MG MIDGET

Midget

DESCRIPTION

Midget brake system is made up of two independent curcuits: a hydraulic foot brake and a mechanical hand brake. Hand brake is lever operated and, when set, locks rear wheels. Foot brakes are either leading-trailing drum type or dual piston caliper disc type. Rear brakes in all instances are leading-trailing drum type with manual adjusters. Master cylinder is tandem type with each of its halves feeding a separate circuit. There is a brake warning light located on instrument panel to indicate fluid loss in either side of master cylinder.

ADJUSTMENT

DISC BRAKES

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

DRUM BRAKES

Raise and support vehicle, and remove wheel to be serviced. Rotate drum until front hole and adjuster mechanism are aligned. Using a screwdriver, turn adjuster clockwise until brake shoe contacts drum. Back off adjuster until drum is just free to turn. Repeat adjustment on rear shoe adjuster.

PARKING BRAKE

With service brakes correctly adjusted, apply parking brake three ratchet notches. Adjust sleeve nut on parking brake cable until drum can just be rotated.

BLEEDING HYDRAULIC SYSTEM

Fit a bleeder tube to both right front and right rear wheel cylinders, then submerge free ends into a partially filled container of brake fluid. Pump brake pedal, but do not go entire pedal stroke. Repeat bleeding process until all air is expelled from system. With pedal down, and on next to last stroke, close bleeder screws. Perform same procedure on left front and left rear wheels.

COMBINATION VALVE

Reset – Make sure brake fluid reservoir is full. Correct any hydraulic leaks. Bleed brakes to make sure all air is out of system. Bleed brakes of one wheel of system that was not at fault. Slowly depress pedal, as soon as light goes out, release pedal and close bleeder screw. **NOTE** – *If pedal isn't released immediately, piston will move too far and procedure will have to be repeated.*

FRONT DISC BRAKE PADS

Removal – Remove tire and wheel. Depress friction pad retaining spring and remove cotter pins. Remove retaining springs. Carefully twist friction pads and remove damper shims. Lift out friction pads. Using a clean rag, wipe any foreign material from piston head and cylinder cavity.

Installation – Using suitable clamp, fully seat piston in cylinder bore. **NOTE** – *Fluid level will rise during this procedure.* Insert friction pads into caliper and ensure they have free movement. Install damper shims between pistons and friction pads. Fit pad retaining springs, press down spring and insert cotter pins. Install tire.

BRAKE SHOES

Removal – Remove tire. Loosen brake shoes at adjuster and remove drum. Disconnect brake mounting springs. Pull trailing shoe against tension of return springs and away from its abutment at either end. With return spring tension released, detach mounting springs and remove both shoes. Remove brake adjuster.

Installation – To install, reverse removal procedure and ensure adjuster is in slot in shoe.

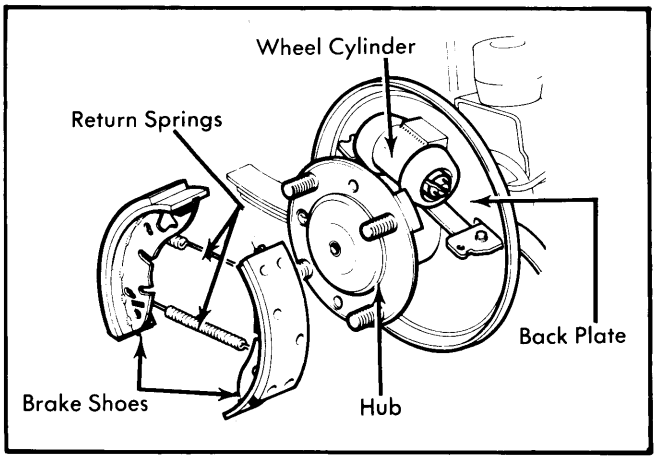

Fig. 1 MG Midget Rear Drum Brake Assembly

REMOVAL & INSTALLATION

BRAKE CALIPER

Removal – Remove tire and wheel. Remove friction pads. Disconnect brake caliper line. Remove nuts securing caliper hose mounting plate to caliper. Remove studs securing caliper to axle stud and lift off caliper.

