

## 1968-71 AUSTIN AMERICA

## Austin America (1968-71)

## DESCRIPTION

All service brakes are hydraulically operated by pressure developed in tandem master cylinder. Front service brakes are of the sliding caliper disc brake type. Rear brakes are internal-expanding, leading-trailing shoe type. Disc brakes function when single piston caliper, with two pads, contacts rotor. Pads simultaneously meet rotor because pressure forces one pad against rotor and induces caliper to slide, thereby bringing second pad into contact. Rear brakes operate when pressure on pedal expands shoes in drum, when pressure subsides, return springs retract lining to stops. An inertia valve is mounted on crossmember and is designed to prevent the possibility of rear wheel skidding. A steel ball inside body of valve holds open the valve allowing fluid passage. Under hard braking weight transfer causes ball to move and valve to close. A mechanical hand brake is actuated from inside vehicle and locks rear brake drums via cables and levers mounted on underbody and backing plates. Vehicle is equipped with a hydraulic pressure failure switch which serves as a stop light switch and hydraulic pressure loss indicator. Failure switch is located at four way hydraulic union. All models utilize a tandem master cylinder to develop hydraulic pressure. A vacuum servo unit (power brakes) is offered as optional equipment. Servo consists of three main components; a vacuum cylinder, air valve and slave cylinder.

## ADJUSTMENT

**DISC PAD NOTE** — Frequent inspecting of disc pads is essential to maintain peak braking efficiency. If one pad exhibits extreme wear, change operating positions.

**DRUM BRAKE NOTE** — Adjustment is designed only to compensate for minor lining wear and should be utilized as such. If brake pedal travel is excessive, drums must be removed and lining wear limits inspected.

**Disc Brakes** — No adjustment required.

**Drum Brakes** — Brakes have one common adjuster to control both shoes; it is located on rear of backing plate. To adjust, raise vehicle and turn adjuster clockwise until drum locks; back off adjuster until drum is just free to turn.

**Hand Brake** — If hand brake is disfunctional because of inability to lock drums, ratchet travel generally needs adjusting. **NOTE** — Before attempting to reduce lever travel, adjust drum brakes. Raise vehicle until both rear wheels clear ground. Set hand brake in fully relaxed position; ensure both drums rotate. Apply hand brake three ratchet serrations. Adjust nuts on hand brake lever until heavy hand pressure will just turn drum (tire and wheel). Release hand brake and ensure both drums rotate freely. **NOTE** — It is imperative that both drums offer equal resistance if maximum braking is to be achieved.

## BLEEDING SYSTEM

**BRAKE FLUID LEVEL CAUTION** — If master cylinder has been allowed to run dry it will be necessary to bleed hydraulic system in addition to refilling master cylinder.

**HYDRAULIC SYSTEM LEAK NOTE** — If a leak is diagnosed in hydraulic system it will be necessary to bleed entire system after repairing deficiency.

Fill master cylinder reservoir to correct level and maintain level throughout operation. Attach tube to front and rear bleed screws on left side of vehicle. Submerge free ends into a half-full container of brake fluid. Open bleed screw one-half turn, fully depress brake pedal, and close screw before allowing pedal to return to relaxed position. Repeat operation until air bubbles cease to appear. Move tubes to right side of vehicle and continue bleeding procedures.

## REMOVAL &amp; INSTALLATION

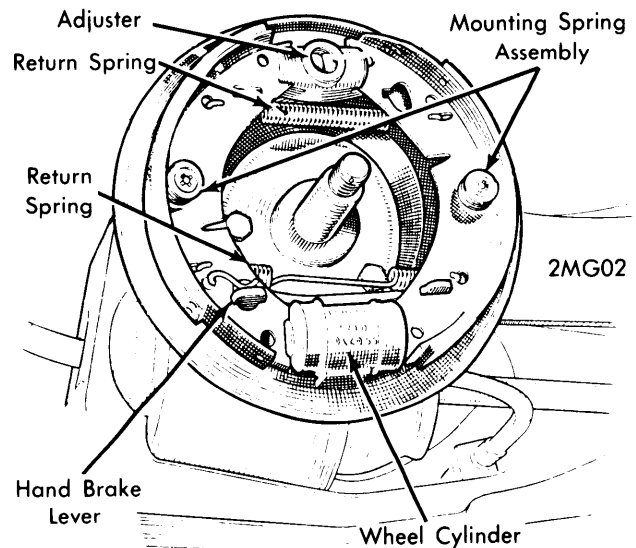
## LINING REPLACEMENT (DISC BRAKES)

**Removal** — Raise vehicle and remove tire and wheel. Depress retaining spring and extract keeper pins. Remove retaining spring and using suitable pliers withdraw friction pads.

**Installation** — Clean exposed surface of piston and caliper cavity. Seat piston in bore, fit new friction pad assemblies to caliper, ensuring piston operated pad has free movement. Install retaining spring and insert keeper pins. Loosen screw on caliper top adjacent to pivot pin boss and press pedal several times to centralize brake rotor and pads.

