands, then remove the rear wheels.
2. Release the parking brake, and remove the rear brake drum.





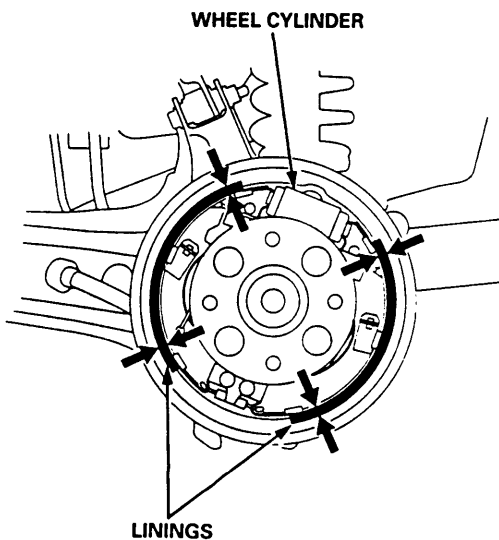
Inspection

1. Check the wheel cylinder for leakage.
2. Check the brake linings for cracking, glazing, wear and contamination.
3. Measure the brake lining thickness.

Brake Lining Thickness:

Standard: 4.0 mm (0.157 in)

Service Limit: 2.0 mm (0.08 in)



NOTE: Measurement does not include brake shoe thickness.

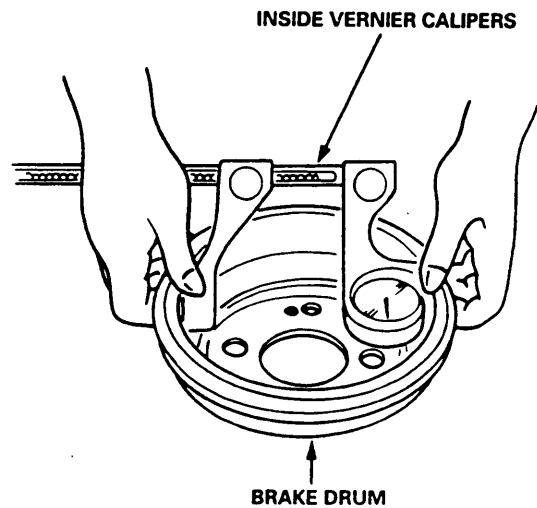
4. If the brake lining thickness is less than service limit, replace the brake shoes as a set.
5. Check the bearings in the hub unit for smooth operation. If defective, refer to section 18.

6. Measure the inside diameter of the brake drum using the inside vernier calipers.

Drum Inside Diameter:

Standard: 199.9 – 200.0 mm (7.870 – 7.874 in)

Service Limit: 201.0 mm (7.913 in)

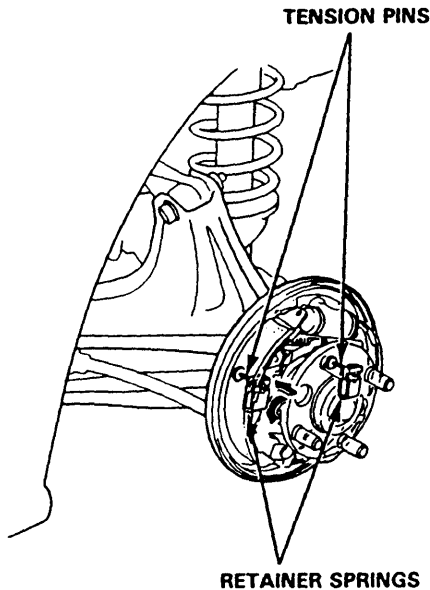


7. If the inside diameter of the brake drum is more than service limit, replace the brake drum.
8. Check the brake drum for scoring, grooves and cracks.

