DELCO-MORAINE SINGLE PISTON DISC – REAR

Buick
Riviera
Cadillac
Eldorado & Seville
Oldsmobile
Toronado
Pontiac
Firebird

DESCRIPTION

Rear disc brakes are a single piston sliding caliper type. An integral parking brake is used, with automatic adjusting provision. Brake rotors are made of cast iron, with two machined braking surfaces separated by cooling fins. On some cars, a groove is machined in the center of the braking surface to aid in reducing braking noise.

ADJUSTMENT

SERVICE BRAKES

Caliper design automatically compensates for shoe wear; therefore, no brake adjustment service is required.

PARKING BRAKE

With parking brake pedal fully released and rear wheels raised, hold brake cable stud to prevent turning and tighten equalizer nut until cable slack is removed. Make sure levers are on stops. If not, loosen equalizer nut until levers return against stops on caliper housing. After adjustment, pedal travel (with 125 lbs. force) should be 4-5½" (Eldorado, Seville, Toronado & Riviera) or 5¼-6¾" (Firebird).

SERVICING

BLEEDING

See Hydraulic Brake Bleeding in this section.

SHOE & LINING INSPECTION

Inspect linings every 6000 miles or any time wheels are removed. Check both ends of inboard and outboard linings for wear. Replace all linings if any one wears to the approximate thickness of the shoe.

SHOE & LINING REPLACEMENT

NOTE – *Relining should be done in complete set only.*

CAUTION – *Front brake shoes must not be used on rear calipers.*

Removal – 1) Remove and discard ⅔ of brake fluid in master cylinder reservoir. Raise vehicle on hoist; remove wheel and tire. Replace one lug nut (flat side toward rotor) to prevent rotor from falling off when caliper is removed.

NOTE – *Mark relationship of wheel to axle flange before removing wheels.*

2) Loosen tension on parking brake cable at equalizer and disconnect brake cable from parking brake lever. Remove cable bracket from caliper. Remove return spring, lock nut, lever, lever seal and anti-friction washer.

NOTE – *Lever must be held in place while removing nut.*

3) Clean any dirt from caliper in area of lever seal. Using a large "C" clamp, place solid end on lever stop and screw end on back of outer lining assembly. Turn clamp until piston bottoms in caliper. Remove "C" clamp.

NOTE – *Do not position "C" clamp on actuator screw.*

4) Lubricate caliper housing surface under lever seal with silicon brake lubricant. Install new anti-friction washer. Lubricate new lever seal with silicon and install with sealing bead against housing. Install lever on actuator screw with lever pointing down.

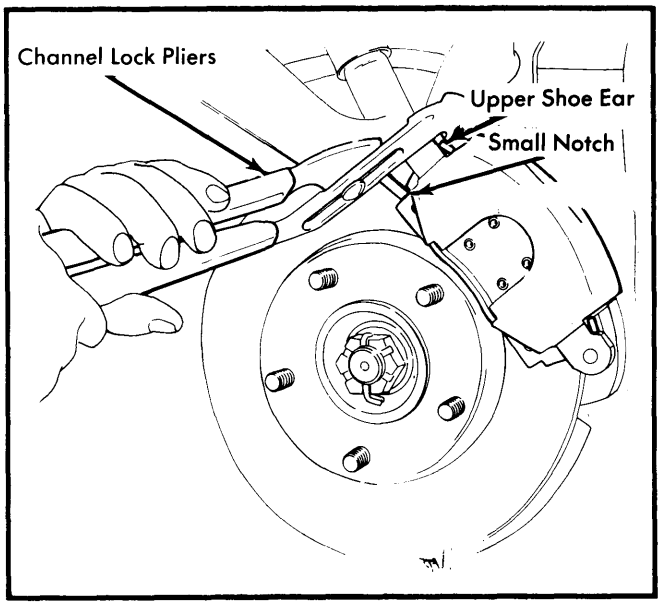

Fig. 1 Clinching Ears of Outboard Shoe

5) Remove brake line from caliper and plug opening to retain fluid and prevent entrance of dirt. Remove caliper mounting bolts. Remove caliper with brake shoes. Inspect caliper assembly for damage, cuts, cracks or excessive leakage. Replace or repair as necessary. Remove and discard two caliper mounting sleeves and four bushings. Remove and discard piston check valve.

