

GENERAL MOTORS FLOATING CALIPER DISCS

Chevrolet (All Models)
GMC (All Models)

NOTE — Floating calipers are used on all models except if equipped with Hydro-Boost. All models equipped with Hydro-Boost use sliding caliper disc brakes.

DESCRIPTION

Floating caliper disc brake assembly uses a single piston caliper mounted to an anchor plate which is bolted to the steering knuckle. Caliper assembly floats, through four rubber bushings, on two steel guide pins threaded into anchor plate. When brake pedal is depressed, hydraulic pressure is passed to caliper pistons. This force is transmitted to inboard brake pad and against braking surface. Pressure then moves caliper housing inward on caliper guide pins, thus forcing outer disc pad against outer braking surface. When brakes are released, pressure is removed from cylinder bores and rotor runout moves pistons back into cylinders to maintain sufficient rotor-to-pad clearance.

ADJUSTMENT & SERVICING

DISC PAD ADJUSTMENT

Pad wear is automatically compensated for by piston moving outward in cylinder bore; therefore, no disc pad adjustment in service is required. *NOTE* — Inspect condition of disc pads whenever wheels are removed. If any pad is worn to within $\frac{1}{32}$ " of rivet heads, replace complete disc pad set.

BLEEDING SYSTEM

See *Hydraulic Brake Bleeding* in this Section.

REMOVAL & INSTALLATION

DISC BRAKE PADS

Removal — Remove and discard 2/3 of the fluid from master cylinder. Raise vehicle and remove wheel. Force piston back into cylinder bore and remove guide pins. Carefully lift caliper assembly off and away from rotor. Remove inner and outer disc pads and support caliper on front suspension arm to prevent damage to flexible brake hose. Remove shoe support spring from piston, and remove sleeves and bushings from ears of caliper housing.

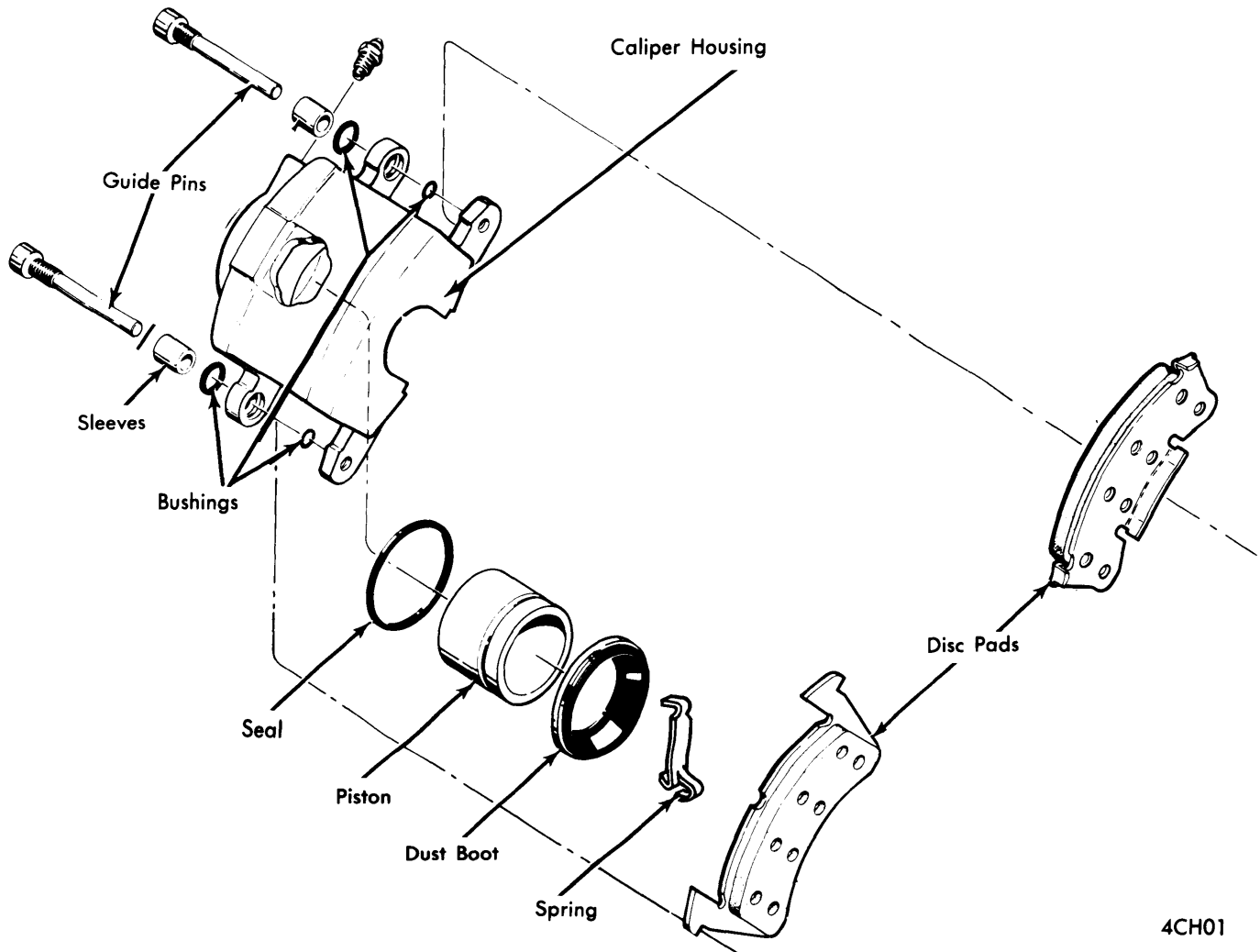


Fig. 1 Exploded View of Floating Caliper Assembly

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Installation — Lubricate sleeves, bushings, bushing grooves and ends of guide pins with suitable silicone lubricant. Install NEW bushings and sleeves into ears of caliper housing. Install shoe support spring in center of piston and install inner disc pad. Install outer disc pad over ears of caliper housing and carefully position caliper assembly on rotor. Install guide pins and tighten. Pump brake pedal to seat pads, bend ears of outer pad over housing and install wheel. Lower vehicle and refill master cylinder.