## LINING REPLACEMENT (DRUM BRAKES)

**Removal** — Raise rear of vehicle, remove tire and wheel and fully release hand brake. Remove hub cap and nut, using suitable tools (18G-304 & 18G-304-B). Withdraw brake drum and hub unit. Disengage mounting springs, return springs and hand brake lever. Separate brake shoes from wheel cylinder and brake adjuster while removing from backing plate.



DRUM BRAKE ASSEMBLY

## 1968-71 AUSTIN AMERICA (Cont.)

**Installation** — To install brake drum lining, reverse removal procedures noting the following: ensure mounting springs are located in proper brake shoe holes.

### BRAKE CALIPER

**Removal** — Remove friction pad assemblies as previously outlined. Disconnect hydraulic inlet line. Remove two bolts securing caliper to front hub and withdraw caliper from disc and hub assembly.

**Installation** — To install sliding caliper, reverse removal procedures and bleed hydraulic system.

### BRAKE ROTOR (DISC)

**BRAKE ROTOR NOTE** — Rotor and hub are separate assemblies that, once off vehicle, can be disassembled.

**Removal (All Models)** — Raise vehicle and suitably support front end. Remove brake caliper assembly as previously described. Extract cotter key, mounting nut, washer, and outer bearing. Pull hub assembly from mounting position with inner bearing and grease seal intact. If necessary, rotor can now be disassembled from hub.

**Installation** — To install brake hub assembly, reverse removal procedures noting the following: It is advisable to replace inner wheel bearing grease seal. Tighten wheel bearing to specification. See *Wheel Bearing Adjustment* in **WHEEL ALIGNMENT** Section.

### BRAKE DRUM

**Removal (Rear Drum)** — Raise vehicle and block front wheel. Remove tire and wheel. Set hand brake in fully released position. Using suitable tools (18G-304 & 18G-304-B), withdraw brake drum and hub assembly.

**Installation** — To install brake drum, reverse removal procedures noting the following: brake shoes may need to be loosened to install drum.

### MASTER CYLINDER

**Removal** — Disconnect hydraulic lines from master cylinder and plug open ends. Withdraw two nuts securing master cylinder to fire wall and lift off, leaving the push rod attached to brake pedal.

**Installation** — To install master cylinder, reverse removal procedures noting the following: Check clearance between pedal back and stop (.030"). It may be necessary to readjust position of stop light switch. Refill master cylinder and bleed entire hydraulic system.

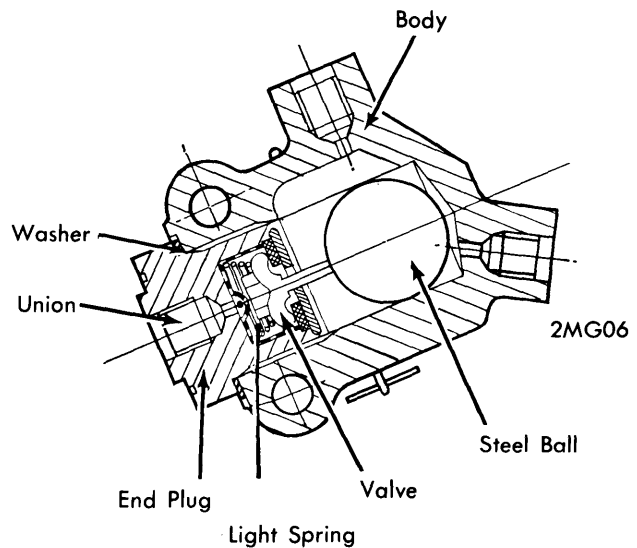
### VACUUM SERVO UNIT

**Removal** — Disconnect both unions from slave cylinder and release vacuum line from check valve located in servo housing. Withdraw the top mounting nuts from servo housing and loosen clamp from neck of slave cylinder. Lift off servo unit noting the holes in mounting brackets are slotted for easy installation.

**Installation** — To install vacuum servo unit, reverse removal procedures noting the following: bleed hydraulic system.

### INERTIA VALVE

**Removal** — Valve can be removed by disconnecting and plugging all hydraulic lines. Remove two mounting bolts and lift valve assembly from under right hand sub-frame crossmember.



### INERTIA VALVE

**Installation** — To install inertia valve, reverse removal procedures noting the following: Valve must be installed with "FRONT" marking facing correctly.

