

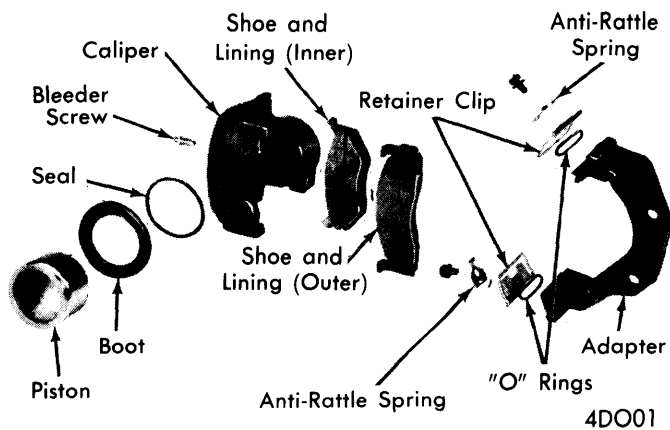
Brake Systems

SLIDING CALIPER SINGLE PISTON DISC

Chrysler Corp. (Except) –
 Barracuda, Challenger, Charger,
 Coronet, Satellite
 Ford Motor Co.

DESCRIPTION

Brake unit consists of caliper, disc pads, splash shield, adapter (Chrysler Corp.), anchor plate (Ford Motor Co.), and rotor. Rotor has integrally cast cooling fins between machined braking surfaces. As pedal is depressed, hydraulic pressure is applied against piston. This force is transmitted to inboard disc pad and against braking surface. As force increases against inboard side, caliper slides inward, providing full clamping force on rotor.



SLIDING CALIPER ASSEMBLY (TYPICAL)

PARKING BRAKE (CHRYSLER IMPERIAL)

Parking brake assembly consists of conventional type shoe brake mounted on axle flange and intermediate disc brake adapter. Braking disc used for service brakes has separate internal seven inch drum surface for internal expanding parking brake shoes.

