2. TECHNICAL DATA

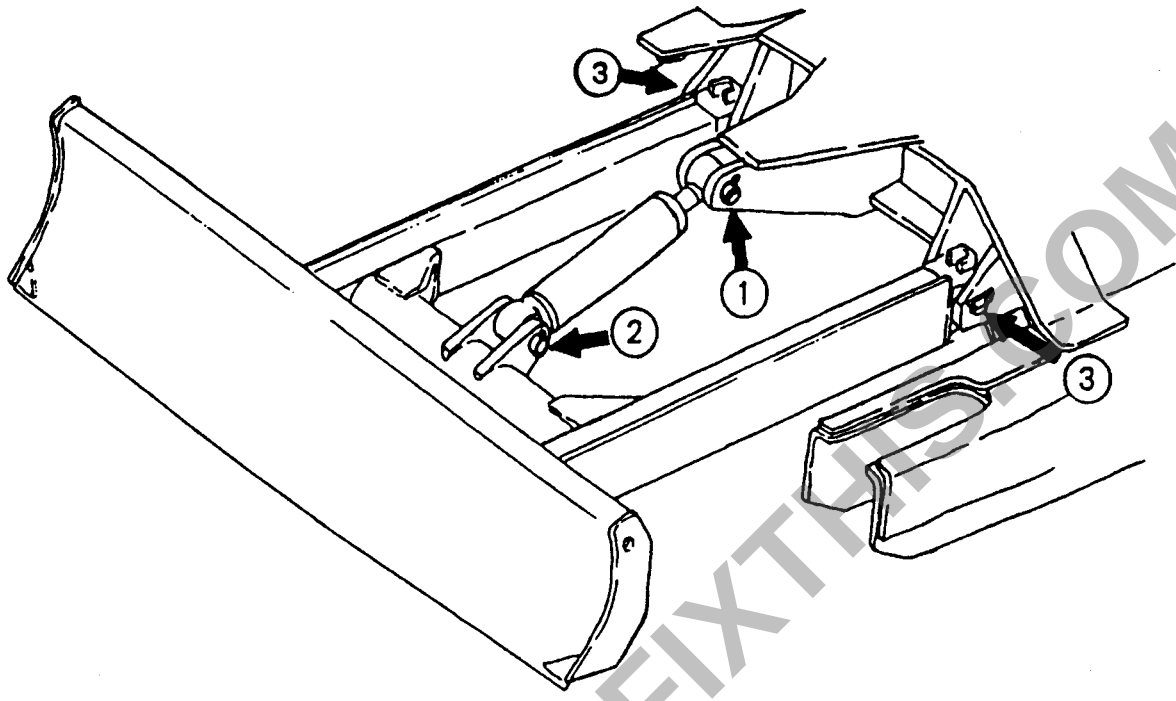
Item			Unit	B22-2	B22-2A
Undercarriage					
	Number of shoe slide plates (One side)		pcs.	2	
	Track roller (Lower roller)	Quantity (One side)	pcs.	3	
		Bearing		Ball bearing	
		Sealing		Seal QLF	
	Idler	Quantity (One side)	pcs.	1	
		Bearing		Ball bearing	

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3-6-2 Dozer Moving Device



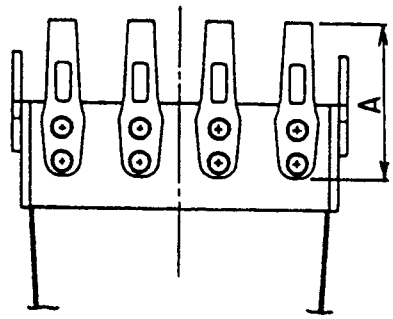
(Unit : mm)

No.	Applicable model : B22-2/B22-2A	Standard	Wear limit	
	Measuring item		Pin	Bore of bush or hole
1	Dozer cylinder, rod	ϕ38	−0.5	+0.5
2	Dozer cylinder, bottom	ϕ38		
3	Dozer fulcrum	ϕ38		

