

TC PUMP

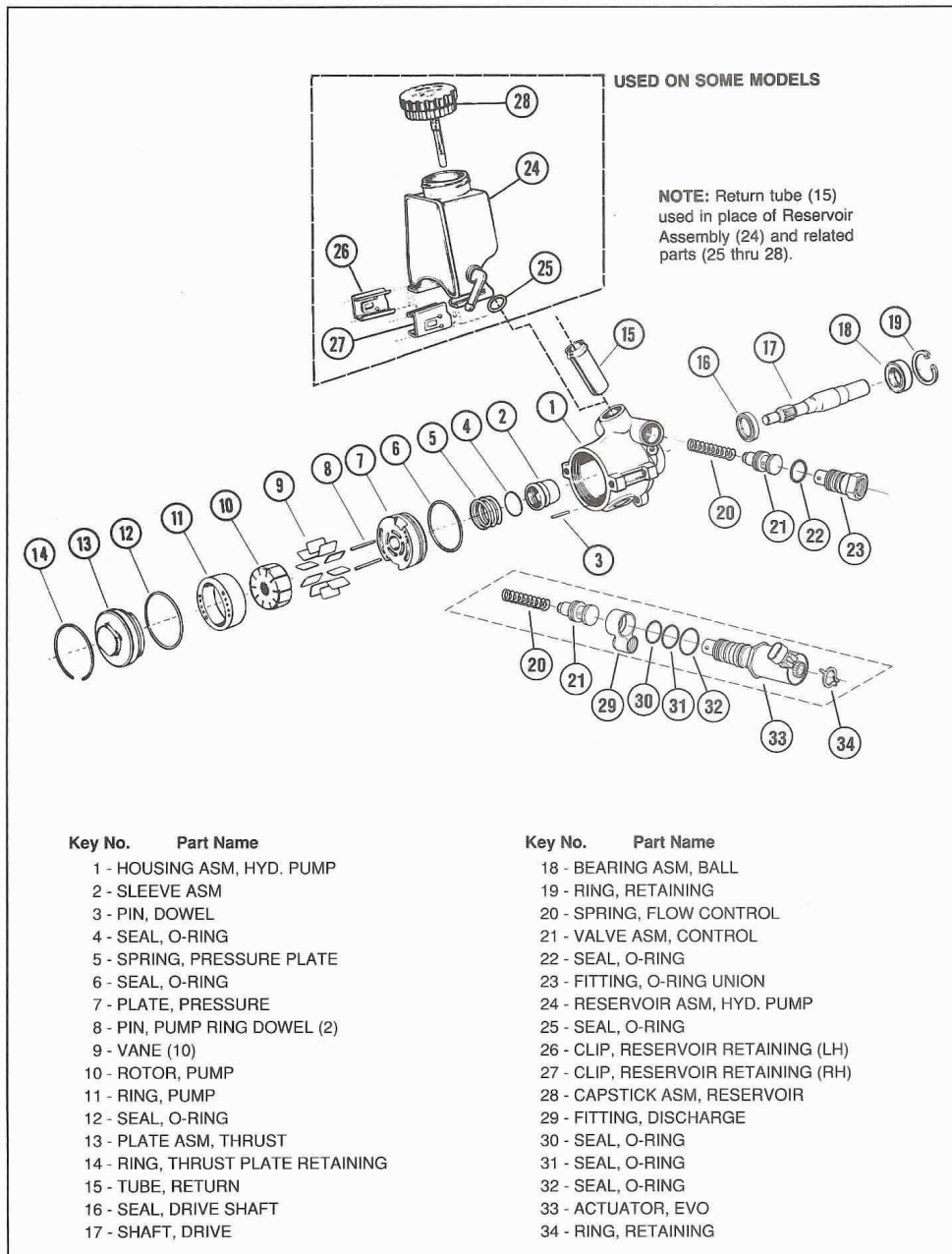


Figure 1 Typical TC Pump Assembly

RESERVOIR ASSEMBLY

↔ Remove or Disconnect (Figure 1)

1. Pump assembly from vehicle if necessary for access.
2. Retaining clips (26) and (27) from reservoir assembly (24) and housing (1).
3. Reservoir (24) from housing (1).
4. O-ring seal (25) from reservoir (24).

→↔ Install or Connect (Figure 1)

1. O-ring seal (25) to reservoir (24).
2. Reservoir assembly (24) to housing (1).
3. Retaining clips (26) and (27) to reservoir (24) and housing (1).
4. Pump assembly to vehicle.

RETURN TUBE

! **Important**
Plug return tube (15) to prevent chips from entering pump.

↔ Remove or Disconnect (Figures 1, 2)

1. Pump assembly from vehicle if necessary for access.
2. Damaged return tube (15) using tap, nut, and washers.

! **Important**
Remove plug and any chips before installing new return tube.

