MAZDA

GLC
626
RX7
B2000 Pickup

DESCRIPTION

Brake system is hydraulically operated using a tandem master cylinder and power brake unit. Front brakes are floating caliper disc; rear brakes are leading/trailing drum. A combination valve is used to prevent premature lock-up of rear wheels. Parking brake is cable actuated on rear wheels.

ADJUSTMENT

REAR DRUM BRAKE SHOES

RX7 & GLC – 1) Raise and support rear of vehicle. Release parking brake. Loosen the anchor pin lock nut and hold in position while turning the anchor pin in proper direction until the wheel is locked. *See Fig 1.*

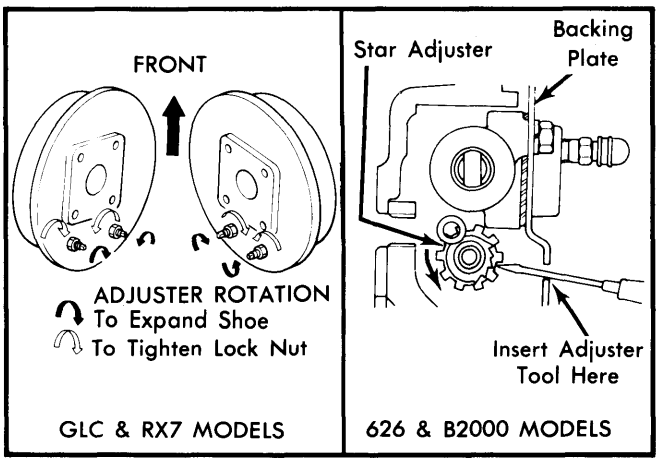

Fig. 1 Rear Brake Shoe-to-Drum Adjustment

2) Back off anchor pin until wheel just turns freely. Hold the anchor in position and tighten lock nut. Repeat the procedure for each shoe and ensure adjustment is equal on both wheels.

Except RX7 & GLC – Raise and support rear of vehicle. Release parking brake. Remove adjusting hole plugs from backing plate. Using a brake adjusting tool, rotate star wheel adjuster (direction marked on backing plate) until wheel locks. Back off adjuster 3-4 notches, until wheel rotates freely. Install adjusting hole plugs.

PEDAL HEIGHT & FREE PLAY

1) Pedal height (measured from fire wall to pedal pad center) should be as shown in chart. To adjust, disconnect negative battery cable and stop light switch connector. Loosen stop light switch lock nut and turn switch until correct pedal height is obtained. Tighten lock nut and connect electrical leads.

2) Pedal free play should be .28-.35" (7-9 mm). To adjust, loosen push rod lock nut and turn push rod until correct free play is obtained. Tighten lock nut.

Brake Pedal Height Specifications

Application	Height In. (mm)
GLC	
Man. Trans.	7.5-7.7 (190-195)
Auto. Trans.	7.7-7.9 (195-200)
626	8.7-8.9 (220-225)
RX7	7.5-7.7 (190-195)
B2000	8.1-8.3 (205-210)

STOP LIGHT SWITCH

Stop light switch is located under dash, above brake pedal. To adjust, disconnect battery ground cable and switch electrical lead. Turn switch until it contacts brake pedal arm. Check and adjust brake pedal height. Tighten lock nut and connect electrical connection and battery cable.

PARKING BRAKE

With service brakes properly adjusted, raise and support vehicle. On all models except B2000, remove parking brake lever boot and turn lever adjusting screw so rear wheels are locked when lever is pulled 3-7 notches (5-7 on 626). Replace brake lever boot. On B2000, turn adjusting nut at equalizer (underside of vehicle) so rear wheels are locked when brake lever is pulled 5-10 notches. On all models, apply and release parking brake several times and ensure rear wheels rotate freely.

BRAKE WARNING LIGHT

B2000 – Light indicates parking brake is engaged and warns of brake system malfunction. To adjust light operation with parking brake applied, bend switch plate down until light comes on when brake lever is pulled 1 notch and goes out when lever is released (ignition on). To check warning light operation, release parking brake and ensure light is off (ignition on). Open bleeder screw on wheel and depress brake pedal; light should glow. Close bleeder screw and replenish brake fluid in master cylinder reservoir. With ignition on, depress brake pedal firmly to center combination valve piston. Light should go off; turn ignition off.

