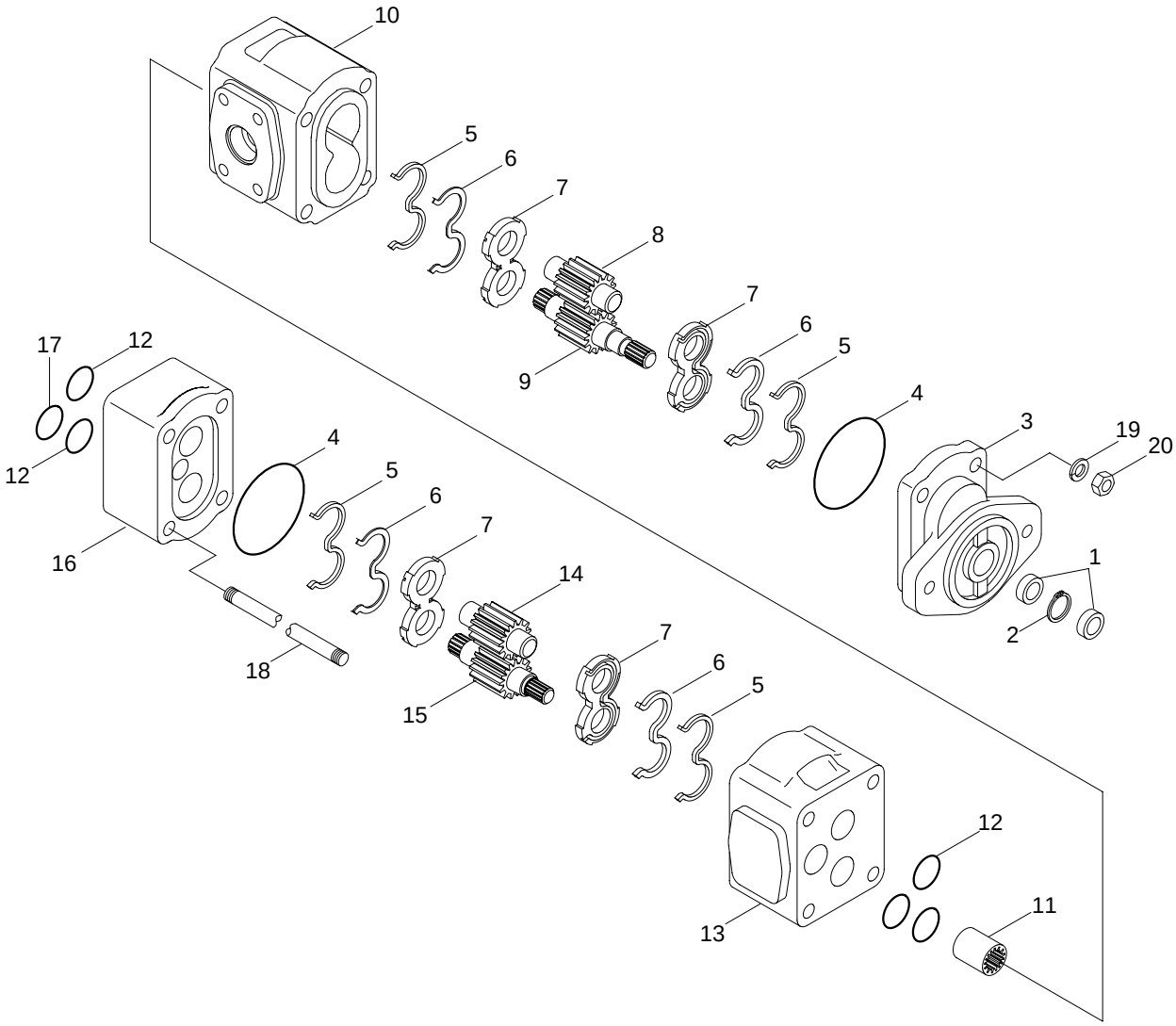
1. MAIN PUMP

1) STRUCTURE



1	Shaft seal	8	Driven gear	15	Drive shaft
2	Circlip	9	Drive gear	16	Cover
3	Flange	10	Front body	17	O-ring
4	O-ring	11	Splined coupling	18	Stud assy
5	Seal	12	O-ring	19	Serrated washer
6	Seal	13	Center body	20	Nut
7	Balance plate	14	Driven gear		

2) GENERAL INSTRUCTION

(1) Cleanliness

① Cleanliness is the primary means of assuring satisfactory hydraulic pump life. Components such as flanges and covers are best cleaned in soap and hot water, then air dried. Gears should be washed in solvent, air dried, and oiled immediately.

⚠ **Certain cleaning solvents are flammable. Do not allow sources of ignition in the area when using cleaning solvents.**

② Protect all exposed surfaces and open cavities from damage and foreign material.

※ **Gear journals and gear faces are super finished. Take care not to touch these surfaces after oil and solvent have been removed.**

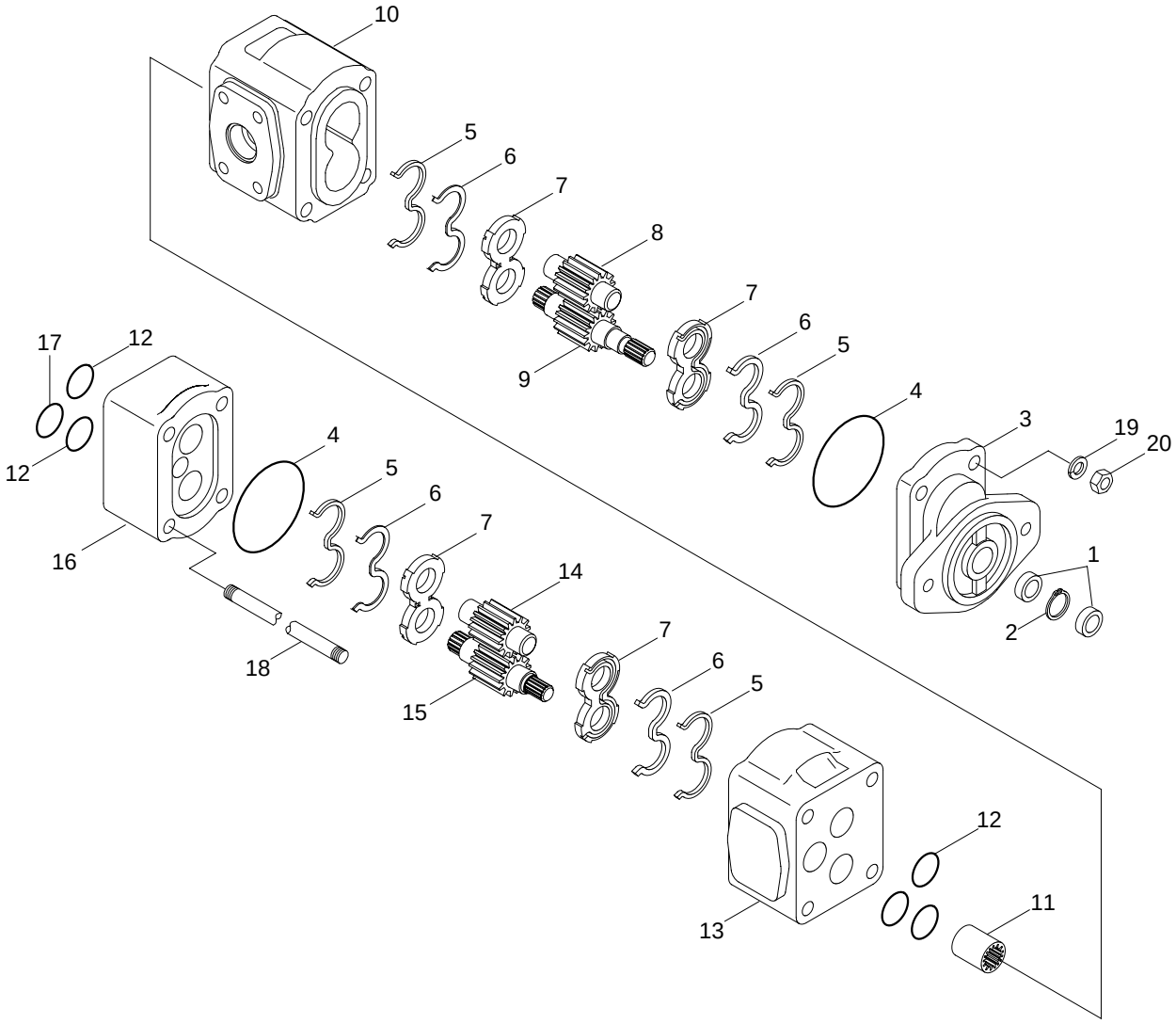
(2) Lubrication of moving parts

During assembly, all running surfaces(Bushing and spacer plate) must be lightly lubricated with a clean oil or aerosol lubricant.

(3) Tools required for assembly

① Torque wrench(0~20kgf · m, 0~150lbf · ft)
② Open end wrenches
③ Seal installation tools(Inner and outer)
④ Shaft bullet(Seal protector)
⑤ Installation plate

3) DISASSEMBLY



※ Prior to starting work ensure that the pump and the working area are thoroughly clean and free from sources of contamination.

(1) Mark end cover(16), center body(13), front body(10) and mounting flange(3) to ensure correct assembly.

(2) Remove the 4 bolts(18), serrated washers(19), nut(20) clamping the units together, separate the pumps by removing the rear unit from the location dowels in the center body - use a soft faced hammer.

