SUBARU

Subaru

DESCRIPTION

Service brake system is a diagonally split dual hydraulic circuit with a tandem master cylinder and vacuum suspended type power brake unit. Front disc brakes on all models are Bendix type, automatic adjusting, and rear brakes are leading-trailing drum type. Parking brake operates on front brakes and is mechanically actuated.

ADJUSTMENT

PEDAL HEIGHT

Adjust pedal height to 2.76" (70 mm) depressed and no less than 1.97" (50 mm), by disconnecting wiring from stop light switch and turning switch. Proper pedal free postion is 7.09-7.48" (180-190 mm).

PEDAL FREE PLAY

Adjust pedal free play to .20-.43" (5-11 mm) by disconnecting wiring from stop light switch and turning switch.

FRONT DISC BRAKE PADS

Self-adjusting, no adjustment required.

REAR DRUM BRAKE SHOES

Raise vehicle and loosen lock nut. Turn adjusting wedge until wheel locks, then back-off to clearance of .0004-.0006" (.1-.15 mm).

PARKING BRAKE

With service brake system fully adjusted, engage parking brake lever several times, then loosen cable lock nut and adjust cable length for lever ratchet travel of 6-9 notches under normal application.

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 or suitable tool (925370000). Place new disc pad in position then reinstall stop plug (coated on both sides with high temperature grease), pin and connect handbrake cable.

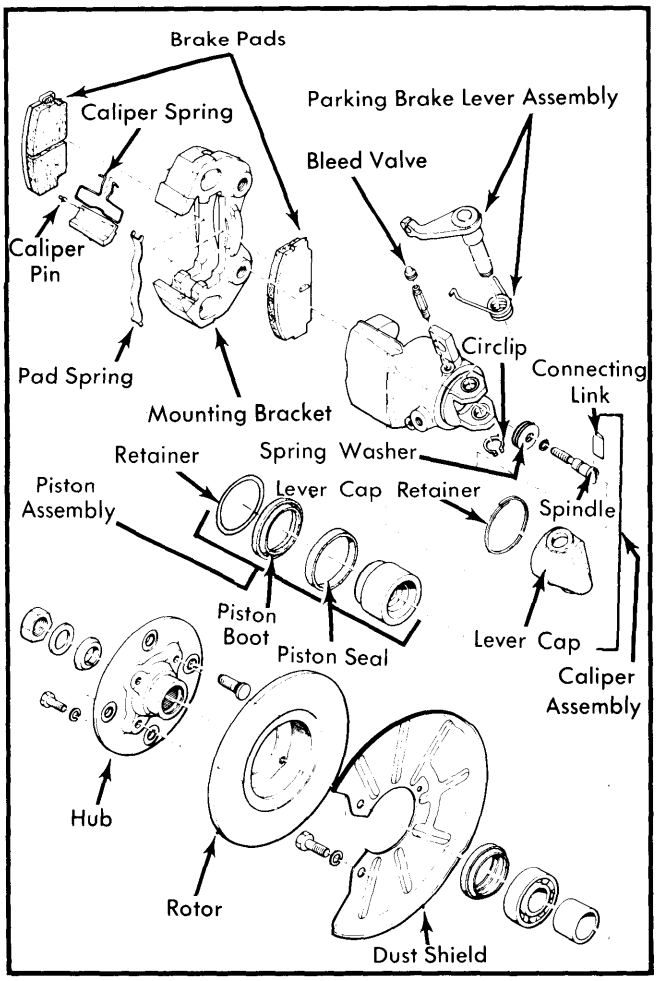

Fig. 1 Exploded View of Front Disc Brake Assembly

FRONT DISC BRAKE CALIPER

Removal – Raise and support vehicle and remove wheel assembly, brake line and pads from caliper assembly. Remove parking brake cable and mounting bracket bolts and remove caliper assembly.

Installation – Reverse removal procedure ensuring caliper-to-rotor clearance of 1.5" (39 mm). Bleed hydraulic system.

FRONT DISC BRAKE ROTOR

Removal – Remove wheel, handbrake cable, stoppers and caiiper assembly. Remove 2 bolts and lift off caliper bracket. Pull rotor from axle using suitable tool (925200000). Remove 4 bolts to separate rotor from hub.

NOTE – *Mounting bracket should be replaced if rotor is replaced.*

Installation – To install, reverse removal procedure.

REAR BRAKE DRUM

Removal – Remove wheel cap and loosen wheel nuts. Raise vehicle and remove wheel. Remove 3 cap bolts, washers, cap

SUBARU (Cont.)

and stopper plate. Remove cotter pin and castle nut. Remove brake drum using suitable puller (925240000).

Installation – To install, reverse removal procedure.

