SUBARU

1400

DESCRIPTION

Subaru brake system utilizes hydraulically operated service brakes. All models except Coupe use a duo-servo, single anchor front brake with self-adjuster mechanisms. Coupe models use front, single cylinder disc brakes with self-adjuster components. Rear brakes on all models are drum type with leading-trailing shoes. Parking brake operates on front brakes and is mechanically actuated. A tandem master cylinder is located under the hood and supplies hydraulic pressure. Some models use a power brake cylinder to imporve the effectiveness of the brake system.

NOTE — Because of the front wheel drive construction, brakes are mounted inboard to drive axle and are connected directly to differential carrier.

ADJUSTMENT

PEDAL FREE PLAY

Adjust brake pedal free play to .24-.55" (4-14 mm) by disconnecting wiring from stop light switch and turning switch.

FRONT BRAKES

Self-adjusting, no adjustment required.

REAR BRAKES

Raise vehicle and loosen lock nut. Turn adjusting wedge until wheel locks, then back-off adjuster until wheel is just free to rotate. Tighten lock nut.

PARKING BRAKE

Engage parking brake lever a few serrations. Loosen cable lock nut and adjust turnbuckle for necessary length. Parking brake is correctly adjusted when ratchet travel is between 6-10 notches.

HYDRAULIC SYSTEM BLEEDING

Begin bleeding with wheel furthest from master cylinder and end with wheel nearest master cylinder. With pressure on pedal, open bleed fitting and push pedal its full travel. When pedal is fully depressed, close fitting and let pedal return to fully released position. Repeat procedure until all air is bled from system.

REMOVAL & INSTALLATION

FRONT DISC BRAKE PADS

Removal — Disconnect handbrake cable. Remove pin and stop plug. Force caliper body from brake pad and lift-off pad. *NOTE — It is not necessary to disconnect brake line to change pads.*

Installation — Return piston to bottom of caliper bore by turning it clockwise with a screwdriver. Place new lining in position. Re-install stop plug and pin and connect handbrake cable.

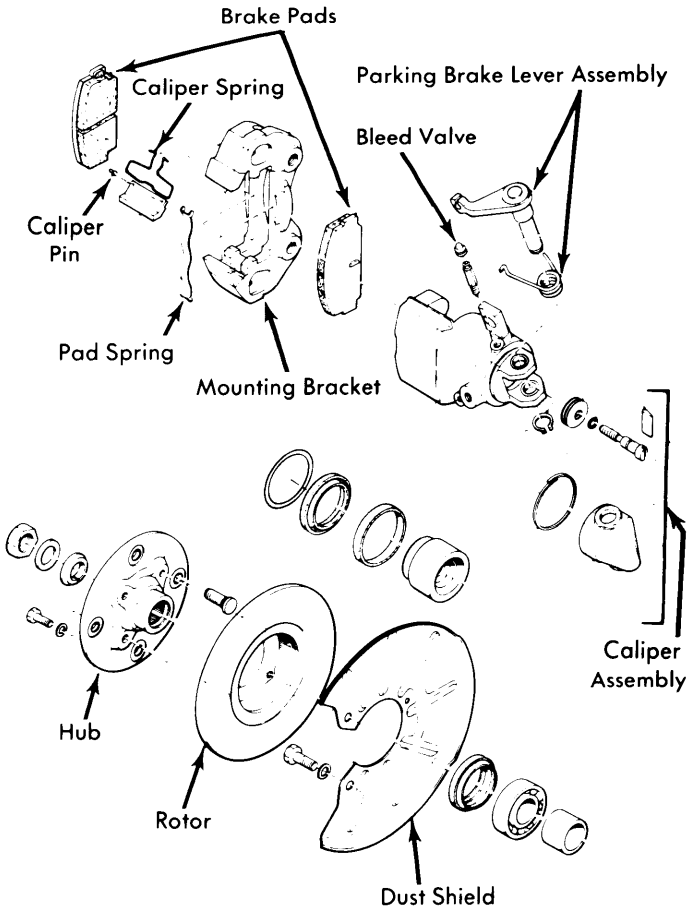

Fig. 1 Exploded View of Front Disc Brake Assembly

FRONT DISC BRAKE ROTOR

Removal — Remove wheel, handbrake cable, stoppers and calipers. Remove two bolts and lift off caliper bracket. Pull rotor from axle using suitable tool (925200000). Remove four bolts to separate rotor from hub.

Installation — To install, reverse removal procedure.

FRONT BRAKE DRUM

Removal — Remove wheel cap and loosen axle nut. Raise vehicle and remove wheel. Remove axle nut and pull off drum using suitable tool (925200000).

Installation — To install, reverse removal procedure.