NOTE – *Brake warning light on B2000 will glow whenever any repairs are made to service brake system. Combination valve piston must be centered using this procedure.*

Except B2000 – Light indicates parking brake is engaged and also warns of low fluid level. Light should glow when parking brake lever is pulled 1 notch and go off when lever is fully released (ignition on). To check warning light operation, release parking brake lever and ensure light is off. Raise master cylinder reservoir cap and light should glow (ignition on). If not, check switch and wire connector.

REMOVAL & INSTALLATION

FRONT DISC BRAKE PADS

Removal – Raise and support vehicle; remove tire and wheel. Disconnect pad wear indicator (if equipped). On 626 and RX7, remove lower caliper guide pin and pivot caliper body up out of way. On GLC and B2000, remove spring clips and guide

MAZDA (Cont.)

plates. Remove caliper body and hang from frame with wire; DO NOT disconnect hydraulic line. On all models, remove anti-rattle springs (clips), pads and shims (if equipped).

Installation – To install, reverse removal procedure and note the following: Before mounting caliper, loosen bleed screw and seat piston. Tighten bleed screw. After pad installation, depress brake pedal several times to seat pads and bleed hydraulic system, if required.

FRONT DISC BRAKE CALIPER

Removal – Raise and support vehicle; remove tire and wheel. Disconnect and plug hydraulic line at caliper. On 626 and RX7, remove caliper guide pins and remove caliper. On GLC and B2000, remove spring clips and guide plates, then remove caliper. Remove disc pads as previously described and remove caliper mounting bracket.

Installation – To install, reverse removal procedure and bleed hydraulic system.

FRONT DISC BRAKE ROTOR

Removal – With caliper assembly removed, remove wheel hub grease cap, cotter pin, nut lock, and bearing adjusting nut. Remove thrust washer and outer bearing from hub, then slide hub and rotor assembly from spindle. On B2000, remove hub-to-rotor bolts and separate rotor from hub.

Installation – To install, reverse removal procedure and tighten hub-to-rotor bolts evenly (B2000). Adjust wheel bearings. *See Wheel Bearing Adjustment in WHEEL ALIGNMENT Section.*

REAR BRAKE DRUM

Removal – Raise and support vehicle; remove tire and wheel. Remove brake drum retaining screws and insert into tapped holes of brake drum. Turn screws evenly and force brake drum off flange.

Installation – To install, reverse removal procedure and tighten retaining screws securely.

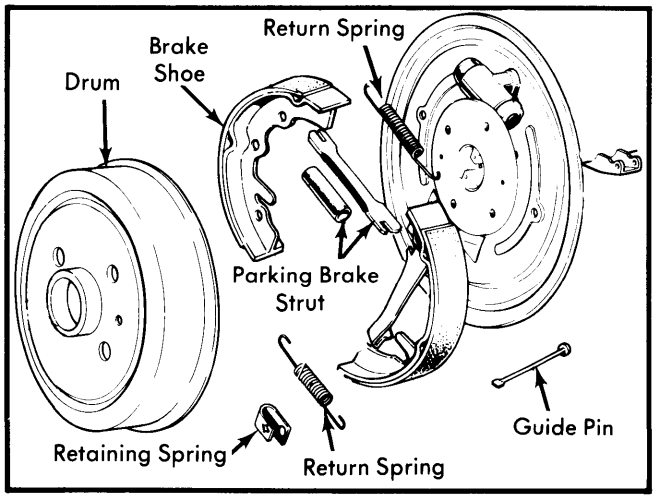

Fig. 2 Disassembled View of GLC Rear Brakes Other Models Similar

REAR BRAKE SHOES

Removal – With brake drum removed, remove brake shoe return springs, retaining springs and guide pins. Remove brake shoes. Remove parking brake strut and disconnect parking brake cable from operating lever of secondary shoe.

Installation – **1**) Lubricate adjusting screw threads and contact surfaces of shoes and backing plate with brake grease. Install parking brake operating lever to secondary shoe and secure with clip. Engage lever in parking brake cable.

