1965-72 EATON ROLLER TYPE PUMPS

International Harvester (1965-72)
Jeep (1965-71)

NOTE — Some models use other units. See Thompson Slipper Type Pumps and Saginaw Vane Type Pumps in this Section.

DESCRIPTION

Eaton roller type power steering pump can be identified by round pump reservoir, which is either bolted to top of pump body or mounted remotely. Fluid movement is accomplished by action of rollers following surface of cam ring while being rotated by drive shaft and roller carrier. Oil is forced along between rollers and delivered under pressure to pump outlet. Pressure relief valve and flow control valve, which are built into pump body, control pump pressure output. Pump is mounted to engine by brackets, and is belt driven from engine crankshaft.

LUBRICATION

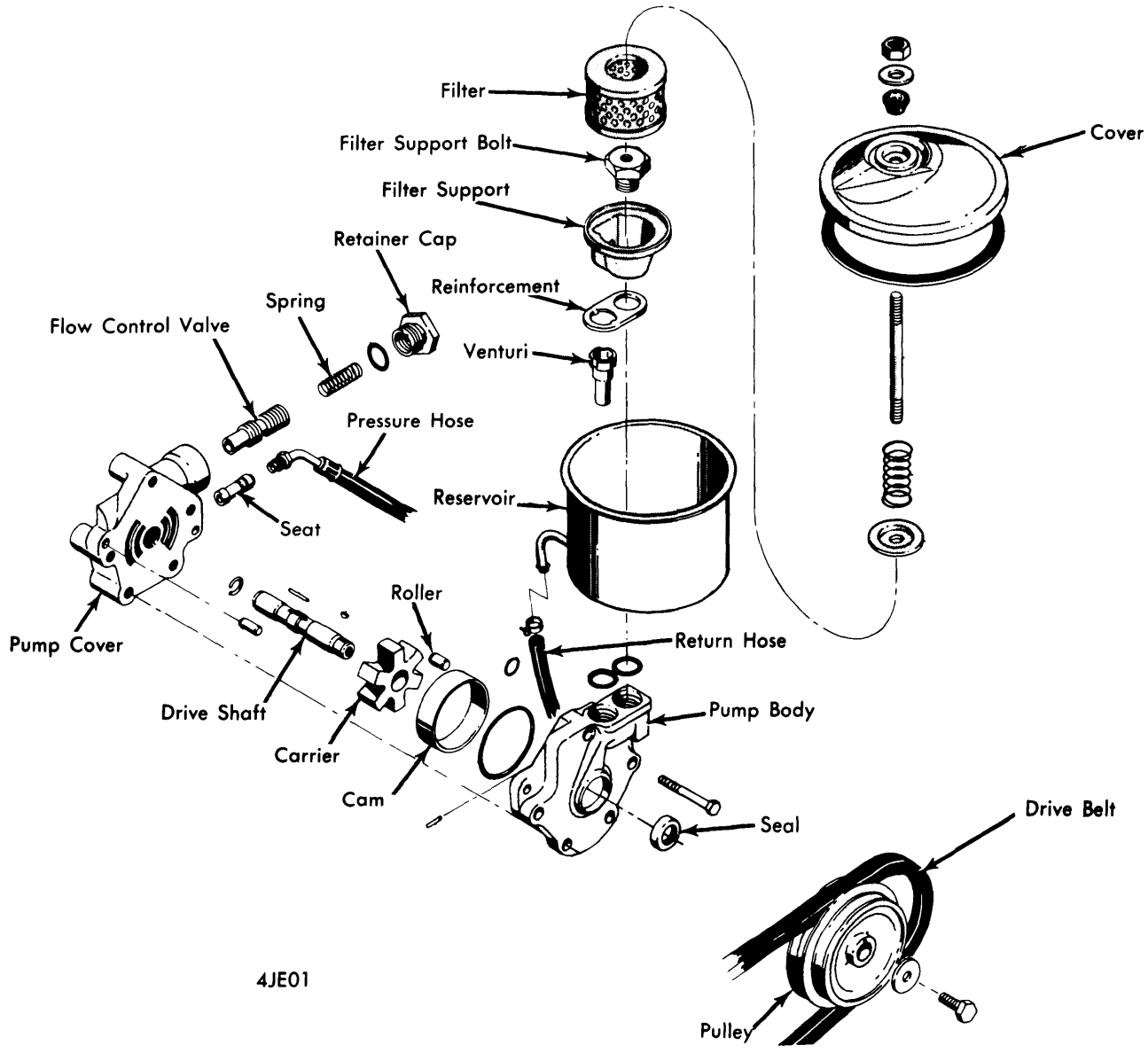
Check fluid level visually or on dipstick (if equipped) with fluid at normal operating temperature. Maintain proper level using either Power Steering Fluid or "Dexron" Automatic Transmission Fluid.