ADJUSTMENT

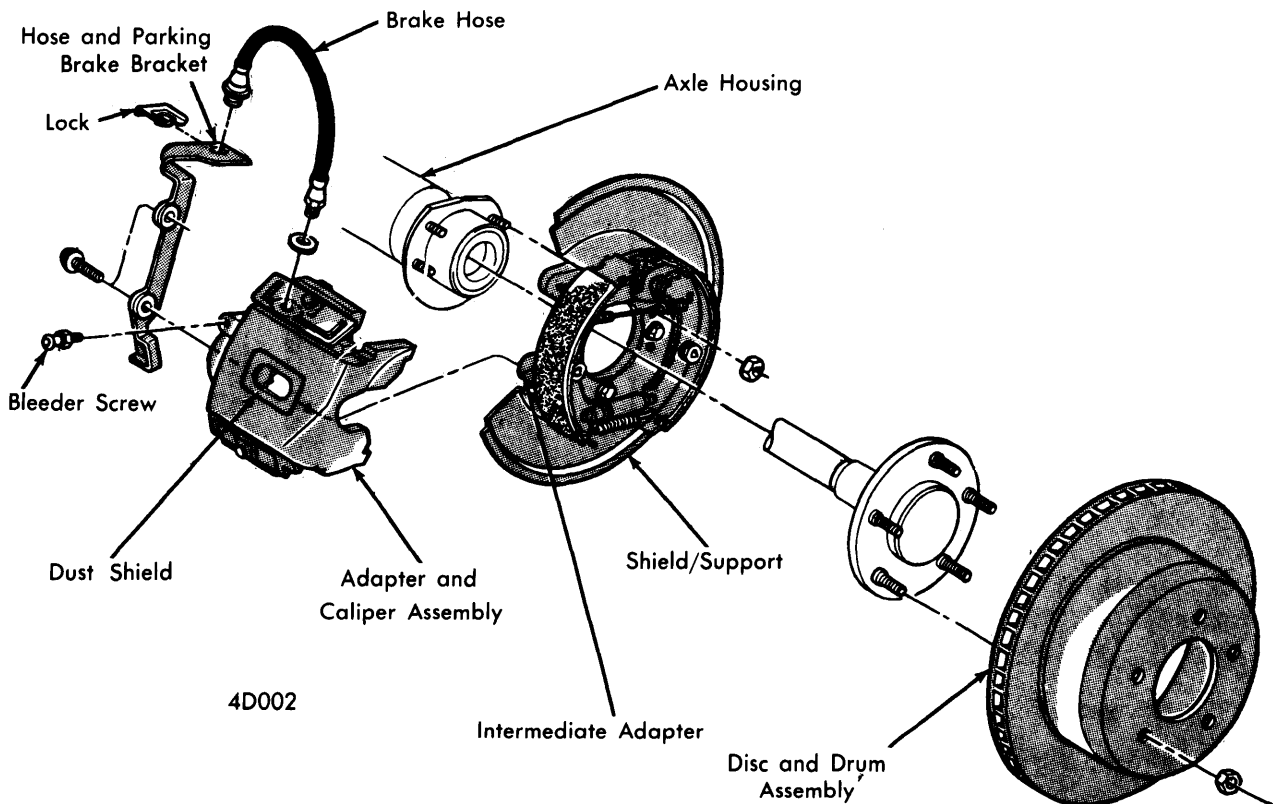
SERVICE BRAKES

Disc brakes are self-adjusting. Caliper piston seals are designed to retract pistons just enough to allow brake lining to lightly brush disc without any drag.

PARKING BRAKE (CHRYSLER IMPERIAL)

Shoe Adjustment – Release parking brake lever and loosen cable adjusting nut to insure cable is slack. Using suitable tool (C-4223), rotate star wheel until brake shoes seat against drum surface. Back off star adjuster 12 notches or "clicks" to insure a free wheel with no drag.

Cable Adjustment – Release parking brake cable and loosen cable adjusting nut to insure cable is slack. Tighten cable adjusting nut until a slight drag is felt while rotating wheel, then back off nut until wheel can be rotated freely. Back off nut an additional two full turns. Apply and release parking brakes several times to see that wheels rotate freely with no drag.



CHRYSLER IMPERIAL REAR BRAKE ASSEMBLY

SLIDING CALIPER SINGLE PISTON DISC (Cont.)

SERVICING

BLEEDING SYSTEM

See *Hydraulic Brake Bleeding* in this section.

SHOE & LINING INSPECTION

Inspect condition of disc pad assemblies any time wheels are removed. If any disc pad wears to the following limits, replace complete disc pad set.

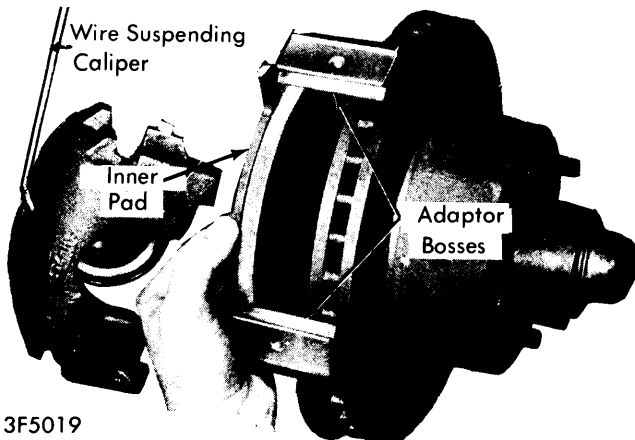
Application	Wear Limit
Chrysler Corp.	
All (Exc. Dart, Valiant)	$\frac{13}{64}$ "
Dart, Valiant	
Inner Disc Pad	$\frac{3}{16}$ "
Outer Disc Pad	$\frac{1}{4}$ "
Ford Motor Co.	Ⓛ

Ⓛ — Within $\frac{1}{32}$ " of rivets.

SHOE & LINING REPLACEMENT

Removal (Chrysler Corp.) — Remove approximately two-thirds of brake fluid from master cylinder. Raise and support vehicle. Remove front wheels. Remove caliper retaining clips and anti-rattle springs. Remove caliper from rotor by sliding out and away. Remove outboard shoe by prying between shoe and caliper fingers. Support caliper to eliminate strain on brake hose.