2) Position operating strut between slots of shoes. Mount assembly to backing plate so slots in shoes are toward adjusting screws. Install return springs and retainer springs.

MASTER CYLINDER

Removal – Disconnect hydraulic lines at master cylinder and plug openings to prevent entry of dirt and loss of fluid. Remove nuts attaching cylinder to firewall or power brake unit and remove master cylinder from vehicle.

Installation – To install reverse removal procedure and bleed hydraulic system.

POWER BRAKE UNIT

Removal – Disconnect hydraulic lines at master cylinder, and vacuum line at power brake unit. From inside vehicle, remove cotter pin and clevis pin retaining push rod to brake pedal, and separate. Remove nuts retaining power unit to firewall, then remove power brake unit and master cylinder as an assembly. Separate master cylinder from power brake unit.

Installation – To install, reverse removal procedure and bleed hydraulic system.

OVERHAUL

DISC BRAKE CALIPER

Disassembly – Thoroughly clean exterior of caliper and remove retainer and dust boot. Place a piece of wood in front

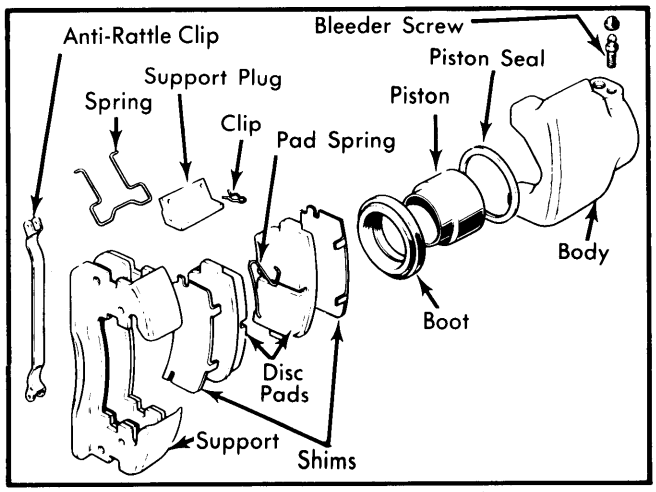

Fig. 3 Exploded View of GLC and B2000 Front Disc Brake Caliper Assembly

MAZDA (Cont.)

of piston, apply compressed air to fluid inlet and remove piston (tapping caliper with plastic hammer, if required). Remove piston seal without damaging caliper bore.

Cleaning & Inspection – Wash all parts in alcohol or brake fluid and air dry. Inspect cylinder bore and piston for scoring, scratches or rust. Replace defective parts. Minor damage may be removed with crocus cloth. Always replace dust boot and piston seal when caliper is disassembled.

Reassembly – Apply clean brake fluid to cylinder bore, piston and piston seal, then seat piston seal in caliper bore. Install piston carefully into cylinder bore and install dust boot and retainer.

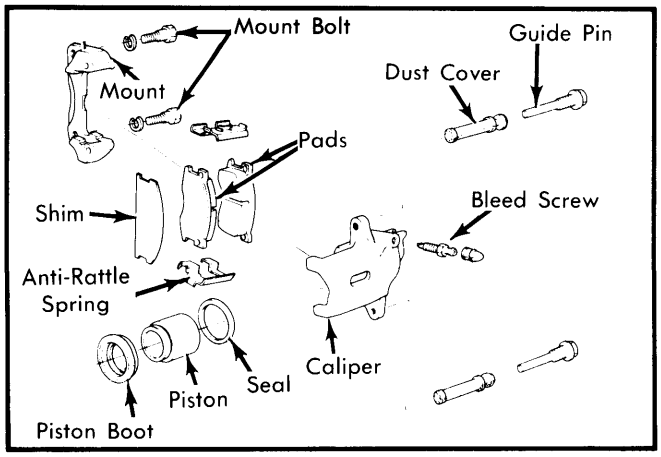

Fig. 4 Exploded View of 626 and RX7 Front Disc Brake Caliper Assembly

WHEEL CYLINDERS

Disassembly – Remove dust boots. Remove pistons with adjuster assemblies. Press on 1 cylinder cup to force out filling blocks and return spring.

