CHRYSLER CORP. DUAL PISTON MASTER CYLINDERS – ALUMINUM

Dodge
Plymouth

DESCRIPTION

The new Chrysler tandem dual piston master cylinder is the venting type with nylon reservoir. The front and rear pistons have separate reservoirs and outlets, but may be filled from one cap because reservoirs are connected at the top. Air entrapment is controlled by cup expanders in rear brake wheel cylinders. No residual pressure valves are installed on this master cylinder.

REMOVAL & INSTALLATION

MASTER CYLINDER

Removal – Disconnect primary and secondary brake lines from master cylinder and plug outlets. Remove nuts that attach cylinder to power brake unit. Slide master cylinder straight out and away from brake unit.

Installation – Position master cylinder over studs of power brake unit, aligning power cylinder brake push rod with cylinder piston. Install and tighten nuts. Connect both brake lines and bleed system. See *Hydraulic Brake Bleeding in this Section.*

CAUTION – *Use extra care not to cross threads when installing brake lines to master cylinder. Torque to specifications only.*

OVERHAUL

MASTER CYLINDERS

Disassembly – 1) Clean outside of reservoir and cylinder body. Remove reservoir caps and empty brake fluid. Position cylinder body in vise and rock reservoir from side to side to remove from cylinder. Remove grommets and use needle nose pliers to remove secondary piston retainer pin from inside master cylinder body. Remove snap ring and slide primary piston out of bore.

2) Tap open end of cylinder on bench to remove secondary piston. If piston sticks, use air pressure to force piston from cylinder. New cups must be installed if air pressure is used.

NOTE – *If primary cup on primary piston is damaged or worn, a new primary piston must be installed.*

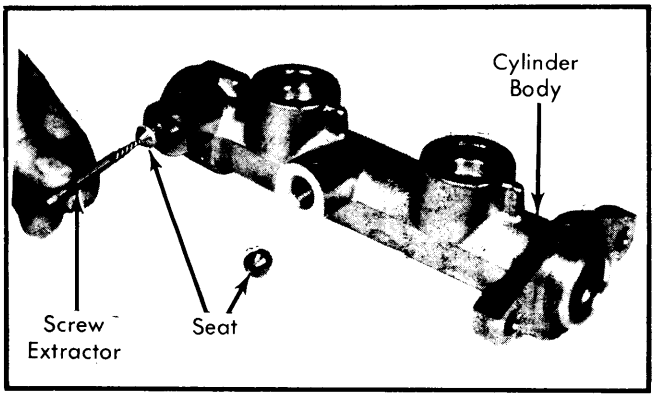

Fig. 1 Removing Tube Seat from Master Cylinder

3) If brass tube seats are damaged or worn, use screw extractor to remove seats.