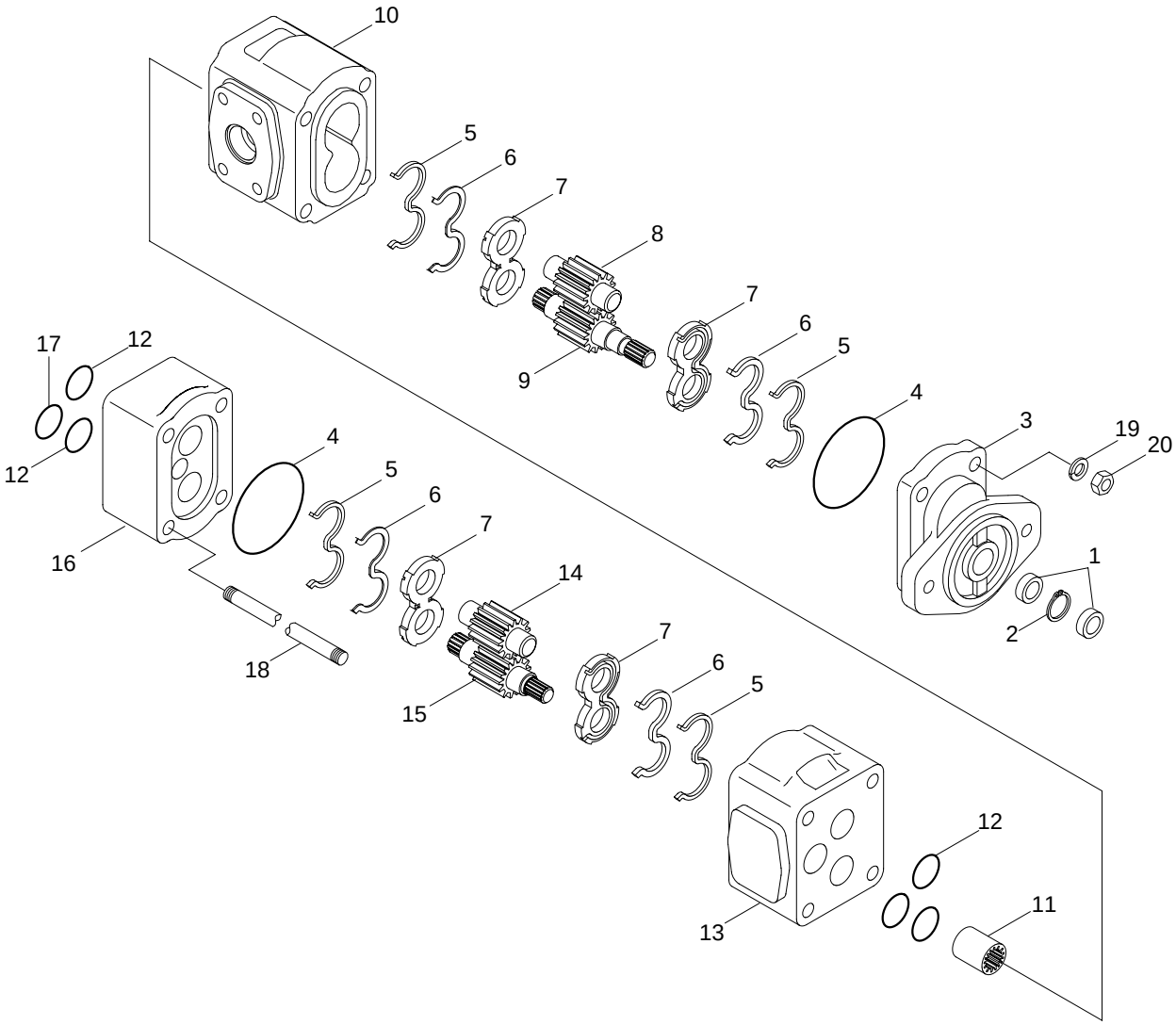
(3) Remove splined coupling(11) and discard O-ring(12) sealing the internal passages between the pump sections.

(4) Disassemble rear pump by removing the end cover(16) from the body(13), free cover front location spigot using a soft faced hammer.

(5) Remove drive shaft(15) from its bore by pushing it out from the connection hole in the rear face, this will also remove balance plate(7).

※ Note position of gear and balance plate for correct reassembly.

DISASSEMBLY



(6) Remove driven gear(14) and lower balance plate(7).

(7) Discard O-ring(4) from end cover, seal element(5) and seal energizer(6) from balance plates.

(8) Disassemble front pump by separating flange(3) from its location spigot in body(10) - use soft faced hammer.

(9) Remove shaft seal(1) from flange(3). Flanges have two shaft seals fitted back to back and the outer shaft seal must be removed first to gain access to retaining circlip(2).

(10) Remove circlip(2) and inner shaft seal(1) take care to ensure that the seal recess is not damaged as this could result in leakage.

(11) Grasp drive shaft(9) and remove it with balance plate(7), finally remove driven gear(8) and lower balance plate(7).

※ Note their positions for correct assembly.

(12) Remove and discard O-ring(4) in flange recess and seal element(5) and seal energizer(6) from balance plates.

(13) Clean off all loctite sealant from flange/ body and end cover/body interfaces.

4) INSPECTION AND REPAIR

(1) Assessment

Each components should be thoroughly cleaned, carefully examined and assessed for suitability re-use. Below is a guide for inspecting the various components.

(2) Body

① Inspect the body bore cut-in where both gears wipe into the body.

② The body can only be re-used if the **cut-in** is bright and polished in appearance and the depth does not exceed 0.15㎜(0.006").

③ The body should be replaced if the surface is scored, has a matt appearance or shows signs that the tip of the gears have dug in and torn away the surface material.

④ The body should be inspected to ensure that there is no superficial damage which may adversely effect performance or sealing. Pay particular attention to the port threads and body O-ring seal recesses.

(3) Mounting flange and end cover

① The inner surfaces should be inspected to ensure that there is no unusual wear or scoring in the regions where the body O-rings and backing rings contact, which result in external leakage.

② Check the shaft seal recess for scoring or damage that could result in oil leakage around the outer diameter of the shaft seal. Replacement shaft seals can be refitted with Loctite hydraulic sealant to overcome slight damage in this area.

(4) Balance plate

① The side faces which abut the gears should be perfectly flat showing no sign of scoring. Characteristically there are bright polished areas on this surface caused by loading against the gear side faces, which is often more pronounced on the low pressure side. The balance plate should be replaced if there is any general scoring or fine scoring with a matt appearance or tearing of the surface material. Often there is a witness where the tips of the opposing gears have wiped an overlap reassembling a half moon shape. There must be no noticeable wear step as it is critical that the balance plate side face is completely flat to the gear side face.

② The bearing liners are acceptable providing that they are not scored or show other damage. The general outside area of the balance plate should not show any prominent signs of wear.

(5) Gears

① The gear side faces should be examined for bruising or scoring. Often operation on contaminated fluid shows scoring between the root of the gear and the journal undercut, which leaves a wear step. If a wear step can be felt, coincidental with the root diameter, by drawing a sharp pointed tool across the surface from the undercut outwards towards the tip of the gear, then the gear is unserviceable.

② The gear teeth should then be carefully examined to ensure that there are no signs of bruising or pitting.

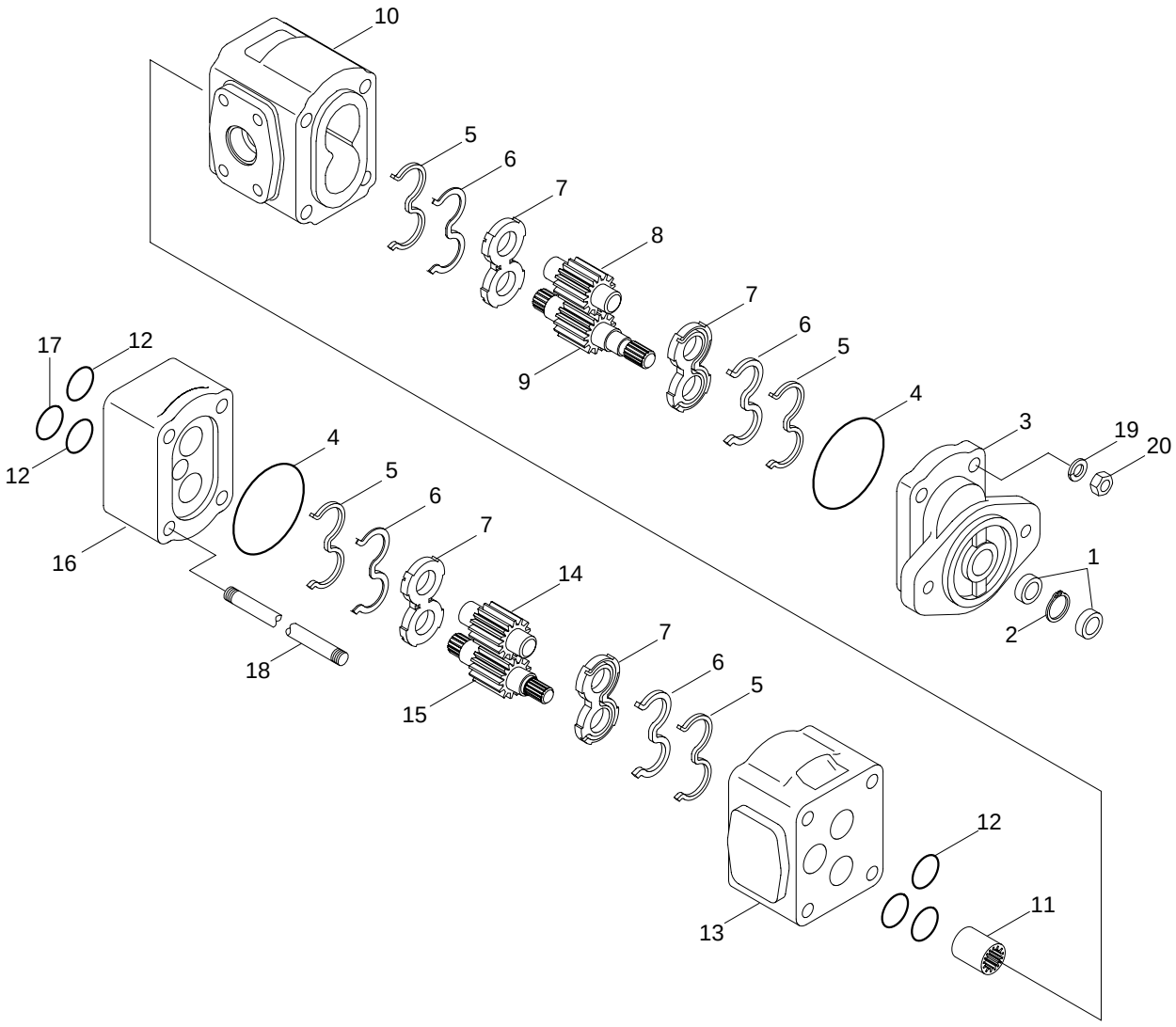
③ The journal bearing surfaces should be completely free from scoring or bruising. The surface should appear highly polished and smooth to touch.

④ Examine the area where the shaft seal lips run on the drive shaft, this shows up as a polished ring or rings. If a noticeable groove can be felt or there is scoring the shaft should be replaced.

⑤ Provided the drive shaft is not damaged from the drive-coupling and the gears have not been harmed as described above, then the gears can be re-used. If, however, the gears are damaged they must be replaced as a matched pair.

⑥ As a matter of good practice, when pumps have been disassembled, all the seals should be replaced. It is most important that only the genuine seals are used.

