

## DATSUN 710 & 810

710  
810

### DESCRIPTION

Brake system is hydraulically operated, using a tandem master cylinder and a Master-Vac power brake unit. Front brakes are single cylinder, dual piston type. Rear brakes are leading-trailing drum type. A combination valve is used in brake system to prevent premature locking of rear brakes. Parking brake is cable operated by an actuating lever. Parking brake works on rear wheels only.

### ADJUSTMENT

#### BRAKE PEDAL HEIGHT & FREE PLAY ADJUSTMENT

Adjust brake light switch bolt until end face is flush with front face of bracket, then tighten lock nut. Adjust pedal stopper until pedal height, measured from pedal pad to floor, is 7.28" (185 mm) for 710 models or 7.09" (180 mm) for 810 models. Adjust master cylinder push rod length until free play, measured at pedal, is .039-.197" (1-5 mm).

#### FRONT DISC BRAKE PADS

Front disc brakes are self-adjusting; therefore, no adjustment in service is required.

#### REAR BRAKE SHOES

**710** — With parking brake fully released, depress brake pedal several times so that shoes are settled to normal positions. Turn adjusting cam on backing plate until shoes lock against drum. Loosen adjusting cam until drum is just free to rotate.

**810** — No adjustment is required. Brakes are adjusted when parking brake is applied.

#### PARKING BRAKE

**Station Wagon** — Make sure rear brakes are correctly adjusted. Adjust front cable adjusting nut so that when parking brake lever is pulled with specified force (see specifications), the lever stroke or the number of notches is as specified (see specifications). With parking brake off, make sure cables are slack and the rear levers are in their original positions.

**Sedan** — Make sure rear brakes are correctly adjusted. Adjust front cable adjusting nut so that when parking brake is off, dimension "A" (see Fig. 1) is .28" (7 mm). Tighten lock nut. Now adjust rear cable adjuster so that when parking brake lever is pulled with specified force (see specifications) the lever stroke or the number of notches is as specified (see specifications). With parking brake off, make sure cables are slack and the rear levers are in their original positions.

#### Parking Brake Adjustment Specifications

Adjustment	Station Wagon	Sedan
Pulling Force <sup>①</sup>	53 lbs. (24 kg)	44 lbs. (20 kg)
Lever Stroke	4.49" (114 mm)	4.02-4.49" (102-114 mm)
No. of Notches	6	5-6

① — Measured 1.97" (50 mm) from the end of the parking brake lever (less release button).

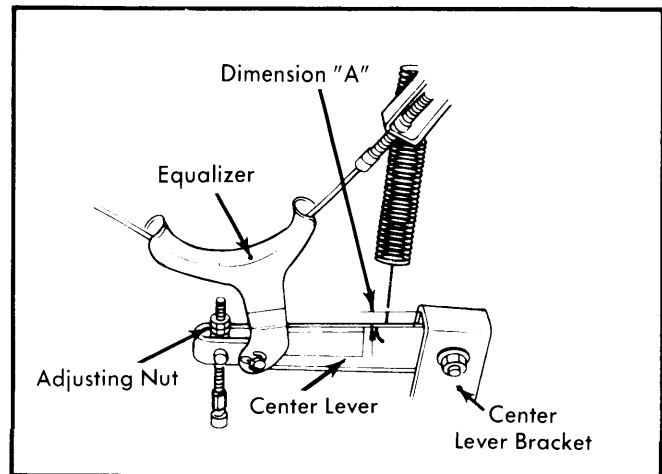


Fig. 1 Adjusting Center Lever (Sedan Models)

#### BRAKE WARNING LIGHT

**Brake Warning Light** — Light indicates parking brake is engaged. To adjust warning light, bend switch plate down until light operates when ratchet handle is pulled up one notch and so light goes out when handle is returned to normal position.

#### COMBINATION VALVE

**Function Test** — Accelerate to about 30 mph on a dry concrete surface and harshly apply brakes. If rear wheels lock at same time as fronts do, or if front wheels lock before rears, combination valve is operating properly. If rear wheels lock first, combination valve is malfunctioning; replace valve.

