

## HYDROSTATIC PUMP (CONT'D)

### Shaft Disassembly

Clean the outside of the pump before disassembly.

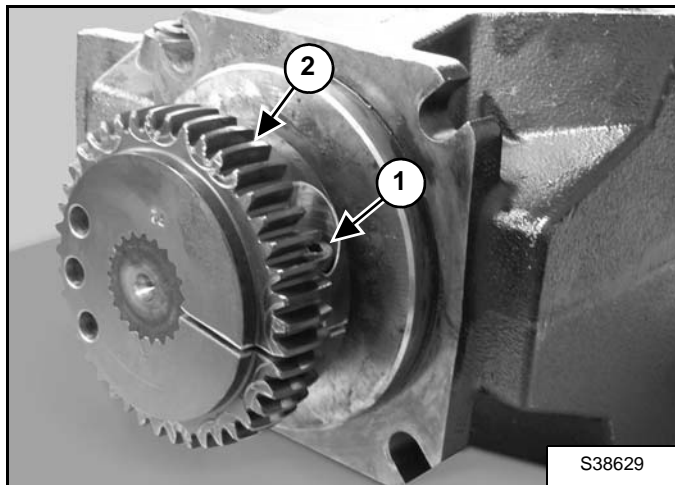
Mark the outside of the pump for ease of assembly.

# IMPORTANT

When repairing hydrostatic and hydraulic systems, clean the work area before disassembly and keep all parts clean. Always use caps and plugs on hoses, tubelines and ports to keep dirt out. Dirt can quickly damage the system.

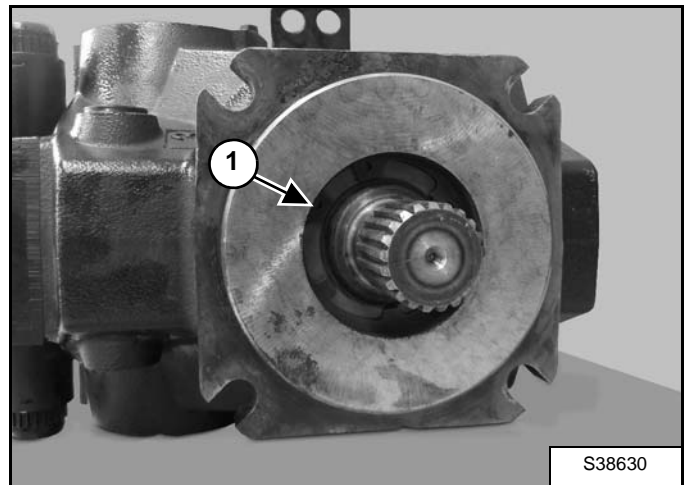
I-2003-0888

Figure 30-40-6



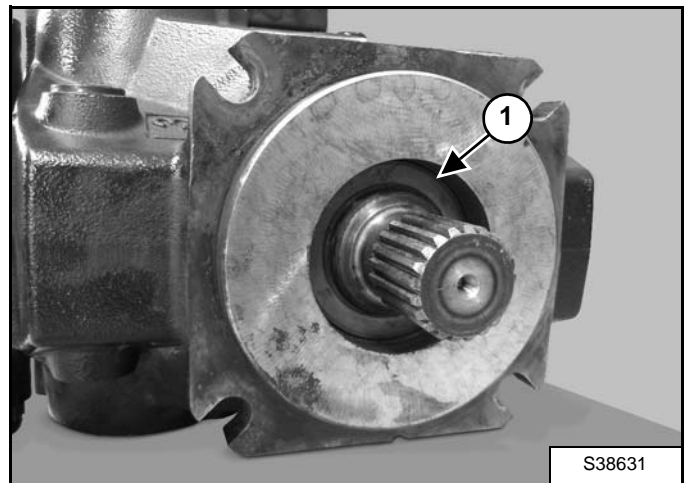
Loosen the retainer bolt (Item 1). Remove the coupler gear (Item 2) [Figure 30-40-6] from the shaft.

