CHRYSLER CORP. DUAL PISTON MASTER CYLINDER

Dodge
Plymouth

NOTE – *Some models use other units. See Bendix/Delco-Moraine Tandem Dual Piston Master Cylinders in this Section.*

DESCRIPTION

Chrysler tandem dual piston master cylinder is a single casting with front and rear piston and a separate reservoir and outlet for each piston. Rear piston is operated by a push rod connected to brake pedal. Front piston is operated by rear piston. In a combination drum and disc brake system, reservoir which feeds disc brakes is larger, to correspond with larger size of disc brake caliper cylinders.

ADJUSTMENT

BRAKE PEDAL

On vehicle equipped with adjustable brake pedal push rod, turn adjusting rod in or out to obtain brake pedal free travel of 1/16", measured at center of pedal pad. After adjustment, make sure relief port in cylinder is open with brake pedal in fully disengaged postion.

REMOVAL & INSTALLATION

MASTER CYLINDER

Removal – Disconnect front and rear hydraulic brake lines at master cylinder. On vehicles equipped with manual brakes, disconnect brake pedal push rod at brake pedal. Remove master cylinder attaching bolts and remove master cylinder from vehicle.

Installation – Position master cylinder on vehicle and install cylinder attaching bolts. Connect front and rear hydraulic brake lines to cylinder and install brake pedal push rod, if removed. Fill reservoir with clean brake fluid and bleed entire brake system. *See Hydraulic Brake Bleeding in this Section.*

OVERHAUL

MASTER CYLINDER

Disassembly – Remove cover and gasket, and pour out remaining brake fluid. Remove front piston retainer screw from inside reservoir. Remove snap ring from outer end of master cylinder and slide out rear piston. Tap open end of master cylinder on bench to remove front piston and spring. Air pressure can be used to remove front piston if piston is stuck. Remove front piston compression ring from bore. Remove tube seats using an easy out and discard seats. Note position of lips on rubber cups and remove cups from pistons. Do not remove center cup on rear piston, if cup is damaged piston must be replaced.

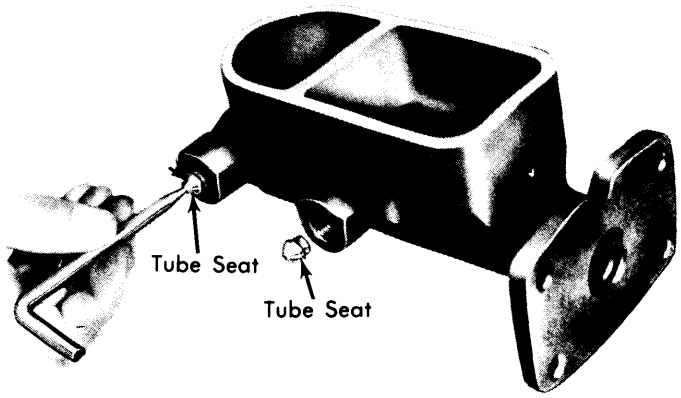

Fig. 1 Removing Tube Seat from Master Cylinder

Inspection – Clean master cylinder using suitable solvent, and dry with compressed air. Inspect cylinder bore for signs of scoring, pitting, and corrosion. Light scratches and corrosion may be removed, using crocus cloth. Deeper scratches or scoring may be removed by honing cylinder bore, providing bore diameter is increased no more than .002".

Reassembly – **1)** Dip all components in clean brake fluid before reassembly. Carefully install primary cup on front piston with lip away from piston. Carefully install second seal cup over rear of front piston and into second cup land. Lip of seal must face rear. Slide cup retainer over stem of front piston with beveled side away from piston cup. Place small end of pressure spring into retainer and slide assembly into bore of cylinder.