5) ASSEMBLY



※ Prior to assembly all parts must be perfectly clean and lubricated with clean hydraulic oil.

※ Renew all seals using clean hydraulic oil as a lubricant.

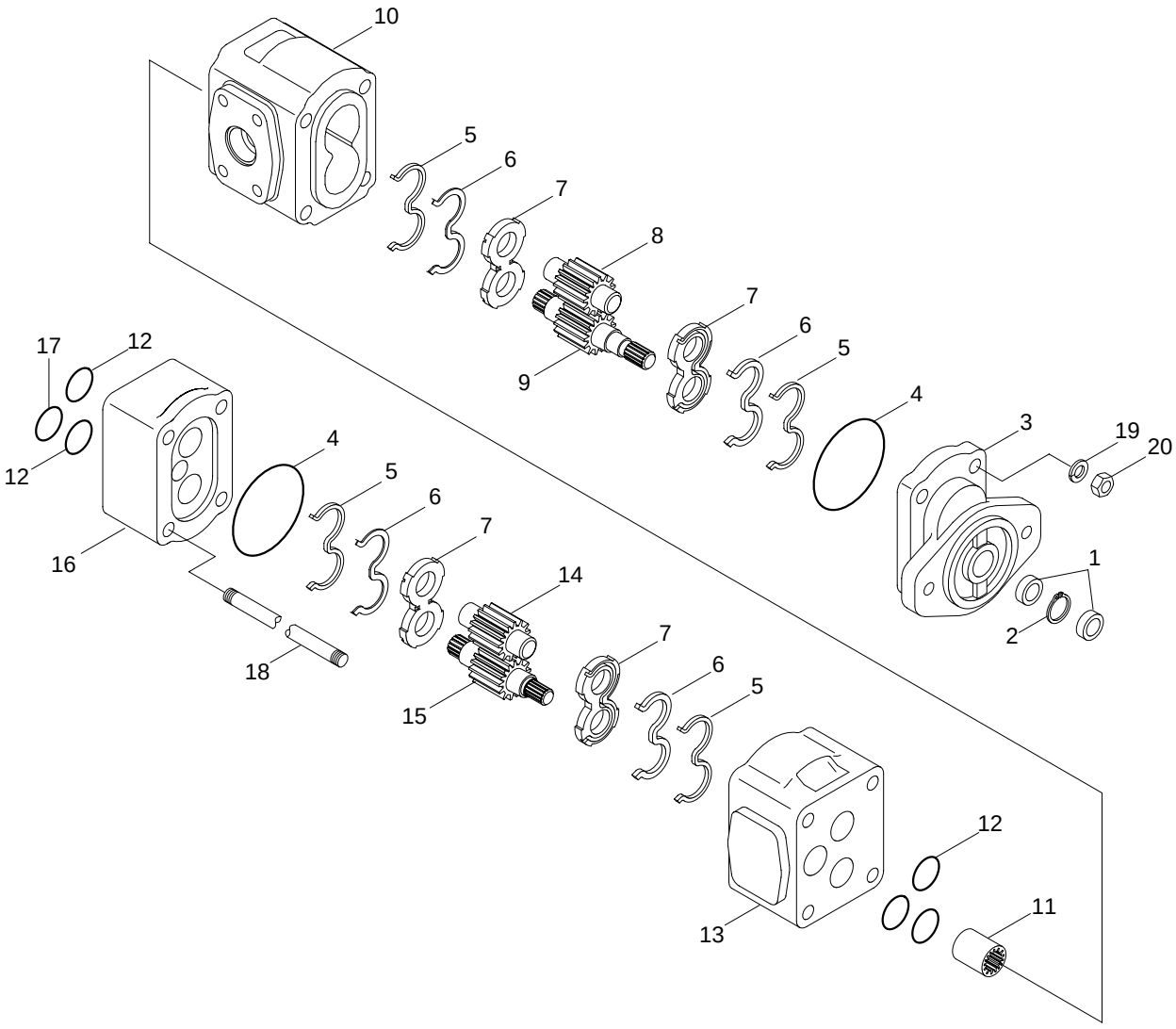
(1) Front pump

① Fit inner shaft seal(1) into the recess in the mounting flange, with the garter spring facing into the pump, refit circlip(2) into its groove.
Fit outer shaft seal with garter spring facing uppermost. Coat lips of seals with a high melting point grease.

※ If the seal recess has been scored, then seal outside diameter can be coated with loctite hydraulic sealant to prevent leakage.

② Stand pump body on its rear face, fit seal element(5) and seal energizer(6) to the groove in the balance plate. Carefully feed the balance plate into the body bores. Ensure that the seals remain in position and that the two small holes through the balance plate are to the low pressure side of the unit, i.e. side with large 4 bolt port pattern.

ASSEMBLY



③ Insert drive shaft(9) and driven gear(8) into their original bores.

④ Replace top balance plate with small holes to low pressure side of the unit, fit seal element(5) and seal energizer(6) to grooves in balance plate.

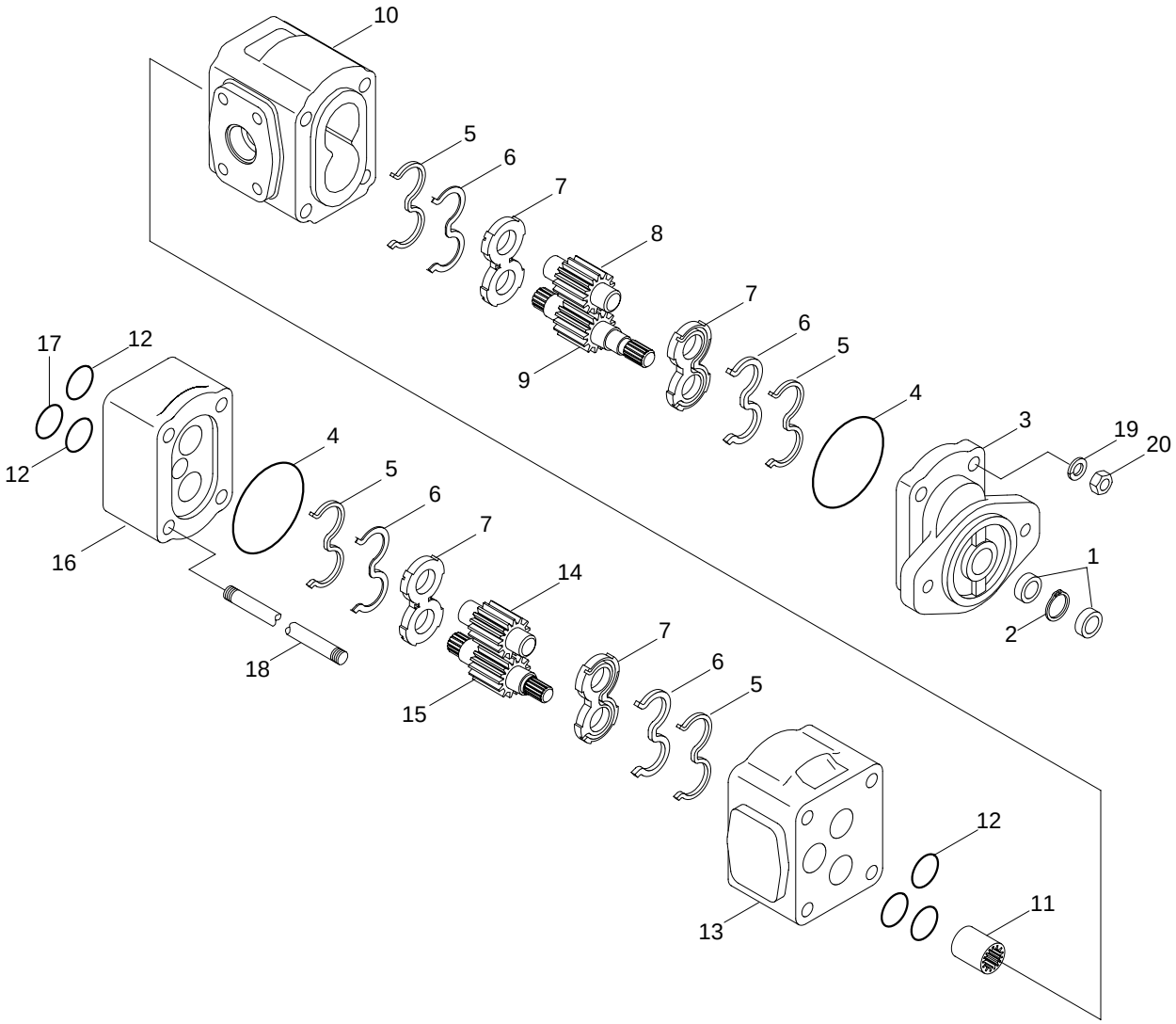
⑤ Fit O-ring(4) to groove in mounting flange and apply a small amount of loctite sealant to the body lower face, i.e. outboard of oval spigot. This sealant is to prevent moisture entering this area preventing corrosion.

⑥ Carefully feed mounting flange over the drive shaft, ensure flange is in its original position-4㎜ hole in rear face of flange must be to the low pressure side of the unit. Tap flange on to its location spigot with a soft faced hammer.

(2) Rear pump

① Support front pump on the mounting flange-not the drive shaft-fit O-rings(12) into the grooves around connection passages in the rear face, replace splined coupling(11).

② Fit rear pump body to front pump ensuring that it locates on the dowels and the through holes line up.



③ Fit seal element(5) and seal energizer(6) to grooves in balance plate(7) and carefully feed into body bores. Ensure seals remain in position and that the two small holes through the balance plate are to the low pressure side, i.e. the side without a port.

④ Fit drive gear(15) ensuring that it locates in the splined coupling(11), fit driven gear(14).

⑤ Replace upper balance plate in its original position, i.e. with 2 small holes to low pressure side, fit seal element(5) and seal energizer(6) to groove in plate.