→↔ Install or Connect (Figures 1, 3)

1. Coat end of new return tube (15) using Loctite solvent 75559 and Loctite adhesive 290, or equivalent.
2. Press return tube (15) into housing (1) until bottomed.
3. Pump assembly to vehicle.

EVO ACTUATOR

↔ Remove or Disconnect (Figure 1)

1. Pump from vehicle if necessary for access.
2. Retaining ring (34) from EVO actuator (33).
3. EVO actuator (33) and discharge fitting (29).
 - Discharge fitting (29) from EVO actuator (33).
 - O-ring seals (30), (31) and (32) from EVO actuator (33).

→↔ Install or Connect

1. O-ring seals (30), (31) and (32) on EVO actuator (33).
2. Discharge fitting (29) to EVO actuator (33) until fully seated.
3. EVO actuator (33) and discharge fitting (29) to pump assembly.
4. Position discharge fitting (29), tighten actuator (33) to 62 N•m (46 lb. ft.).
5. If new actuator is being installed position electrical connector and install retaining ring (34).

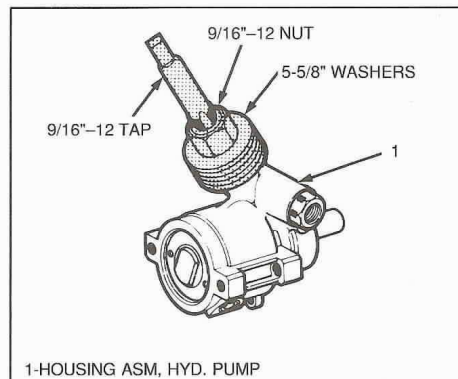


Figure 2 Return Tube Removal

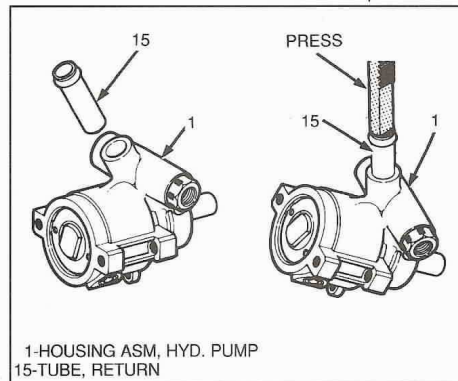


Figure 3 Return Tube Installation

CONTROL VALVE ASSEMBLY**←→ Remove or Disconnect (Figure 1)**

1. Pump assembly from vehicle if necessary for access.
2. O-ring union fitting (23) from housing (1) and o-ring seal (22) from fitting (23).
3. Control valve assembly (21) from housing (1).
4. Flow control spring (20) from housing (1).

→← Install or Connect (Figure 1)

1. Flow control spring (20) to housing (1).
2. Control valve assembly (21) to housing (1).
3. New o-ring seal (22) onto union fitting (23) and fitting (23) into pump housing (1) and torque to 75 N•m (55 lb. ft.).
4. Pump assembly to vehicle.

DRIVE SHAFT ASM, DRIVE SHAFT SEAL**←→ Remove or Disconnect (Figures 1, 4, 5)**

1. Pump assembly from vehicle if necessary for access.
2. Retaining ring (19) from housing (1).
3. Drive shaft (17) and ball bearing assembly (18) from housing (1).
 - When clearance exists between drive shaft shoulder and bearing inner race, measure clearance before bearing removal.
 - Bearing (18) from shaft (17).
4. Drive shaft seal (16) from pump housing assembly (1).

☑ Clean

- All parts in power steering fluid.
- Dry parts.

🔍 Inspect

- Drive shaft (17) and splines.
- Ball bearing assembly (18).
- For scoring or pitting.
- If noted, replace appropriate parts.

