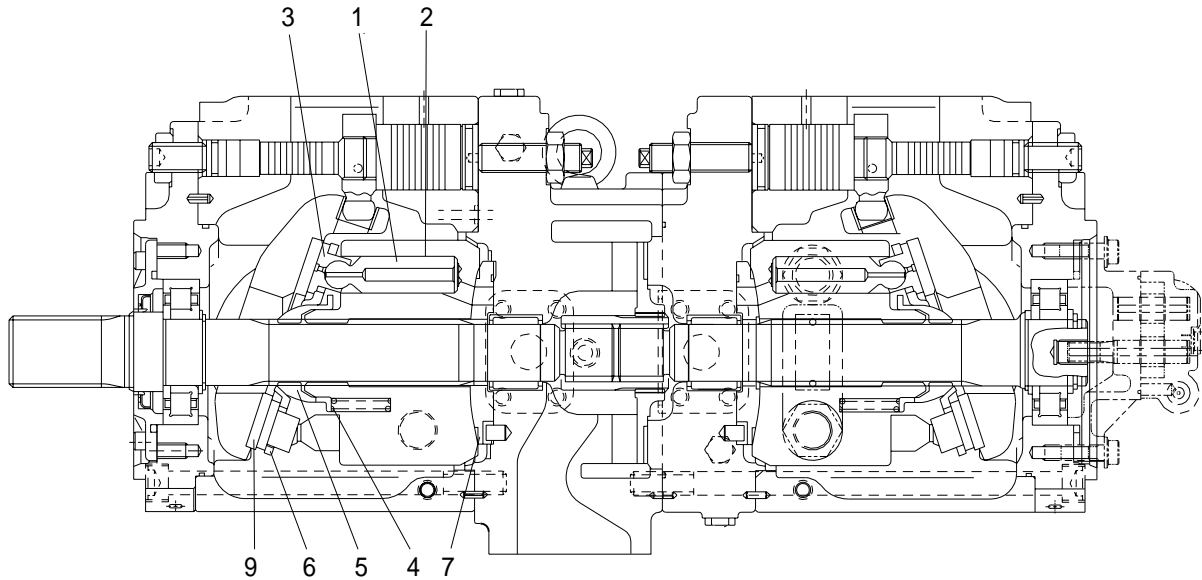
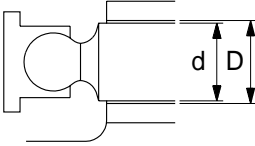
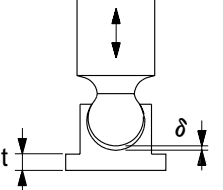
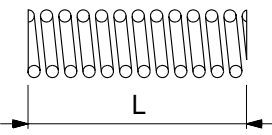
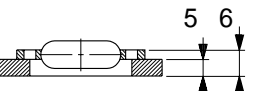


GROUP 2 MAJOR COMPONENT

1. MAIN PUMP

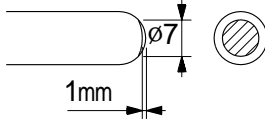


Part name & inspection item		Standard dimension	Recommended replacement value	Countermeasures
Clearance between piston(1) & cylinder bore(2) (D-d)		0.038	0.078	Replace piston or cylinder
Play between piston(1) & shoe caulking section(3) (δ)		0-0.1	0.35	Replace assembly of piston & shoe
Thickness of shoe (t)		5.4	5.0	
Free height of cylinder spring(4) (L)		40.9	40.1	Replace cylinder spring
Combined height of set plate(6) & retainer (5) (6-5)		13.5	12.5	Replace retainer or set plate
Surface roughness for valve plate(sliding face)(7,8), swash plate (shoe plate area)(9), & cylinder(2)(sliding face)	Surface roughness necessary to be corrected	3z		Lapping
	Standard surface roughness (corrected value)	0.4z or lower		

2. MAIN CONTROL VALVE

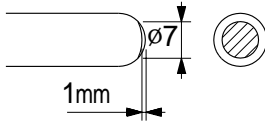
Part name	Inspection item	Remedy
Casing	<ul style="list-style-type: none"> · Scratch, rust and corrosion 	<ul style="list-style-type: none"> · Replace parts that have damage on the following areas: <ul style="list-style-type: none"> - Sliding surface between casing hole and spool, particularly the land area. - Seal pocket section into which spool enters. - Sealing area to which O-ring contact. - Sealing area of main, travel and port relief valves. - Other areas which may be deemed to mar normal functions.
Spool	<ul style="list-style-type: none"> · Scratch, binding, rust and corrosion · O-ring seals on both ends · Insert spool into casing hole, rotate and stroke it. 	<ul style="list-style-type: none"> · Replace a spool with a scratch that may be caught by your nail (particularly on an area in contact with seals). · Replace such a spool having a scratch on its sliding surface. · Correct or replace such a spool that may damage O-rings or that does not operate smoothly.
Poppet	<ul style="list-style-type: none"> · Damage of poppet and spring · Insert poppet into casing and function it. 	<ul style="list-style-type: none"> · Correct or replace such a poppet that gives incomplete sealing effect. · Poppet is normal if it functions lightly without binding.
Spring and associated parts	<ul style="list-style-type: none"> · Inspect that spring, spring seat, plugs and covers are not rusted, corroded, deformed and broken. 	<ul style="list-style-type: none"> · Replace those showing excessive damage.
Spool seal and related areas	<ul style="list-style-type: none"> · Oil leakage to outside · Rusting, corrosion and deformation of seal plate 	<ul style="list-style-type: none"> · Correct or replace. · Correct or replace.
Relief valve	<ul style="list-style-type: none"> · External rusting and damage · Contact surface of valve seat · Contact surface of poppet · Fault on springs · O-rings, backup rings and seals 	<ul style="list-style-type: none"> · Replace. · Replace one that is damaged. · Replace one that is damaged. · Replace. · Replace all as a rule.