Figure 30-40-7



Remove the snap ring (Item 1) [Figure 30-40-7] from the pump housing

Figure 30-40-8



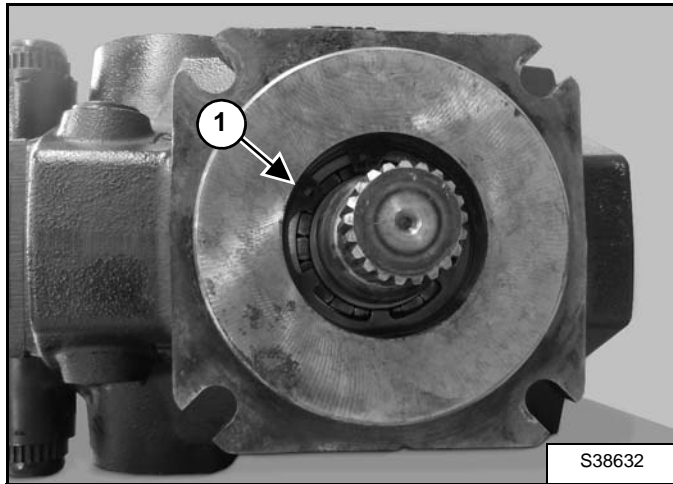
Remove the seal (Item 1) [Figure 30-40-8] from the housing.

**NOTE:** The seal may need to be punctured in order to pull out the seal. Do not damage the pump housing, shaft or bearing.

## HYDROSTATIC PUMP (CONT'D)

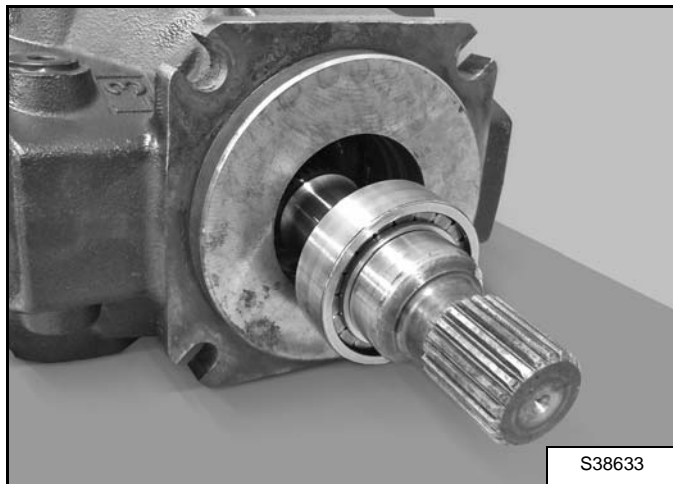
### Shaft Disassembly (Cont'd)

Figure 30-40-9



Remove the snap ring (Item 1) [Figure 30-40-9] from the pump housing.

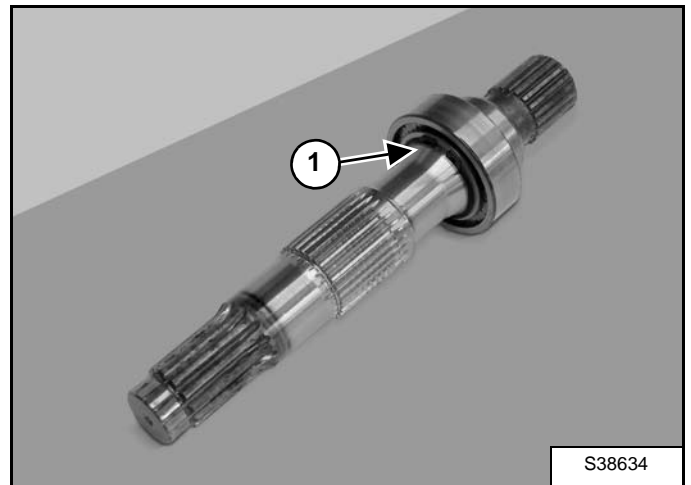
Figure 30-40-10



Remove the shaft and bearing assembly from the housing [Figure 30-40-10].