[Note] *Allowable clearance between pin and bore of bush or hole is 1.0mm.*

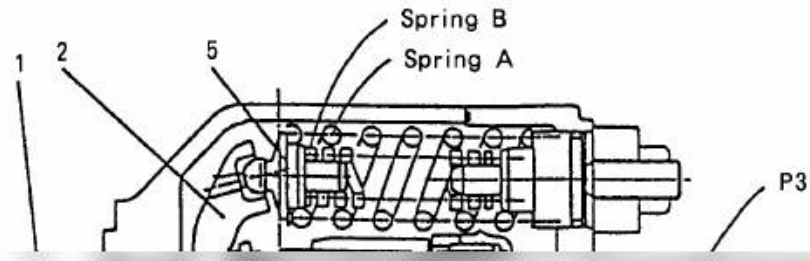
3-6-3 Bucket Teeth

(Unit : mm)

Measuring position	Standard	Wear limit
	195	145

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2) Control Functions



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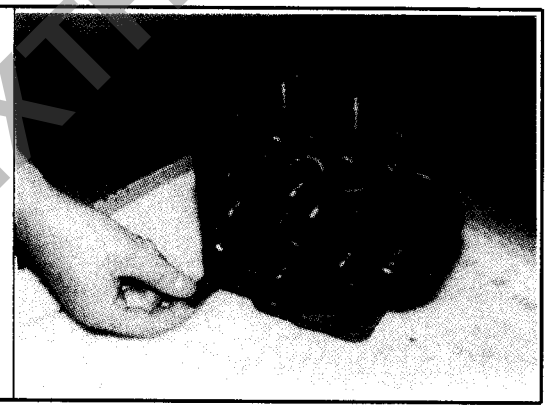
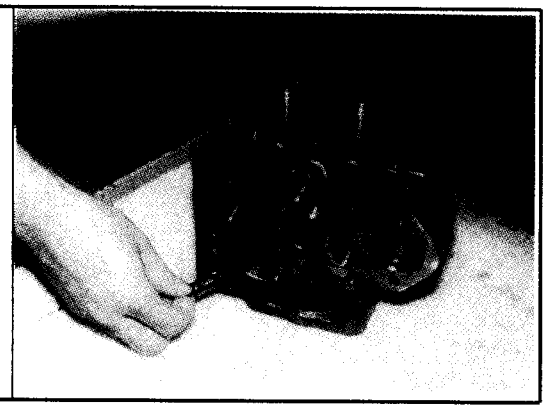
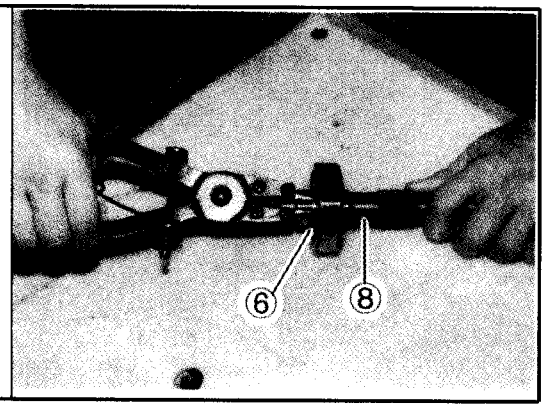
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Procedure	Photo
(5) While keeping the cover ㉜ level, remove it. Remove the cover ㉜ by it straight up. If the cover ㉜ is not easily removed, tap lightly with a plastic hammer.	

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Procedure	Photo
(29) Unscrew the nut ⑯ and remove the adjust screw ⑮. ***Notes :*** *1) Since the pressure is set up, remove only when the disassembly is necessary.* *2) Be careful to the shim ⑭.*	
(30) Remove the spring ⑬.	
(31) Remove the spool ⑫.	
(32) Remove the circlip ⑥ from the shaft ⑧.	

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6) Reassembly (B22-2A)

Procedure	Photo
1. Assembly of main pump. (1) Assemble the hunger onto the housing.	