Installation – To install, reverse removal procedure, tighten all nuts and bolts, and bleed hydraulic system.

FRONT DISC BRAKE ROTOR

Removal – Remove tire and wheel. Extract friction pads and brake caliper. Remove dust cover cap, cotter pin, locking nut and washer. Withdraw hub assembly from axle, using suitable puller (18G-304 with adaptors 18G-304-F for standard wheels, or 18G-363 for wire wheels, early models, or 18G-1032 for wire wheels, late models). Remove bolts securing brake rotor to hub and remove rotor.

Installation – To install, reverse removal procedure.

MG MIDGET (Cont.)

MASTER CYLINDER

Removal – Disconnect high tension lead from ignition coil and blue-white lead from resistor. Remove four screws and pull cover plate with ignition coil from vehicle. Remove cotter pin and clevis from push rod. Disconnect and separate hydraulic lines from master cylinder, then plug open lines. NOTE – *Keep brake fluid off paint.* Remove bolts securing master cylinder pedal box and pull out cylinder.

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

REAR WHEEL CYLINDER

Removal – Remove rear wheel and brake drum. Disconnect the brake line at wheel cylinder and plug line opening. Remove cylinder bleed screw. Take out spring clip and washer retaining wheel cylinder to back plate and withdraw cylinder assembly.

Installation – To install, reverse removal procedure and bleed brakes.

COMBINATION VALVE

Removal – Thoroughly clean all line connections. Disconnect electrical wiring. Disconnect and plug all hydraulic lines entering combination valve. Remove mounting bolts and take off assembly.

Installation – To install, reverse removal procedure and note: Make sure all hydraulic lines fully seat before final tightening. It is important that valve is fully seated in approximately horizontal position.

OVERHAUL

BRAKE CALIPER

Disassembly – 1) Remove brake caliper as previously described. Clean outside of caliper and note position of relieved portion of piston face. Using suitable clamp, retain piston in mounting half of caliper.

2) Holding caliper on bench, apply compressed air to hydraulic inlet port until dust seal retainer and seal can be removed. Remove fluid seal from groove in caliper bore. NOTE – *Exercise care not to score caliper bore.* Refit piston into caliper bore and install suitable clamp.

3) Remove mounting half dust seal, piston, and fluid seal. Remove clamp and piston. NOTE – *Do not separate caliper halves.*

Inspection – Clean all components with brake fluid. Check pistons and cylinder bores for wear or damage, replace parts as necessary.

Reassembly – Lubricate pistons and all new seals in brake fluid. Insert fluid seals into grooves fit pistons in bore with relieved portion toward bleed screw. Install dust seal and retainer.

