JEEP SLIDING CALIPER DISCS

"CJ" Models, Scrambler

DESCRIPTION

Sliding caliper disc brake assemblies are of a single piston design. Calipers are mounted to an anchor mount connected to front drive axle.

As brake is depressed, hydraulic pressure ia passed to brake caliper piston. This force is transmitted to inboard disc pad and against inner braking surface. As force increases against inner side, caliper slides inward, providing vise-like clamping action on rotor.

ADJUSTMENT & SERVICING

DISC PAD ADJUSTMENT

Pad wear is automatically compensated for by piston moving outward in cylinder bore. No disc pad adjustment is necessary.

BLEEDING SYSTEM

See Hydraulic Brake Bleeding in this section.

REMOVAL & INSTALLATION

DISC BRAKE PADS

Removal

1) To prevent master cylinder overflow when caliper piston is depressed, remove ⅔ of the brake fluid from master cylinder reservoir. Raise vehicle and remove wheel.

2) Using a screwdriver or "C" clamp, press caliper piston to bottom of bore. Remove support key retaining screw. Drive out support key with a punch and hammer. Lift caliper assembly off anchor mount. Do not let caliper hang by brake line.

3) Remove inner disc pad from anchor mount. Remove anti-rattle spring from inner disc pad. Note position of spring for installation. Remove outer disc pad from caliper.

Installation

1) Install anti-rattle spring on rear flange of inner disc pad. Make sure looped section of spring faces away from rotor. Install inner disc pad in anchor mount. Make sure anti-rattle spring stays in place.

2) Install outer disc pad in caliper. Place caliper in position over rotor and onto anchor mount. Care must be taken not to tear or dislodge dust boot when installing caliper.

3) Align caliper with anchor mount. Install support key and support spring between abutment surfaces at trailing end of caliper and anchor mount. Drive support key into place with a punch and hammer.

4) Install support key screw and tighten to 15 ft. lbs. (20 N.m). Fill master cylinder with new brake fluid. Press on brake pedal several times to seat disc brake pads. Install wheel and lower vehicle.

BRAKE CALIPER

Removal & Installation

Caliper removal and installation procedures are same as for disc pad replacement. It will be necessary to disconnect brake hose.

DISC ROTOR

Removal

1) Raise vehicle and support on safety stands. Remove caliper as previously outlined. Remove bolts attaching hub body to hub clutch and remove hub body. Remove axle shaft retaining ring. Remove hub clutch and bearing assembly.

2) Straighten lip of outer lock nut retaining washer. Remove outer lock nut, retaining washer, inner lock nut and inner retainer ring. Remove hub clutch and bearing assembly.

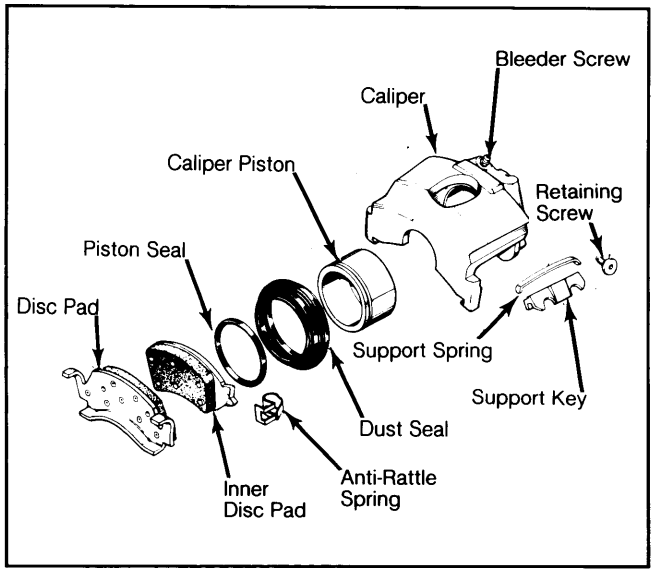
Installation

1) Lubricate bearings with EP-type waterproof wheel bearing lubricant. Install bearings in rotor, using new oil seal. Install rotor, tabbed inner washer and lock nut. Install wheel but do not tighten wheel nuts. Rotate wheel and tighten inner lock nut to 50 ft. lbs. (68 N.m) to seat bearings.

2) Back off inner locknut 60°. Install outer tabbed washer and lock nut. Tighten nut to a minimum of 50 ft. lbs. (68 N.m) and bend lip of tabbed washer over locknut. Install hub clutch and bearing assembly on axle shaft.

