CHRYSLER CORP. DUAL PISTON — 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 (Power Brakes)

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 power unit.

Installation (Power Brakes)

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.*

Removal (Manual Brakes)

1) Disconnect primary and secondary brake lines from master cylinder and plug outlets. Disconnect stop light switch mounting bracket under instrument panel.

2) Grasp brake pedal and pull back to disengage push rod from master cylinder. This will destroy push rod retention grommet. Remove nuts attaching master cylinder to cowl panel. Slide master cylinder straight out and away from cowl.

Installation (Manual Brakes)

1) Install new push rod retention grommet. Postion master cylinder to cowl panel, install and tighten nuts. Connect brake lines and tighten. From under instrument panel, moisten push rod grommet with water and align push rod with master cylinder piston.

2) Using brake pedal, apply pressure to fully seat push rod into piston. Install master cylinder boot and connect stop light switch mounting bracket. 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 CYLINDER

Disassembly

1) Clean outside of reservoir and cylinder body. Remove reservoir caps and drain brake fluid. Position cylinder body in vise and rock reservoir from side to side to remove from cylinder.

2) 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.

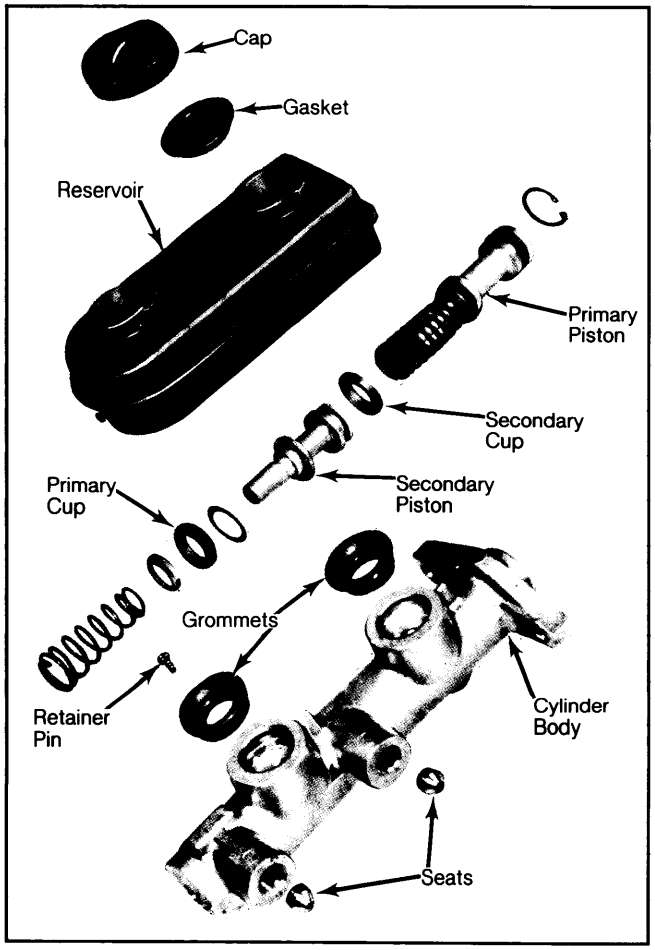
3) Tap open end of cylinder on bench to remove secondary piston. If piston sticks, use air pressure to force piston from cylinder. New cups must be installed if air pressure is used.

4) Check condition of primary cup. If cup is damaged or worn, primary piston must be replaced. If brass tube seats are damaged or worn, use screw extractor to remove seats.

Inspection

1) Wash master cylinder bore with brake fluid. Inspect bore for pitting, scratches or scoring. If badly worn, cylinder must be replaced. Aluminum master cylinders may not be honed.

Fig. 1: Exploded View of Aluminum Master Cylinder



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

Reassembly

1) Dip master cylinder and all components in clean brake fluid. If seals are assembled dry, they will be ruined.

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.

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 enter bore evenly in order not to affect 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

Master Cylinders

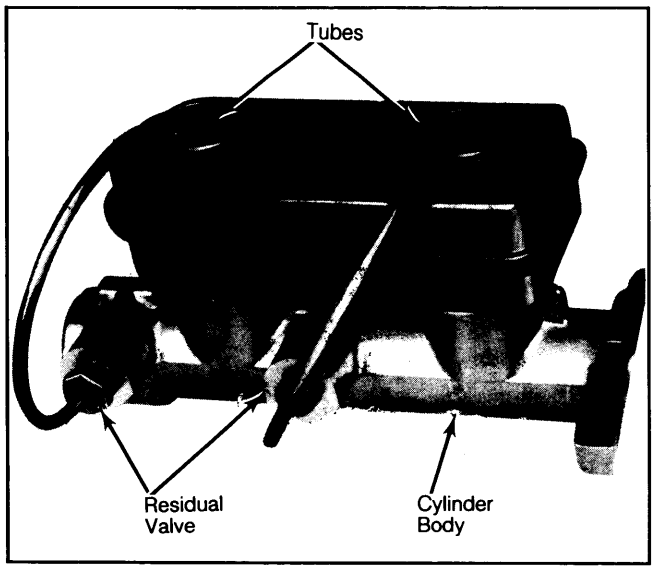
CHRYSLER CORP. DUAL PISTON — ALUMINUM (Cont.)

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.

6) Position secondary piston retainer pin in cylinder housng and tap or press in until firmly seated. Install tube seats. Install housing-to-reservoir grommets and rock reservoir on to master cylinder body. Reservoir is keyed to prevent installation in wrong direction.

Fig. 2: Master Cylinder Bleeding Procedure



Depress and release push rod until all air is expelled.

7) Bleed cylinder as follows: Clamp master cylinder in vise and attach suitable bleeding tubes (C-4029). Attach residual valves on outlet of each bleeder tube. Fill reservoir with fluid. Using brass or wood rod, depress push rod slowly and allow pistons to return under spring pressure. Repeat until all air is expelled. Remove tubes, plug outlets and install caps.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Master Cylinder Attaching Nuts	17 (23)
Pedal Link Bolt	30 (41)
	INCH Lbs. (N.m)
Brake Line Tube Nuts	150 (17.0)