ADJUSTMENT

DRIVE BELT

International Harvester — Loosen pump adjusting bracket bolt, and move pump in or out to obtain ⅜" deflection of belt at a point midway between pulleys. Tighten adjusting bracket bolt.

Jeep — Loosen pump adjusting bracket bolt and move pump in or out to obtain drive belt tension of 70-80 lbs., as measured



EATON ROLLER PUMP ASSEMBLY

1965-72 EATON ROLLER TYPE PUMPS (Cont.)

with Strand Tension Gauge at a point midway between pulleys. Tighten adjusting bracket bolt.

BLEEDING HYDRAULIC SYSTEM

International Harvester – Fill reservoir to proper level, and turn pump pulley backwards until all air is expelled from system. Recheck fluid level in pump.

Jeep – Fill reservoir to proper level, and let fluid remain undisturbed for at least two minutes. Start engine and run at idle speed for a short time, adding fluid as necessary to maintain proper level in pump. Turn wheels to left and right, contacting steering stops lightly. Check oil level and refill as necessary. Continue process as long as necessary to expell all air from system.

REMOVAL & INSTALLATION

POWER STEERING PUMP

Removal & Installation – Drain pump reservoir completely (on vehicles with remote mount reservoir, disconnect and plug supply line at pump), and disconnect all lines at pump. Loosen adjusting bracket bolt and remove drive belt. Remove pump-to-bracket attaching bolts, and remove pump from vehicle. To install, reverse removal procedure and bleed system. *See Bleeding Hydraulic System.*

OVERHAUL

CAUTION – Thoroughly clean exterior of pump and reservoir to prevent dirt from entering pump on disassembly.

Disassembly – 1) Carefully clamp pump assembly in soft jawed vise with reservoir facing up. On pumps with integral reservoir, remove wing nut, washer, reservoir cover, and cover gasket from pump. Remove filter element hold down spring and filter element from reservoir. Remove cover retaining stud from reservoir, then remove filter support bolt. Remove reservoir mounting bolts, and remove reservoir reinforcement and reservoir from pump.

2) Remove pump from vise, and remove and discard reservoir "O" rings. Remove cover-to-body screws and studs, then separate pump cover from pump body. Remove and discard body-to-cover "O" ring.

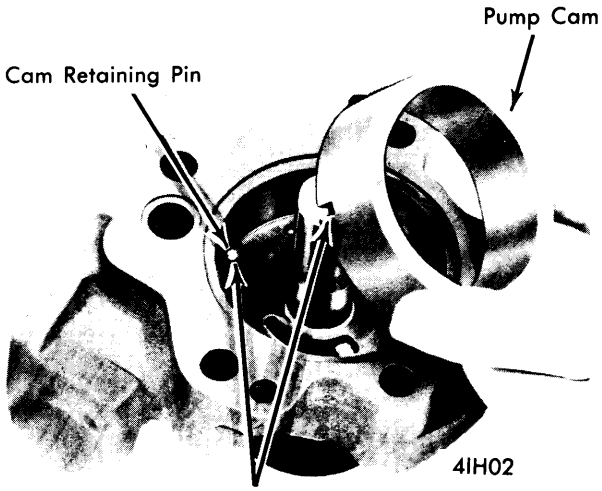
3) Mark carrier and cam for reassembly reference, then remove rollers from cam and carrier assembly. Remove carrier and drive pin from shaft, and lift cam and cam retaining pin from pump body. Remove bearing retaining ring, and lift shaft and bearing assembly from pump. Press bearing from shaft. Using suitable puller (SE-1746), remove and discard drive shaft seal.

