

## CHRYSLER CORP. ROLLER

### Chrysler Corp. Pump Model 1.06

#### DESCRIPTION

Roller type pump can be identified by a 3/8" threaded hole in pulley end of drive shaft. Star shaped rotor propels 12 steel rollers against inside surface of a cam ring. As rollers follow eccentric pattern of cam ring, oil is drawn into inlet ports and exhausted through discharge ports while the rollers are forced into vee shaped cavities of the rotor, forcing oil into high pressure circuit. A flow control valve permits a regulated amount of oil to return to intake side of pump when excess output is generated during high speed operation.

#### LUBRICATION, TROUBLE SHOOTING & TESTING

See *Power Steering General Servicing* in this section.

#### REMOVAL & INSTALLATION

##### POWER STEERING PUMP

Loosen pump mounting and locking bolts, remove belt. Disconnect both hoses at pump. Remove mounting and locking bolts, remove pump and bracket. To install, reverse removal procedures and tighten pump bracket bolts to 30 ft. lbs. When connecting hoses, use a new pressure hose "O" ring.

##### POWER STEERING PUMP PULLEY

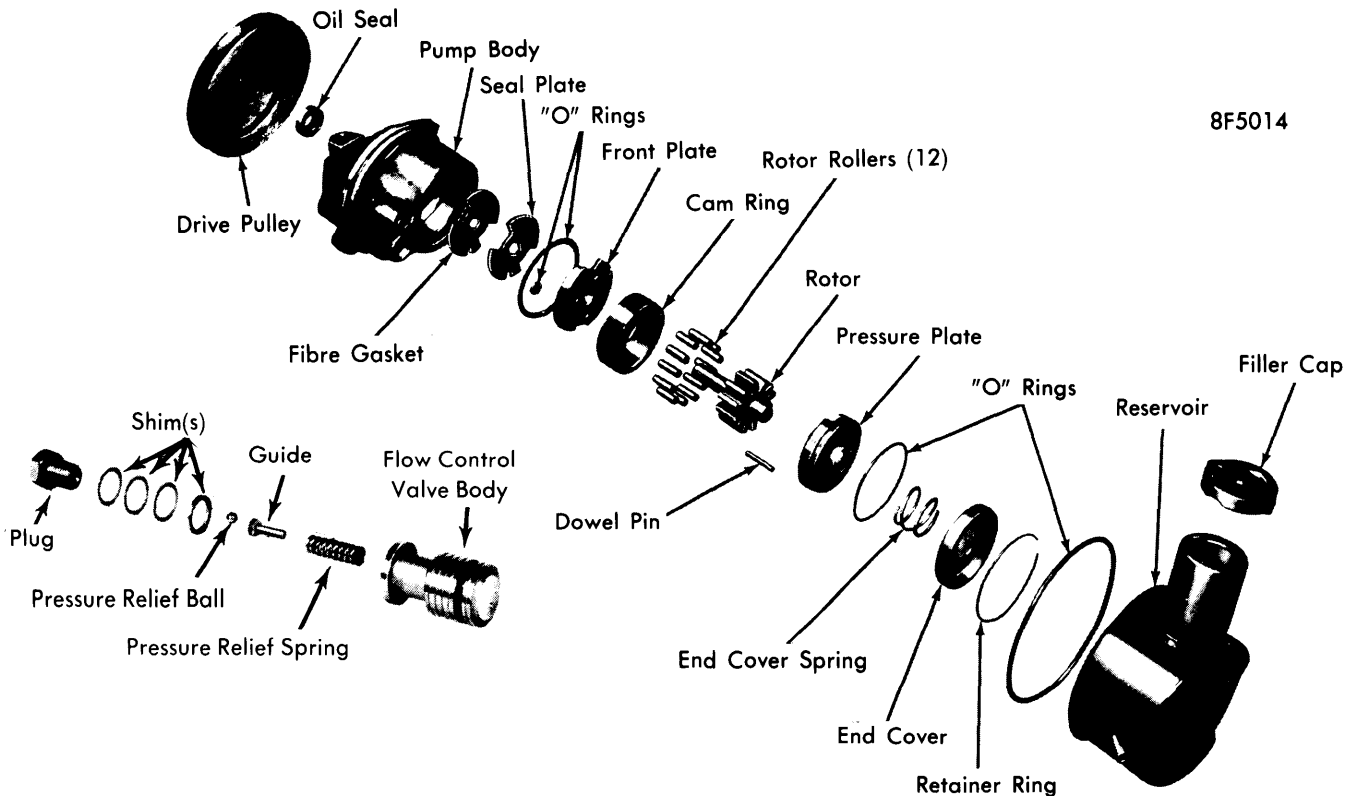
**Pulley Removal** – CAUTION – Do Not hammer on pulley or pump shaft as internal component damage may result. Remove pulley with suitable puller (C-4068).

**Pulley Installation** – CAUTION – Special tools and specified procedure must be used when installing pulley or serious damage may result to interior of pump. Place drive pulley on end of shaft, thread installer tool C-4063 without adapter securely into 3/8" threaded hole on end of pump shaft (6 Cyl. Models), thread installer tool C-4063 with Adapter SP- 5399 into 3/8" threaded hole on end of shaft (V8 Models). On all models, clamp installer shaft securely in vise, tighten tool drive nut against thrust bearing to press pulley on shaft. Remove tools. With pulley correctly installed, pulley will be flush with end of shaft (V8 Models), but will not be flush with end of shaft (6 Cyl. Models) and slight amount of shaft endplay will be noted (this clearance will be minimized by oil cushion between rotor and end plates when pump is operated).