Cleaning & Inspection – Clean all parts in alcohol or brake fluid. Check cylinder bore and pistons for scores, roughness or wear. Check clearance between cylinder bore and pistons; replace if clearance exceeds .006" (.15 mm). Check cups for deformation; replace as necessary.

Reassembly – Reverse disassembly procedure and note the following: Coat all parts with clean brake fluid before reassembly. When installing cylinder cups, make sure flat side of cup faces outward.

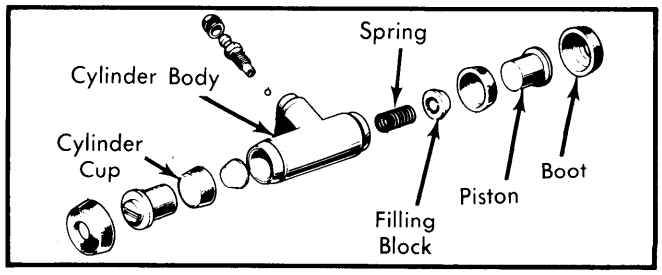

Fig. 5 Exploded View of Wheel Cylinder Assembly

MASTER CYLINDER

Disassembly – Thoroughly clean exterior of cylinder and pour out any remaining brake fluid. If equipped, remove reservoir and dust boot. Depress primary piston assembly, remove retaining ring from rear of cylinder bore, and remove washer, primary piston assembly, and return spring. Depress secondary piston, remove secondary piston stop bolt and insert guide pin. Carefully withdraw secondary piston assembly and return spring. Remove fluid fittings, check valves and springs.

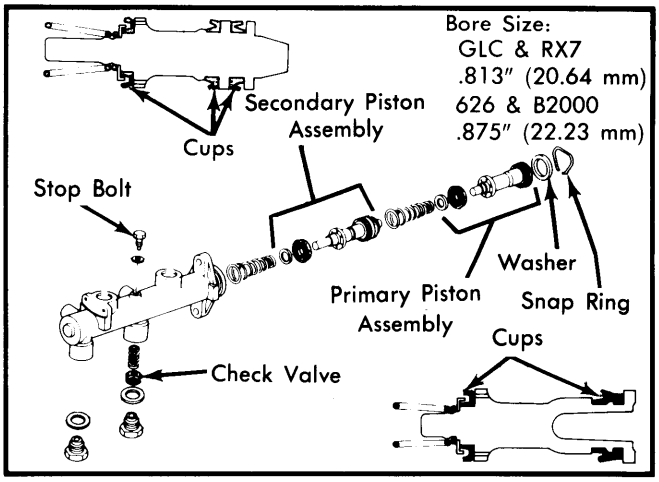

Fig. 6 Exploded View of Master Cylinder Assembly

Cleaning & Inspection – Clean all parts in alcohol or brake fluid. Check all parts for scoring, roughness or wear. Check piston-to-cylinder clearance. If clearance exceeds .006" (.15 mm), replace parts as necessary. Remove all foreign matter from internal passages and recesses with compressed air. Check cylinder cups for deformation and replace as required.

Reassembly – Reverse disassembly procedure and note the following: Coat all parts with clean brake fluid before reassembly. Use new gaskets at all hydraulic unions. When assembled, make sure piston cups do not cover compensating ports. Make sure valve with hole in center faces front side outlet hole.

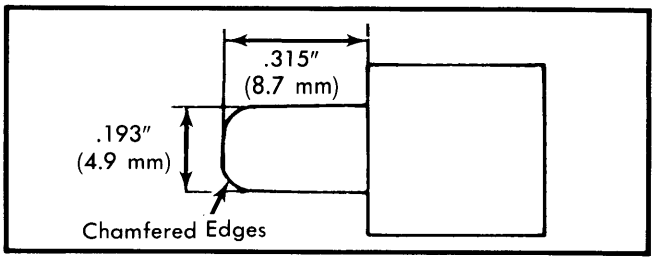

Fig. 7 Dimensions for Fabricating Guide Pin

POWER BRAKE UNIT

Disassembly – 1) Remove master cylinder and check valve from power unit, then place power unit in a vise with push rod up. Scribe alignment marks on front and rear shells to assure reassembly in original position. Remove clevis, lock nut and dust boot from rear shell.