**Warning Light Operation & Reset** — Instrument panel light will come on when a pressure difference of between 71-224 psi is evident between front and rear hydraulic systems. Combination valve shuttle moves to side of low pressure and grounds electrical circuit causing warning light to come on. When hydraulic problem has been corrected and brakes have been bled, system should have 427 psi. Shuttle will then return to centered position and light will go out.

#### HYDRAULIC SYSTEM BLEEDING

Attach a bleed tube to bleeder screw and immerse opposite end of tube in container partially filled with brake fluid. Depress pedal, open bleeder allowing air to escape, close bleeder screw, and allow pedal to return slowly. Continue

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operation until air bubbles are no longer seen in discharged fluid. Repeat procedure on remaining brake lines until all air is bled from system. Bleeding sequence is: Master cylinder first, rear brakes, and front brakes.

## REMOVAL &amp; INSTALLATION

## FRONT DISC BRAKE PADS

**Removal** — Raise and support front of vehicle. Remove retaining spring clip. Remove disc pad pins retaining anti-squeal springs. Pull pads from caliper cavity. If pad thickness is less than .079" (2 mm), replace pads.

**NOTE** — Pads must always be replaced in sets.

**Installation** — Clean cavity and area surrounding caliper. Loosen bleeder screw and seat outer piston in cylinder until dust seal groove of piston aligns with end surface of retaining ring on dust seal. **NOTE** — Make sure piston groove does not go inside piston seal. Tighten bleeder screw and fit new inner pad. Force inner piston into cylinder and install new outer pad. Install anti-squeal spring and insert pad pins, then put spring clip into position.

## FRONT DISC BRAKE CALIPER

**Removal** — Raise and support vehicle and remove tire and wheel assembly. Disconnect hydraulic line from caliper and plug openings. Remove bolts securing caliper to steering knuckle and remove caliper.

**Installation** — Reverse removal procedure, tighten mounting bolts securely, and bleed hydraulic system.

## FRONT DISC BRAKE ROTOR

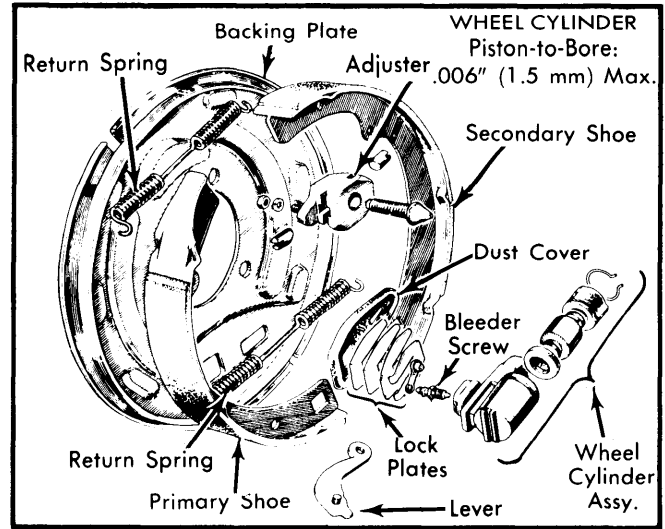
**Removal** — With caliper assembly removed, remove hub dust cap, adjusting cap, adjustment nut and washer. Slide hub and rotor assembly from spindle taking care not to lose outer wheel bearing. Remove bolts attaching rotor to hub, then separate.

**Installation** — Reverse removal procedure, tighten rotor mounting bolts securely, and adjust wheel bearings. See *Wheel Bearing Adjustment* in *WHEEL ALIGNMENT* Section. Using a dial indicator, measure rotor runout. If runout exceeds .005" (.12 mm), resurface or replace rotor.

## REAR BRAKE SHOES

**Removal, 710** — Raise and support vehicle, remove tire and wheel. Remove brake drum. Disconnect anti-rattle springs and shoe return springs. Take shoes off backing plate. If necessary, remove bolts securing adjuster to backing plate and remove adjuster mechanism. See Fig. 2.

**Installation** — Reverse removal procedure and note the following: Apply grease to sliding areas of backing plate and adjuster, taking care not to contaminate linings. When installed, adjust brake shoes, parking brake, and bleed hydraulic system.