Rear Drum Brakes

Brake Shoe Disassembly

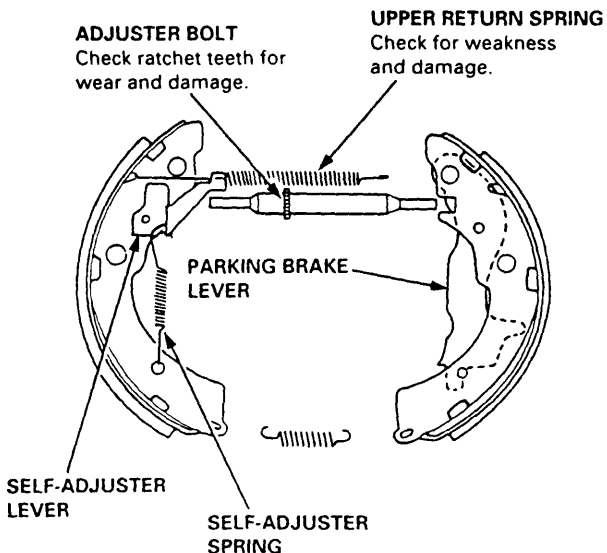
1. Remove the tension pins by pushing the retainer springs and turning them.



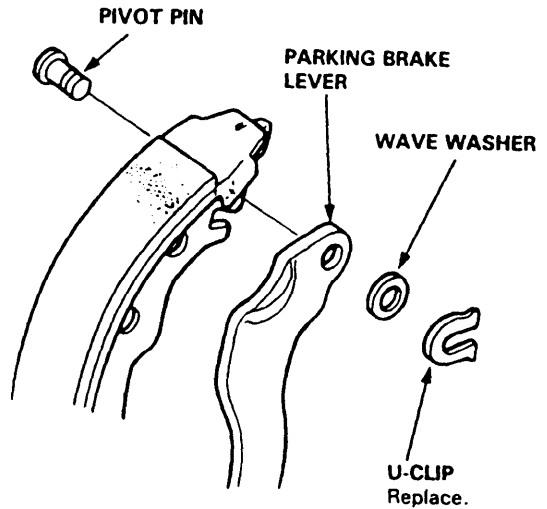
2. Lower the brake shoe assembly, and remove the lower return spring.

NOTE: Be careful not to damage the dust cover on the wheel cylinder.

3. Remove the brake shoe assembly.
4. Disconnect the parking brake cable from the parking brake lever.
5. Remove the upper return spring, self-adjuster lever and self-adjuster spring, and separate the brake shoes.

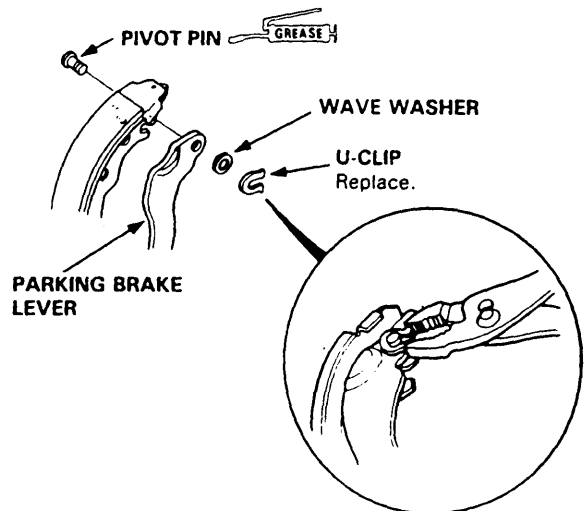


6. Remove the wave washer, parking brake lever and pivot pin from the brake shoe by removing the U-clip.



7. Apply brake cylinder grease (P/N: 08733 - B020E) or equivalent rubber grease to the sliding surface of the pivot pin, and insert the pin into the brake shoe.
8. Install the parking brake lever and wave washer on the pivot pin and secure with U-clip.

NOTE: Pinch the U-clip securely to prevent the pivot pin from coming out of the brake shoe.





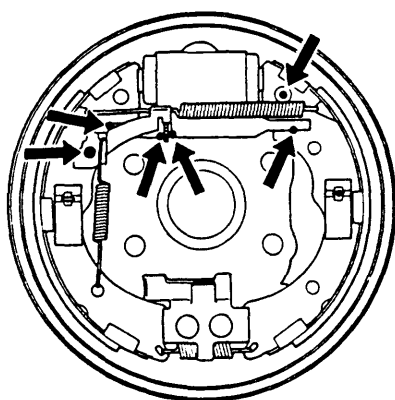
9. Connect the parking brake cable to the parking brake lever.

10. Apply grease on each sliding surface.

⚠ WARNING Contaminated brake linings reduce stopping ability. Keep grease or oil off the brake linings. Wipe any excess grease off the parts.