CAUTION – *Separate front and rear shells carefully; spring tension may cause rear shell to release quickly.*

2) Attach removal tool to rear shell mounting studs, then press down on tool while rotating clockwise to unlock rear shell. Lift

MAZDA (Cont.)

rear shell assembly from power unit, then separate diaphragm and power piston assembly, valve rod and plunger assembly from rear shell. Remove return spring from power unit.

3) Remove diaphragm from power piston, then lift air silencer and filter from piston. Press in on valve rod and remove retainer key, then remove valve rod and plunger assembly. Press reaction disc from power piston. Remove push rod from front shell and if necessary, remove front seal.

Cleaning & Inspection – Clean all parts and blow dry with compressed air. Inspect all rubber parts for cuts, nicks, deterioration or other damage. Check power piston for cracks, distortion, chipping and damaged seats. Inspect front and rear shells for scratches, scores, pits, dents or other damage. Replace any defective parts.

Reassembly – Reverse disassembly procedure and note the following: Apply clean brake fluid to parts before reassembly. When assembling rear shell assembly to front shell, ensure marks made during disassembly are aligned. Before installing master cylinder to power unit, measure clearance between master cylinder primary piston and power unit push rod. Clearance should be .004-.020" (.1-.5 mm). If clearance is not within specifications, correct by adjusting push rod length.

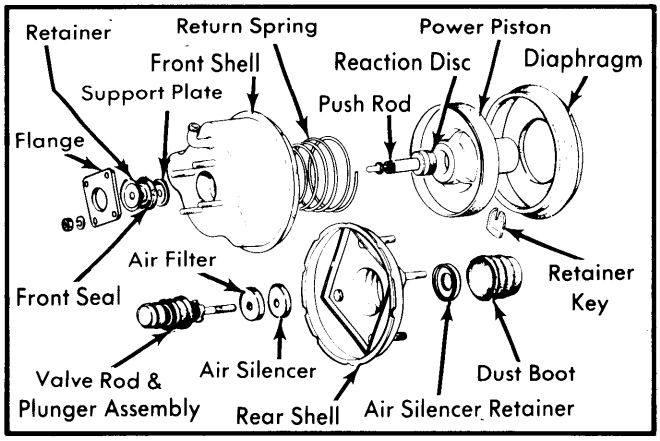

Fig. 8 Exploded View of Power Brake Unit

TIGHTENING SPECIFICATIONS

Application	Ft.Lbs. (mkg)
Caliper Mounting Bracket (B2000)	40-47 (5.5-6.5)
Caliper Guide Pin (626)	33-40 (4.5-5.5)
Wheel Nut	
B2000	58-65 (8.0-9.0)
All Others	65-80 (9.0-11.0)

DISC BRAKE SPECIFICATIONS

Application	Caliper Bore Diameter In. (mm)	Lateral Runout In. (mm)	Parallelism In. (mm)	Original Thickness In. (mm)	Minimum Refinish Thickness In. (mm)	Discard Thickness In. (mm)
GLC	2.0 (50.8)	.002 (.06)	.....	.512 (13)	.....	.472 (12)
626	2.125 (54)	.004 (.10)	.....	.512 (13)	.....	.472 (12)
RX7	2.0 (50.8)	.004 (.10)	.....	.709 (18)	.....	.669 (17)
B2000	2.125 (54)	.004 (.10)	.....	.472 (12)	.....	.433 (11)

DRUM BRAKE SPECIFICATIONS

Application	Wheel Cyl. Bore Diameter In. (mm)	Drum Diameter In. (mm)	Original Diameter In. (mm)	Maximum Refinish Diameter In. (mm)	Discard Diameter In. (mm)
GLC	.750 (19.05)	7.87 (200)	7.87 (200)	.....	7.91 (201)
626	.813 (20.64)	7.87 (200)	7.87 (200)	.....	7.91 (201)
RX7	.750 (19.05)	7.87 (200)	7.87 (200)	.....	7.91 (201)
B2000	.875 (22.23)	10.24 (260)	10.24 (260)	.....	10.28 (261)