FRONT BRAKE SHOES

Removal — Remove brake drum. Remove automatic adjuster spring and lever. Remove handbrake cable. Remove shoe return springs using suitable tool (925110000), then remove adjuster cable. Remove shoe set springs using suitable tool (925110000) and remove brake shoes.

Installation — To install, reverse removal procedure.

SUBARU (Cont.)

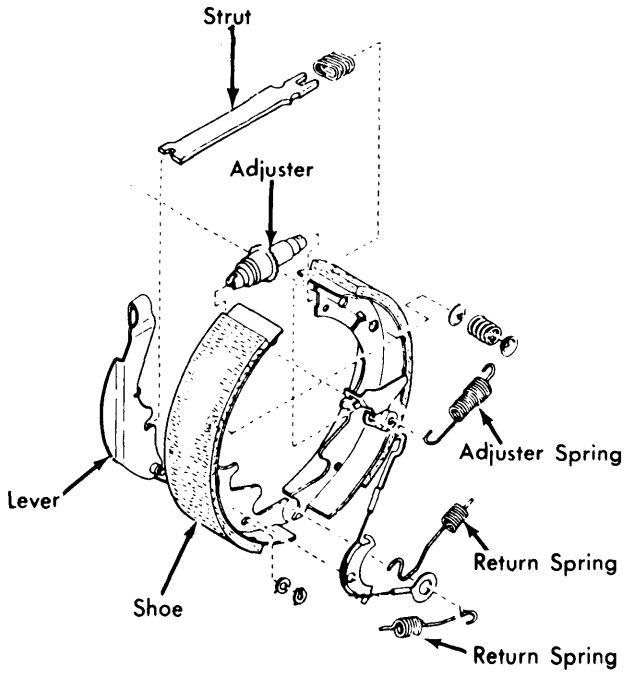

Fig. 2 Showing Components of Front Drum Brake Assembly

REAR BRAKE DRUM

Removal – Remove wheel cap and loosen wheel nuts. Raise vehicle and remove wheel. Remove three cap bolts, washers, cap and stopper plate. Remove cotter pin and loosen castle nut. Remove brake drum using suitable puller (925240000).

Installation – To install, reverse removal procedure.

REAR BRAKE SHOES

Removal – Remove brake drum. Remove three bolts securing back plate and remove brake assembly. Remove shoe setting spring and remove anchor side of shoe first.

Installation – To install, reverse removal procedure.

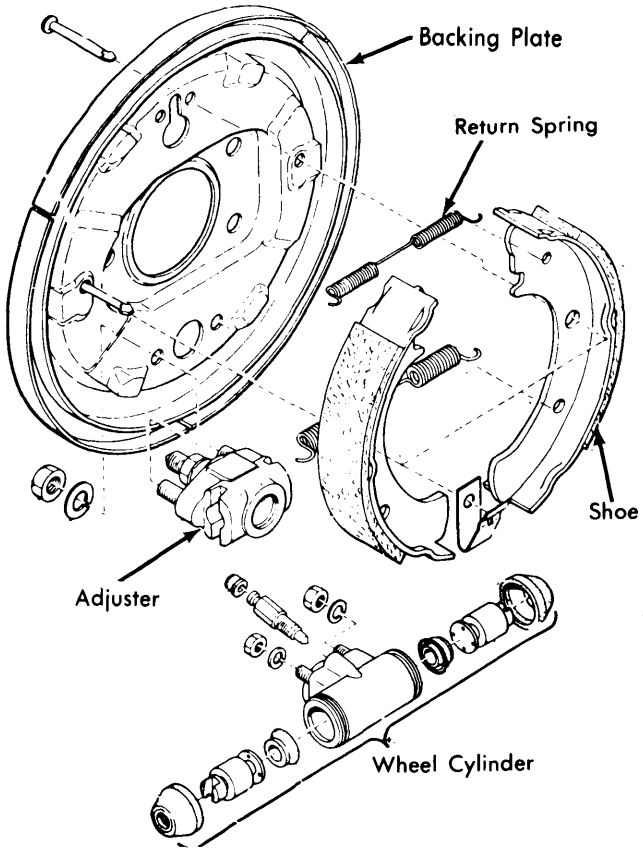

Fig. 3 Rear Drum Brake Assembly

MASTER CYLINDER

Removal – Remove nuts securing brake lines to cylinder. Remove nuts securing cylinder to firewall and remove master cylinder.