REAR BRAKE SHOES

Removal – Remove brake drum. Remove 3 bolts securing back plate and remove brake assembly. Remove shoe setting spring and anchor side of shoe first.

Installation – To install, reverse removal procedure.

REAR BRAKE WHEEL CYLINDER

Removal – With rear drum and brake shoes removed, disconnect hydraulic line from wheel cylinder at rear of backing plate, remove cylinder attaching bolts, and remove wheel cylinder.

Installation – Reverse removal procedure and bleed hydraulic system.

MASTER CYLINDER

NOTE – *BRAT models are equipped with a brake fluid level sensor built into rear reservoir cap. Warning light actuates when fluid is low. To test, remove cap and allow float to drop. Indicator bulb should light.*

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

Installation – To install, reverse removal procedure.

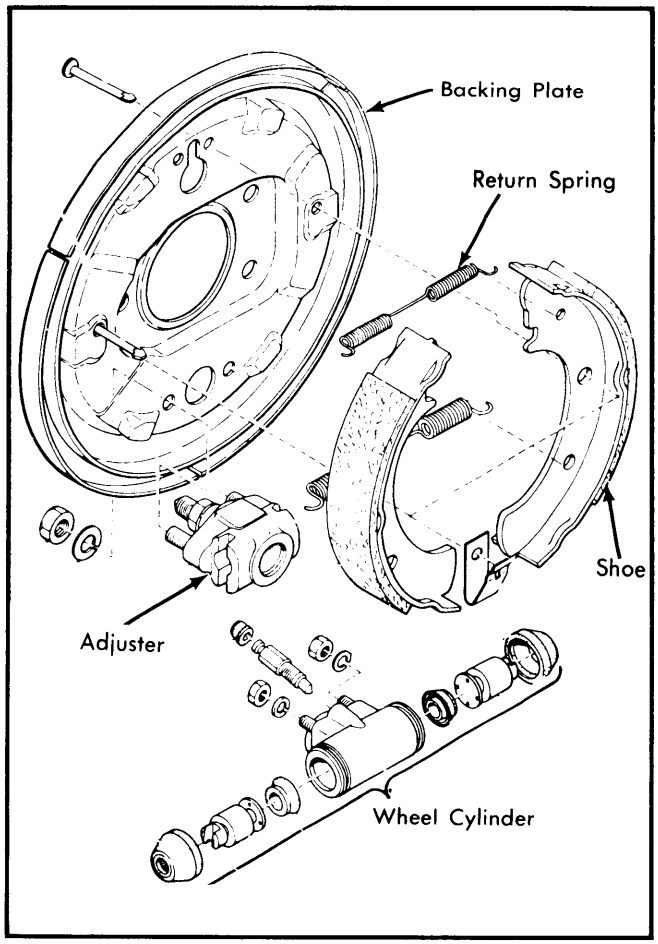

Fig. 2 Exploded View of Rear Drum Brake Assembly

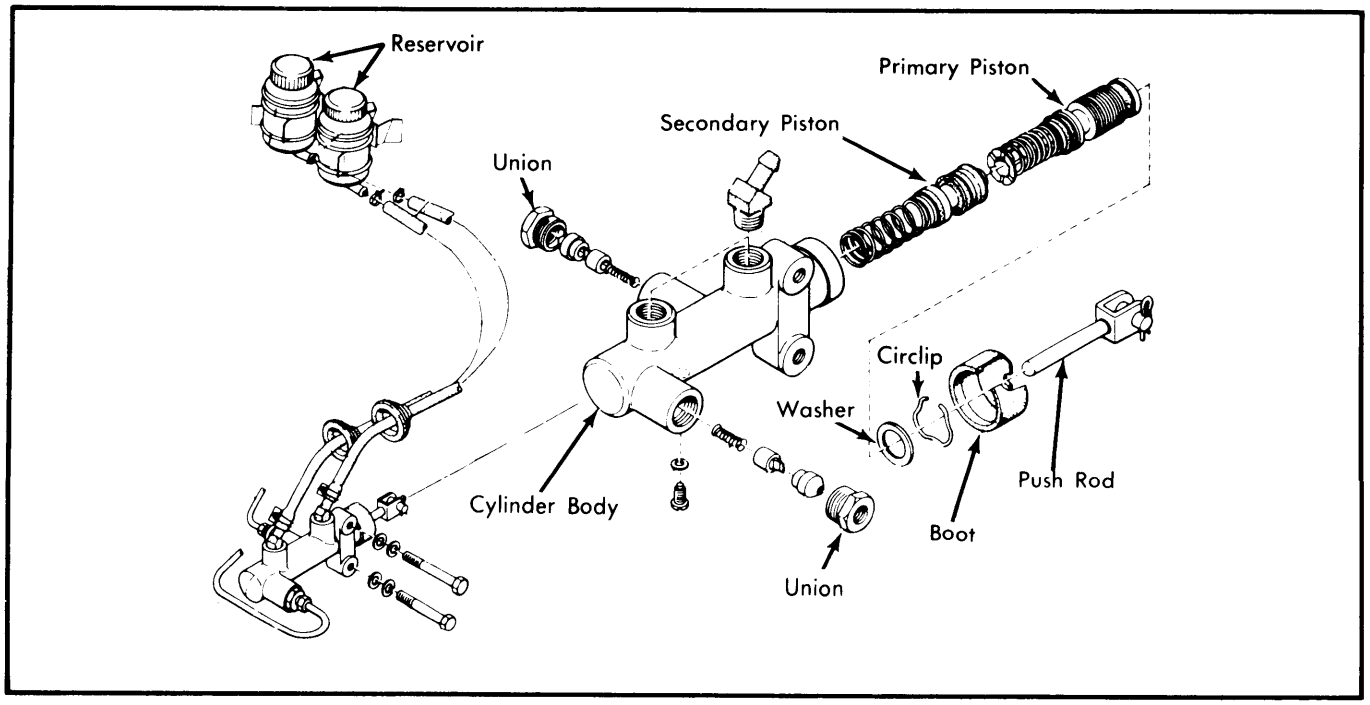

Fig. 3 Exploded View of Components in Tandem Master Cylinder

SUBARU (Cont.)

POWER BRAKE UNIT

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. If equipped, disconnect wiring harness at master cylinder. Remove power brake unit attaching hardware and lift unit from engine compartment, leaving supported master cylinder in vehicle.

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

OVERHAUL

FRONT DISC BRAKE CALIPER

Disassembly – 1) Thoroughly clean exterior of caliper with clean brake fluid or alcohol, and remove bleed valve, retainer and dust boot. Apply compressed air or liquid to fluid inlet and gradually remove piston.

2) Carefully remove piston seal, lever cap retainer and lever cap, then remove circlip from spindle. Using suitable puller tool (925470000) release spring washer load, remove connecting link, spindle and parking brake lever assembly.

Cleaning & Inspection – Clean all components with brake fluid and ensure that inner cylinder wall is not scratched or corroded. Replace any damaged parts.

Reassembly – 1) To reassemble, hand insert piston seal (lightly coated with silicon grease) into cylinder, then hand insert piston (coated with brake fluid). Lubricate cylinder wall and piston grooves then insert piston boot and retainer.