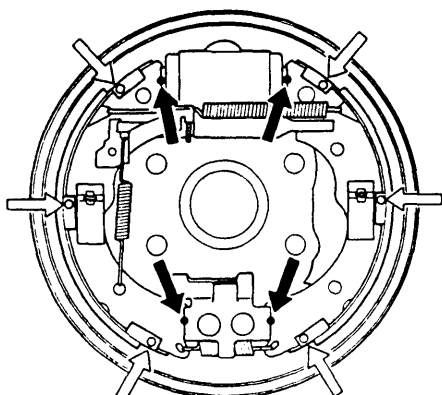
- Apply brake cylinder grease (P/N: 08733 – B020E) or equivalent rubber grease to the sliding surfaces as shown.

→ ● Sliding surface



- Apply Molykote 44MA to the brake shoe ends and opposite edges of the shoes as shown.

→ ● Opposite edge of the shoe
⇨ ○ Brake shoe ends



11. Clean the threaded portions of clevises A and B. Coat the threads of the clevises with grease. To shorten the clevises, turn the adjuster bolt.

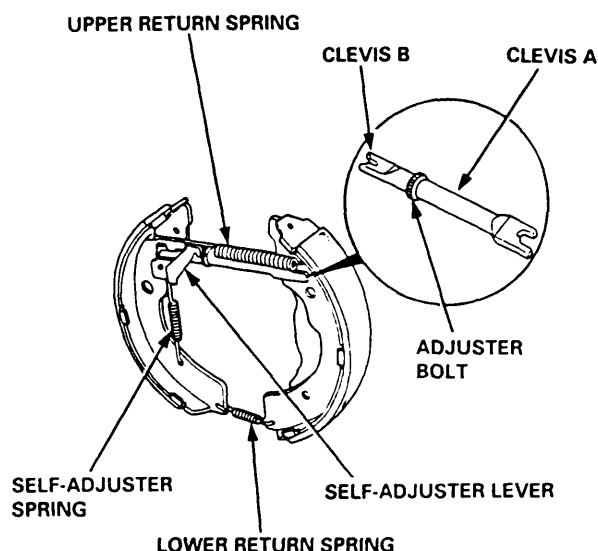
12. Hook the self-adjuster spring to the self-adjuster lever first, then to the brake shoe.

13. Install the clevises and upper return spring noting the installation direction.

NOTE: Be careful not to damage the wheel cylinder dust covers.

14. Install the lower return spring.

15. Install the tension pins and retaining springs.



16. Install the brake drum.

17. If the wheel cylinder has been removed, bleed the brake system (see page 19-7), and check for leaks at brake line connections, and retighten if necessary.