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(2) Counter-Balance Valve Functions

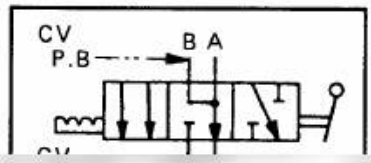
Trouble	Cause	Measure
1. Motor does not turn or low rev. speed.	1. Plunger cannot be moved. 1) No supply of pressurized oil	Check for the breakage of the piping.
	2) Foreign substance caught between plunger and base plate.	Remove all foreign substances completely, repair the damage, clean and reassemble. If the flaw is deep and there's large leakage, replace the part.
	3) Orifice clogged.	Clean with cleaning oil and reassemble.
2. Motor does not stop or is slow to stop.	1. Plunger doesn't return. 1) Foreign substance caught between plunger and base plate.	Remove all foreign substances completely, repair the damage, clean and reassemble. If the flaw is deep and there's large leakage, replace the part.
	2) Spring not assembled.	Assemble the spring at the correct position.
	3) Spring broken.	Replace the spring. Remove foreign substance completely, repair the damage, clean and reassemble.
	4) Orifice clogged.	Clean with cleaning oil and reassemble.
3. Large shocks on stopping travelling.	1. Plunger is slow to return. Spring seat not assembled.	Assemble the spring seat at the correct position.
4. Abnormal noise	1. Plunger does not return. 1) Foreign substance caught between plunger and base plate.	Remove foreign substance completely, repair the damage, clean and reassemble. If the flaw is deep and there's large leakage, replace the part.
	2) Spring broken.	Replace the spring. Remove foreign substance completely, repair the damage, clean and reassemble.
	3) Orifice clogged.	Clean with cleaning oil and reassemble.

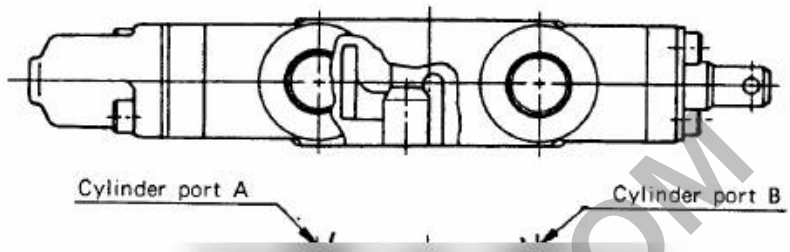
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5-10 PTO Selector Valve (for Merging with Hydraulic PTO)

1) Operation of PTO
Parallel circuit (with detent)





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4. Adjustment Procedures

1) To check the pressure of the system relief valve (for piston pump P1) of the control valve, extend or retract the arm cylinder to full stroke, hold the lever and read the gauge. Adjust the pressure if necessary.

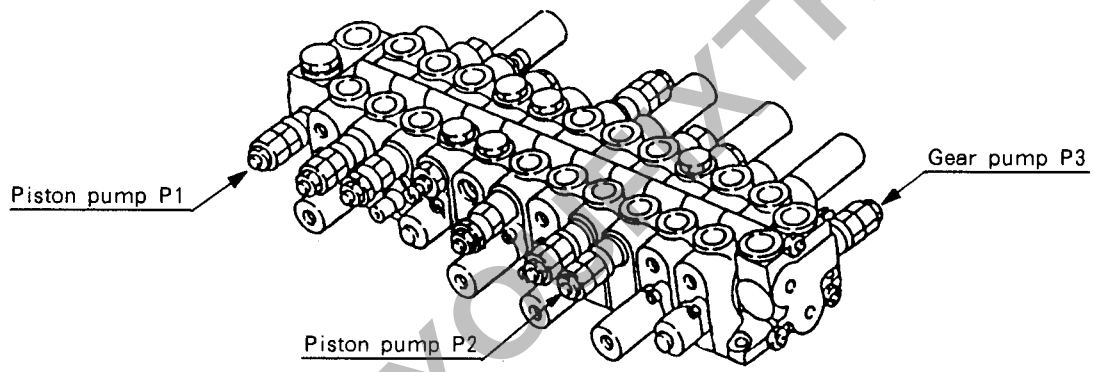
2) To check the pressure of the system relief valve (for piston pump P2), extend the bucket cylinder to full stroke, hold the lever and read the gauge. Adjust the pressure if necessary.

3) To check the pressure of the system relief valve (for gear pump), retract or extend the dozer cylinder to full stroke, hold the lever and read the gauge. Adjust the pressure if necessary.