Installation – 1) Install new piston check valve. Using silicone grease, install new bushings and sleeves. Place new inboard shoe on piston with "D" shaped tab fitting into indentation in piston. Install outboard shoe.

NOTE – *If piston requires rotation, use a spanner wrench (tool J-7624) to turn it.*

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DELCO-MORAINE SINGLE PISTON DISC – REAR (Cont.)

2) Slide caliper over rotor and install mounting bolts under inboard shoe ears. Using new washers, install brake line. Pump brake pedal to seat lining against caliper. Using channel lock pliers, clinch upper ears of outboard shoe against caliper, making sure all ears are flat against caliper with no clearance.

3) Rotate lever toward front of car and torque nut to 30-40 ft. lbs. Rotate lever back against stop on caliper and install spring. Connect and adjust parking brake cable. After bleeding brake system, pump brake several times to adjust. Remove one lug nut used to retain rotor and install wheel.

ROTOR SERVICING

Lateral Runout – Mount a dial indicator so that foot will contact face of rotor approximately one inch from rotor edge. Set gauge to zero, then turn rotor through one complete revolution noting gauge. *See Rotor Specifications for maximum allowable runout.*

Parallelism – Check thickness of rotor at four or more points around circumference of rotor. Make all measurements at same distance from edge of rotor. If thickness varies more than specified, refinish or replace as necessary. *See Rotor Specifications for maximum rotor thickness and parallelism.*

OVERHAUL

BRAKE CALIPER

Disassembly – 1) With caliper held in a vise, remove two mounting sleeves and four bushings from caliper and discard. Remove brake shoes and lever return spring. Using a shop towel to catch piston and brake fluid, rotate lever back and forth to move piston out of caliper housing.

NOTE – *If piston will not move out of housing, remove lock nut, lever, seal and anti-friction washer. Use a wrench to turn activator screw until piston pops out of housing.*

2) Remove piston seal assembly and balance spring. Remove lock nut, lever, seal and anti-friction washer. Push screw out of housing and remove piston seal, copper washer and boot.

3) Thoroughly clean all parts with denatured alcohol. Inspect caliper bore for scoring, nicks, corrosion or wear. Use crocus cloth to polish any light corrosion. Replace if necessary. Check outer diameter of piston for nicks, scoring or damaged plating. If surface defects are visible, replace piston.

Reassembly – 1) Install bleeder screw and tighten to 80-140 INCH Lbs. Install fitting and bolt using new copper washers. Tighten to 30 ft. lbs. Lubricate new piston seal with brake fluid and install into caliper bore groove. Fit boot on piston with inside lip of boot in piston groove and boot fold toward end of piston that contracts inboard brake shoe. Install new thrust washer and seal on actuator screw. Lube actuator screw with brake fluid and install in piston. Fit balance spring into piston and start piston assembly into caliper housing.

NOTE – *Caliper housing and activator screws must be installed on the same side of the car as they were removed from. If parts are on the wrong side parking brake will not work.*