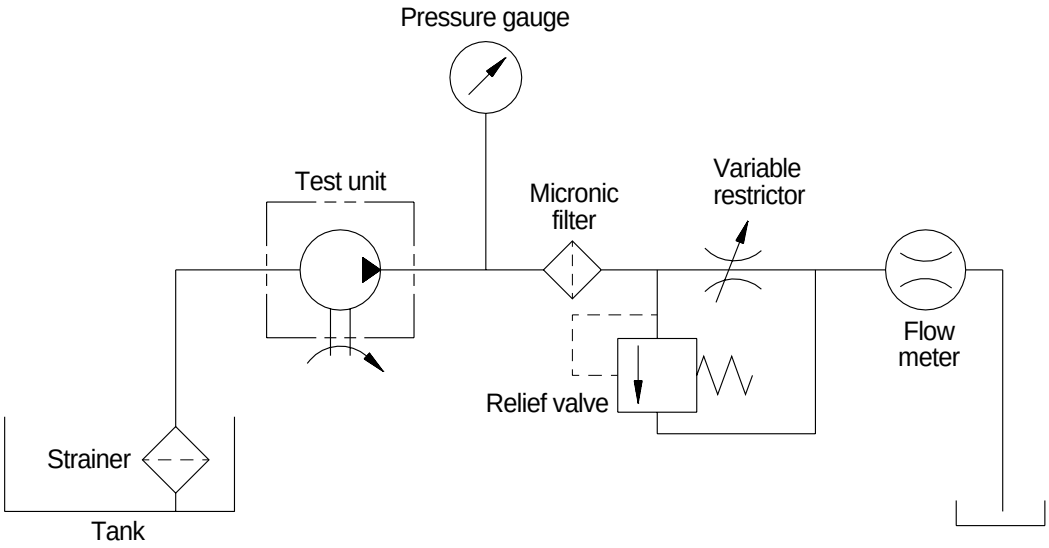
⑥ Fit O-ring(4) to groove in end cover, apply a small amount of loctite sealant to lower face of body, i.e. outboard of oval spigot.

⑦ Studs(18) to be screwed into cover(16). Prior to fitting flange(3) washers(19) and nuts(20).

・Tightening torque : 9.5 ± 0.7kgf・m(68.7 ± 5.1lbf・ft)

⑧ Pour a small amount of clean hydraulic oil into ports and check that the unit rotates without undue force. If excessive force it required then seals in balance plates are possibly trapped and the unit should be disassembled and reassembled correctly.

6) RUNNING-IN



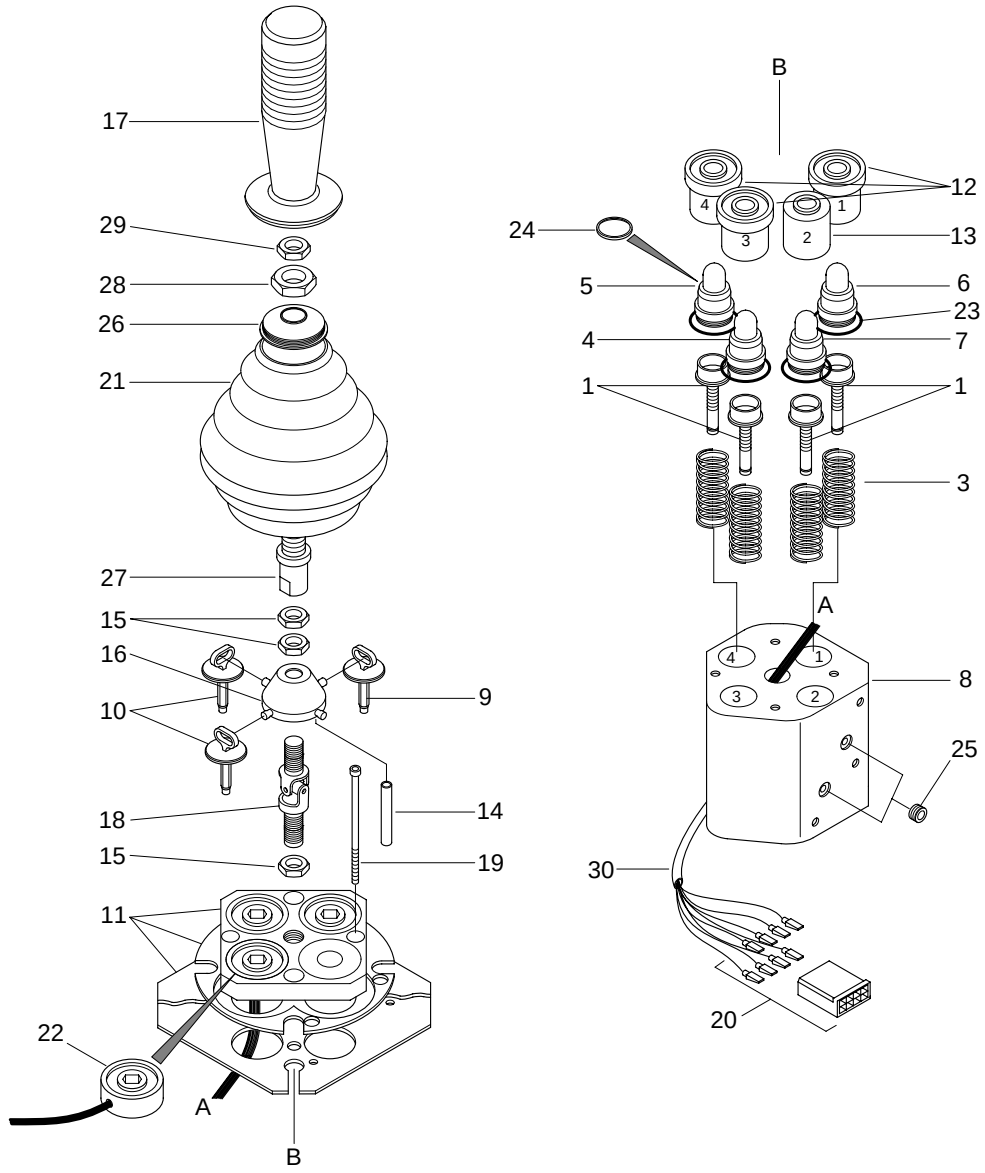
(1) A unit which has been reassembled with either new gears, balance plate or body, must be carefully run-in before it is subjected to full working conditions.

(2) Ideally this should be done on a test rig(See figure) where pressure can be gradually applied and any wipings from the body cut-in arrested by filters.

(3) It is recommended that the unit is run-in at 1500rpm, initially, at zero pressure for one minute then in stages with the pressure increased by 500psi every minute, until maximum rated pressure has been attained. Frequently check the system temperature, ensuring that it does not exceed the maximum permissible figure of 80℃. If the temperature exceeds the system or unit specification the test must be delayed and operated off-load until acceptable temperatures are obtained.

2. RCV LEVER

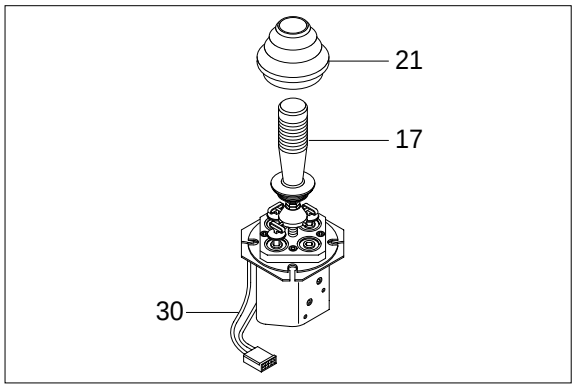
1) STRUCTURE



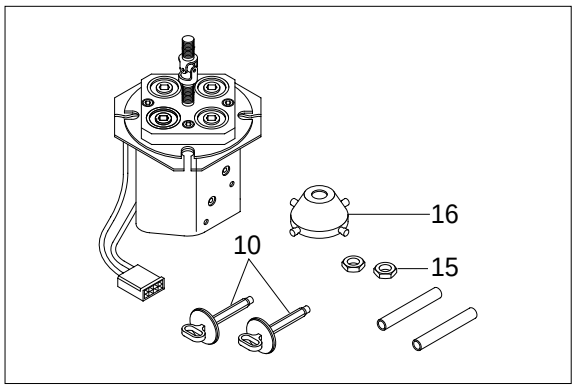
1	Spring pack	12	Prefeel cage assy	22	Hand coil
3	Spring	13	Spindle retainer	23	O-ring
4	Plunger assy	14	Spindle	24	Wiper seal
5	Plunger assy	15	Nut	25	Plug
6	Plunger assy	16	Lever assy	26	Boot retainer collar
7	Plunger assy	17	Handle assy	27	Handle adapter
8	Body kit	18	Lever assy	28	Nut
9	Prefeel kit	19	Socket screw	29	Nut
10	Prefeel kit	20	Connector assy	30	Insulation tube
11	Detent kit	21	Rubber boot		

2) DISASSEMBLY AND ASSEMBLY

(1) Remove the rubber boot(21), unscrew the handle(17), remove the cables(30).

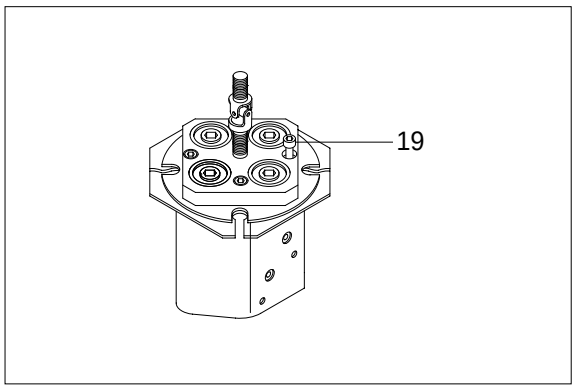


(2) Retain the lever pivot(16) and unscrew the locknut(15). This will allow removal of the lever pivot together with the prefeel assemblies(10). Ensure that the prefeel assemblies are identified, without damage, and can be returned to the same bores. Clean all parts, particularly the armature and magnet faces and check for any sign of damage. The universal joint, which is held with a locknut, need not be unscrewed if there was no free play in the lever mechanism.

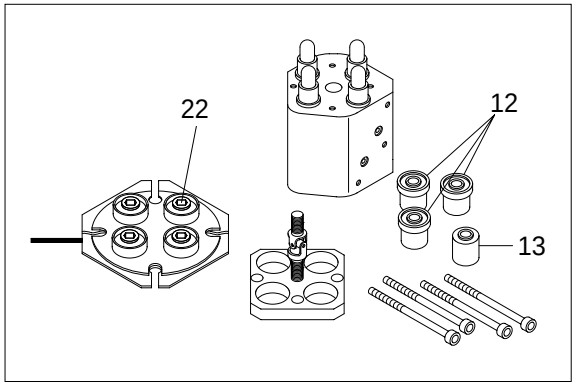


(3) The four capscrews(19) holding the magnet retaining plate can now be unscrewed.

