

This user guide provides guidance on how to determine whether the parts of the APP5.1-10.2 are worn and should be replaced.

**Seal retaining ring:**

The seal retaining ring is not a wear part.

**Swash plate:**

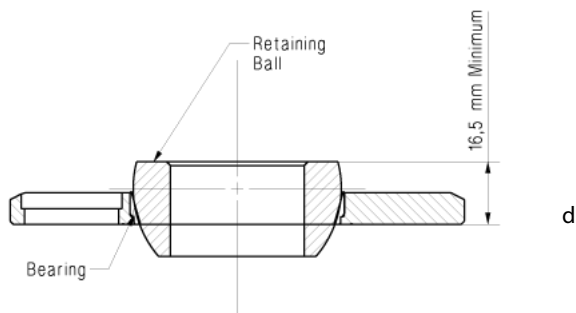
The swash plate is OK if the surface is smooth and no wear is visible and no scratches or grooves are felt. If not, change the swash plate according to instruction 521B0740.

**Retaining Plate:**

Slight wear felt on the sliding surface is acceptable (see picture). If the wear is worse, change the retaining plate according to instructions 521B0740. There must not be any level difference on the surface of the ring. The retainer ring must be absolute straight and not bend.



The bearing in the retaining plate is worn if the distance (d) is below 16.5 mm (0.65 inches). This corresponds to a wear of 1 mm (0.04 inches).



**Retaining ball:**

The retaining ball is OK if the sliding surface is smooth and no wear is visible and no scratches are felt. If the wear is worse, change the retaining ball according to instructions 521B0740.

**Valve Plate:**

Slight wear felt on the sliding surface is acceptable.

If mechanical and volumetric efficiencies are acceptable, the valve plate is OK.

If mechanical and volumetric efficiencies are not acceptable, change the valve plate according to instruction 521B0740.

**Port Plate:**

Slight wear felt on the sliding surface is acceptable.

If mechanical and volumetric efficiencies are acceptable, the port plate is OK.

If mechanical and volumetric efficiencies are not acceptable, change the valve plate according to instruction 521B0740.

**Bearing surface inside pump housing:**

The bearing is not a wear part.

The bearing is OK if the sliding surface is free of hard particles.

If the surface is rough, the pump will still work. However, the energy consumption might increase.

**Outer surface of cylinder barrel:**

The surface is OK if the sliding surface is free of hard particles and no elements stick out from the surface.

If the surface is rough, the pump will still work. However, the energy consumption might increase.

**Piston bores:**

Piston bores are not a replaceable part.

The surface of the bores in the cylinder barrel is OK if the sliding surface is free of hard particles.

If the surface is rough or has scratches or grooves, the pump will still work. However, the flow output might drop.

**Pistons:**

The pistons are the heart of the pump regarding service.

**If the pistons break down, the pump will suffer a breakdown.**

In case of doubt - the pistons must be replaced.

The pictures below is ment as a guideline for evaluating the wear of the sliding surface.

Picture 1:



Cavitation of the piston shoes.  
New inspection is required in 3000-4000 hours.

Picture 2:



Cavitation of the piston shoes.  
All pistons must be replaced within the next 500-1000 hours.

Picture 3:



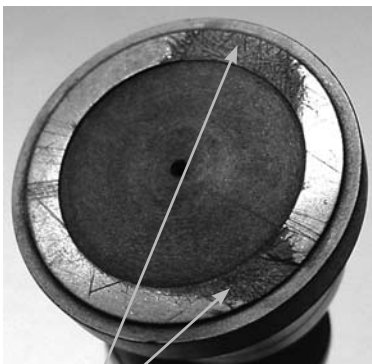
Cavitation of the piston shoes.  
All pistons must be replaced within the next 100-200 hours.

Picture 4:



Cavitation of the piston shoes.  
All pistons must be replaced immediately.

Picture 5:



Abrasive wear of the piston shoes.  
All pistons must be replaced immediately.