18. Depress the brake pedal several times to set the self-adjusting brake.

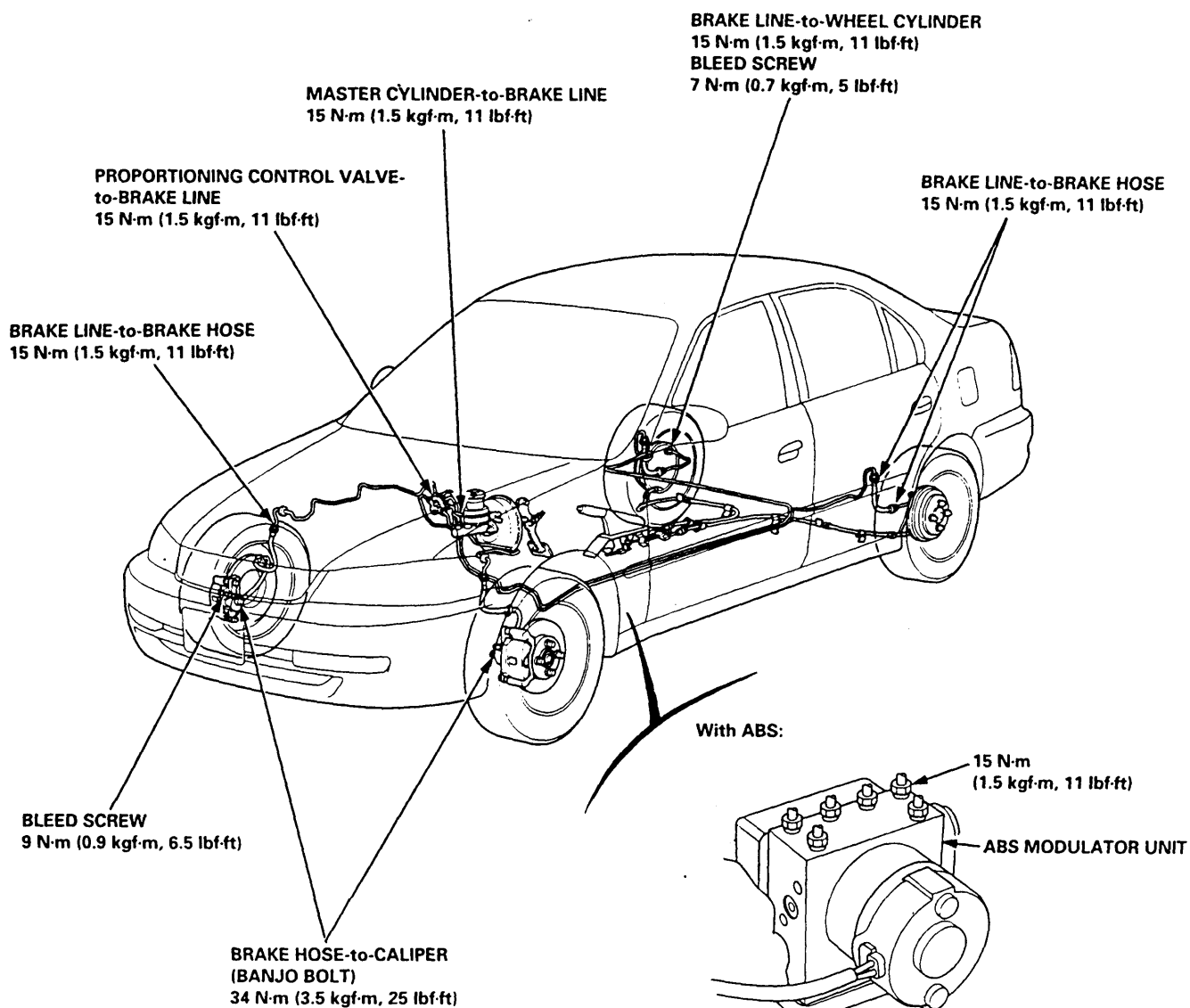
19. Adjust the parking brake (see page 19-6).

Brake Hoses/Lines

Inspection/Torque Specifications

1. Inspect the brake hoses for damage, deterioration, leaks, interference and twisting.
2. Check the brake lines for damage, rusting and leakage. Also check for bent brake lines.
3. Check for leaks at hose and line joints and connections, and retighten if necessary.
4. Check the master cylinder and ABS modulator unit for damage and leakage.

CAUTION: Replace the brake hose clip whenever the brake hose is serviced.



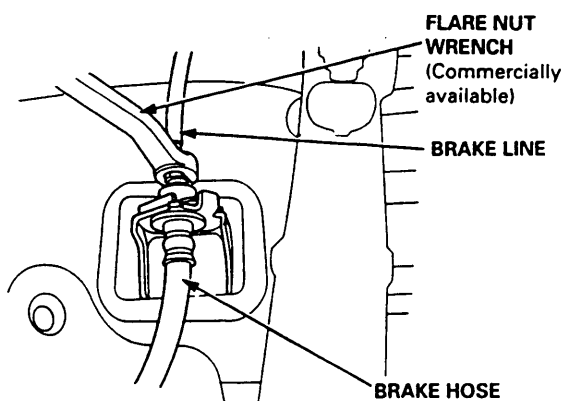


Hose Replacement

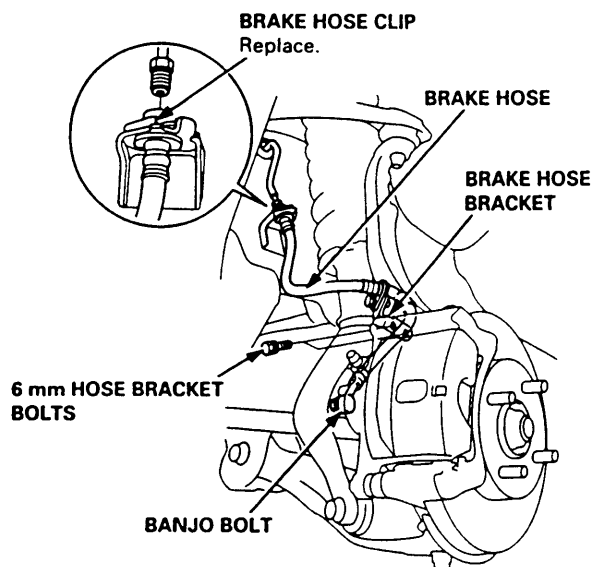
CAUTION:

- Before reassembling, check that all parts are free of dust and other foreign particles.
- Replace parts with new ones whenever specified to do so.
- Do not spill brake fluid on the vehicle; it may damage the paint; if brake fluid does contact the paint, wash it off immediately with water.