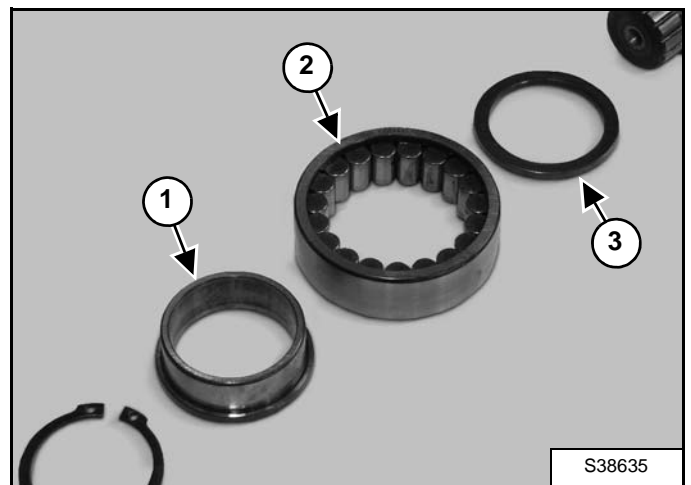
**NOTE:** For easier removal, use a hammer and drifter to tap lightly on the rear side of the shaft.

Figure 30-40-11



Remove the snap ring (Item 1) [Figure 30-40-11] from the shaft.

Figure 30-40-12

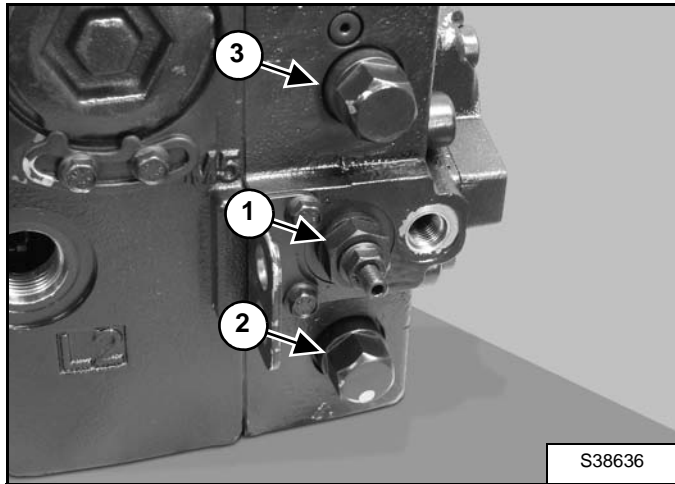


Press the bearing off the shaft. The bearing exists of three parts (Items 1, 2 and 3) [Figure 30-40-12].

## HYDROSTATIC PUMP (CONT'D)

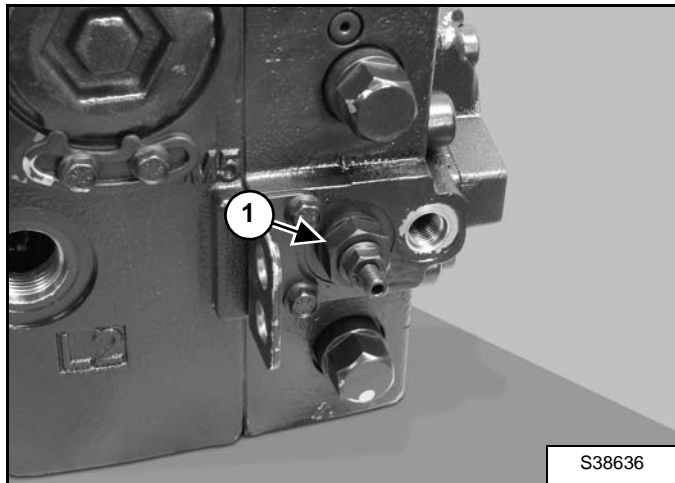
### Relief Valves Disassembly And Assembly

Figure 30-40-13



- Charge pressure relief valve (gearset pump pressure relief) (Item 1) [Figure 30-40-13].
- High pressure relief valves (piston pump pressure relief):
  - 'A' port side (Item 2) [Figure 30-40-13].
  - 'B' port side (Item 3) [Figure 30-40-13].

