AUDI FOX

Fox

DESCRIPTION

Brake system is hydraulically operated using a tandem master cylinder in conjunction with a power booster unit. This year the booster diameter has been increased to 9". Front disc brakes have been changed to Girling type. Rear brakes are leading-trailing, shoe/drum type. Rear brakes use dual piston wheel cylinders. Parking brake is cable operated and works on secondary shoes of rear brakes. A pressure regulator valve is used in the hydraulic circuit to prevent premature rear wheel lock-up.

ADJUSTMENT

FRONT DISC BRAKE PADS

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

REAR DRUM BRAKE SHOES

NOTE – *In order to rotate right rear wheel it may be necessary to relieve residual brake pressure. Push lever on brake pressure regulator in direction of rear axle.*

Raise and support rear of vehicle, release parking brake. Use a brake spoon, tighten rear star adjuster until wheel can no longer be turned by hand. Loosen star until wheels are just free to turn.

PARKING BRAKE

With rear brake shoes properly adjusted, pull parking brake handle to second notch. Tighten parking brake adjusting nut until rear wheels can just be turned by hand, then tighten lock nut. Release handle and ensure both rear wheels rotate freely.

PRESSURE REGULATOR VALVE

1) Remove everything from luggage compartment. Fill fuel tank. Load drivers seat with about 165 lbs. Bounce vehicle several times and allow to settle normally.

2) Measure distance from top of tire to lower edge of fender lip. Make measurement on both sides. If a hoist type lift is being used, install spring tensioners under shock absorbers and at top to frame. Tensioners will hold vehicle in settled position.

3) Connect 1 1500 psi minimum pressure gauge to right rear wheel cylinder and connect another to left front brake caliper. Bleed gauges.

4) Pump pedal several times. Depress pedal until front wheel gauge reads 710 psi. Check rear wheel gauge for pressure or 440-497 psi.

5) Continue to depress pedal until front gauge reads 1400 psi. Rear gauge must read 753-810 psi.

NOTE – *Do not adjust spring tension with brake pedal depressed.*

6) If both pressures in test were too high on rear wheel, loosen regulator clamp bolt and REDUCE spring tension. If both pressures were consistently low, INCREASE spring tension. If correct specifications cannot be obtained by adjusting spring tension, replace pressure regulator.

HYDRAULIC SYSTEM BLEEDING

NOTE – *When bleeding brake system push lever on brake pressure regulator in direction of rear axle to relieve residual pressure.*

Fill master cylinder reservoir with brake fluid and maintain level throughout bleeding operation. Attach a hose to bleeder screw, and immerse opposite end in a container partially full of brake fluid. Open bleeder screw approximately one-half turn, depress brake pedal, close bleeder screw, and slowly return pedal. Continue operation until air bubbles are no longer seen in discharged fluid. Bleeding sequence is right-rear, left-rear, right-front, left-front.

REMOVAL & INSTALLATION

FRONT DISC BRAKE PADS

Removal – 1) Raise vehicle and place on safety stands. Remove front wheel. Using hand pressure force caliper to slide outward (toward outer wheel bearing). This forces piston into cylinder housing. Some brake fluid may need to be syphoned out of reservoir during this procedure.

2) Take an open end wrench and hold guide pin head while removing lower mounting bolt. See *Fig. 2*. Rotate caliper cylinder upward. Take out disc pads.

Installation – 1) Clean area where pads rest. Make sure grommets on guide pins are not damaged. Guide pins must slide smoothly in housing. Install brake pads. Swing caliper housing down.

2) Make sure pads do not hit piston; force piston deeper into housing if necessary. Tighten lower mounting bolt. Depress brake pedal several times to seat pads against rotor.

FRONT DISC BRAKE CALIPER

Removal – Raise and support vehicle. Remove wheel. Disconnect brake line from caliper and plug opening to prevent entry of dirt and foreign matter. Bend back locking tabs (if equipped) on mounting bolts. Remove caliper mounting bolts and take off caliper assembly.

Installation – Reverse removal procedure and bleed hydraulic system.