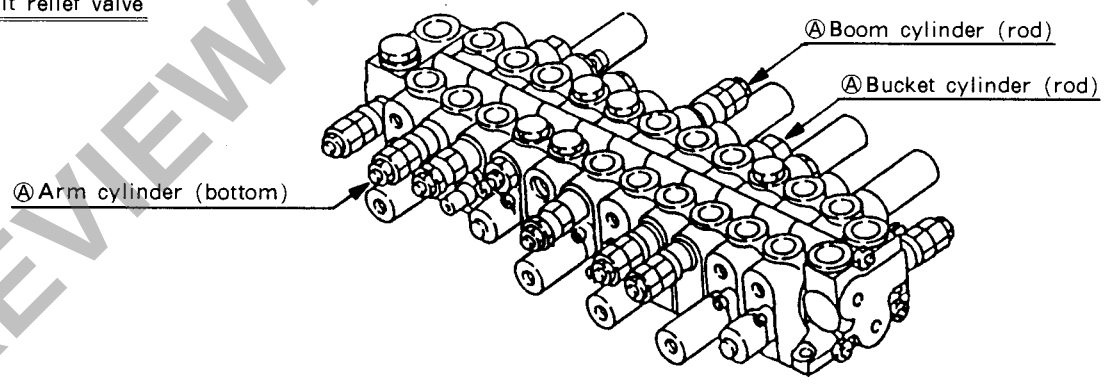
4) To adjust the circuit relief valve, extend or retract each cylinder to full stroke, hold the lever and read the gauge. When the pressure of the circuit relief valve is lower than the pressure of the system relief valve, it can be read from the gauge.

   Raise the pressure of the system relief valve and the circuit relief valve by turns, and lock the adjust screw when the specified pressure of the circuit relief valve is obtained. Then, lower the pressure of the system relief valve to the specified pressure and lock the adjust screw.

System relief valves



Circuit relief valve



5. Pressure change/one adjust screw turn

	Pressure	Adjust screw turn
System relief valve	180 kgf/cm²	1/1
Circuit relief valve	Ⓐ 180 kgf/cm² Ⓑ 160 kgf/cm²	1/1

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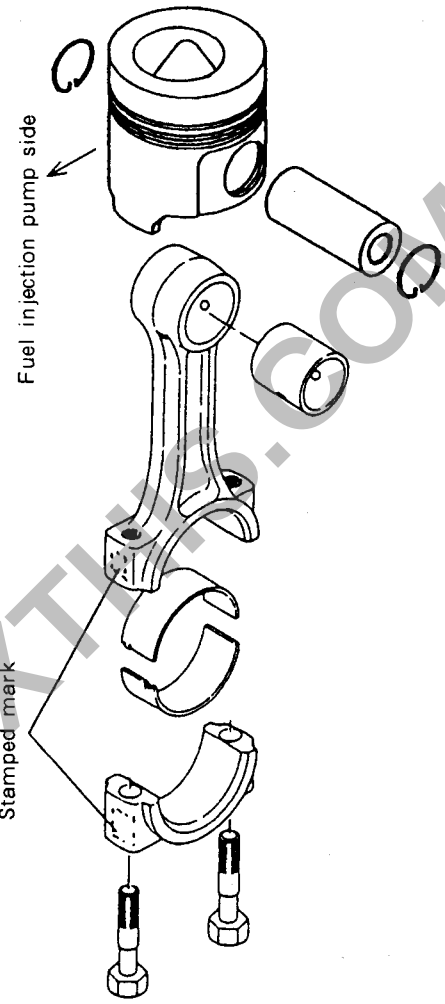
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4-4-3 Piston Pin Bushing

Excessive wear of the piston pin bushing may result in the damage to the piston pin or the piston itself. Therefore, carefully check the piston and bushing oil clearance. Calculate the clearance based on the measured values of the piston pin outside dia. and the bushing inside dia..

(mm)

	3TN75L		3TNE78A	
	Standard	Wear limit	Standard	Wear limit
Piston pin metal inside dia.	See separate service standards (P3-2-1~P3-2-2)			
Piston pin and bushing oil clearance				



4-4-4 Assembling the Pistons and the Connecting Rods

The piston and the connecting rod should be assembled so that the stamped side of the connecting rod large end faces the fuel injection pump side. The piston should be assembled so that, when viewed from the top, the combustion chamber recess come to the fuel injection pump side.