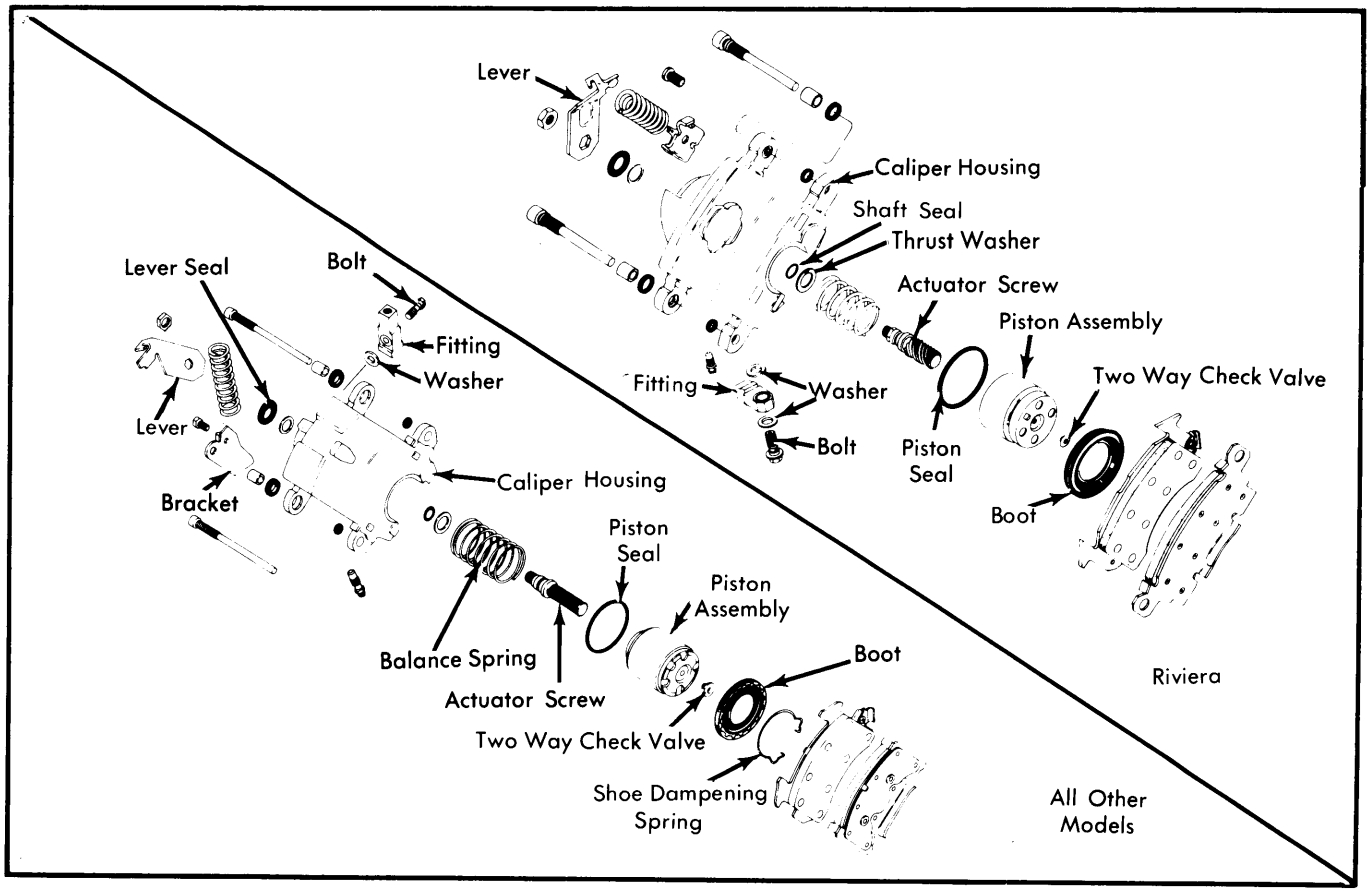

Fig. 2 Exploded View of Delco-Moraine Single Piston Rear Caliper

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2) Using suitable tool (J-23072) screw piston all the way back into housing. Ensure that piston is straight or screw may damage seal as is passes through. Before removing tool, install lubricated anti-friction washer and new lever seal. Install lever away from stop, rotate forward and hold while tightening nut.

3) Remove tool (J-23072), rotate lever back to stop and install return spring (red-right side & black-left side). Using suitable boot installer tool (J-26296 on Buick & Pontiac models and J-28678 on all other models), drive boot in until seal bottoms in housing. Install lining and caliper. See *Shoe and Lining Replacement*.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs.
Brake Hose-to-Caliper	30
Caliper Mounting Bolts	30-45
Brake Lever Activator Screw	30-40
Application	**INCH Lbs.**
Bleeder Screw	80-140

DISC BRAKE SPECIFICATIONS

Application	Disc Diameter	Lateral Runout	Parallelism	Original Thickness	Minimum Refinish Thickness	Discard Thickness
Buick						
Riviera	10.50″	.003″	.0005″	1.030″	1.020″	.956″
Cadillac						
Eldorado & Seville	10.43″	.004″	.0005″	1.030″	.....	.....
Oldsmobile						
Toronado	10.50″	.005″	.0005″	1.040″	1.020″	.960″
Pontiac						
Firebird	10.50″	.005″	.0005″	1.040″	1.020″	.....

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