FRONT DISC BRAKE ROTOR

Removal – With wheel and tire assembly removed, remove caliper. NOTE – *Do not disconnect hydraulic line unless necessary.* Remove screw securing rotor to wheel hub and withdraw rotor.

Installation – Reverse removal procedure and bleed hydraulic system if necessary.

REAR BRAKE DRUM

Removal – Pry off grease cap. Remove cotter pin, castle nut, hex nut, and washer. Pull off brake drum making sure that inner race of outer bearing is not lost.

Installation – Reverse removal procedure, adjust brake shoes, and adjust wheel bearings. *See Wheel Bearing Adjustment in WHEEL ALIGNMENT Section.*

REAR BRAKE SHOES

Removal – 1) With brake drum removed, disconnect lower return spring by disengaging it from primary shoe. Remove primary shoe upper return spring. Remove hold-down clip and

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pin and take off primary shoe. Slide out brake shoe adjustment mechanism.

2) Disconnect parking brake cable from secondary shoe. Disengage upper and lower return springs. Take off hold-down clip and pin. Slide off secondary shoe.

Installation – To install, reverse removal procedure. Make sure brake shoes fully engage wheel cylinder and that all return springs lock into place.

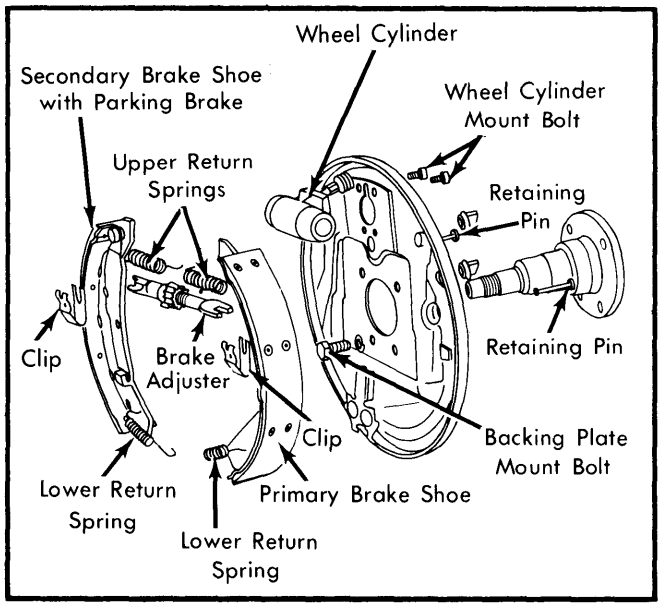

Fig. 1 Exploded View of Rear Brake Assy.

REAR BRAKE WHEEL CYLINDER

Removal – Remove brake shoes as previously outlined. Disconnect brake fluid line. Plug opening in line. Remove bolts attaching wheel cylinder to backing plate.

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

MASTER CYLINDER

Removal – Siphon brake fluid from master cylinder reservoir. Disconnect hydraulic lines at cylinder, remove nuts attaching master cylinder to power unit, and remove master cylinder.

Installation – Reverse removal procedure and note the following: Make sure "O" ring is installed between master cylinder and power unit. After installing master cylinder, bleed hydraulic system.

OVERHAUL

FRONT DISC BRAKE CALIPER

Disassembly – 1) Remove caliper and clean outside surfaces. Remove both cylinder housing mounting bolts. Place a block of wood between piston and housing. Blow compressed air into cylinder housing to dislodge piston.

2) Remove dust seal. Using a plastic instrument, carefully dig piston seal from groove in cylinder housing.

Inspection – Check housing and piston. Housing can not be honed. Replace housing and cylinder in sets. Boots, guide pins, and miscellaneous pieces are only available with new pad carrier.

Reassembly – Coat piston, cylinder bore, and new seal with suitable brake paste. Fit seal into cylinder. Slide dust seal onto piston. Slowly insert piston into cylinder fitting inner lip of dust seal into cylinder housing groove. Fully seat piston into cylinder. Engage outer lip of dust seal into groove of piston.