Note: *Be careful not to assemble the piston in the opposite direction.*

Note: *Because the stamp of the dimensional mark of the piston is not always stamped at the fixed position, assemble the piston so that, when viewed from the top, the combustion chamber recess comes to the fuel injection pump side.*

4-4-5 Tightening the Rod Bolts

After coating the rod bolt threads and bearing face with lube oil, tighten the bolts to the specified torque. Refer to section "Engine" in No.3 Service Standard in the list of tightening torques for important parts.

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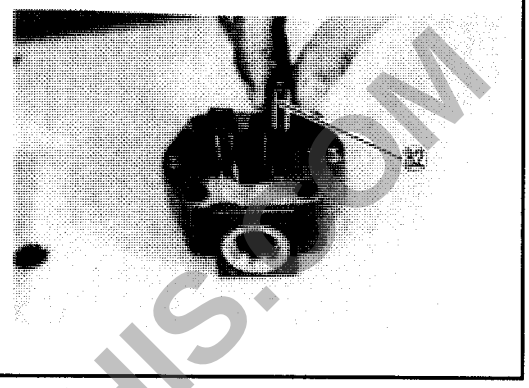
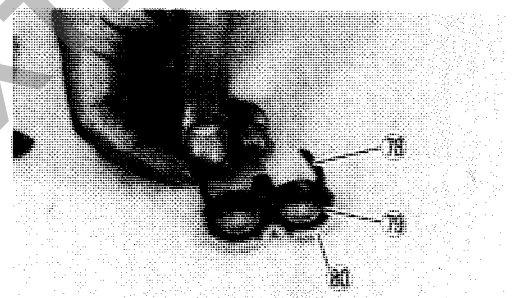
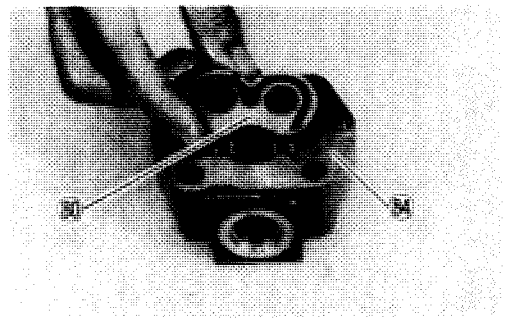
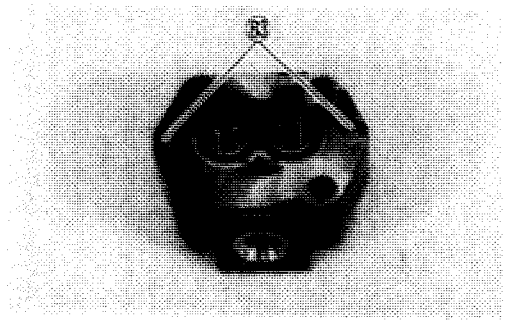
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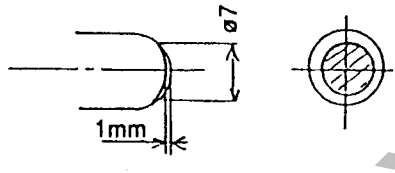
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Procedure	Photo
(43) Insert the idle gear ㉜ into the housing.	
(44) Assemble the square ring ㊾ and backup ring ㊽ onto the side plate ㊿ in that order. ***Note:*** *Apply grease to the square ring ㊾ and back up ring ㊽ to prevent them from dropping off.*	
(45) Insert the assembled side plate ㊿ into the housing ㉞.	
(46) Insert the two parallel pins ㉝ into the housing ㉞.	