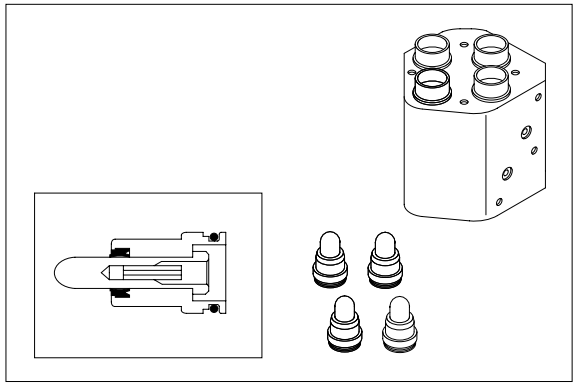
· Torque limit : 1.02kgf · m(7.38lbf · ft)



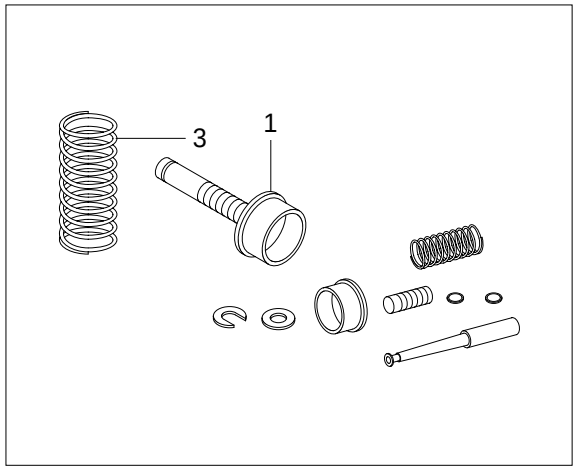
(4) This will release the hold coils(22), blanks, prefeel cage assemblies(12), spindle guides(13). These can all be removed but ensure that they are identified so that they can be repositioned in the same bores.



(5) The spindle guide/operating shaft subassemblies are now exposed and can be removed and disassembled.
These contain an O-ring seal on the insert diameter and a rod seal/wiper inside the bore. These O-rings and seals can be removed and new components fitted. Ensure that all parts are clean before refitting.

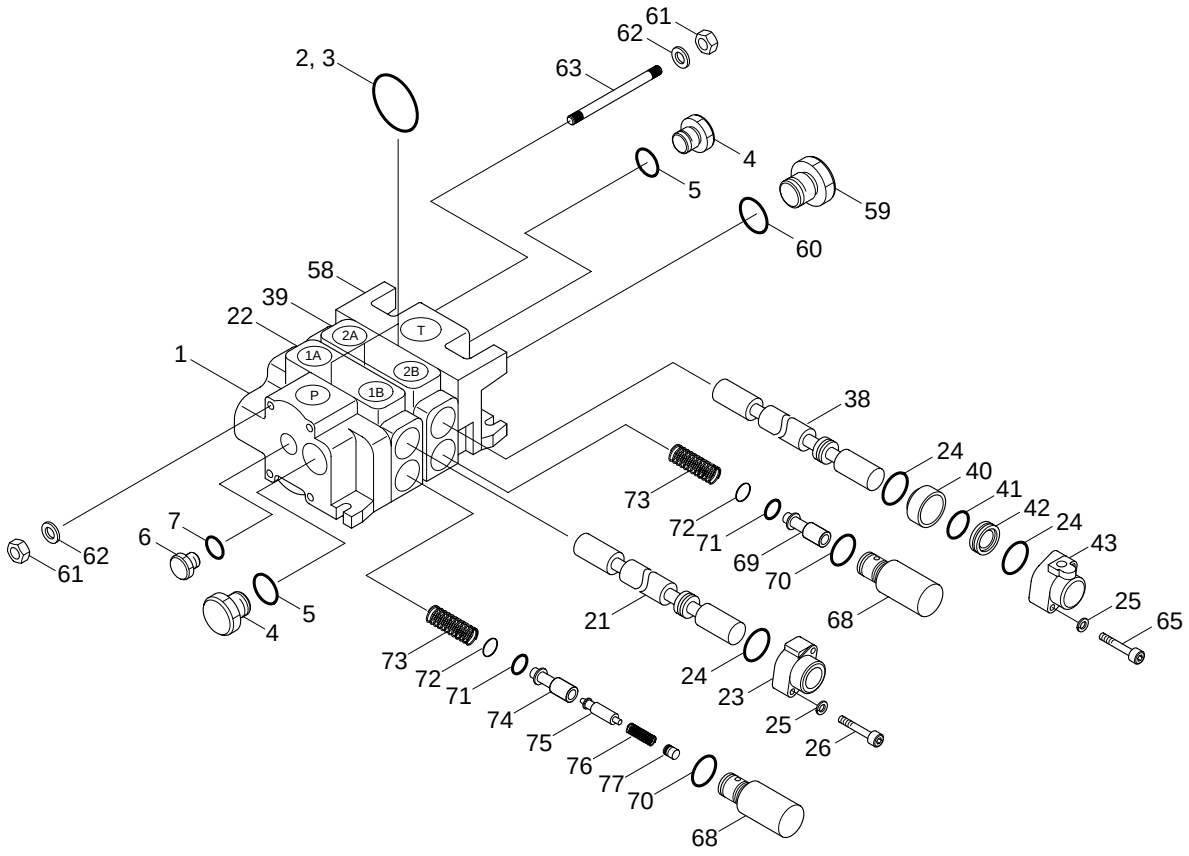


(6) The piston assembly(1) can be removed from its bore, together with the return spring(3), again ensuring that each assembly is identified so that it can be correctly replaced. Take care to note the positions of any shims if the sub assembly is disassembled as these are critical to the performance. The assembly is disassembled by removing a C washer at the top of the assembly. All other parts can then be removed. Replace any parts necessary and rebuild.



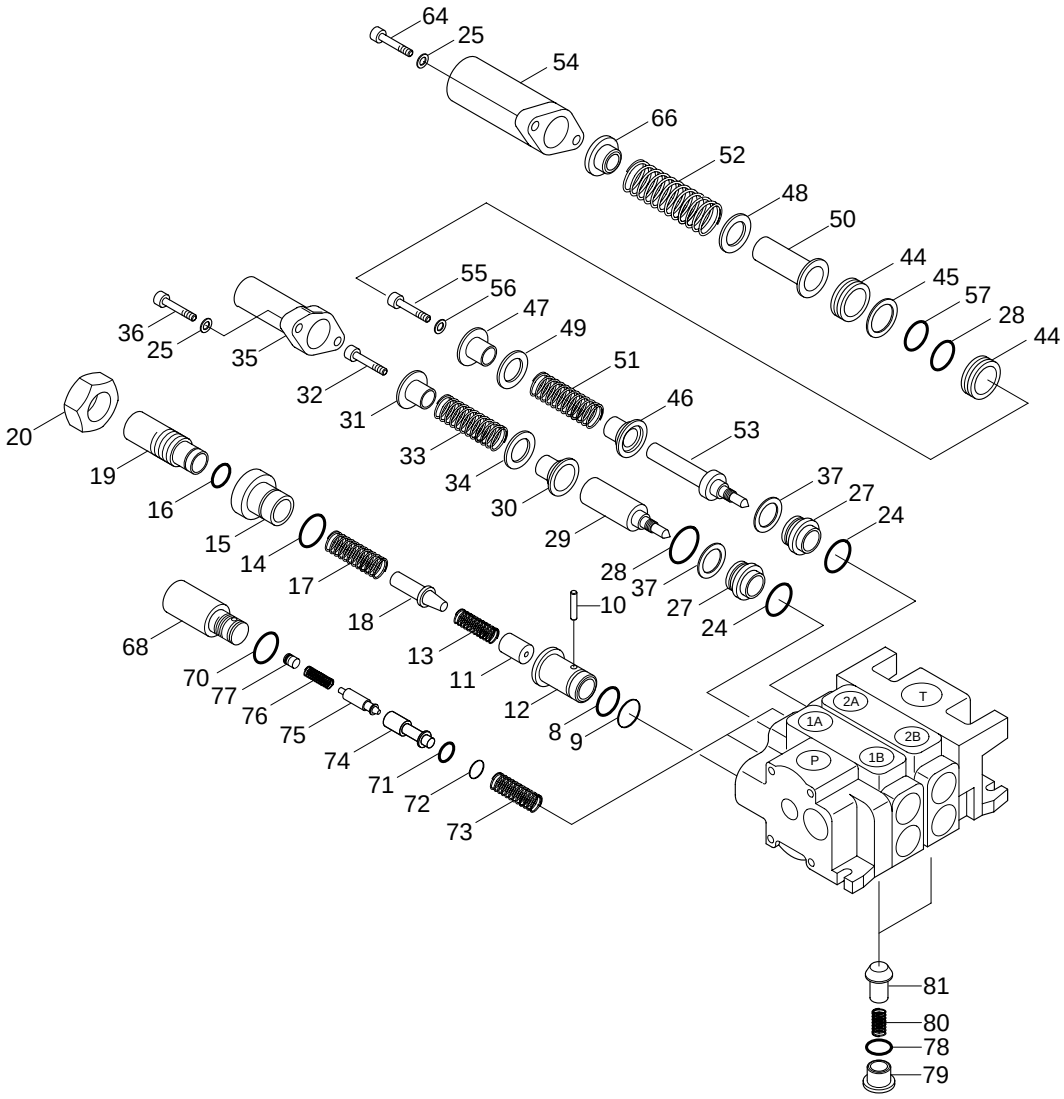
3. MAIN CONTROL VALVE

1) STRUCTURE(1/2)



1	Inlet housing	26	Bolt	63	Tie stud
2	O-ring	38	Spool	65	Stop
3	O-ring	39	Spool section	68	Housing
4	Plug	40	Seal extension	69	Check valve
5	O-ring	41	O-ring	70	O-ring
6	Plug	42	Sleeve	71	Back up ring
7	O-ring	43	Cover	72	O-ring
21	Spool	58	Outlet housing	73	Spring
22	Spool section	59	Plug	74	Check valve
23	Cover	60	O-ring	75	Poppet
24	O-ring	61	Hexagon nut	76	Spring
25	Lock washer	62	Washer	77	Adjusting screw

2) STRUCTURE(2/2)

