

DATSUN PICKUP

Pickup

DESCRIPTION

Brake system is hydraulically operated, using a tandem master cylinder and a Master-Vac power brake unit. Leading-trailing shoe/drum brakes are used on all four wheels, with front brakes actuated by a uni-servo wheel cylinder, and rear brakes actuated by a duo-servo wheel cylinder. Parking brake is cable actuated, operating secondary shoes of rear brake assemblies.

ADJUSTMENT

BRAKE PEDAL

Loosen stop light switch adjusting nuts and rotate switch until pedal height, measured from pedal pad to floor, is approximately 5.5". With pedal height adjusted, adjust brake pedal push rod adjusting nut so that .039-.118" free play is obtained when depressing pedal. With pedal assembly properly adjusted, total pedal travel should be 4.96-5.20" with no interference.

BRAKE SHOES

Remove rubber boot from hole in front backing plate and lightly tap adjuster housing to move it forward. Using a suitable brake adjusting tool, turn adjuster downward until drum locks, then back off adjuster 12 ratchet stops and ensure brake drum rotates freely without dragging. Adjustment procedure for rear brake shoes is the same, with parking brake fully released.

PARKING BRAKE

With parking brake lever applied 3.15-3.94", adjust equalizer link with adjusting nut until rear wheels are locked. Release parking brake and insure rear wheels turn freely.

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 vehicle to 30 mph and sharply apply brakes. If rear wheels lock ahead of fronts, or if stopping distance is greater than 43 feet (rear wheels locked), valve must be replaced.

NOTE — Stopping distance is same whether loaded or not. Lighter pedal pressure is required to lock rear wheels of unloaded vehicles.

MASTER VAC

Vacuum Test — 1) Insert vacuum gauge in line between check valve and master vac.

2) Start engine and raise RPM until vacuum gauge reads 19.69 in. Hg (500 mm Hg). Stop engine.

3) After 15 minutes lapse time, check pressure drop indicated by gauge. A drop of more than .98 in. Hg (25 mm Hg) in-

dicates master vac is losing pressure too quickly. Several problems are indicated:

- Check valve air leak
- Push rod seal air leak
- Air leak; valve body and seal
- Damaged hydraulic lines

4) Repeat step 2) Fully apply brake pedal and read vacuum gauge after 15 minutes. Note if pressure drop has exceeded .98 in. Hg (25 mm Hg). Several problems are indicated if pressure drop is excessive:

- Check valve air leak
- Damaged diaphragm
- Disengaged reaction rod
- Air leak at poppet seat and valve body

Check Valve Test — 1) Using suitable master vac tester gauge set or equivalent, apply 7.87 in Hg (200 mm Hg) to master vac side of check valve. If pressure drops more than .39 in. Hg (10 mm Hg) in 15 seconds, replace valve.

2) When pressure is applied to master vac side of check valve and valve fails to open, replace check valve.

HYDRAULIC SYSTEM BLEEDING

Attach a bleed tube to wheel cylinder bleeder screw, and immerse opposite end into a container partially filled with brake fluid. Pump brake pedal two or three times, open bleeder screw to allow air to escape, then close bleeder screw. Continue operation until air is no longer seen in discharged fluid. Repeat procedure on remaining brake lines. Bleed rear wheels first, front wheels last.

REMOVAL & INSTALLATION

BRAKE SHOES

Removal (Front) — Remove tire, wheel and brake drum. Disconnect all mounting and return springs. Remove brake shoes. Remove backing plate plug, spring plate, lock plate, shim and adjuster assembly.

Installation — Reverse removal procedure. **NOTE** — Apply a thin coat of suitable brake grease to pivot points on backing plate, adjuster and spring sliding surfaces.

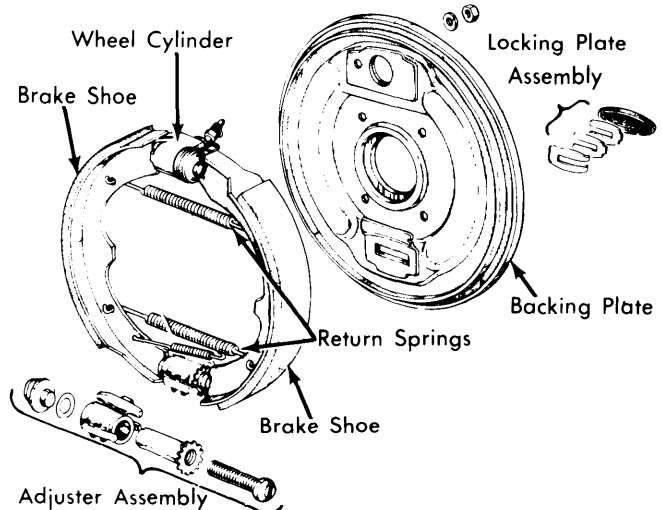


Fig. 1 Exploded View of Front Brake Assy.

