

KAWASAKI HYDRAULIC STEERING GEAR SERVICE NEWS

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SUBJECT :

**Recommendation for Replacement of
LVP017 Hydraulic Pump Complete Assembly**

1. Type of hydraulic pumps for steering gear

Our company offers two types of hydraulic pumps. LV series is for large size steering gear and LVP017 is for small size steering gear. Figure 1 and figure 2 show the section view of each pump.

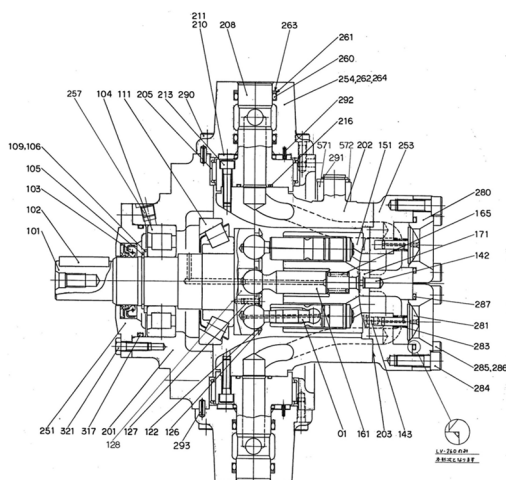


Figure 1: LV Series

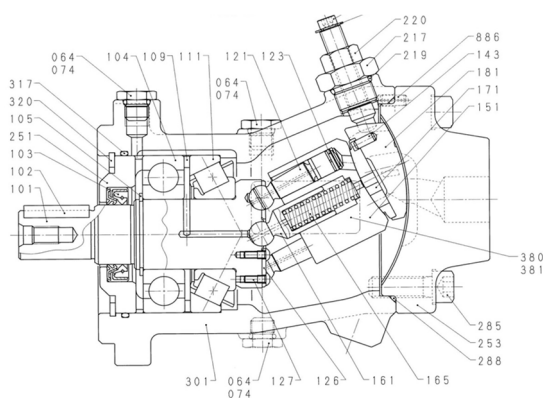


Figure 2: LVP017

2. Difference in oil seal replacement procedures

As the hydraulic pump operates over a long period, the area of the drive shaft that comes into contact with the oil seal lip becomes worn, which can lead to oil leakage. Therefore, when

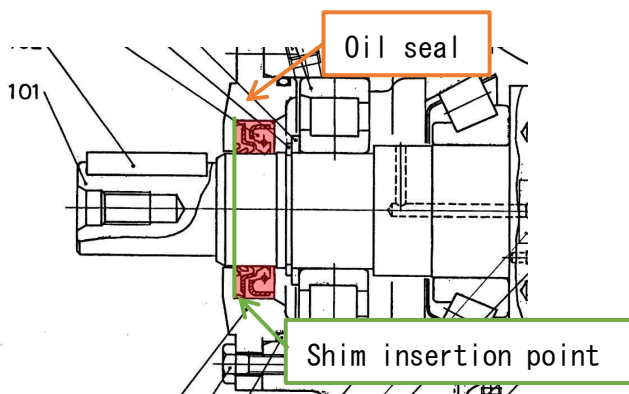


Figure 3: LV Series

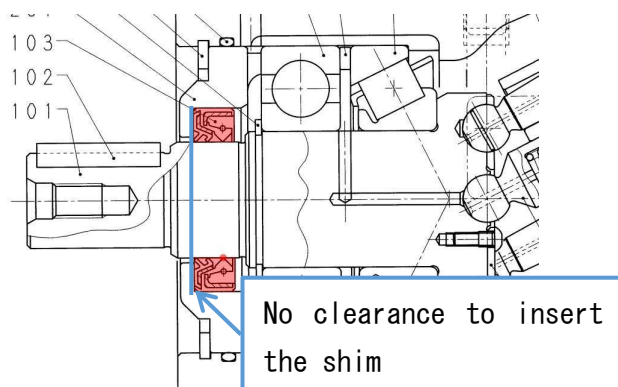


Figure 4: LVP017

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overhauling the LV series, the oil seal is replaced and, at the same time, a shim is inserted at the location indicated by the green line in Figure 3 to shift the contact position between the oil seal and the drive shaft. Due to the internal dimensions of the pump, this procedure can only be performed once. On the other hand, since there is no space to insert a shim in the LVP017, it is not possible to shift the position of the oil seal (see figure 4).

3. Problems caused by not being able to move the oil seal position

If the oil seal is replaced without being able to shift its position, the new oil seal will come into contact with the worn area of the shaft. As a result, even after performing an overhaul, there remains a significant risk of oil leakage.

4. our recommendations for overhauling the LVP017 hydraulic pump

For the reasons stated above, we recommend replacing the complete LVP017 assembly when overhauling the small size steering gear.

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