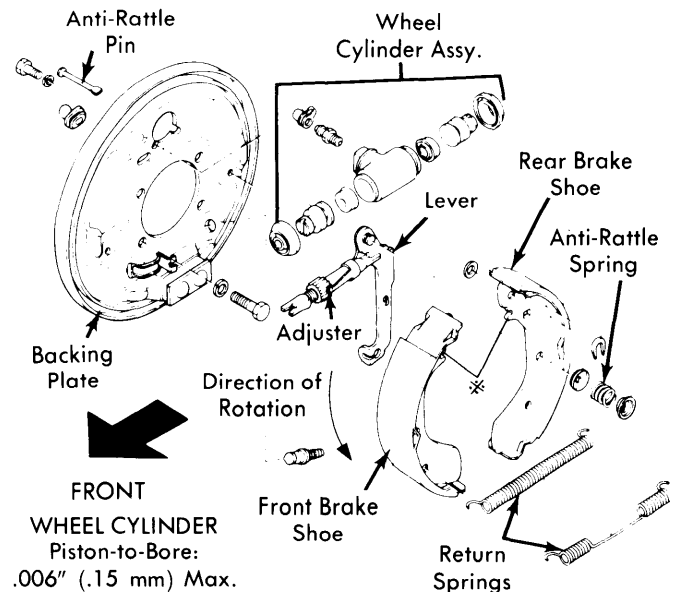


**Fig. 2** Rear Brake Assembly for Datsun 710. Also Note Detail of Sliding Wheel Cylinder for Disassembly Purposes

**Removal, 810 Sedan** — 1) Raise rear of vehicle, remove tire and brake drum. Apply parking brake. Lightly tap stopper head. Remove stopper and fastener as an assembly. Release parking brake.

2) If necessary, remove rear axle to gain access to rear brake components. Remove anti-rattle spring and pin. Remove return springs and brake shoes. Remove parking brake cable from lever. Pry off snap ring and remove lever from brake shoe.

**Installation** — To install, reverse removal procedure. Apply grease to adjuster nut and threads on rod. Also, apply grease to mating surfaces between adjuster and back plate.



**Fig. 3** Exploded View of Rear Brake Assembly for Datsun 810 Sedan Models. 810 Station Wagon Models Are Similar But Have Different Brake Adjuster Mechanism Configuration

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**Removal, 810 Station Wagon** – 1) Raise rear of vehicle, remove tire and brake drum. Apply parking brake. Pull out pin and remove stopper from toggle lever. Release parking brake.

2) If necessary, remove rear axle shaft to gain access to brake components. Remove anti-rattle spring and pin. Remove return springs and brake shoes. Remove parking brake return spring, then remove cross-rod cotter pin. Remove dust cover and toggle lever with adjuster assembly.

**Installation** – To install, reverse removal procedure. Apply grease to adjuster nut and rod threads. Also apply grease to mating surface between adjuster and toggle lever.

**Removal, 710** – With rear drum and brake shoes removed, disconnect and plug hydraulic line at wheel cylinder. Pull out clevis pin and separate rod from cylinder operating lever. Remove dust cover, adjusting shims and lock plates, then remove wheel cylinder.

**Installation** – Reverse removal procedure and note the following: After wheel cylinder is installed, measure wheel cylinder sliding resistance using a spring pull gauge; resistance should be 4.4-15.4 lbs. (2.0-7.0 kg.). Install brake shoe assemblies and bleed hydraulic system.

**Removal, 810** – With brake drum and shoes removed, disconnect hydraulic line at rear of wheel cylinder. Remove bolt securing wheel cylinder to backing plate and remove cylinder.

**Installation** – To install, reverse removal procedure. Bleed hydraulic system after installation.

### MASTER CYLINDER

**Removal** – Disconnect and plug front and rear hydraulic lines from master cylinder and drain brake fluid from cylinder. Remove master cylinder attaching nuts and lift off master cylinder.

**Installation** – Reverse removal procedure and bleed hydraulic system.

### POWER BRAKE UNIT

**Removal** – With master cylinder removed, disconnect vacuum line from power unit. From inside vehicle, disconnect pedal return spring, push rod from brake pedal, and power unit mounting nuts. Remove power unit from engine compartment.