DATSUN PICKUP (Cont.)

Removal (Rear) — Remove rear wheel and brake drum. Remove mounting springs, clips and pins. Spread shoe assembly and remove parking brake strut. Disconnect return springs and parking brake cable, then lift off brake shoes. Remove adjuster assembly from backing plate.

Installation — Reverse removal procedure. See **NOTE** in preceding installation procedure.

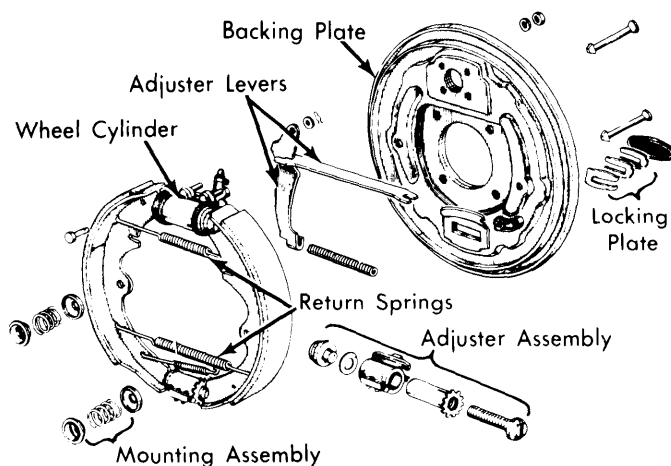


Fig. 2 Exploded View of Rear Brake Assy.

WHEEL CYLINDER

Removal (All) — With brake shoes removed, disconnect hydraulic line from cylinder and nuts attaching cylinder to backing plate. Remove wheel cylinder.

Installation — Reverse removal procedure, adjust brake shoes, and bleed hydraulic system.

MASTER CYLINDER

Removal — Disconnect hydraulic lines from master cylinder, taking care not to spill brake fluid on paint. Remove nuts attaching master cylinder to power unit and remove 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 brake pedal return spring, power unit push rod clevis from brake pedal, and remove nuts attaching power unit to firewall. Remove power unit from engine compartment.

Installation — Reverse removal procedure, adjust brake pedal assembly, and bleed hydraulic system.

Check Valve Replacement — Vacuum check valve is located in vacuum line between intake manifold and power unit. To remove, loosen hose clamps, separate hoses from valve, and remove check valve. To install, reverse removal procedure.

OVERHAUL

WHEEL CYLINDER

Disassembly (All) — Remove snap ring and rubber dust boots. Remove piston and seal assemblies, then remove seals from pistons.

Cleaning & Inspection — Clean all parts in clean alcohol or brake fluid. **NOTE** — DO NOT use mineral based solvents. Inspect all parts for wear or damage; replace parts as necessary. Check clearance between piston and cylinder bore; if clearance exceeds .006" (.15 mm), replace cylinder or piston as necessary.

Reassembly — Reverse disassembly procedure and note the following: Coat all parts with clean brake fluid when reassembling. When securing connector bolt, insert location tip to hole of wheel cylinder firmly and tighten securely.

MASTER CYLINDER

Disassembly — Remove reservoir caps and drain fluid. Remove retaining ring and secondary piston stop bolt, then withdraw stop washer, primary piston assembly, secondary piston assembly, and return springs. Remove valve caps and check valve assemblies. **NOTE** — DO NOT remove reservoir. If removed, a new replacement reservoir must be installed.

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

Reassembly — Reverse disassembly procedure and note the following: Coat all parts with brake fluid or rubber grease when reassembling to prevent damage. Replace all gaskets and packings with new parts.