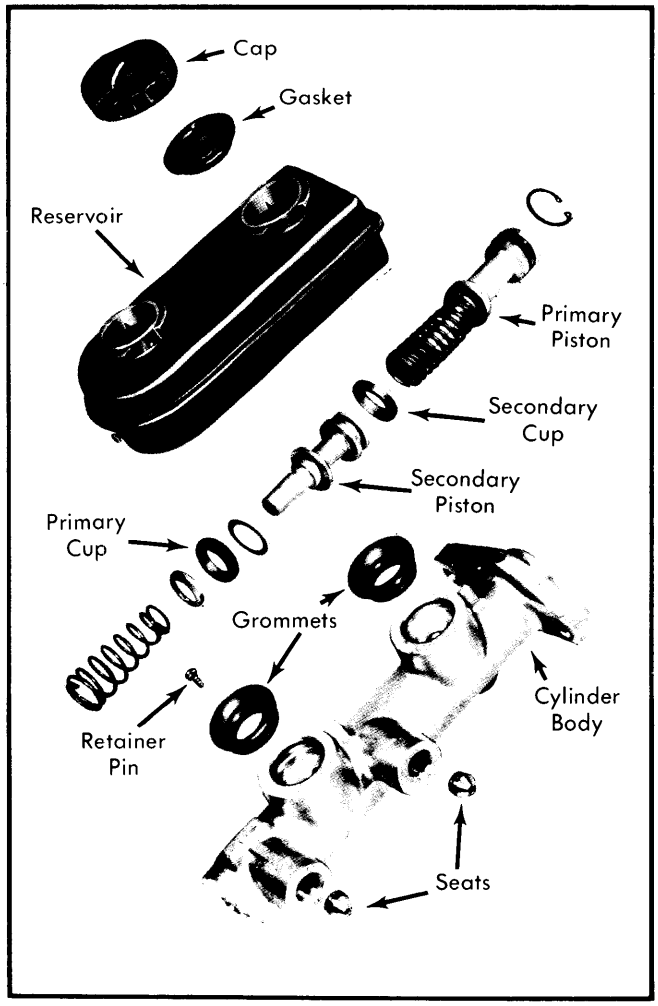

Fig. 2 Exploded View of Aluminum Master Cylinder

Inspection – 1) Wash master cylinder bore with brake fluid. Inspect bore for pitting, scratches or scoring.

NOTE – *Do not hone aluminum master cylinder. If bore is found unservicable, cylinder must be replaced.*

2) Inspect piston for corrosion and scoring and replace as necessary. During overhaul, all rubber parts must be replaced.

NOTE – *Internal parts of aluminum master cylinder are not interchangeable with cast iron master cylinder components.*

Reassembly – 1) Dip master cylinder and all components in clean brake fluid. Assembling seals dry could ruin seals.

2) Install check flow washer on secondary piston and carefully work primary cup on end with lip facing away from piston. Slide cup retainer over front end of piston followed by spring.

CHRYSLER CORP. DUAL PISTON MASTER CYLINDERS – ALUMINUM (Cont.)

3) Carefully work secondary piston secondary cup into cylinder bore, with lip away from piston. Install secondary piston into bore. Be careful that lip of cups enters bore evenly in order not to damage sealing of cups.

4) Carefully work secondary cup over rear end of primary piston with larger lip of cup toward piston. Center spring retainer of primary piston on secondary piston. Push piston assemblies into bore up to primary piston cup.

5) Carefully work cup into bore, then push piston into secondary seal. Work lip of primary cup into bore, then push in on piston until seated. Depress piston with brass or wood rod and install snap ring.

TORQUE SPECIFICATIONS

Application	Ft. Lbs.
Master Cylinder-to-Dash Panel	17
Pedal Link Bolt	30
Brake Line Tube Nuts	
3/8 or 7/16"	7-12
1/2 or 9/16"	10-15

6) Position secondary piston retainer pin in cylinder housing and tap or press in until firmly seated. Install tube seats. Install housing-to-reservoir grommets and using rocking motion, install reservoir on master cylinder body.

NOTE – *Reservoir is keyed to prevent installation in wrong direction.*

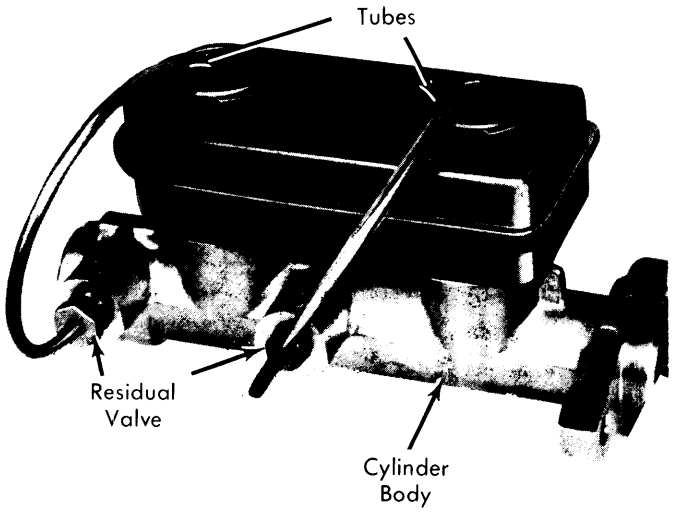

Fig. 3 Master Cylinder Bleeding Procedure