BRAKE CALIPER

Removal & Installation — Brake caliper removal and installation procedures are same as for disc brake pads, except it will be necessary to disconnect brake hose.

OVERHAUL

BRAKE CALIPER

Disassembly — Clean exterior of caliper with denatured alcohol and place on clean work surface. Remove brake hose, discarding copper gasket. Drain brake fluid from caliper. Use clean shop towels to pad interior of caliper and use compressed air introduced at caliper inlet, to remove piston. **CAUTION** — Use just enough air pressure to ease piston out of bore. Use screwdriver to pry boot out of caliper housing. Remove piston seal from its groove in caliper bore, using a piece of wood or plastic. **CAUTION** — Do not use metal tool of any type for this operation. Remove bleeder valve from housing.

Inspection — Boot, seal, rubber bushings, and sleeves are to be replaced each time caliper is overhauled. Clean all other parts in denatured alcohol. Dry parts with dry, filtered, compressed air. **NOTE** — Using lubricated shop air will leave a film of mineral oil on metal parts. This may damage rubber parts upon contact during reassembly. Check guide pins for corrosion, breaks in plating, or other damage. Do not attempt to clean pins; replace them. Check outside diameter of piston for scoring, nicks, corrosion, and worn or damaged plating. If surface defects exist, piston must be replaced.

NOTE — Refinishing piston with abrasives is not acceptable. Piston bore should be checked for similar defects. Bore is not plated; therefore, minor corrosion can be polished with crocus or emery cloth. Thoroughly clean bore after polishing. Replace caliper housing if bore corrosion cannot be easily cleaned.

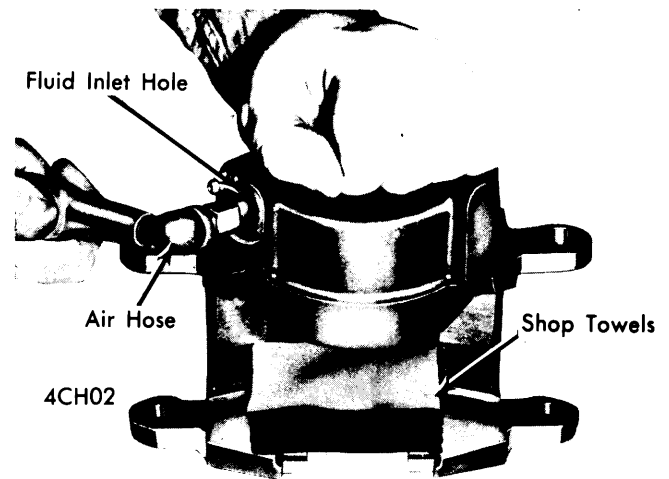


Fig. 2 Using Compressed Air to Remove Caliper Piston

Reassembly — Lubricate bore in caliper housing and new piston seal with clean brake fluid. Position seal in caliper bore groove. Lubricate piston with clean brake fluid and assemble new boot into groove in piston with fold facing open end of piston. Insert piston into caliper bore, using care not to unseat seal. DO NOT force piston to bottom of bore. Position outer diameter of boot in caliper counterbore and, using suitable tool (J-22904), drive in until fully seated. Check boot installation to ensure retaining ring (molded into boot) is not bent, and that boot is installed completely below caliper face. Install brake hose, using new copper gasket.

DISC BRAKE ROTOR SPECIFICATIONS						
Application	Disc Diameter	Lateral Runout	Parallelism	Original Thickness	Minimum Refinish Thickness	Discard Thickness
Chevrolet						
C, K, P10	11.86"	.005"	.0005"	1.280"	1.230"	1.215"
C, K, P20	12.5"	.005"	.0005"	1.280"	1.230"	1.215"
C, G, P30	12.5"	.005"	.0005"	1.280"	1.230"	1.215"
G10	11.00"	.005"	.0005"	1.030"	.980"	.965"
G20	11.86"	.005"	.0005"	1.280"	1.230"	1.215"
GMC						
C, K, P1500	11.86"	.005"	.0005"	1.280"	1.230"	1.215"
C, K, P2500	12.5"	.005"	.0005"	1.280"	1.230"	1.215"
C, G, P3500	12.5"	.005"	.0005"	1.280"	1.230"	1.215"
G1500	11.00"	.005"	.0005"	1.030"	.980"	.965"
G2500	11.86"	.005"	.0005"	1.280"	1.230"	1.215"
Motor Home	11.00"	.005"	.0005"	1.200"	1.185"	1.170"

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DISC ROTOR

Lateral Runout — Adjust wheel bearings until all endplay is eliminated. Attach dial indicator with contact tip of indicator approximately one inch from rotor edge. Set indicator to zero and turn rotor through one complete revolution, noting indicator reading.

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 variation is excessive, refinish or replace rotor as necessary.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs.
Brake Hose-to-Caliper.....	22
Caliper Mounting Bolts.....	35

Application	Inch Lbs.
Hydraulic Line-to-Brake Hose	150
Support Plate-to-Knuckle Bolts.....	140