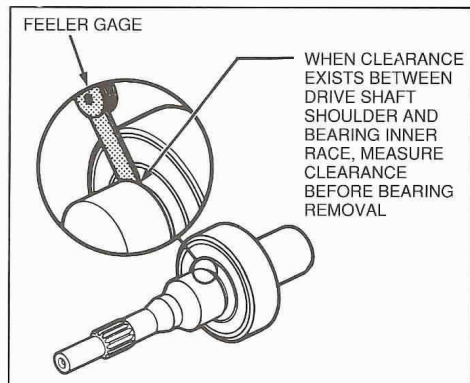


Figure 4 Drive Shaft and Ball Bearing Removal

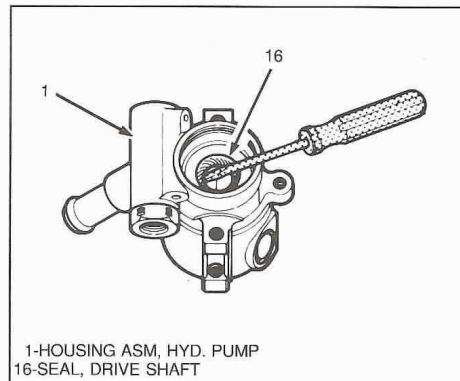


Figure 5 Drive Shaft Seal Removal

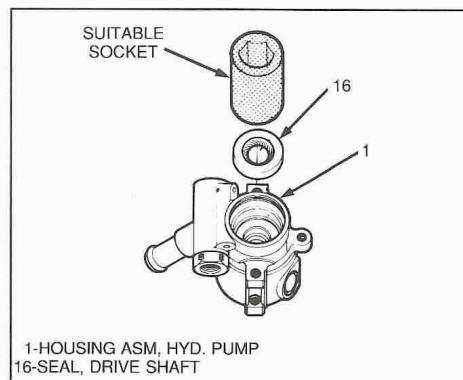


Figure 6. Drive Shaft Seal Installation

→← Install or Connect
(Figures 1, 6, 7, 8)

1. Lubricate new drive shaft seal (16) with power steering fluid.
 - Seal (16) into pump housing (1) using suitable socket.
2. Ball bearing (18) to drive shaft (17).
 - Press bearing to shoulder of drive shaft or clearance measured prior to removal of old bearing.
 - Shaft (17) and bearing (18) into housing assembly (1). Rotate drive shaft so shaft serration engages with pump rotor (10).
3. Retaining ring (19) to housing (1).
4. Pump assembly to vehicle.

ROTATING GROUP AND SLEEVE ASSEMBLY

←→ Remove or Disconnect
(Figures 1, 4, 5, 9, 10, 11)

1. Perform steps 1 through 3 of Drive Shaft Assembly, Remove or Disconnect.
2. Thrust plate retaining ring (14) from housing (1).
3. Thrust plate (13) using a 5/8" piece of bar stock or suitable brass drift. Press on pressure plate hub from drive shaft side of housing (1).
4. O-ring seal (12).
5. Pump ring (11).
6. Pump rotor (10).
7. Ten vanes (9).
8. Two pump ring dowel pins (8).
9. Pressure plate (7). It may be necessary to use press to remove pressure plate.
10. O-ring seal (6) from pressure plate (7).
11. Pressure plate spring (5).

12. Dowel pin (3).
13. O-ring seal (4) from sleeve assembly (2).
14. Sleeve assembly (2) using punch on drive shaft side of housing (1).

Clean

- All parts in power steering fluid.
- Dry parts.

Inspect

- Pressure plate (7).
- Vanes (9).
- Pump ring (11).
- Drive shaft (17) and splines.
- Ball bearing (18).
- For scoring, pitting, or chatter marks.
- If noted, replace appropriate parts.

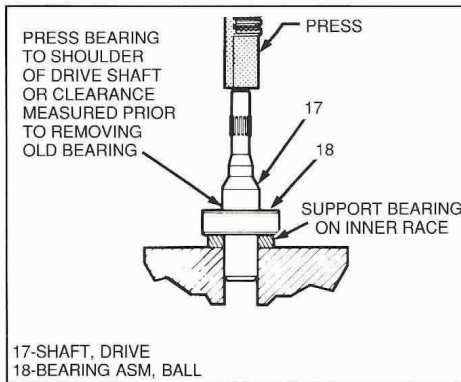


Figure 7 Ball Bearing onto Drive Shaft

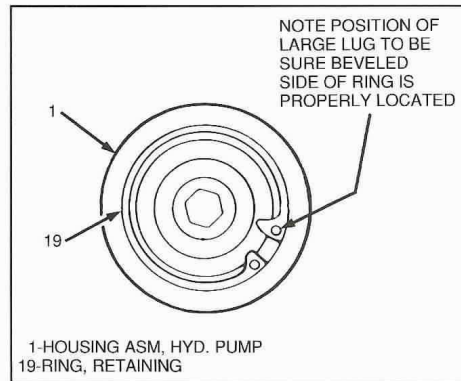


Figure 8 Drive Shaft Retaining Ring Installation

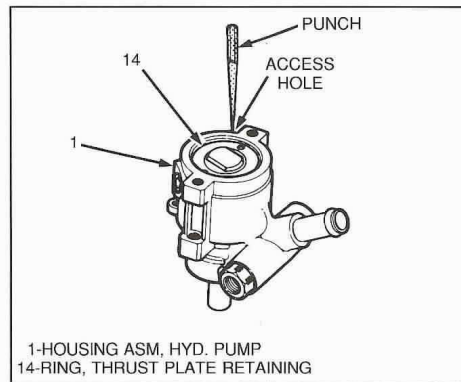


Figure 9 Retaining Ring Removal