Installation (Chrysler Corp.) — Push piston to bottom of bore. Slide new outboard disc pad into recess of caliper. Ensure no free-play exists between pad flanges and caliper fingers. Bend flanges as necessary. Position inboard pads in adaptor and over rotor. Align caliper on machined bosses of adaptor. Install anti-rattle springs and retaining clips. Torque retaining screws to specifications. Refill master cylinder. Pump pedal until firm braking is obtained. Bleed system, if necessary.



3F5019

REMOVING OR INSTALLING INNER PAD

Removal (Ford Motor Co.) — Remove approximately two-thirds of brake fluid from master cylinder. Raise and support vehicle. Remove front wheels. Remove retaining screw from caliper retaining key. Slide retaining key and support spring from anchor plate. Lift caliper assembly from anchor plate by pushing downward against anchor plate and rotate upper end out of plate. **NOTE** — *Anti-rattle clip may be dislodged during caliper removal.* Remove disc pads from anchor plate. Suspend caliper to take weight from brake hose.

Installation (Ford Motor Co., exc. Pinto) — Push piston to bottom of bore. Ensure proper placement of anti-rattle clip. Place inner disc pad on anchor plate. Install outer pad with lower flange ends against caliper abutments, and upper flanges over shoulder of caliper legs. Position caliper lower "V" groove on anchor plate lower abutment surface. Pivot caliper housing upward toward rotor until outer edge of piston dust boot is approximately $\frac{1}{4}$ " from upper edge of inboard disc pad. Position clean, lightweight cardboard between inboard disc pad and lower half of piston dust boot (to prevent pinching dust boot during installation of caliper). Rotate caliper housing toward rotor until a slight resistance is felt. Pull cardboard downward toward rotor centerline while rotating caliper onto rotor. Slide caliper up against anchor plate upper abutment surfaces and center caliper over lower plate abutment. Position caliper support spring and key in key slot, and slide both into opening between caliper and anchor plate, until key semi-circular slot is centered over retaining screw hole. Install retaining screw and torque to specifications. Pump pedal until solid braking is obtained. Bleed system, if necessary.

ROTOR SERVICING

Lateral Runout — Tighten wheel bearings until all endplay is eliminated. Attach dial indicator to suspension such that dial pointer contacts rotor face approximately one inch from outer edge. Turn rotor through one complete revolution, checking indicator as rotor moves. If runout exceeds specifications, replace rotor assembly.

Parallelism — Measure thickness of rotor at four or more points around rotor. Make all measurements at same distance from edge of rotor. If rotor does not meet specification, replace with new assembly.

REMOVAL & INSTALLATION

BRAKE CALIPER

Caliper removal and installation procedures are same as for disc pad assembly replacement, except it will be necessary to disconnect brake hose. See *Shoe & Lining Replacement*.

HUB & ROTOR

Chrysler Corp. Removal (Front) — Raise and support vehicle, then remove wheel and tire assembly. Remove caliper assembly and suspend with wire or hook to avoid damage to brake hose. Remove grease cap, cotter pin, nut lock, thrust washer and outer wheel bearing, then remove hub from wheel spindle.

Chrysler Corp. Installation (Front) — Slide rotor and hub assembly onto spindle. Install outer wheel bearing, thrust washer and nut. Tighten nut to 90 INCH lbs. while rotating hub. Back off nut to release all preload, then tighten nut finger tight. Position lock on nut, then install cotter pin and grease cap. Clean both sides of rotor with alcohol or suitable solvent, then install caliper assembly.

Chrysler Imperial Removal (Rear) — Raise and support vehicle, then remove wheel and tire. Remove caliper assembly and suspend with wire or hook to avoid damage to brake line. Loosen parking brake star adjusting wheel using suitable tool (C-4223). Remove retaining clips, then remove rotor and drum assembly from axle flange.

Brake Systems

SLIDING CALIPER SINGLE PISTON DISC (Cont.)

Chrysler Imperial Installation (Rear) — Clean both sides of rotor with alcohol or suitable solvent, then install on axle flange. Install caliper and wheel and tire assembly, then adjust parking brake. See *Parking Brake Adjustment*.

Ford Motor Co. Removal — Raise vehicle, then remove wheel and tire assembly. Remove caliper assembly and secure to upper suspension arm. *NOTE* — Do not remove anchor plate. Remove grease cap from hub, then remove cotter pin, nut lock, and adjusting nut, flat washer, and outer wheel bearing. Remove hub and rotor from spindle.