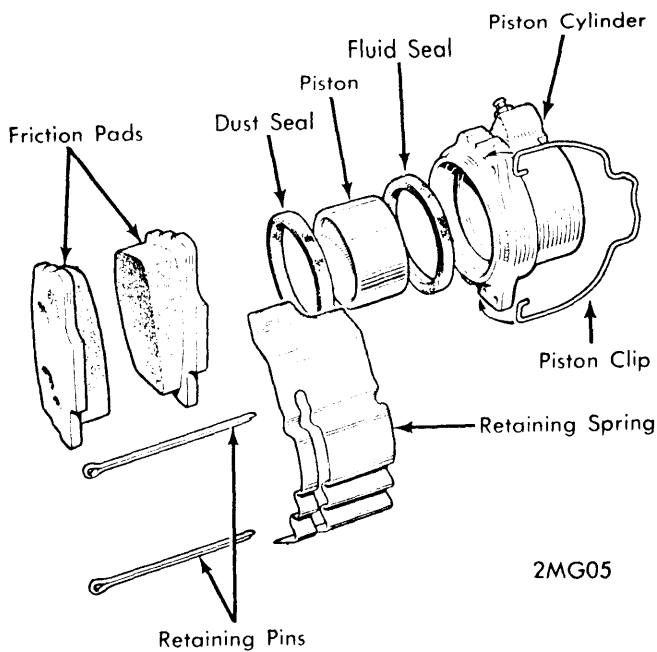
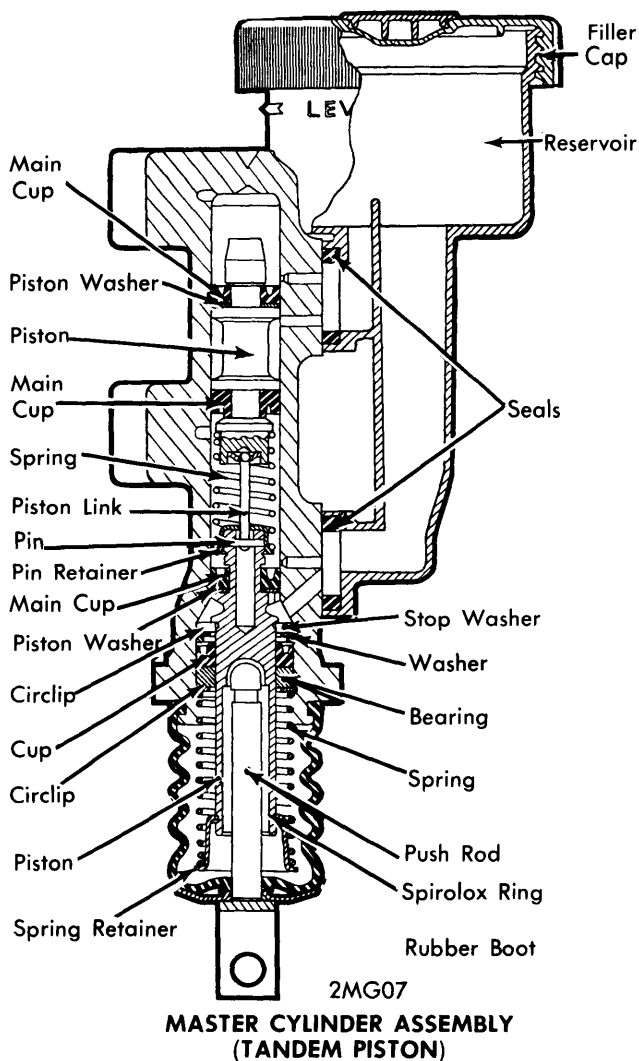
## OVERHAUL

### BRAKE CALIPER

**Disassembly** — With friction pads and brake caliper removed as previously described, clean all dirt from caliper cavity. Reconnect brake hose and support caliper. Push pedal down gently until piston can be removed by hand. Using suitable blunt nosed tool, carefully remove fluid seal from groove. Remove dust seal by inserting a screwdriver between retainer and seal and gently force retainer from bore.

**Reassembly** — Coat new fluid seal with brake fluid and ease seal, with fingers, into groove. Loosen bleed screw one turn and fit piston with cut-away facing upward. Seat piston until approximately 5/16" is protruding above cylinder bore. Fit new seal into retainer and retainer to piston. Seat piston using suitable tool (18G-590). After reassembly and installation has been completed, bleed hydraulic system and refill master cylinder.

## 1968-71 AUSTIN AMERICA (Cont.)



**SLIDING BRAKE CALIPER**

**Reassembly** – With components on bench locate piston on secondary piston head, convex side first. Carefully fit secondary cup, lip last, over piston end. Carry out all remaining procedures in reverse of removal procedures. After reinstallation, bleed hydraulic system.

### MASTER CYLINDER

**Disassembly** – Begin by compressing return spring and disengaging Spirolox ring. Using suitable tool (18G-1112) remove piston retaining circlip. Move piston in bore until nylon bearing and cap seal are free. Withdraw plain washer and using suitable tool (18G-1112) remove inner circlip. Extract primary and secondary piston assemblies with stop washer. Compress spring separating two pistons and drive out roll pin retaining piston link. Disassemble all rubber components and replace. Separate reservoir and replace seals. After removing and inspecting connector unions, fit copper gaskets.

### TIGHTENING SPECIFICATIONS

Application	Ft. Lbs.
Rotor-to-Hub .....	38-45
Backing Plate Bolts .....	25
Front Swivel Hub-to-Caliper .....	50-60
Front Bleed Screw .....	7-8
Rear Bleed Screw .....	4-5