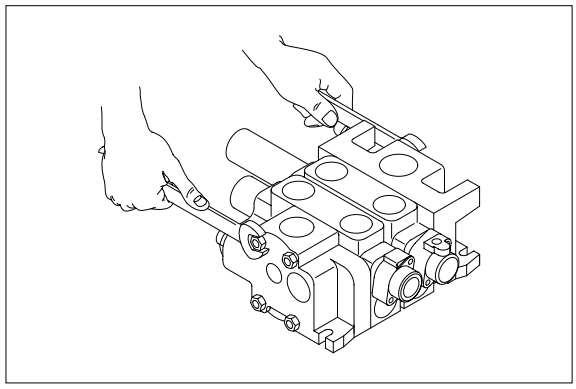


8	O-ring	25	Lock washer	46	Spring retainer	68	Housing
9	Back up ring	27	Seal retainer	47	Spring retainer	70	O-ring
10	Pin	28	O-ring	48	Shim	71	Back up ring
11	Plunger	29	Adapter	49	Shim	72	O-ring
12	Sleeve	30	Spring retainer	50	Spring retainer	73	Spring
13	Spring	31	Spring retainer	51	Spring	74	Check valve
14	O-ring	32	Screw	52	Spring	75	Poppet
15	Pilot housing	33	Spring	53	Spool cap	76	Spring
16	O-ring	34	Shim	54	Cover	77	Adjusting screw
17	Spring	35	Cover	55	Screw	78	O-ring
18	Poppet	36	Bolt	56	Washer	79	Cap
19	Adjusting screw	37	Shim	57	O-ring	80	Spring
20	Lock nut	44	Seal retainer	64	Screw	81	Check valve
24	O-ring	45	Circlip	66	Stop		

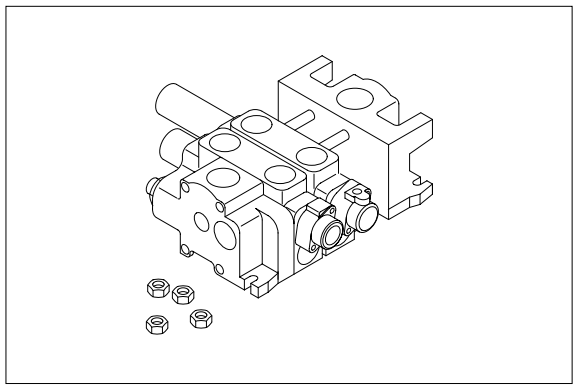
2) DISASSEMBLY AND ASSEMBLY

Servicing intersection seals

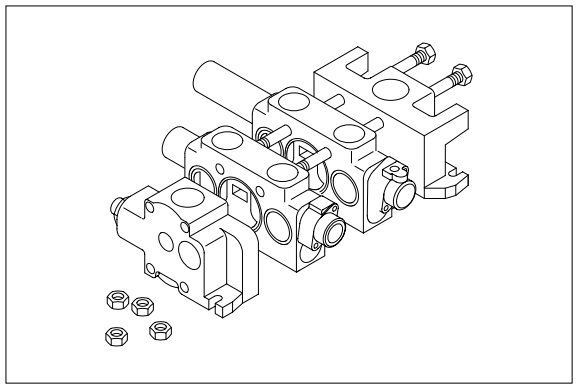
(1) After ensuring that all external surfaces are clean and with the valve stood on its mounting feet loosen all 4 tie rod nuts.



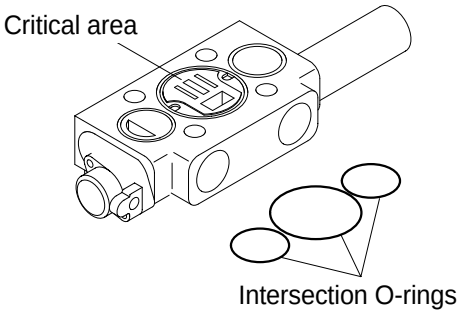
(2) Stand the valve on its inlet cover end and remove each of the 4 tie rod nuts from the upper end of the tie rods. Lift of the cover, check for damage, remove the existing O-ring seals and discard.



(3) Remove the uppermost section, check for damage, remove the existing O-rings and discard. Repeat for the other sections. Ensure that the sections are laid out in order so that they can be rebuilt in the same order. If the valve is disassembled in this way always ensure that new seals are used when rebuilding.



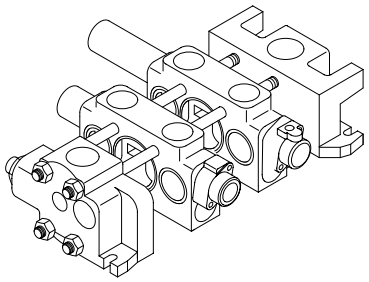
(4) It is generally not a good policy to reuse the original O-ring seals. Ensure that all parts are clean, particularly the seal grooves and the interface areas which contact each other. Also check for any signs of damage to these same areas. Contamination under the seals may allow the seals to leak, and contamination or damage on the interface may cause either leakage or spool stick. Pay particular attention to the machined surfaces inside the large O-ring seal area as these areas rely on a metal to metal seal within this O-ring.



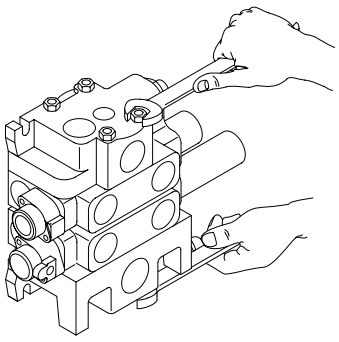
(5) Starting with the inlet cover, fit new intersection seals, and then refit the first section, sliding over the tie rods and ensuring that the section has located correctly. Then fit new intersection seals to that section and fit the next section. After the sections have been fitted fit the final set of interface O-ring seals and refit the outlet cover.

※ Take extra care during the assembly process to ensure that all of the O-rings are properly located and that none are trapped.

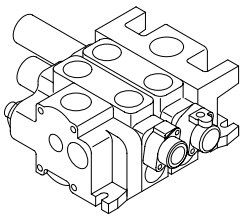
Ensure that the valve is reassembled in exactly the same order as failure to do so may result in the valve not working to specification.



(6) Once all the sections and outlet cover have been refitted, the top 4 nuts can be refitted. These should be initially finger tightened, ensuring that there is an even amount of thread at each end. Still with the valve in this position evenly tighten each nut in turn using spanners only enough to ensure that the interfaces are in proper contact with each other. This will remove the danger of O-rings becoming trapped when the valve is placed on its mounting feet.



(7) Stand the valve onto its mounting feet on a level surface ensuring that all feet are in contact with the surface. Progressively tighten the tie rod nuts in turn and finally torque load the nuts to 3.88/4.08kgf · m. Do not overtighten as this may induce spool stiction problems.



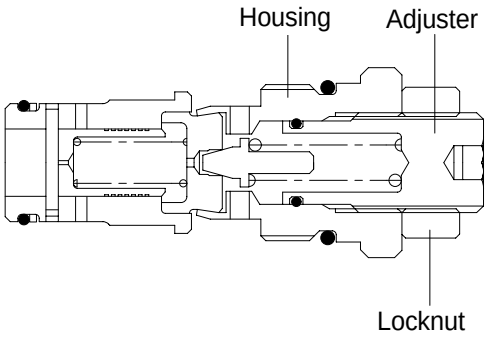
3) MAIN RELIEF VALVE SERVICING

Servicing of these units is normally limited to replacing the O-ring seals. If a main relief valve is stripped down then its actual setting may be lost. If this occurs it must be reset before it can be used on the machine. Failure to do so may make the machine unsafe.

There are 2 O-rings fitted onto this assembly, one which seals between the inlet gallery and the tank gallery and the second which seals between the tank gallery and atmosphere. Both of these seals can be simply removed and replaced with new ones. If this assembly has to be removed for any reason then it is advised that the seals are replaced.

· Locknut torque limit:
3.06~3.67kgf · m (22.1~26.5lbf · m)

· Housing torque limit:
4.18~4.89kgf · m (30.2~35.4lbf · m)



※ **Resetting procedure :**

Ensure that an accurate pressure gauge is used for this procedure.

Loosen the locknut and turn the adjuster to change the setting. Tighten the locknut apply the pressure a number of times and then recheck the setting.

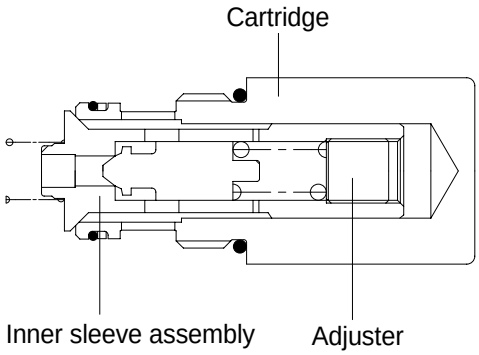
4) PORT RELIEF VALVE SERVICING

Servicing of these units is normally limited to replacing the O-ring seals. If a service port relief valve is stripped down then its actual setting may be lost. If this occurs it must be reset before it can be used on the machine. Failure to do so may make the machine unsafe.

There are 2 O-rings fitted onto this assembly, one which seals between the service port and the tank gallery and the second which seals between the tank gallery and atmosphere. Both of these seals can be simply removed and replaced with new ones. If this assembly has to be removed for any reason then it is advised that the seals are replaced.

· Cartridge torque limit:

4.18~4.89kgf · m (30.2~35.4lbf · m)



※ **Resetting procedure :**

This valve is internally adjusted and as such requires a special setting pot and as such is normally factory set.

If setting is carried our ensure that an accurate pressure gauge is used for this procedure.

Remove the inner sleeve assembly from the cartridge and turn the adjuster to change the setting. Apply the pressure a number of times and then recheck the setting.

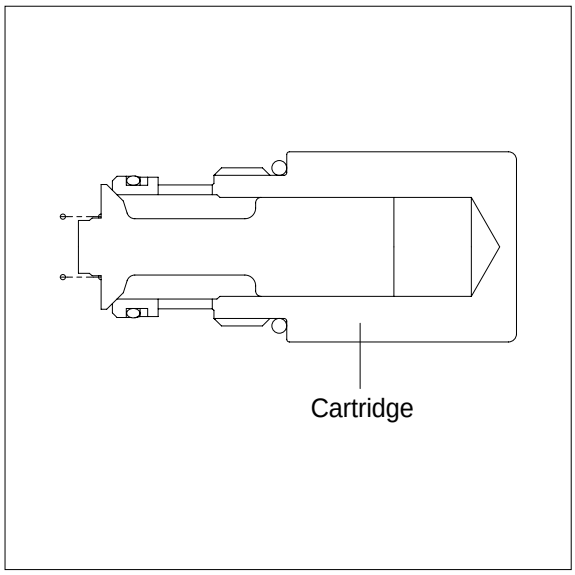
5) ANTI CAVITATION VALVE SERVICING

Servicing of these units is normally limited to replacing the O-ring seals.