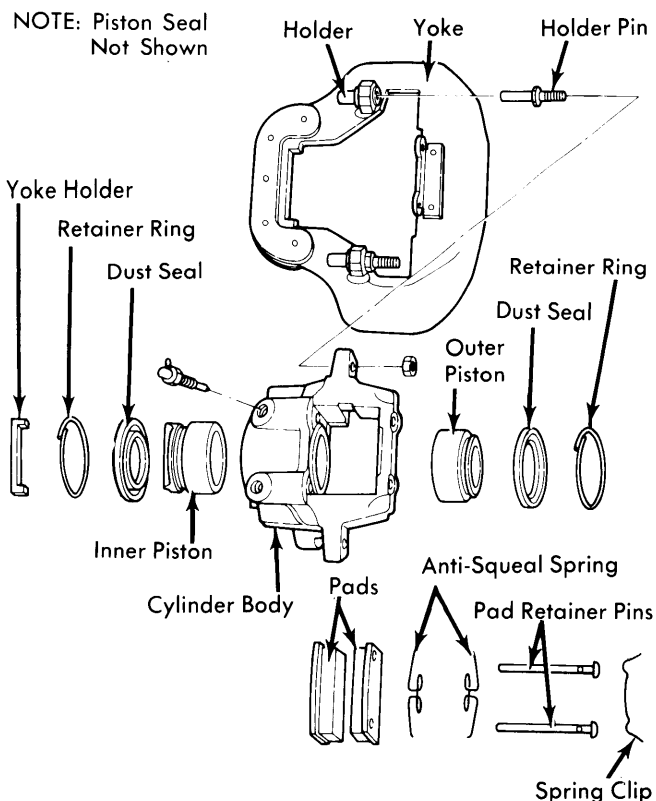
**Installation** – Reverse removal procedure, adjust pedal height and free play, and bleed hydraulic system.

**Check Valve Replacement** – Check valve is located near identification plate on firewall. To remove, disconnect clip, remove hose clamps, separate hoses from valve, and remove valve. To install, reverse removal procedure.

## OVERHAUL

### FRONT DISC BRAKE CALIPER

**Disassembly** – Drain any remaining fluid from cylinder. Remove holding mounting nut, See Fig. 4. Separate yoke and cylinder body. Remove yoke holder from piston. Take off retaining ring and dust seals from both inner and outer pistons. Force pistons from cylinder using compressed air. Carefully pry out piston seals.



**Fig. 4 Exploded View of Front Disc Brake Caliper**  
710 Caliper is Shown – 810 Models Have Slightly  
Different Holder Pins and Anti-Rattle Springs

**Inspection** – Clean all components in brake fluid. Inspect for rust, score marks, damage, or wear. Minor damage can be polished out with a fine emery cloth, except on piston head.

**Reassembly** – Carefully refit piston seals. Apply a light coat of brake fluid to sliding surfaces. Insert inner piston so yoke groove aligns with groove in cylinder. Fit dust seal and insert retaining ring. Fit yoke holder to inner piston. Drive in holding pin. Support end of piston, then press yoke into holder.

### MASTER CYLINDER

**Disassembly** – Remove reservoir cap and drain fluid. Remove dust cover, retaining ring and piston stop screw. Remove washer, primary piston assembly, secondary piston assembly and return spring. Remove valve plugs and remove check valves. **NOTE** – Do not remove master cylinder reservoir tanks; if removed new tanks must be reinstalled.

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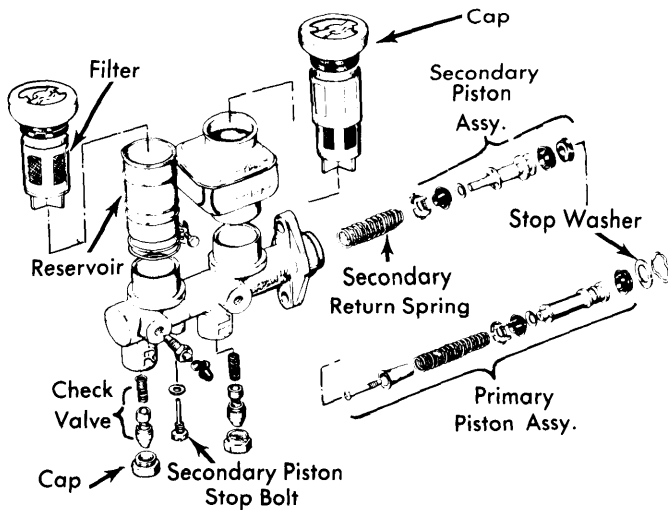


Fig. 5 Exploded View of Master Cylinder with Detail of Related Components for Identification

**Cleaning & Inspection** – Clean all parts in alcohol or brake fluid, and inspect for wear or damage; replace parts as required. Check clearance between cylinder bore and piston; if greater than .006" (.15 mm) replace cylinder or piston as required. **NOTE** – Manufacturer recommends replacing cylinder cups and valves whenever master cylinder has been disassembled.