3. RCV LEVER

Maintenance check item	Criteria	Remark
Leakage	The valve is to be replaced when the leakage becomes more than 1000 ^{cc} /m at neutral handle position, or more than 2000 ^{cc} /m during operation.	Conditions : Primary pressure : 30kgf/cm ² Oil viscosity : 23cSt
Spool	This is to be replaced when the sliding surface has worn more than 10 _{μm} , compared with the non-sliding surface.	The leakage at the left condition is estimated to be nearly equal to the above leakage.
Push rod	 <p>This is to be replaced when the top end has worn more than 1mm.</p>	
Play at operating section	The pin, shaft, and joint of the operating section are to be replaced when their plays become more than 2mm due to wears or so on.	When a play is due to looseness of a tightened section, adjust it.
Operation stability	When abnormal noises, hunting, primary pressure drop, etc. are generated during operation, and these cannot be remedied, referring to section 6. Troubleshooting, replace the related parts.	

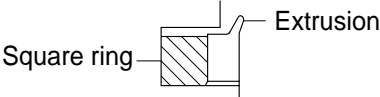
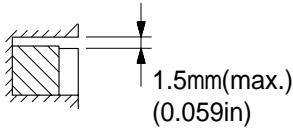
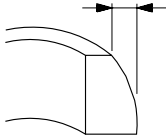
- Notes
1. It is desirable to replace seal materials, such as O-rings, every disassembling. However, they may be reused, after being confirmed to be free of damage.
 2. When loosening the hexagon socket head cap screw(125), replace the seal washers(121) without fail.

4. RCV PEDAL

Maintenance check item	Criteria	Remark
Leakage	The valve is to be replaced when the leakage effect to the system. For example, the primary pressure drop.	Conditions : Primary pressure : 30kgf/cm ² Oil viscosity : 23cSt
Spool	This is to be replaced when the sliding surface has worn more than 10 μ m, compared with the non-sliding surface.	The leakage at the left condition is estimated to be nearly equal to the above leakage.
Push rod	 <p>This is to be replaced when the top end has worn more than 1mm.</p>	
Play at operating section	The pin, shaft, and joint of the operating section are to be replaced when their plays become more than 2mm due to wears or so on.	When a play is due to looseness of a tightened section, adjust it.
Operation stability	When abnormal noises, hunting, primary pressure drop, etc. are generated during operation, and these cannot be remedied, referring to section 6 troubleshooting, replace the related parts.	

Notes 1. It is desirable to replace seal materials, such as O-rings, every disassembling. However, they may be reused, after being confirmed to be free of damage.

5. TURNING JOINT

Body, Stem	Sliding surface with sealing sections.	Plating worn or peeled due to seizure or contamination.	Replace
	Sliding surface between body and stem other than sealing section.	· Worn abnormality or damaged more than 0.1mm (0.0039in) in depth due to seizure contamination.	Replace
		· Damaged more than 0.1mm(0.0039in) in depth.	Smooth with oilstone.
	Sliding surface with thrust plate.	· Worn more than 0.5mm(0.02in) or abnormality.	Replace
		· Worn less than 0.5mm(0.02in).	Smooth
		· Damage due to seizure or contamination remediable within wear limit (0.5mm)(0.02in).	Smooth
Cover	Sliding surface with thrust plate.	· Worn more than 0.5mm (0.02in) or abnormality.	Replace
		· Worn less than 0.5mm (0.02in).	Smooth
		· Damage due to seizure or contamination remediable within wear limit (0.5mm)(0.02in).	
Seal set	-	<ul style="list-style-type: none"> · Extruded excessively from seal groove square ring. 	Replace
	-	<ul style="list-style-type: none"> · Slipper ring 1.5mm(0.059in) narrower than seal groove, or narrower than back ring. 	Replace
	-	<ul style="list-style-type: none"> · Worn more than 0.5mm(0.02in) ~ 1.5mm(MAX.) (0.059in) 	Replace

6. CYLINDER

Part name	Inspecting section	Inspection item	Remedy
Piston rod	· Neck of rod pin	· Presence of crack	· Replace
	· Weld on rod hub	· Presence of crack	· Replace
	· Stepped part to which piston is attached.	· Presence of crack	· Replace
	· Threads	· Presence of crack	· Recondition or replace
	· Plated surface	· Plating is not worn off to base metal	· Replace or replate
		· Rust is not present on plating	· Replace or replate
· Scratches are not present		· Recondition, replate or replace	
· Rod	· Wear of outer diameter	· Recondition, replate or replace	
Cylinder tube	· Bushing at mounting part	· Wear of inner diameter	· Replace
	· Weld on bottom	· Presence of crack	· Replace
	· Weld on head	· Presence of crack	· Replace
	· Weld on hub	· Presence of crack	· Replace
	· Tube interior	· Presence of faults	· Replace if oil leak is seen
	· Bushing at mounting part	· Wear on inner surface	· Replace
Cylinder head	· Bushing	· Flaw on inner surface	· Replace if flaw is deeper than coating