There are 2 O-rings fitted onto this assembly, one which seals between the service port and the tank gallery and the second which seals between the tank gallery and atmosphere. Both of these seals can be simply removed and replace with new ones. If this assembly has to be removed for any reason then it is advised that the seals are replace.

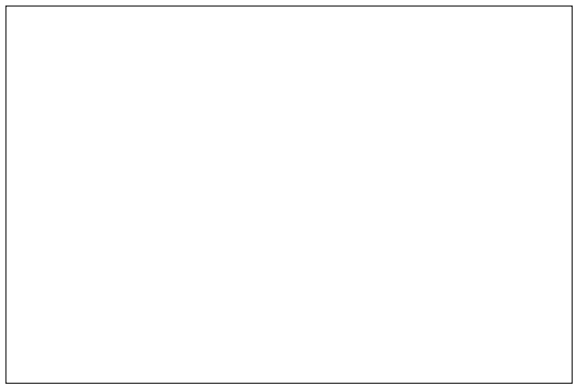
· Cartridge torque limit:

4.18~4.89kgf · m (30.2~35.4lbf · m)

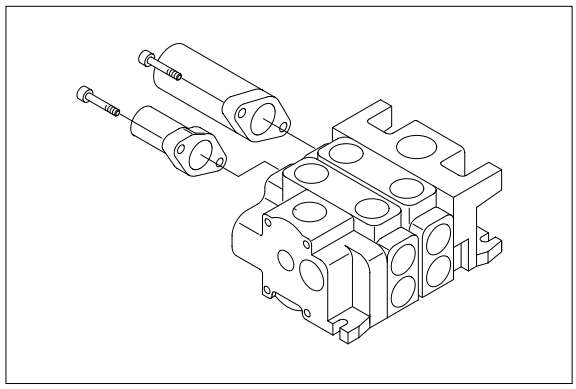


(2) Servicing spool assemblies

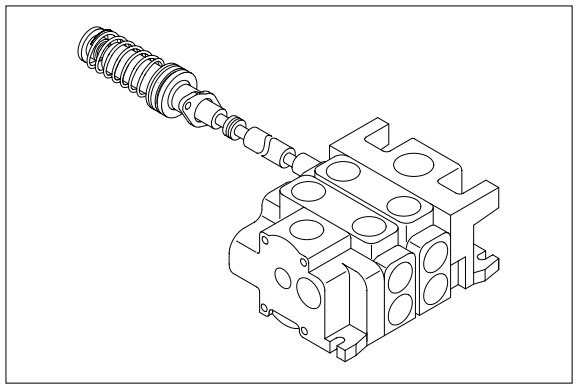
※ It is recommended that spool assemblies be removed from their respective housings only when the valve sections are bolted together. Removing spool assemblies with the sections apart may result in interface damage.
All O-ring seals can be replaced without disassembling any of the spring mechanisms so this should not normally be necessary.



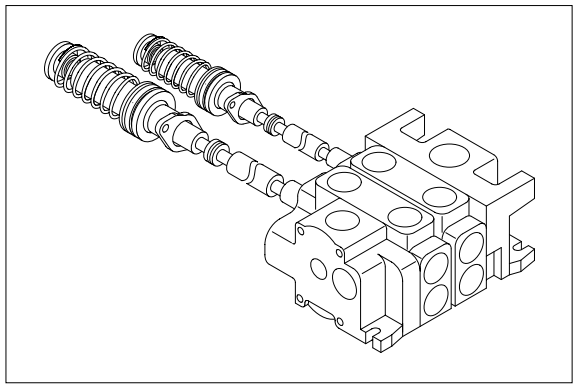
① Remove the bolts and pilot cans from both ends of the valve.



② The spool and spring assembly can be removed as an assembly from the spool bore.



③ Ensure that the spools are identified so that they can be refitted into the same bore.



※ The auxiliary and bucket sections have similar seal arrangements as shown in fig A, while the boom section has a different arrangement as shown if fig B.

※ Adapter torque limit:

1.33kgf · m (9.62lbf · m)

Screw torque limit:

0.41kgf · m (2.95lbf · m)

Pilot end cap bolts limit:

1.33kgf · m (9.62lbf · m)

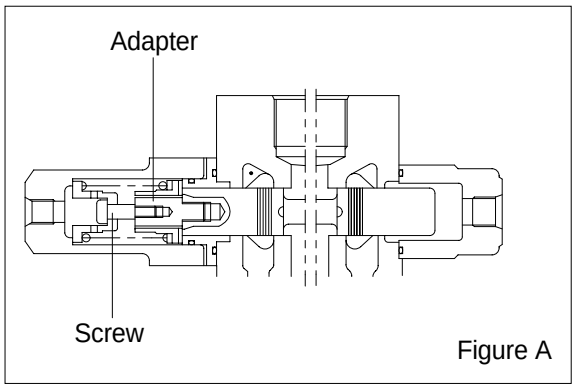


Figure A

※ Spool cap torque limit:

1.33kgf · m (9.62lbf · m)

Screw torque limit:

0.51kgf · m (3.69lbf · m)

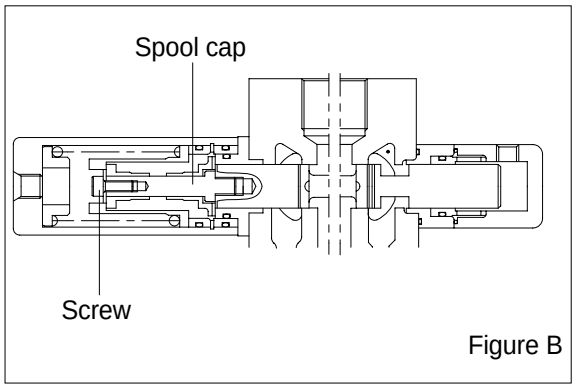
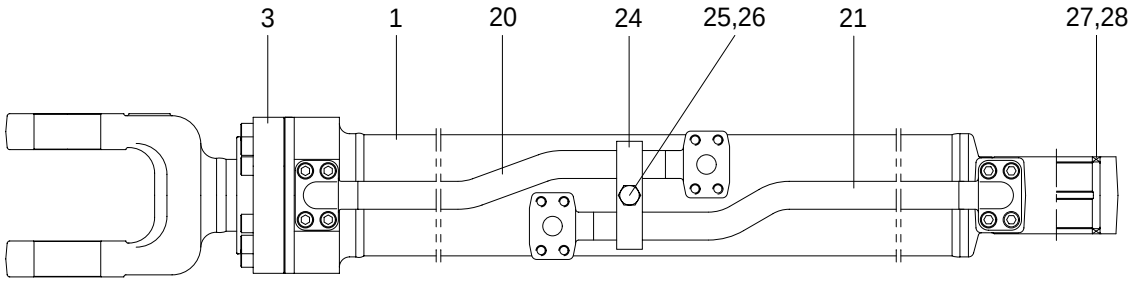
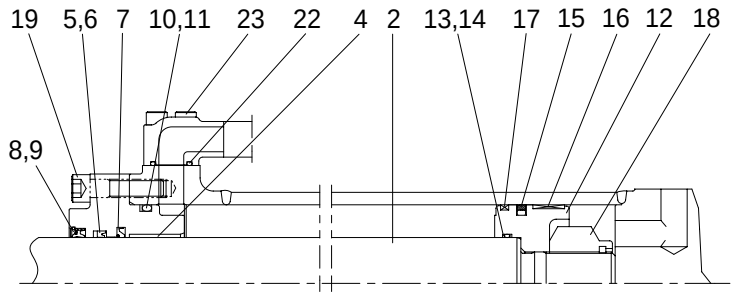


Figure B

4. BOOM AND BUCKET CYLINDER

1) BOOM CYLINDER

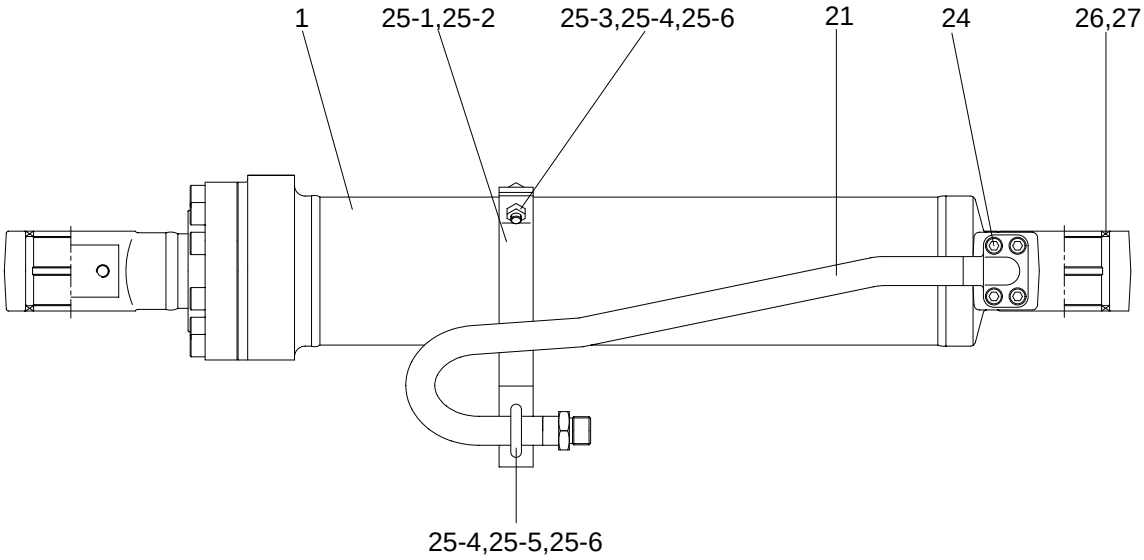


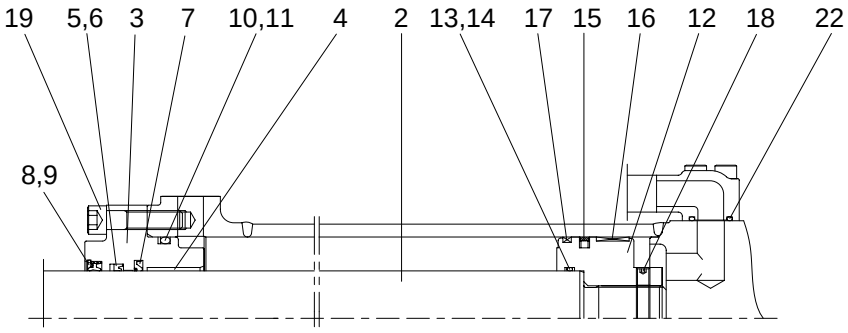


INTERNAL DETAIL

1	Tube assy	11	Back up ring	21	Pipe assy
2	Rod assy	12	Piston	22	O-ring
3	Gland	13	O-ring	23	Socket bolt
4	Bushing	14	Back up ring	24	Pipe clamp
5	Rod seal	15	Piston seal	25	Hexagon bolt
6	Back up ring	16	Wear ring	26	Spring washer
7	Buffer ring	17	Dust ring	27	Bushing
8	Dust wiper	18	Nylon nut	28	Dust seal
9	Snap ring	19	Socket bolt		
10	O-ring	20	Pipe assy		