##### OIL SEAL REPLACEMENT

Remove pump from engine and remove pulley as previously outlined. Using suitable seal remover tool adapter (SP-5323A), position adapter over drive shaft with large opening toward pump. Place suitable remover tool (C-4062) over shaft through adapter and screw tapered thread well into metal portion of seal. Tighten large drive nut and remove seal. Inspect shaft for scratches or burrs and remove with crocus

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CHRYSLER CORP. ROLLER TYPE MODEL 1.06 PUMP

# Power Steering Pumps

## CHRYSLER CORP. ROLLER (Cont.)

cloth. Examine seal bore for burrs or score marks that would allow oil to by-pass outer seal surface. Lubricate new seal and install with lip toward pump using suitable tool (C-4061) to drive seal in flush with housing. Install pulley and pump.

### OVERHAUL

#### DISASSEMBLY

- 1) Clamp pump securely in vise at mounting bracket, remove pulley and oil seal as previously outlined. Remove pump from vise and remove mounting bracket bolts. Use a plastic hammer to loosen and remove reservoir.
- 2) Clamp pump in vise (shaft down) making sure vise has soft protective jaws. Discard mounting bolt and reservoir "O" rings. Using a punch, tap end cover retaining ring around until one end lines up with hole in pump body, then insert punch through hole to disengage ring from pump bore groove, remove ring from body. Tap end cover with plastic hammer to jar it loose (spring under cover should push cover up out of pump bore).
- 3) Remove pump body from vise and place in inverted position on clean flat surface. Tap end of drive shaft to loosen shaft and internal parts, then lift pump off this rotating group. Remove and discard brass seal plate and fibre gasket (some pumps assembled without this fibre gasket). If fibre gasket is stuck to pump housing floor, make certain that all portions of gasket are removed. **CAUTION** - Do not scratch or damage floor of pump housing.
- 4) Discard pressure plate and end cover "O" rings. Remove snap ring, bore plug, flow control valve and spring from housing, discard "O" ring.

#### INSPECTION

Remove clean out plug with Allen wrench. Wash all parts in clean solvent, blow out all passages with compressed air and air dry all parts. Inspect drive shaft for excessive wear and seal area for nicks or scoring, replace if necessary. Inspect end plates, rollers, rotor and cam ring for nicks, burrs, or scratches. If any of the components are damaged to a degree that the efficiency of the pump is affected, it is recommended that all interior parts be replaced. Inspect pump body drive shaft bushing for excessive wear. If worn or scored, install pump partial assembly (entire pump less reservoir, filler cap, mounting brackets, and drive pulley.)

#### REASSEMBLY

- 1) Install 1/8" pipe clean-out plug, tighten to 80 inch pounds. Place pump body on flat surface and drive new shaft seal into bore with Tool C4061. Install new end cover "O" ring in groove in pump bore and lubricate with power steering fluid. Lubricate new large pump body-to-reservoir "O" ring and install on pump body.
- 2) Install new fibre gasket and brass seal plate on floor of pump housing (**CAUTION** - Pumps originally assembled with brass plate only must be reassembled with BOTH

fibre gasket and brass seal plate). Align index notches in plate and gasket with dowel pin hole in housing and note that cut-out sections of gasket and plate are in line with core pockets on side of housing bore.

3) Install front plate in pump bore with chamfered edge in and index notch in plate aligned with dowel pin hole (**CAUTION** - Use extreme care in aligning dowel pin holes - it is possible to completely assemble pump with dowel pin improperly positioned in end plates and not engaging indexing hole in the pump housing). Place the dowel pin in the cam ring and position the cam ring inside pump bore (notch on cam ring must be up or away from pulley end of pump). If cam ring has two notches (one machined and one cast), install with machined notch up. Machined notch has sharp corners and cast notch rounded corners. If end of dowel pin in cam ring is more than 3/16 inch above surface of installed cam ring, it is not seated in index hole in housing. Install rotor and shaft in cam ring and carefully place 12 rollers in cavities of rotor. Lubricate rotor, rollers and cam ring with power steering fluid. Before installing pressure plate, rotate shaft by hand to ensure rollers are all seated parallel with pump shaft.

4) To insure proper alignment of pressure plate to dowel pin, insert the largest possible drill (No. 13 through 16) into the 3/16" diameter hole in cam ring next to cam notch and bottom the drill on the pump housing floor. Install a new "O" ring on pressure plate, lubricate assembly with power steering fluid and carefully position plate in pump bore with index notch in plate aligned with dowel pin and oil passage slot with numbered drill. Use a clean 1 1/8" socket and soft hammer to seat plate on cam ring. Remove drill and inspect pressure plate at both oil passage slots to insure that plate is squarely seated on cam ring end face.

5) Place large coil spring over raised portion of pressure plate. Position end cover (lip edge UP) over spring. Press end cover down below retaining ring groove with thumb and install ring making sure it is seated in groove. Replace reservoir mounting bolt seal. Lubricate flow control valve with power steering fluid and insert valve spring and valve into bore (spring first, then hex plug end of valve), install new "O" ring on bore plug, lubricate assembly with power steering oil and carefully install in valve bore, install snap ring with sharp edge upward. **CAUTION** - Do not depress bore plug more than 1/16" beyond snap ring groove. Place reservoir on pump body and align mounting bolt hole, then tap reservoir down in place on pump with a plastic hammer. Remove pump from vise and install mounting bracket, tighten bracket bolts to 18 ft. lbs.

TIGHTENING SPECIFICATIONS	
Application	Ft. Lbs.
Mounting Bracket-to-Pump .....	18
Bracket Mounting Bolts .....	30
High Pressure Hose	
Steering Gear End .....	19
Pump End .....	30
Flow Control Valve Plug .....	7