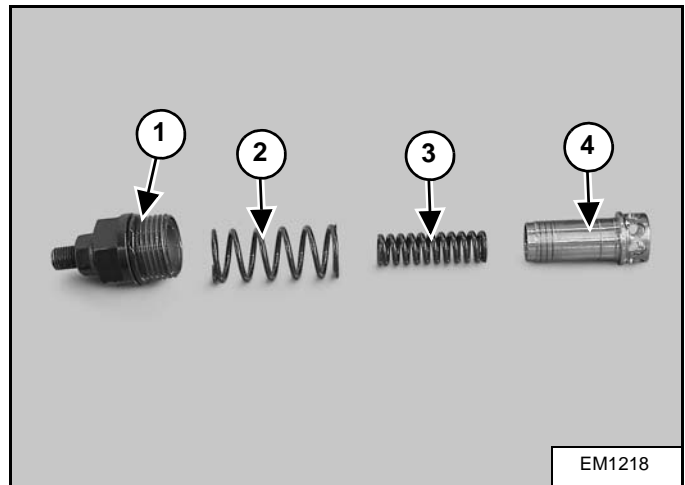
Figure 30-40-14



Remove the charge pressure relief valve (Item 1) [Figure 30-40-14].

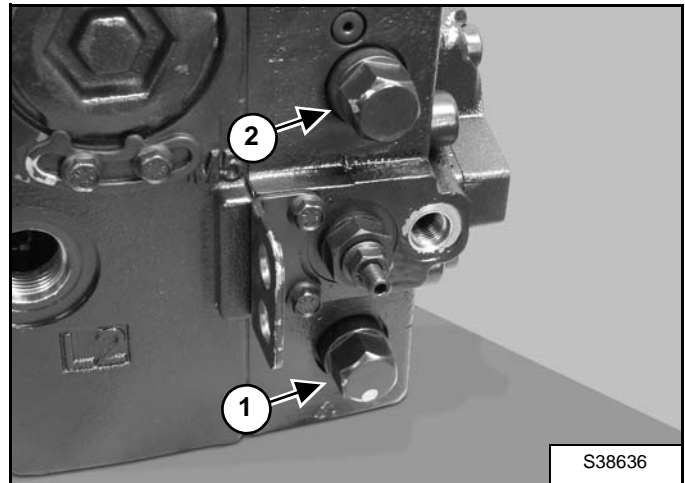
**Installation:** Tighten the valve to 52 N•m (38 ft-lb) torque.

Figure 30-40-15



The valve has the following components: adjustable valve housing (Item 1), spring (Item 2), spring (Item 3) and spool (Item 4) [Figure 30-40-15].

Figure 30-40-16



Remove the A port side relief valve (Item 1) [Figure 30-40-16].

Repeat for the B port side relief valve (Item 2).

**Installation:** Tighten the valves to 110 N•m (81 ft-lb) torque.

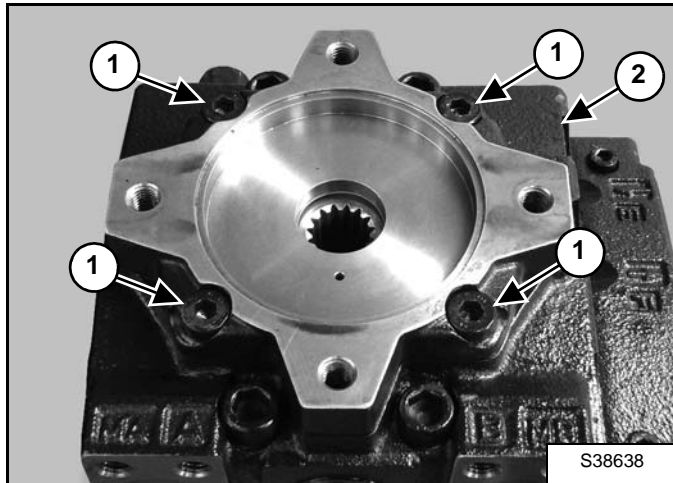
## HYDROSTATIC PUMP (CONT'D)

### Charge Pump Disassembly

Place the pump on the work surface with the charge pump up.