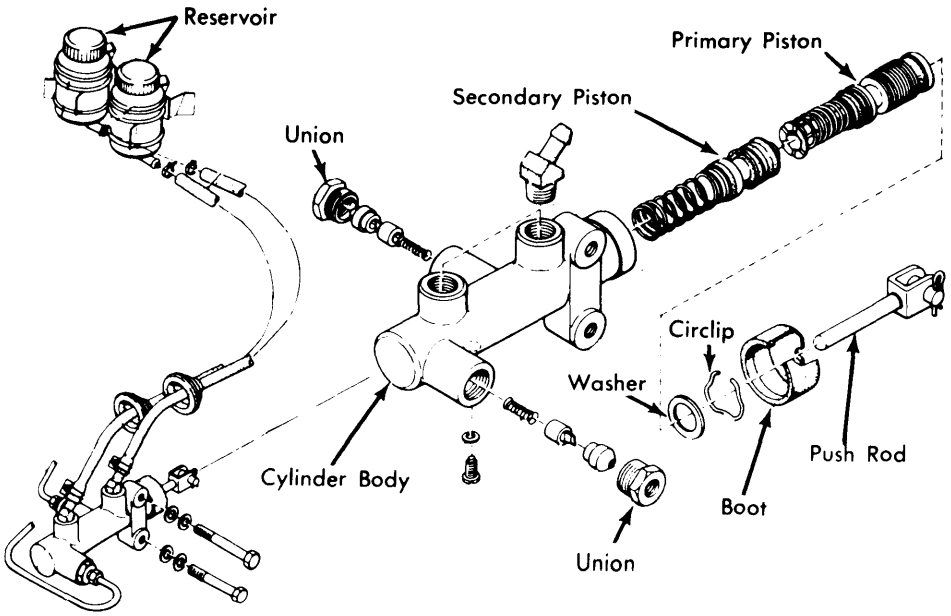

Fig. 4 Exploded View of Components in Tandem Master Cylinder

SUBARU (Cont.)

Installation – To install, reverse removal procedure.

POWER BRAKE CYLINDER

Removal – Extract cotter key, pull out lock pin and separate brake pedal from push rod. Disconnect power brake unit vacuum hose and remove master cylinder mounting nuts. Remove power brake unit attaching hardware and lift unit from engine compartment. Support master cylinder and leave it in vehicle.

Installation – To install, reverse removal procedure noting the following: Arrow on power brake unit should face toward engine.

OVERHAUL

WHEEL CYLINDER

Disassembly – Remove boot and take out wheel cylinder, taking care not to scratch cylinder bore. Also remove spring located in center of rear wheel cylinder.

Cleaning & Inspection – Clean all components in brake fluid. Inspect piston-to-cylinder bore for .001-.004" (.025-.105 mm) clearance. Check cylinder bore for out of round and burrs. If cylinder bore is damaged, it cannot be honed; it must be replaced.

Reassembly – To reassemble, reverse disassembly procedure.

MASTER CYLINDER

Disassembly – Remove boot from cylinder, then remove stop ring and plate. Remove stopper pin and gasket, pull out primary and secondary piston assembly. Remove return spring, screw, retainer and secondary cup.

Cleaning & Inspection – Clean all parts in clean brake fluid. Inspect cylinder bore for smoothness and roundness. Replace cylinder if scored or out of round. Do not hone cylinder. Inspect piston-to-cylinder clearance and replace if worn.

Reassembly – To reassemble, reverse disassembly procedure.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Front Brake Mounting Bolt	30 (4.2)
Backing Plate Mounting Bolts	24 (3.3)
Drum-to-Double Offset Joint	54 (7.5)
Brake Lines	14 (1.9)
Wheel Bearing Nut	115-133 (15.9-18.4)
Power Cylinder-to-Firewall	5.0-9.0 (.69-1.20)
Master Cylinder-to-Power Cylinder	5.0-9.0 (.69-1.2)

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)
Coupe	7.2 (184)	.....	.....	.39 (10)	.33 (8.5)	.....

BRAKE DRUM SPECIFICATIONS

Application	Drum Diameter In. (mm)	Original Diameter In. (mm)	Maximum Refinish Diameter In. (mm)	Discard Diameter In. (mm)
All Models				
Front	9.00① (229)	9.00 (229)	....	9.08 (230)
Rear	7.09 (180)	7.09 (180)	....	7.17 (182)

① – Coupe models use front disc brakes.

BRAKE SYSTEM SPECIFICATIONS

Application	Drum Diam. In. (mm)	Wheel Cylinder Diameter		Master Cylinder
		Front In. (mm)	Rear In. (mm)	Diameter In. (mm)
All Models	9.00① (229)	.938② (23.8)	.627 (15.9)	.750 (19.0)

① – Front drum. Rear drum is 7.09" (180 mm).
② – Coupe models use front disc brakes. Caliper bore diameter is 2.125" (53.9 mm).