**Reassembly** – Coat all parts with clean brake fluid and reverse disassembly procedure.

### POWER BRAKE UNIT

**Disassembly** – 1) Place power unit in a soft jaw vise with operating rod pointing up. Scribe alignment marks on front and rear shells to assure reassembly in original position. Remove operating rod clevis, lock nut and dust boot.

2) Place Master-Vac wrench (ST08080000) over rear shell mounting studs. Press down on wrench while rotating counterclockwise and separate rear shell from front shell, then remove diaphragm plate assembly, diaphragm spring and push rod assembly. Pry off retainer and remove bearing and valve body seal from rear shell.

3) Remove rubber diaphragm from diaphragm plate assembly, then pry off air silencer retainer and remove silencer and filter. Rotate plate assembly until valve plunger key slot is down, then press in on plunger and shake out stop key. Remove reaction disc from plate assembly. Detach flange from front shell and remove plate and seal assembly.

**Cleaning & Inspection** – Clean all parts in denatured alcohol and blow dry with compressed air. Inspect front and rear shells for wear or damage. If slight rust is found on inside surface of shell, polish clean with fine emery cloth. Inspect all parts for cracks, nicks, distortion or other damage and replace as necessary.

**Reassembly** – Reverse disassembly procedure and note the following: Apply a thin coat of silicone grease to parts before reassembly. When assembling front shell to rear shell, ensure marks made during disassembly are aligned. After reassembly, measure distance from master cylinder mounting surface of power unit to end of power unit push rod; distance should be .38-.39" (9.8-10.0 mm). If distance is not to specifications, correct by adjusting tip of push rod.

### TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Hydraulic Lines .....	11-13 (1.5-1.8)
Rotor-to-Hub .....	28-38 (3.9-5.3)
Caliper-to-Steering Knuckle .....	53-72 (7.3-9.9)

### BRAKE SYSTEM SPECIFICATIONS

Application	Drum Diam. In. (mm)	Wheel Cylinder Diameter		Master Cylinder
		Front In. (mm)	Rear In. (mm)	Diameter In. (mm)
710	9 (229)	2.012⓪ (51.1)	.813 (20.6)	.750 (19.0)
810	9 (229)	2.125⓪ (53.98⓪)	.813 (20.6)	.813 (20.6)

⓪ – Caliper cylinder diameter.

### DISC BRAKE ROTOR SPECIFICATIONS

Application	Disc Diameter In. (mm)	Lateral Runout In. (mm)	Parallelism In. (mm)	Original Thickness In. (mm)	Minimum Refinish Thickness In. (mm)	Discard Thickness In. (mm)
710	9.65 (245)	.0024 (.06)	.0028⓪ (.07)	.394 (10.0)	.331 (8.4)	⓪
810	10.67 (271)	.0059 (.15)	.0028⓪ (.07)	.492 (10.67)	.413 (10.5)	⓪

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BRAKE LINING SPECIFICATION							
Application	Drum Dia. In. (mm)	Width		Length		Thickness	
		Front In. (mm)	Rear In. (mm)	Primary In. (mm)	Secondary In. (mm)	Primary In. (mm)	Secondary In. (mm)
710 & 810	9.0 (229)	①	1.575 (40)	8.642 (219.5)	8.642 (219.5)	.177 (4.5)	.177 (4.5)

① — Front disc brake equipped.

BRAKE DRUM SPECIFICATIONS				
Application	Drum Diameter In. (mm)	Original Diameter In. (mm)	Maximum Refinish Diameter In. (mm)	Discard Diameter In. (mm)
710 & 810	9 (229)	9.000 (229)	9.055 (230)	①

① — More than maximum refinish diameter.