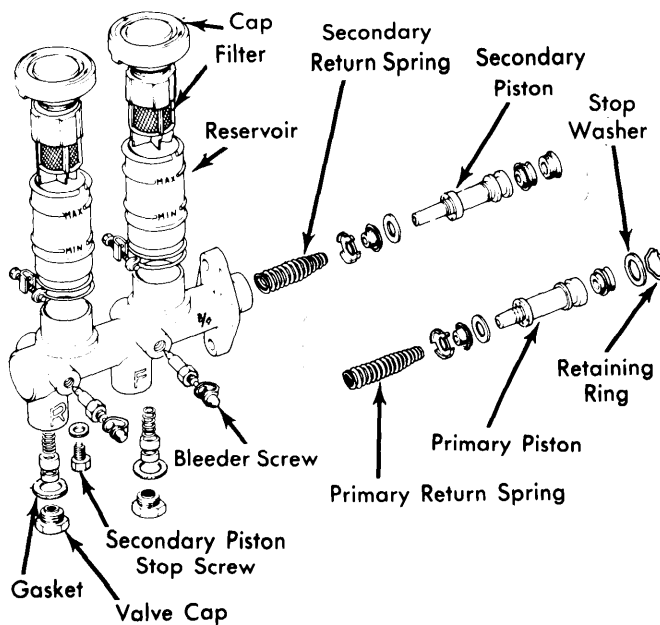


Fig. 3 Exploded View of Datsun Pickup Master Cylinder

DATSUN PICKUP (Cont.)

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 stop 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.

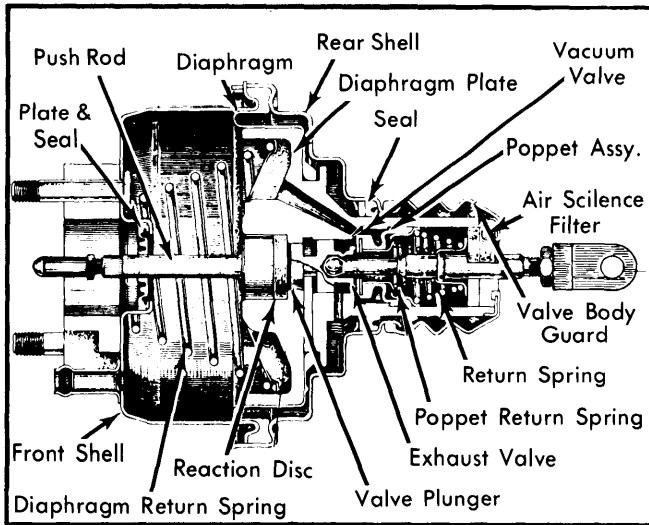


Fig. 4 Sectional View of Master Vac Power Brake Unit

Reassembly – Reverse disassembly procedure and note the following: Apply a thin coat of silicone grease to parts before reassembly. When assembling rear shell to front 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 .39-.41" (10.0-10.5 mm). If distance is not to specifications, correct by adjusting tip of push rod.

| TIGHTENING SPECIFICATIONS | |
|------------------------------------|------------------|
| Application | Ft. Lbs. (mkg) |
| Master Cylinder-to-Master Vac..... | 5.8-8.0 (.8-1.1) |
| Combination Valve-to-Body..... | 5.8-8.0 (.8-1.1) |
| Brake Back Plate | |
| Front..... | 30-36 (4.2-5.0) |
| Rear..... | 39-46 (5.4-6.4) |
| Master Vac-to-Body..... | 5.8-8.0 (.8-1.1) |

| BRAKE SYSTEM SPECIFICATIONS | | | | |
|-----------------------------|---------------------|-------------------------|---------------|-------------------|
| Application | Drum Diam. In. (mm) | Wheel Cylinder Diameter | | Master Cylinder |
| | | Front In. (mm) | Rear In. (mm) | Diameter In. (mm) |
| Pickup | 10.0 (254) | .750 (19.05) | .750 (19.05) | .750 (19.05) |

| BRAKE DRUM SPECIFICATIONS | | | | |
|---------------------------|------------------------|----------------------------|------------------------------------|---------------------------|
| Application | Drum Diameter In. (mm) | Original Diameter In. (mm) | Maximum Refinish Diameter In. (mm) | Discard Diameter In. (mm) |
| Pickup Front & Rear | 10.00 (254) | 10.00 (254) | 10.059 (255.5) | ① |

① – More than Maximum Refinish Diameter.