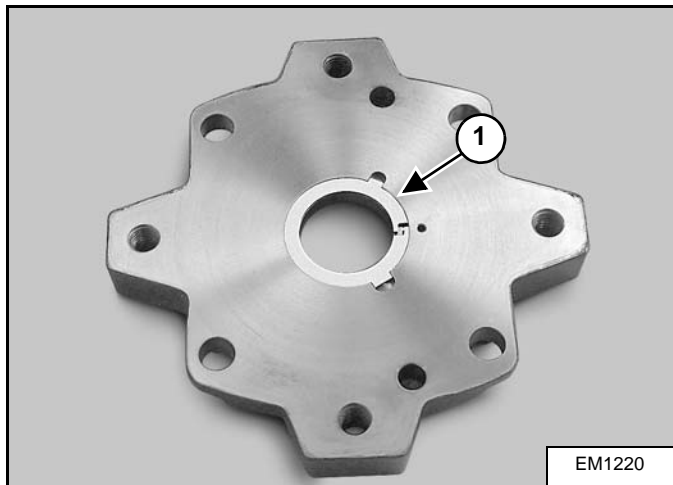
Mark the pump housings for correct assembly.

**Figure 30-40-17**



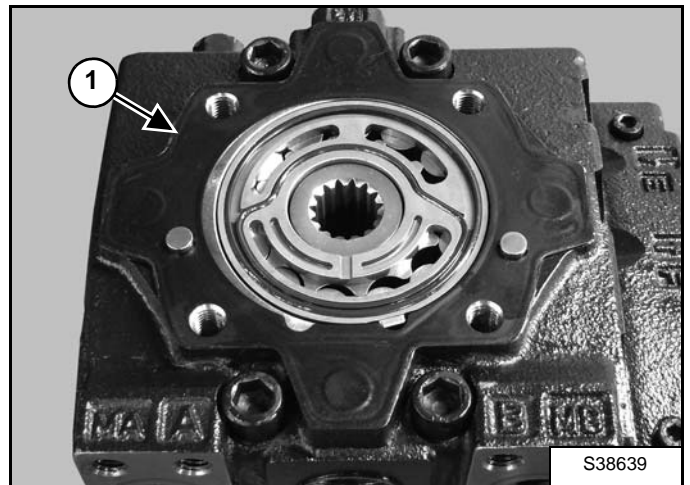
Remove the four bolts (Item 1) and remove the cover (Item 2) [Figure 30-40-17] from the charge pump housing.

**Figure 30-40-18**



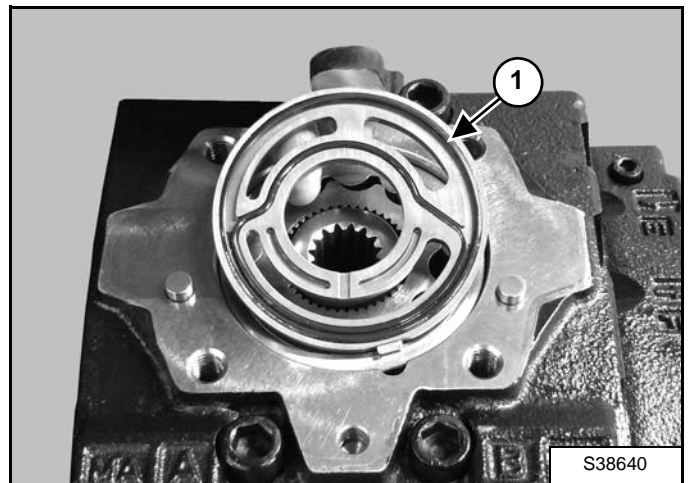
Remove the thrust washer (Item 1) [Figure 30-40-18] from the cover.

**Figure 30-40-19**



Remove the gasket (Item 1) [Figure 30-40-19] from the charge pump.

**Figure 30-40-20**

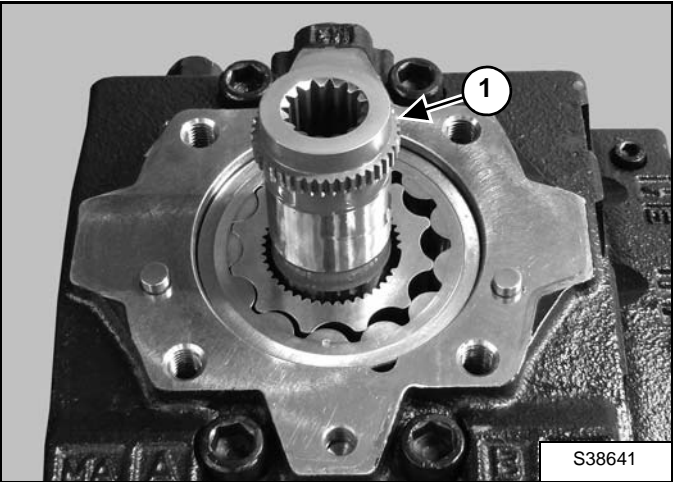


Lift the pressure balance plate (Item 1) [Figure 30-40-20] from the charge pump.