1. Replace the brake hose if the hose is twisted, cracked, or if it leaks.
2. Disconnect the brake hose from the brake line using a 10 mm flare nut wrench.

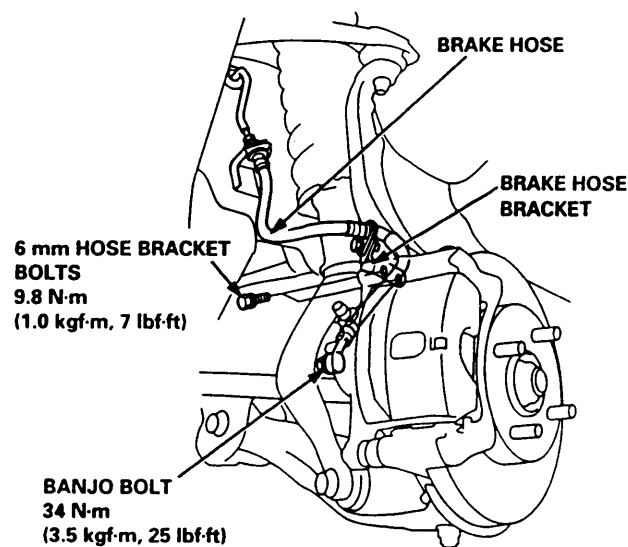


3. Remove and discard the brake hose clip from the brake hose.

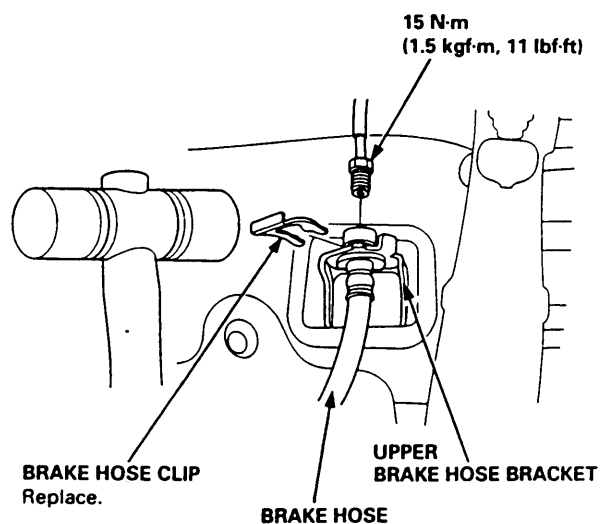


4. Remove the banjo bolt, and disconnect the brake hose from the caliper.
5. Remove the brake hose bracket from the knuckle.

6. Install the brake hose bracket and brake hose on the knuckle first, then connect the brake hose to the caliper with the banjo bolt and new sealing washers.