3) Install retaining ring on axle shaft. Install hub body, gasket and bearing assembly. Align bolt holes in hub body and rotor hub and install bolts and lock washers. Install caliper and wheels.

Fig. 1: Exploded View of Jeep Sliding Caliper



OVERHAUL

BRAKE CALIPER

Disassembly

1) Remove caliper and drain fluid. Place caliper assembly on bench, piston side up. Place several shop towels between piston and outer legs of caliper housng.

2) Carefully apply air pressure to caliper inlet port until piston comes out of caliper housing. Use low air pressure to remove piston, as high pressure may cause piston to pop out with considerable force. Do not place fingers in front of piston when removing as severe personal injury could result.

Brake Systems

JEEP SLIDING CALIPER DISCS (Cont.)

3) Remove dust seal from piston. Pry piston seal from piston bore with a plastic or wooden tool.

4) Remove bleeder screw and plastic cap. Clean caliper housing and piston with denatured alcohol. Check cylinder bore, seal groove and boot groove for damage and excessive wear. Replace piston if pitted.

Reassembly

1) Lubricate piston seal with clean brake fluid and install seal in piston bore groove. Work seal into groove with finger. Install bleeder screw and plastic cap.

2) Place dust seal on piston bore. Do not lubricate seal. Reaching through top of seal, work large lip of seal into seal groove at top of piston bore. Make sure seal is completely seated in groove.

3) Lubricate caliper piston and small lip of dust seal with brake fluid and position piston over seal lip. Hold piston in place on dust seal. Apply reduced air pressure (air pressure should not exceed 15 psi) into caliper inlet port.

4) As air pressure expands dust seal, carefully work caliper piston into dust seal until small lip of seal seats in caliper piston groove. With seal seated in groove, release air pressure and push piston to bottom of bore with a hammer handle.

5) Install caliper. Install brake hose on caliper using a new washer. Tighten brake line bolt to 160 INCH lbs. (18.1 N.m) or, if equipped with brake line fitting, tighten fitting to 25 ft. lbs. (34 N.m). Fill master cylinder and bleed system. Check brake application and refill master cylinder if necessary.

DISC ROTOR

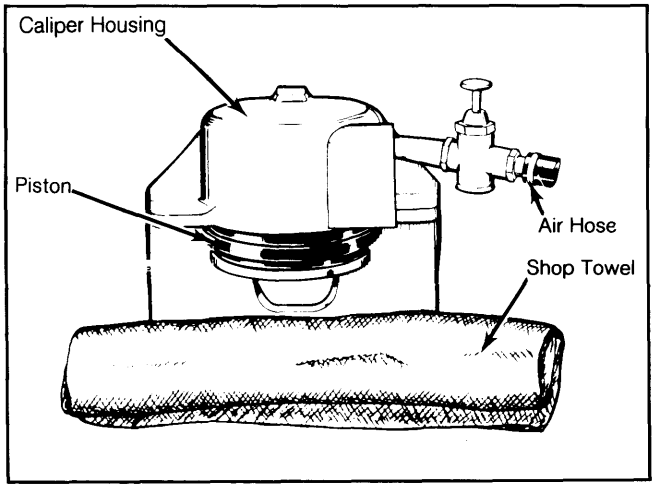
Lateral Runout

Adjust wheel bearings until all end play is eliminated. Attach dial indicator with contact tip of indicator on braking surface 1" from rotor edge. Set indicator to zero and turn rotor through one revolution noting indicator reading. If runout exceeds specifications, replace or refinish rotor.

Parallelism

Check thickness of rotor at 4 or more points around circumference of rotor. Make all measurements at same distance from edge of rotor. If thickness variation exceeds specifications, replace or refinish rotor.

Fig. 2: Using Compressed Air to Remove Caliper Piston



Do not catch piston with hands. Place shop towels under caliper assembly before removing piston.

TIGHTENING SPECIFICATIONS

Application	Torque
Brake Hose-to-Caliper	160 INCH lbs. (18.1 N.m)
Support Key Retaining Screw	15 ft. lbs. (20 N.m)

DISC BRAKE ROTOR SPECIFICATIONS

Application	Disc Diameter In. (mm)	Lateral Runout In. (mm)	Parallelism In. (mm)	Original Thickness In. (mm)	Min. Refinish Thickness In. (mm)	Discard Thickness In. (mm)
"CJ" and Scrambler	11.70 (297.2)	.005 (.12)	.001 (.03)	.....	.815 (20.70)	.815 (20.70)
Cherokee, Wagoneer and Pickup	12.00 (304.8)	.005 (.12)	.001 (.03)	.....	1.215 (30.86)	1.215 (30.86)