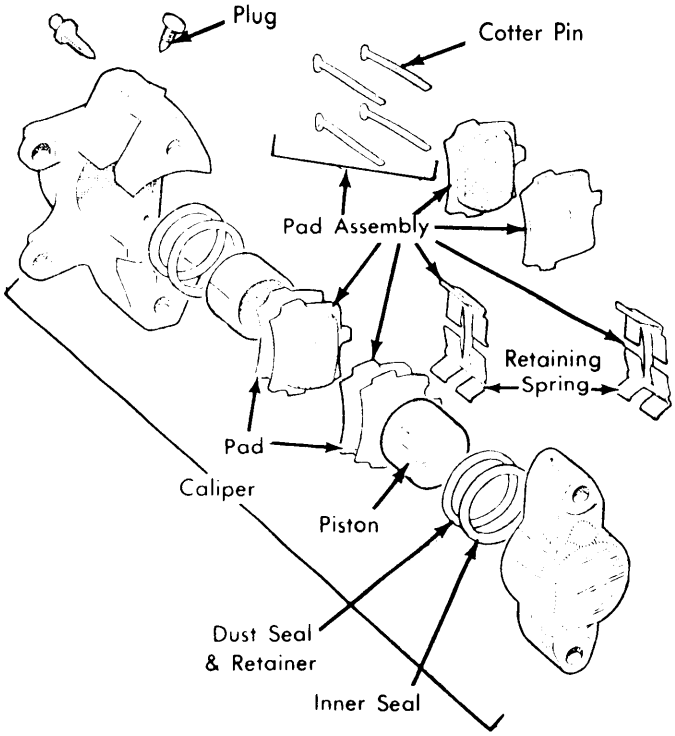

Fig. 2 Exploded View of Front Disc Brake Caliper Assembly

REAR WHEEL CYLINDER

Disassembly – Separate dust cover boot from both ends of wheel cylinder. Pull out both pistons with seals and inspect pistons for excessive wear or damage. Separate seals from pistons and replace seals.

Reassembly – After cleaning cylinder bore and related components in brake fluid, check wheel cylinder bore for scoring or pitting. While components are still damp, fit new seals to pistons with flat surfaces of seals facing slotted end of piston. Insert new pistons into wheel cylinder bore, plain end first. Install new dust cover boots.

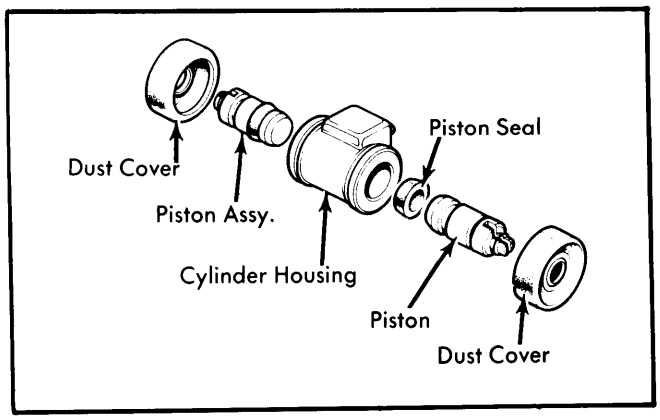

Fig. 3 Disassembled View of Rear Wheel Cylinder

MG MIDGET (Cont.)

COMBINATION VALVE

Disassembly – Remove the end plug and discard copper washer. Unscrew nylon switch. Remove shuttle valve piston from assembly bore. Use air pressure to force out piston. Remove two piston seals and discard.

Inspection – Thoroughly clean all components in clean brake fluid. Check bore of assembly for scoring or ridges. New seals can be used if bore isn't damaged.

Reassembly – Lightly coat all components in brake fluid. Install both new seals with lips facing outward from piston center. Fit piston into bore, taking care that lead seal is not cocked. Fit new copper seal and tighten end plug to 200 INCH lbs. (230 cmkg). Refit nylon switch and torque to 15 INCH lbs. (17.25 cmkg).

MASTER CYLINDER

Disassembly – Thoroughly clean dirt from outside of cylinder. Detach rubber boot and remove snap ring. Compress return spring and remove circlip. Move piston around in bore to free nylon guide bearing and cap seal. Remove bearing seal and plain washer. Remove inner circlip. Withdraw primary and secondary piston assemblies complete with stop washers. When component parts have been removed, they can be further disassembled.

Cleaning & Inspecting – Clean all parts in approved grade brake fluid. Examine all components for signs of rust, grooves or distortion. Replace any parts found out of tolerance.

Reassembly – To reassemble, reverse disassembly procedure.