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3) Service Standard

Maintenance check item	Criterion	Remarks
Leakage	Replace the valve when the leakage becomes more than 1000 cc/min. at neutral handle position, or more than 2000 cc/min. during operation.	Conditions : Primary press. 30kgf/cm² Oil viscosity 23cSt
Spool	Replace the spool when the sliding surface has worn more than 10μm, compared with the non-sliding surface.	The leakage at the left condition is estimated to be nearly equal to the above leakage.
Push rod	 Replace the push rod when the top end has worn more than 1mm.	
Play at operating section	The pin, shaft, and joint of the operating section are to be replaced when their plays exceed 2mm due to wears, etc.	When a play is due to looseness of a tightened section, adjust it.
Operation stability	When abnormal noises, hunting, primary pressure drop, etc. are noted during operation, and these cannot be repaired, referring to 'Trouble-shooting' and replace the related parts.	

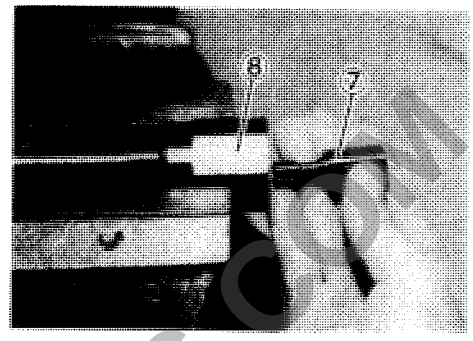
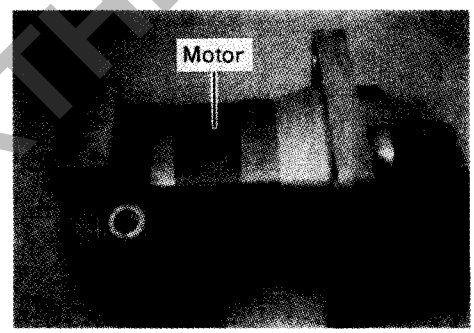
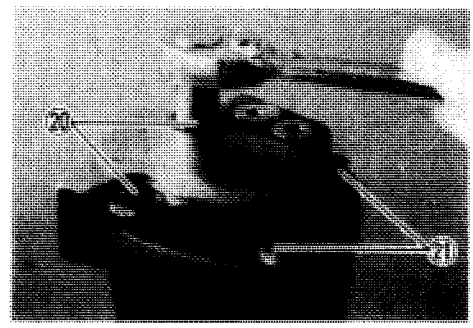
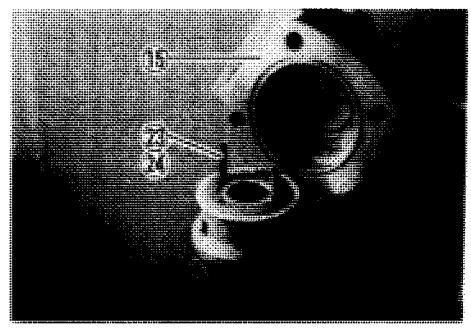
[Notes] :

(1) Replace O-rings and other seal materials after every disassembly. However ,these may be reused if being confirmed to be free of damage.

(2) When loosening the hexagon socket head cap screw (125), be sure to replace the seal washers (121).

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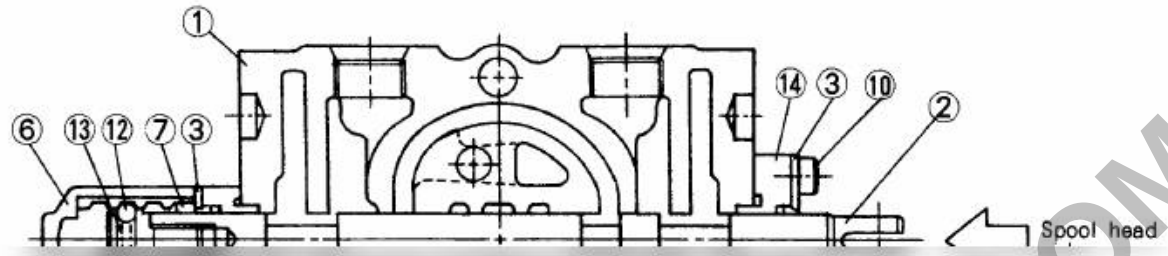
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Procedure	Photo
(5) Remove plunger ⑦ from cartridge ⑧.	
(6) Disassembly of the motor	
(7) Fix the flange on the vice with pinion gear ㊼ downward, then remove two hexagon head bolts ⑳ and ㉑.	
(8) Remove valve housing ⑮. ***Note:*** *Be careful not to lose spring ㉓ and pin ㉔.*	