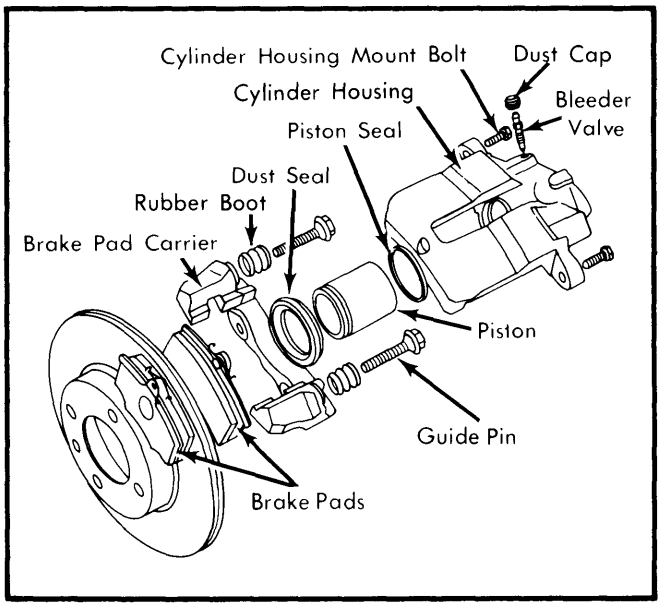

Fig. 2 Audi Fox Disc Brake Caliper Assy.

REAR BRAKE WHEEL CYLINDER

Disassembly – Remove rubber dust caps, then withdraw front and rear piston and seal assemblies. Remove seals from pistons. Remove bleeder screw and dust cap.

Cleaning & Inspection – Thoroughly clean all components in alcohol. Inspect cylinder and pistons for rust, corrosion, or scoring; replace parts as necessary. **NOTE** – *Manufacturer recommends replacing all rubber parts whenever cylinder has been disassembled.*

Reassembly – Reverse disassembly procedure and note the following: Refer to *Fig. 3* for correct installation position of wheel cylinder pistons.