2) Lightly coat spindle and "O" ring with silicon grease, insert spindle and using suitable puller tool (925470000) install 6 spring washers. Lubricate and install connecting link (thick side in slot). Install parking brake lever assembly, circlip, lever cap and retainer. Bleed hydraulic system after installation.

REAR WHEEL CYLINDER

Disassembly – Remove boot and take out wheel cylinder piston with cup. DO NOT separate cup unless replacement is to be made.

Cleaning & Inspection – Clean all components in brake fluid. Inspect piston-to-cylinder bore for .001-.004" (.025-.102 mm) clearance. If cylinder is out of round or burred, replace, DO NOT hone.

Reassembly – To reassemble, reverse disassembly procedure, making certain cup is not installed in reverse.

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 components in 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 master cylinder, reverse disassembly procedure.

POWER BRAKE UNIT

Disassembly – Disassembly procedures not available.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Front Brake Mounting Bolt	36-51 (5.0-7.0)
Backing Plate Mounting Bolts	22-35 (3.0-4.8)
Brake Lines	11-14 (1.5-2.0)
Wheel Bearing Nut	174 (24.0)
Power Cylinder-to-Firewall	5-9 (0.7-1.2)
Master Cylinder-to-Power Cylinder	5-9 (0.7-1.2)

DISC BRAKE ROTOR SPECIFICATIONS

Application	Disc Diameter	Lateral Runout	Parallelism	Original Thickness	Minimum Refinish Thickness	Discard Thickness
All Models	7.2 (184)	.006 (.15)	.....	.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 Rear	7.09① (180)	7.09 (180)	7.17 (182)	.....

① – All models use front disc brakes.

SUBARU (Cont.)

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)
All Models	7.09 (180)	①	1.18 (30)	5.55 (141)	5.55 (141)	.20 (5)	.20 (5)

① — All models use front disc brakes.

BRAKE SYSTEM SPECIFICATIONS

Application	Drum Diam. In. (mm)	Wheel Cylinder Diameter		Master Cylinder Diameter In. (mm)
		Front In. (mm)	Rear In. (mm)	
All Models	7.09 (180)	2.125 (53.9)	.625① (15.9)	.750 (19.0)

① — Station Wagon and 4-Wheel Drive Wagon .687" (17.46 mm), BRAT models use .750" (19.05 mm).