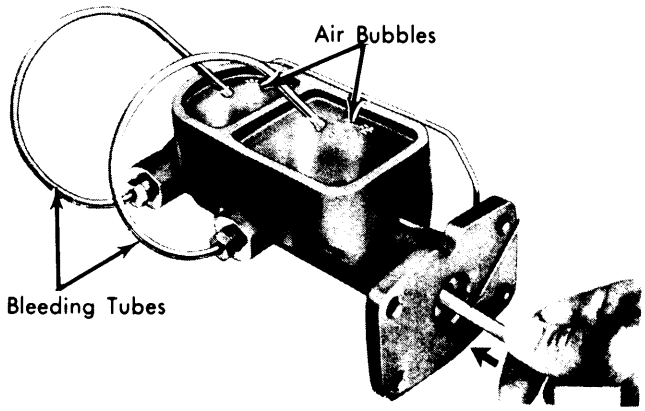

Fig. 2 Master Cylinder Bleeding Procedure

2) Carefully install secondary cup over rear of rear piston with lip of cup toward rear. Center spring retainer of rear piston over shoulder of front piston and push piston assemblies into bore. Carefully install lips of cups into bore, then seat piston assemblies. Install piston retaining screw and tube seats.

3) Clamp master cylinder in a vise, being careful not to damage housing, and bleed cylinder as follows: Attach suitable bleeding tubes (C-4029) to outlet ports of cylinder, with ends of tubes in master cylinder reservoirs. Fill reservoirs with clean brake fluid and depress push rod slowly. Allow pistons to return to normal position under spring pressure. Repeat procedure until all air bubbles are expelled. Remove bleeding tubes, and install cylinder cover and diaphragm. Remove cylinder from vise.

CHRYSLER CORP. DUAL PISTON MASTER CYLINDER (Cont.)

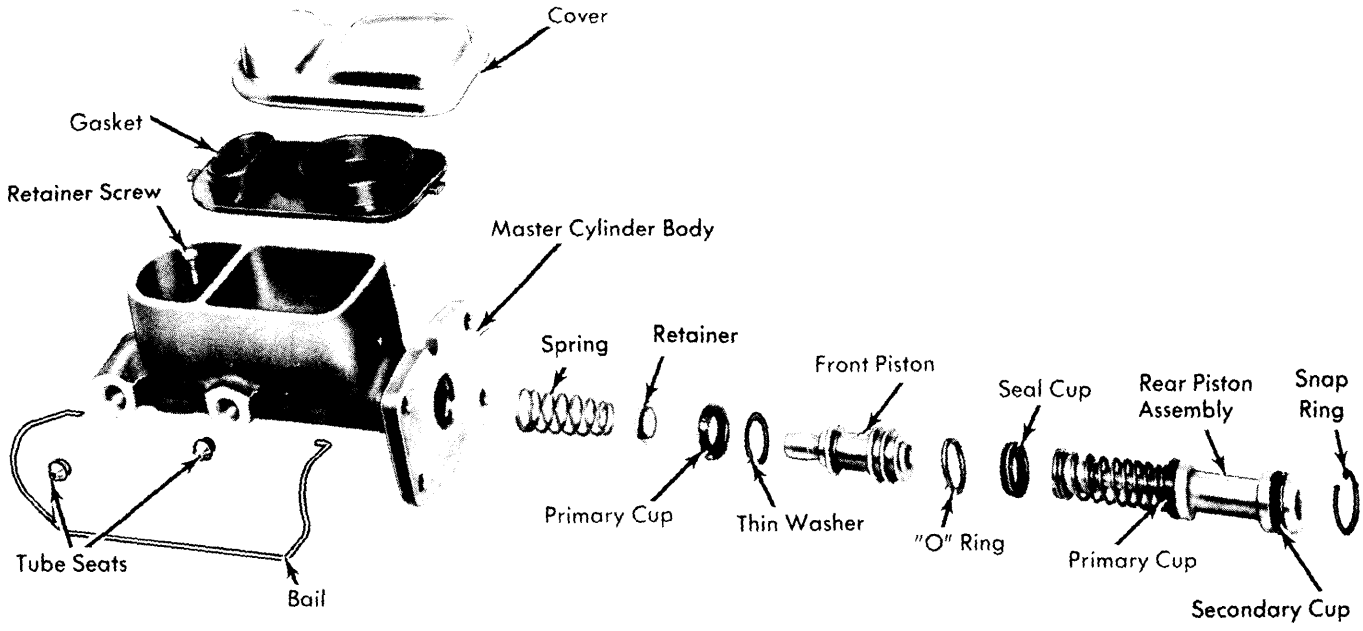

Fig. 3 Exploded View of Master Cylinder Assembly