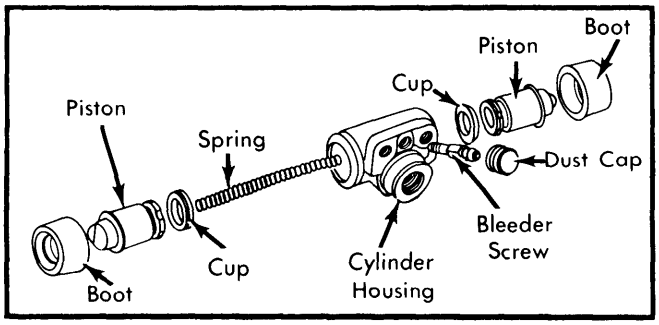

Fig. 3 Exploded View of Rear Wheel Cylinder

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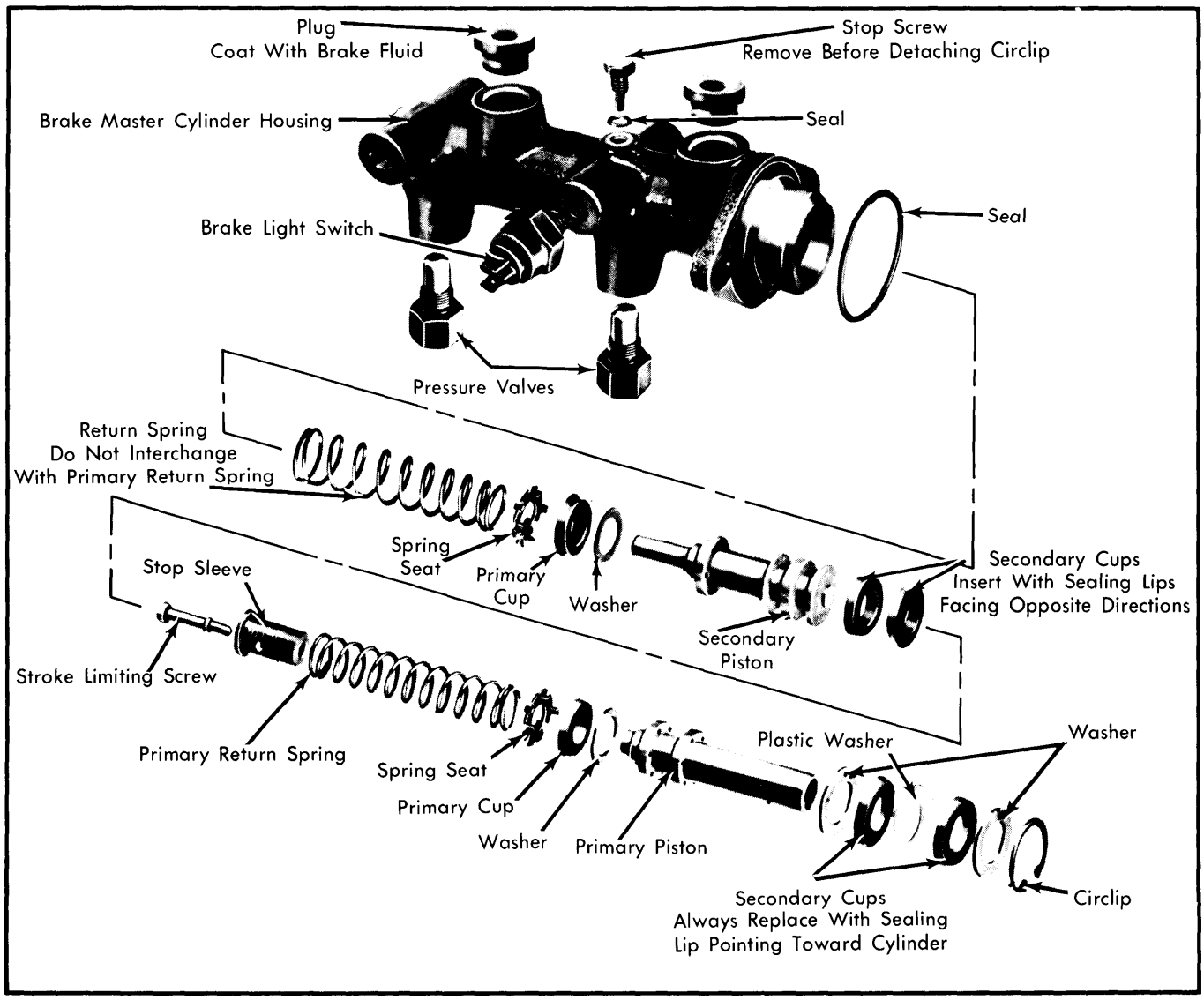

Fig. 4 Exploded View of Fox Master Cylinder

MASTER CYLINDER

Disassembly – Remove "O" ring from master cylinder housing. Remove retaining ring and loosen piston stop screw, then remove both pistons from housing. Remove pressure valves and reservoir from master cylinder housing. Disassemble piston assemblies as necessary.

Cleaning & Inspection – Clean all parts in alcohol and check for rust, corrosion, or other damage; replace parts as necessary. Make sure compensating and filler holes are not plugged.

Reassembly – Reverse disassembly procedure and note the following: Make sure pressure and intermediate piston cups are installed correctly. See *Fig. 4*. Use new "O" ring on master cylinder between cylinder and power unit.

POWER BRAKE UNIT

NOTE – *No information available for Overhaul of power brake unit.*

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Caliper Mounting Bolts	25 (3.5)
Backing Plate Mounting Bolts	47 (6.5)

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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)
Fox (Front)	.....	.0023 (.06)	.0008 (.02)	.470 (12)	.413 (10.5)	.393 (10)

BRAKE DRUM SPECIFICATIONS

Application	Drum Diameter In. (mm)	Original Diameter In. (mm)	Maximum Refinish Diameter In. (mm)	Discard Diameter In. (mm)
Fox (Rear)	7.87 (200)	7.87 (200)	7.89 (200.5)	7.91 (201)