7. Install the brake hose on the upper brake hose bracket with a new brake hose clip.

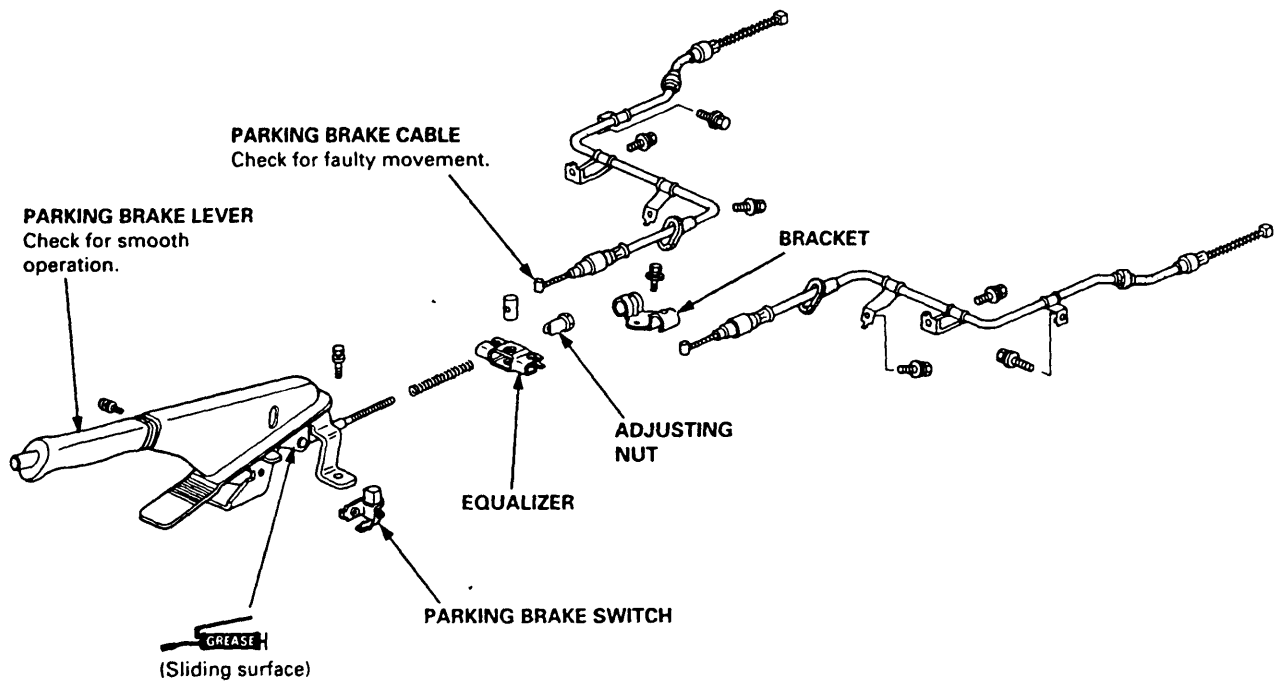


8. Connect the brake line to the brake hose.
9. After installing the brake hose, bleed the brake system (see page 19-7).
10. Perform the following checks.
 - Check the brake hose and line joint for leaks, and tighten if necessary.
 - Check the brake hoses for interference and twisting.

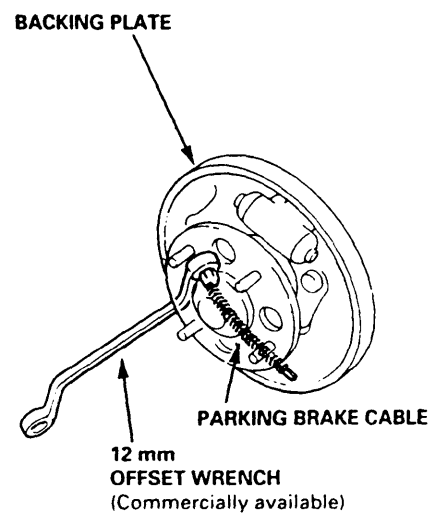
Parking Brake Cable

Inspection and Replacement

CAUTION: The parking brake cables must not be bent or distorted. This will lead to stiff operation and premature cable failure.



Remove the parking brake cable from the backing plate using a 12 mm offset wrench as shown.



Anti-lock Brake System (ABS)

Special Tools	19-26	DTC 11 – 18:	
Component Locations	19-27	Wheel Sensor	19-45
Anti-lock Brake System (ABS)		DTC 31 – 38:	
Features/Construction	19-28	Solenoid	19-47
Operation	19-29	DTC 51 – 53:	
Circuit Diagram	19-32	ABS Pump Motor	19-49
ABS Control Unit Terminal		DTC 54:	
Arrangement	19-34	Main Relay	19-52
Troubleshooting Precautions	19-36	DTC 61:	
Diagnostic Trouble Code (DTC)		Ignition Voltage	19-54
Diagnostic Trouble Code (DTC)		DTC 81:	
Indication (SCS Mode)	19-38	Central Processing Unit (CPU)	19-55
DTC Erasure (MES Mode)	19-39	Modulator Unit	
Troubleshooting Index	19-40	Removal/Installation	19-56
Troubleshooting		ABS Control Unit	
ABS Indicator Light Does Not		Replacement	19-57
Come On	19-41	Pulsers/Wheel Sensors	
ABS Indicator Light Does Not		Inspection	19-57
Go Off (No DTC)	19-43	Wheel Sensor Replacement	19-58

