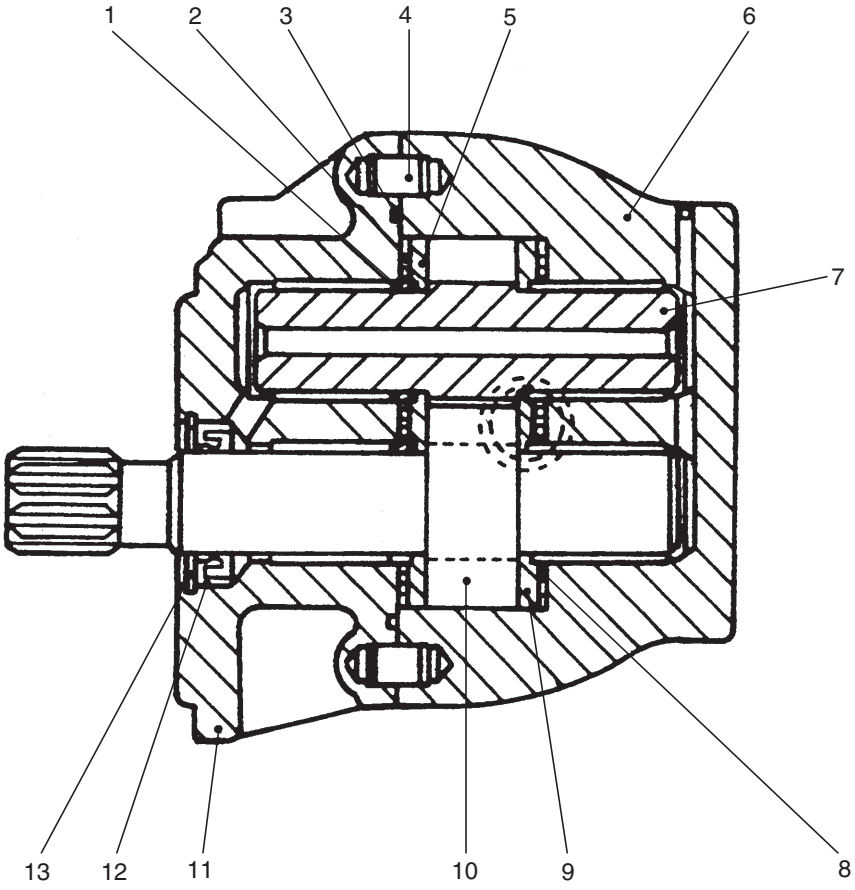
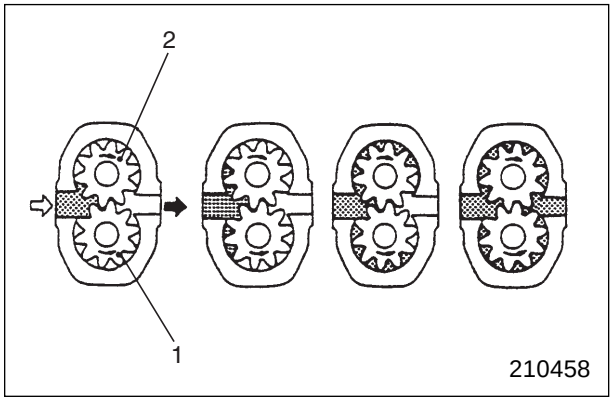
Gear Pump



1. Steel ring
2. Isolation plate B, Back-up ring, O-ring, Retainer
3. O-ring
4. Dowel pin
5. Pressure plate
6. Body
7. Driven gear
8. Isolation plate A, Back-up ring, O-ring, Retainer
9. Pressure plate
10. Drive gear
11. Cover
12. Oil seal
13. Snap ring

Operation

The pump is a single section external gear type pump. It consists essentially of two gears, drive gear 1 and driven gear 2 closely fitted inside the body. As the gears rotate and come out of mesh, they trap inlet oil between the gear teeth and the body. The trapped oil is carried around to the outlet. As the gears mesh again, they form a seal which prevents the oil from backing up to the inlet. The oil is forced out at the outlet and sent through the system.



Pressure loading mechanism

This pump features pressure-loading design of the pressure plates. During operation, a small amount of oil pressure is fed under the pressure plates, pressing them against the gears and keeping the end clearance (between the pressure plates and the gears) at the desired fluid-film thickness to provide high volumetric efficiency.