Ford Motor Co. Installation — Install inner wheel bearing and seal (if removed). Slide hub and rotor assembly onto spindle, then install outer wheel bearing and flat washer. Start wheel bearing adjusting nut on spindle and tighten finger tight so that hub and rotor spin freely. Install caliper and brake shoes and linings, then install wheel and tire assembly. While rotating wheel, tighten adjusting nut to 17-25 ft. lbs. to seat bearings, then back off ½ turn and retighten to 10-15 INCH lbs. Install nut lock, cotter pin and grease cap.

OVERHAUL

Disassembly (Chrysler Corp.) — With caliper removed from rotor (brake hose still attached), carefully depress brake pedal to hydraulically push piston out of bore. Pedal will fall away when piston has passed bore opening. Prop pedal to any position below first inch of pedal travel (to prevent fluid loss). *NOTE* — Chrysler Corp. recommends that compressed air not be used to remove piston from caliper. Disconnect brake hose from caliper. Mount caliper in padded vise. Do not clamp too tightly. Remove dust boot. Using a small wooden or plastic stick, pry seal from caliper bore groove. Discard seal.

Disassembly (Ford Motor Co.) — Follow procedure outlined in *SHOE & LINING REPLACEMENT*. To remove piston, apply compressed air to caliper fluid inlet port. If piston is seized, tap lightly around caliper bore. Remove dust boot and pry piston seal from bore groove. Discard seal.

Cleaning & Inspection — Clean all components, using denatured alcohol, and air dry. Blow out all passages and bores. Inspect piston and bore for scoring or pitting. Clean light scoring or corrosion with crocus cloth. On Chrysler Corp. vehicles, bores with deep scoring may be honed, providing diameter of bore is not increased more than .002". If specification is exceeded, replace caliper.

Assembly (All) — Dip new piston seal in clean disc brake fluid or other specified fluid and install in bore groove. Coat piston boot with lubricant (leave generous amount in boot). Install boot in caliper outer groove. Plug fluid inlet port and bleeder screw hole, coat piston with disc brake fluid, spread boot with fingers, and insert piston. Entrapped air below piston will force boot around piston. Remove plugs and push piston to bottom of bore. *NOTE* — Before installing caliper, check condition of rotor, as described under *ROTOR SERVICING*.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs.
Chrysler Corp.	
Brake Hose-to-Caliper	25
Adapter Mounting Bolts	75-100
Caliper Retaining Screws	180 INCH lbs.
Splash Shield Bolts	220 INCH lbs.
Wheel Attaching Bolts	65
Ford Motor Co.	
Caliper-to-Spindle ①	
Upper Bolt	90-120
Lower Bolt②	90-120
Splash Shield-to-Spindle	9-14
Brake Hose-to-Caliper	20-30
Wheel Attaching Nuts	70-115

① — Upper bolts must be tightened first.

② — Pinto, Mustang, Maverick, Comet — 55-75

DISC BRAKE ROTOR SPECIFICATIONS

Application	Disc Diameter	Lateral Runout	Parallelism	Original Thickness	Minimum Refinish Thickness	Discard Thickness
Chrysler Corp.						
Dart, Valiant	10.98"	.004"	.0005"	1.000-1.010"	.....	.940"
Imperial (Rear Disc)	11.63"	.004"	.0005"	1.000-1.010"	.....	.940"
All Others	11.75"	.004"	.0005"	1.250-1.400"	.....	1.180"
Ford Motor Co.						
Ford, Mercury, Meteor	11.80"	.003"	.0005" ①	1.180"	.....	1.120"
T-Bird, Cont., Mk IV	11.80"	.003"	.00025"	1.180"	.....	1.120"
Cougar, Torino, Montego	10.72" ②	.003"	.0005"	1.180"	.....	1.120"
Pinto, Mustang	9.3"	.003"	.0005"	.870"	.....	.810"
Maverick, Comet	11.03"	.003"	.0005"	.870"	.....	.810"

① — Mercury — .0004".

② — Police — Same as Ford, Mercury, Meteor.