4) Remove flow control valve spring retainer cap from pump cover. Remove and discard "O" ring from cap. Lift out control valve spring, then tap cover against wooden block to loosen control and relief valves in cover. Remove control valve assembly from cover. *NOTE – Relief valve is an integral part of control valve and should not be disassembled.*

NOTE – All parts should be lightly lubricated with SAE-10W engine oil prior to assembly.

Reassembly – 1) Insert flow control valve, exposed ball end first, into bore in pump cover. Install flow control valve spring, place new "O" ring on flow control valve retainer cap, then install cap into pump cover. Using suitable driver (SE-1878-3), install new seal in pump body with lip toward carrier.

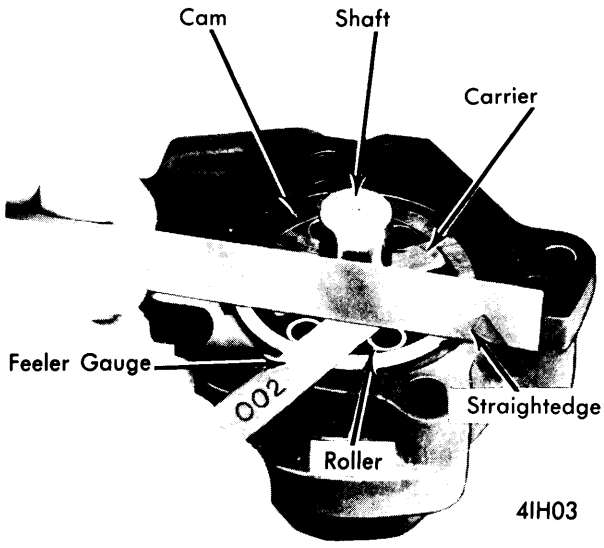
2) Press new bearing onto pump shaft until bearing is firmly seated against shoulder of shaft. Install shaft and bearing assembly into pump body, and install bearing retaining ring in groove in body, making sure ring is properly seated in groove. Install cam retaining pin in pump body, then install cam, making sure cam indexes with retaining pin and cam is firmly seated in pocket.



Index pin in notch on reassembly.

INSTALLING PUMP CAM

3) Insert carrier drive pin in groove in pump drive shaft, then install carrier into pump body making sure to align marks made at disassembly. Install rollers into pockets of carrier. With cam, carrier, and rollers in place, check end clearance as follows: Place a straightedge across cam and carrier, and measure clearance between straightedge and carrier. If clearance exceeds .002", replace carrier or rollers as necessary.



MEASURING END CLEARANCE

1965-72 EATON ROLLER TYPE PUMPS (Cont.)

4) Install new "O" ring seals in pump body. Position pump cover on pump body and install cover attaching bolts and studs. Rotate pump shaft and check for free rotation. Place new "O" ring seals on pump body to mount reservoir. Position reservoir over "O" rings, place reservoir reinforcement plate in position, and install reservoir mounting bolts. Install filter support and filter support bolt, then install cover retaining stud. Place filter element on filter suport, place spring seat over filter, and install filter spring. Install reservoir cover and gasket, and tighten all nuts and bolts.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs.
Control Valve Retainer Cap	30-35
Pump Cover-to-Body Bolts	20-25
Reservoir-to-Pump Body Bolts	30-35
Filter Support Bolt	30-35
Cover Retaining Stud	3-5