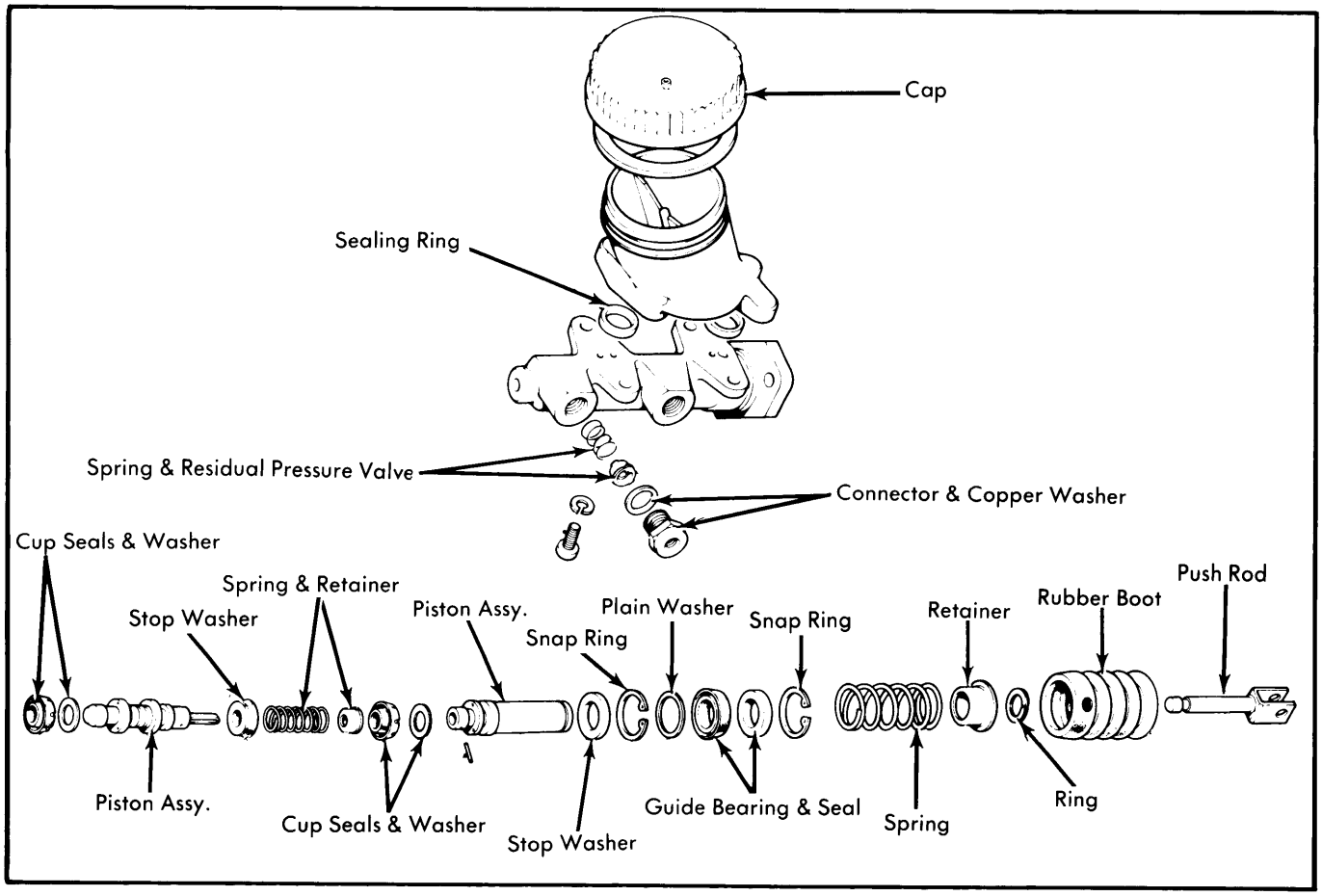

Fig. 4 Exploded View of Master Cylinder Reservoir, Body and Piston Assemblies

BRAKE SYSTEM SPECIFICATIONS

Application	Drum Diam. In. (mm)	Wheel Cylinder Diameter		Master Cylinder
		Front In. (mm)	Rear In. (mm)	Diameter In. (mm)
Midget	7 (177.8)	①	.687 (17.46)	.750 (19.05)

① – Front wheel disc brakes