HYDROSTATIC PUMP (CONT'D)

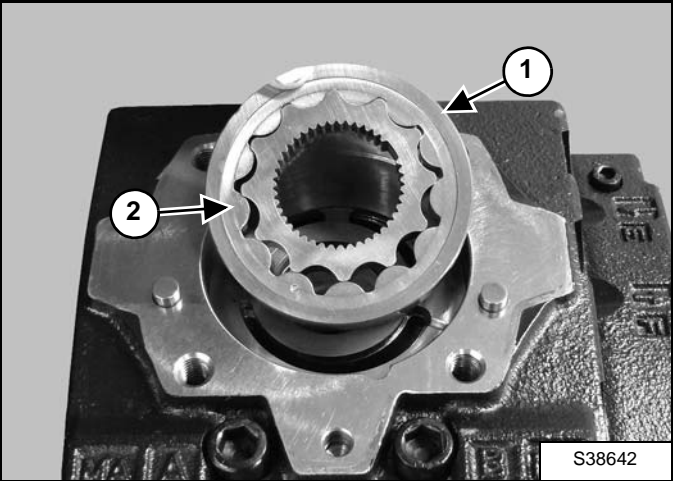
Charge Pump Disassembly (Cont'd)

Figure 30-40-21



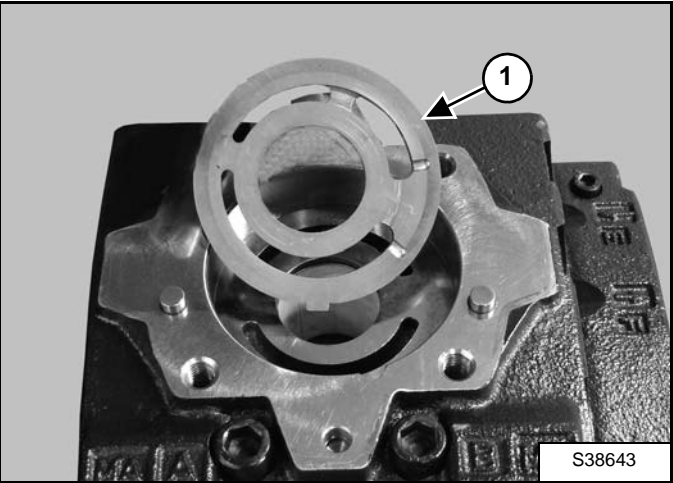
Remove the coupler shaft (Item 1) [Figure 30-40-21].

Figure 30-40-22



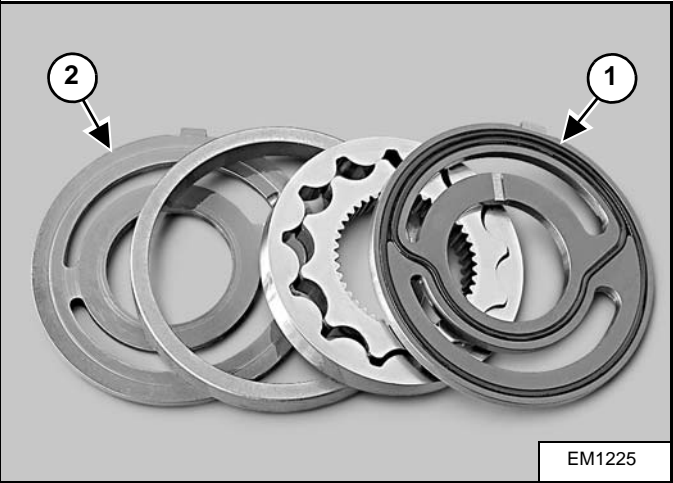
Remove the gearset (Item 1) and ring (Item 2) [Figure 30-40-22] from the pump.

Figure 30-40-23



Remove the valve plate (Item 1) [Figure 30-40-23].

Figure 30-40-24



Remove the seal from the pressure balance plate (Item 1) and the valve plate (Item 2) [Figure 30-40-24].