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2) Disassembly and reassembly



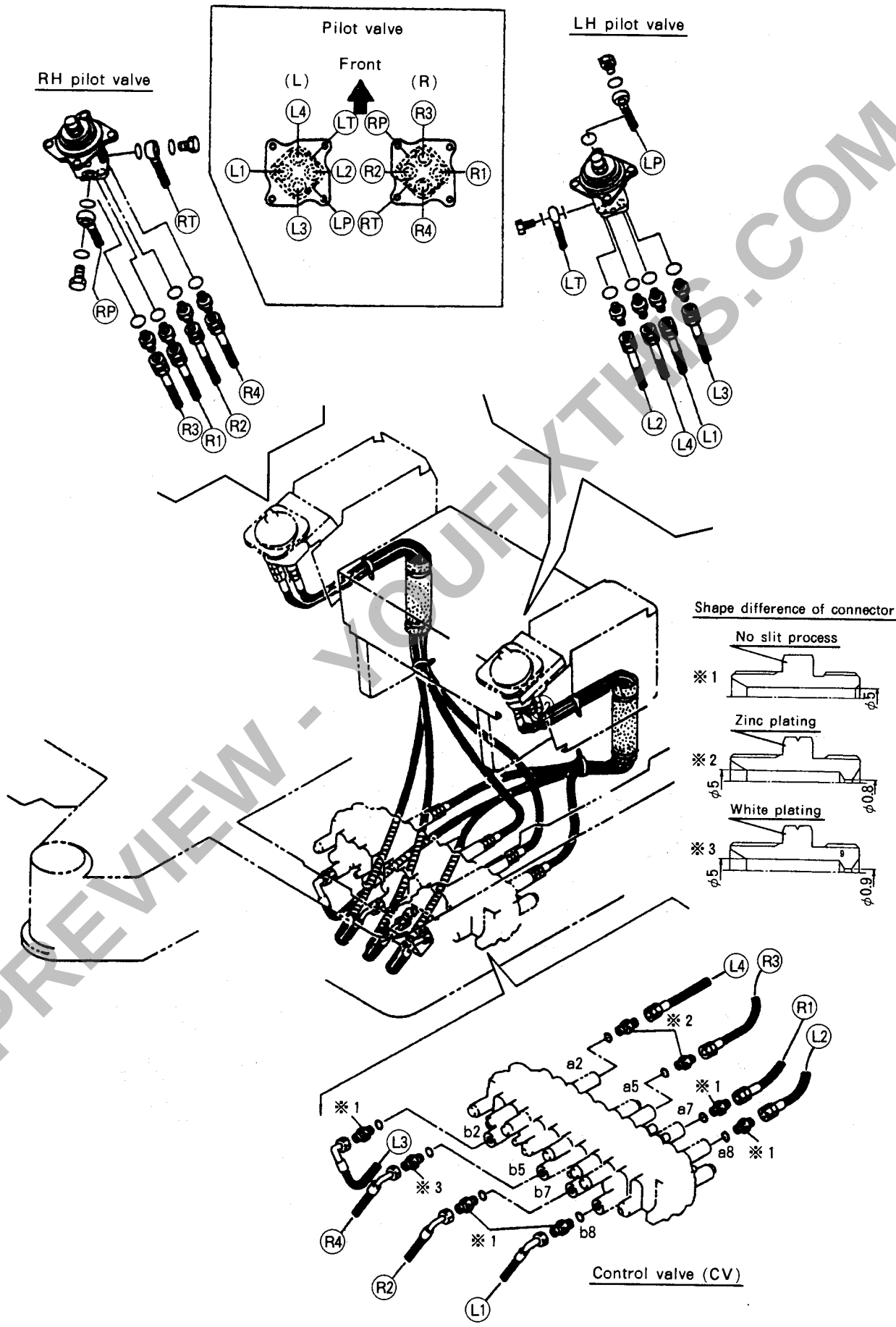
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6. ADJUSTMENT PROCEDURES FOR EACH EQUIPMENT

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