SERVICE BULLETIN

CAB SERVICE & PARTS CORPORATION #16

SUBSIDIARY OF
CHECKER MOTORS
CORPORATION

NEW YORK * BROOKLINE
CHICAGO * DETROIT

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Subject: STEERING - MODEL A-9

Description: SERVICE INSTRUCTION - POWER STEERING

This is an EATON ROTOR PUMP which has a pumping element and a specially designed rotor set, in which the inner and outer members are mutually operated. The inner rotor is keyed to the shaft and drives the outer rotor, which runs in a bore offset from the shaft.

SERVICING INSTRUCTION

A. OIL SEAL REPLACEMENT

1. Remove the shaft bearing sub-assembly. The shaft retaining ring may be removed by using a screwdriver to spring the ring from the groove.
   Note: The two different rings are interchangeable.

2. It is recommended that a seal puller be used, (Snap-On Tool Co. Tool #A-78) to remove worn seal.

3. Grease lip of new seal with lubriplate or equivalent.

4. Assemble seal with lip toward rotor, using a large socket as a piloting tool. Press seal solid, but do not squash.

B. ROTORS

1. These are serviced as a matched set of inner and outer rotor only. In some cases these are serviced as a sub-assembly, consisting of the body sub-assembly with the rotors nested in place.

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2. After cleaning the original set of rotors and nesting them in the pocket in the same position as they were found, inspect tooth nose clearance with a feeler gauge. If the clearance exceeds .008, replace rotors with a new set.

3. If the end clearance, measured with a gauge, exceeds .0025, replace rotors with a new set.

C. SHAFT BUSHING, POCKET BUSHING

1. If any of the above surfaces are scored or show evidence of acute wear, replace the unit with a body bushing sub-assembly.

2. Cover, Shaft Bushing Sub-Assembly

If the rotor bearing face of the cover or shaft bushing are scored or show evidence of acute wear, replace the unit with a cover bushing sub-assembly.

D. Always use new gaskets after dismantling the pump. This is to insure against any possible leakage.

E. The relief valve sub-assembly should be thoroughly cleaned and examined to make sure the valve is not sticking. All burrs should be removed with crocus cloth or equivalent.

F. ASSEMBLY OF PUMP

a. It is important that all parts be clean.
b. Squirt oil on parts as they are assembled to insure lubrication of parts.
c. The rotors should be reassembled in the pump body in the same position that they were in before removal.
d. Torque bolts 30 to 35 foot pounds.
e. Turn pump shaft by hand approximately 12 revolutions to make certain it turns freely before installing.

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G. INSTALLATION IN CAR

a. When installing pump in car, the drive belt should be tightened sufficiently enough to eliminate slippage. (A belt that is excessively tight will cause noise and have adverse effects on the life of the pump.)

b. Fill the reservoir with oil to within one inch of the top and idle engine to bleed air from the system. Then refill reservoir to level specified.

TROUBLES: POSSIBLE CAUSES AND CURES

1. HIGH STEERING EFFORT

a. Insert pressure gauge in discharge line as close to pump as possible. Pressure should be 700-900 psi with engine idling and wheels against stops.

If the pump is not delivering oil under pressure, it may be bacause of one of the following faults:

1. LOW OIL LEVEL: Add oil as necessary.

2. STUCK VALVES: Dirt wedged in valves. Remove valves from pump and check for free operation.

3. DRIVE BELT SLIPPAGE: Adjust and tighten, NOT EXCESSIVELY.

4. VALVE SURFACES SCORED BY ABRASIVE MATTER: Replace all scored or worn parts. Clearance of flow control valve to bore should not exceed .0015.

5. WORN PUMPING ELEMENT:
   a. End clearance should not exceed .0025.
   b. Tooth clearance should not exceed .008.

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2. NOISE - THE INSTALLATION IS NOISY AT ENGINE IDLE STEERING

a. Look for hoses rubbing against the chassis or body metal. Clear hoses from any contact.
b. Noise may be caused by entrapped air in the system.
   1. Bleed the system per recommendations
   2. Refill reservoir to proper level.
c. Air leak past oil seal: Inspect oil seal. Lips may have been damaged due to faulty installation. Replace oil seal.
d. Excessive internal pressure build-up causing noise. Free up valve. If necessary, use crocus cloth to remove burrs in bore and on valve.
e. Noise may be expected when wheels are against stops. This is caused by the relief valve. It is undesirable to hold wheels in this position.
f. When the oil level is low on a cold morning start, some noise may be caused by funneling of the oil, allowing air to be pulled into the inlet. This will stop when the oil heats.

3. OIL LEAKS

A. Shaft seal leakage: replace oil seal.
B. Reservoir gasket: if leakage is indicated by excessive oil around reservoir, replace gasket.
C. Oil flowing out air vent may indicate a clogged filter. Replace the element.

By: NEW YORK SERVICE DEPARTMENT