2) BUCKET CYLINDER



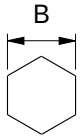


INTERNAL DETAIL

1	Tube assy	12	Piston	25	Band assy
2	Rod assy	13	O-ring	25-1	Band sub assy
3	Gland	14	Back up ring	25-2	Band
4	Bushing	15	Piston seal	25-3	Hexagon bolt
5	Rod seal	16	Wear ring	25-4	Spring washer
6	Back up ring	17	Dust ring	25-5	U-bolt
7	Buffer ring	18	Set screw	25-6	Hexagon nut
8	Dust wiper	19	Socket bolt	26	Bushing
9	Snap ring	21	Pipe assy	27	Dust seal
10	O-ring	22	O-ring		
11	Back up ring	24	Socket bolt		

3) TOOLS AND TIGHTENING TORQUE

(1) Tools

Tool name	Remark	
Allen wrench	8	
	10	
Spanner	17	
	19	
(-) Driver	Small and large sizes	
Torque wrench	Capable of tightening with the specified torques	

(2) Tightening torque

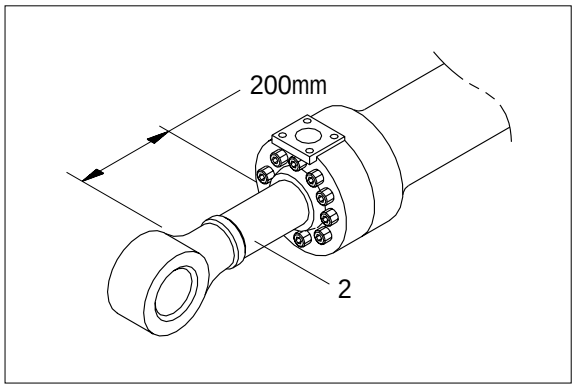
Part name		Item	Size	Torque	
				kgf · m	lbf · ft
Socket head bolt	Bucket cylinder	19	M12×1.75×50	9.4±1	67.9±7.2
	Boom cylinder				
	Bucket cylinder	24	M10×1.5×45	5.4±0.5	39.1±3.6
	Boom cylinder	23			
Nylon nut	Boom cylinder	18	M45×2.0×45	250±20	1808±145
Hex head bolt	Boom cylinder	25	M12×1.75×40	5.5±0.6	39.8±4.3
	Bucket cylinder	25-3	M10×1.5×30	3.2±0.3	23.1±2.2
U-bolt nut	Bucket cylinder	25-5	M10×1.5	3.2±0.3	23.1±2.2
Set screw	Bucket cylinder	18	M10×1.5×12	5.4±0.5	39.1±3.6
Piston	Bucket cylinder	12	-	200±20	1447±145

4) DISASSEMBLY

(1) Remove gland and piston rod

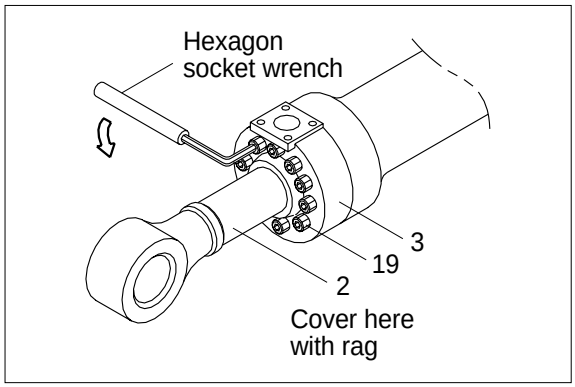
① Hold the clevis section of the tube in a vise. Use mouth pieces so as not to damage the machined surface of the cylinder tube. Do not make use of the outside piping as a locking means.

② Pull out piston rod(2) about 200㎜ (7.8 in). Because the piston rod is rather heavy, finish extending it with air pressure after the oil draining operation.



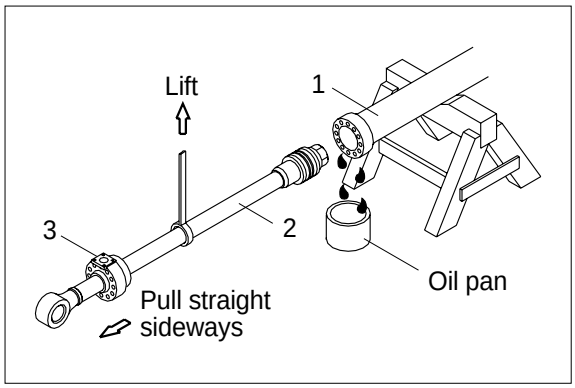
③ Loosen and remove socket bolts(19) of the gland(3) in sequence.

※ Cover the extracted piston rod(2) with rag to prevent it from being accidentally damaged during operation.



④ Draw out gland(3) and piston rod (2) assembly together from cylinder tube(1).

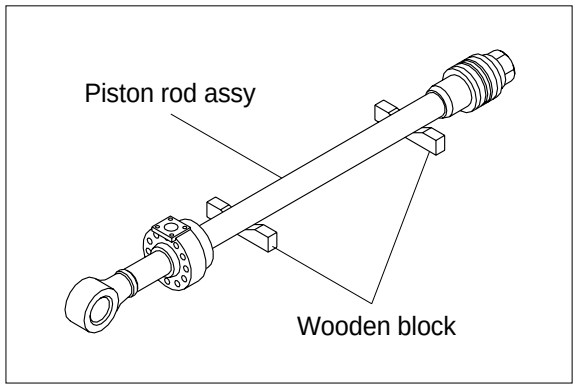
※ Since the piston rod assembly is heavy in this case, lift the tip of the piston rod(2) with a crane or some means and draw it out. However, when piston rod(2) has been drawn out to approximately two thirds of its length, lift it in its center to draw it completely.



※ Note that the plated surface of piston rod(2) is to be lifted. For this reason, do not use a wire sling and others that may damage it, but use a strong cloth belt or a rope.

⑤ Place the removed piston rod assembly on a wooden V-block that is set level.

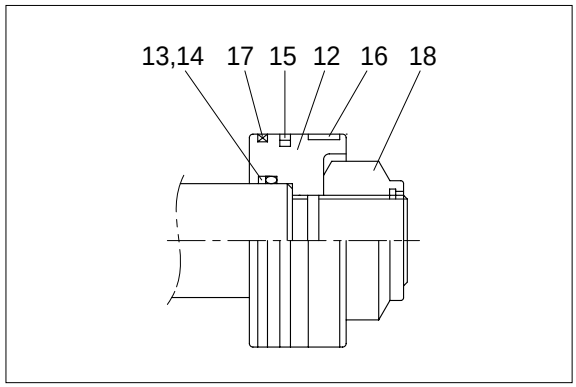
※ Cover a V-block with soft rag.



(2) Remove piston and gland assembly

① Remove the nylon nut(18).

② Remove piston assembly(12) and O-ring (13), back up ring(14).

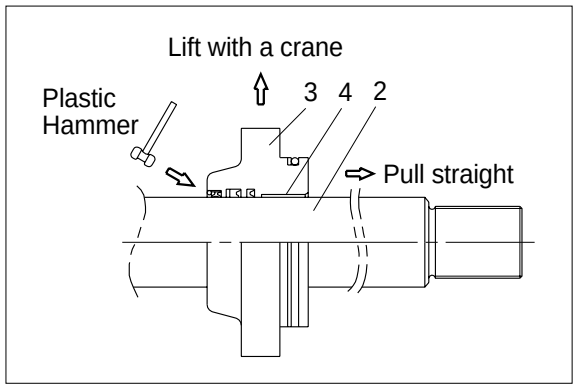


③ Remove the gland assembly from piston rod(2).

※ If is too heavy to move, move it by striking the flanged part of gland(3) with a plastic hammer.

※ Pull it straight with gland assembly lifted with a crane.

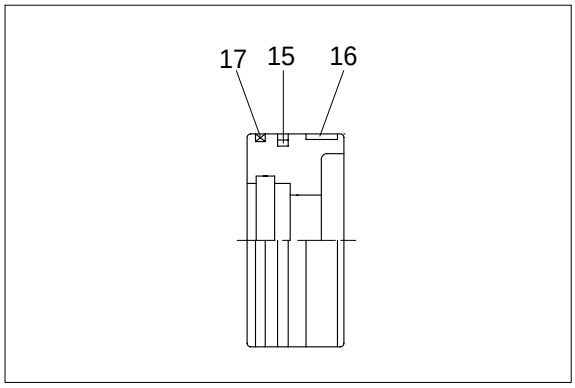
Exercise care so as not to damage the lip of rod bushing(4) and packing(5, 6, 7, 8, 9) by the threads of piston rod(2).



(3) Disassemble the piston assembly

① Remove wear ring(16), dusting(17), and piston seal (15).

※ Exercise care in this operation not to damage the grooves.



(4) Disassemble gland assembly

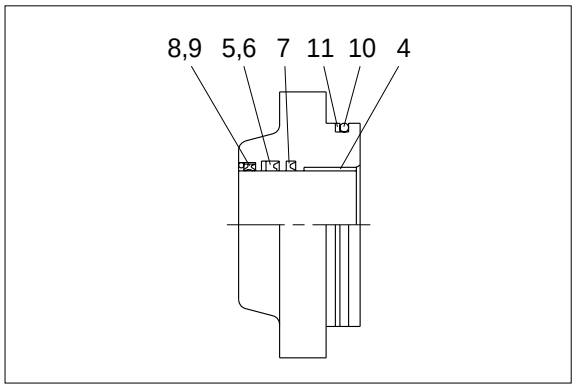
① Remove back up ring(11) and O-ring (10).

② Remove snap ring(9) and dust wiper(8).

③ Remove back up ring(6), rod seal(5) and buffer ring(7).

※ Exercise care in this operation not to damage the grooves.

※ Do not remove seal and ring, if does not damaged.

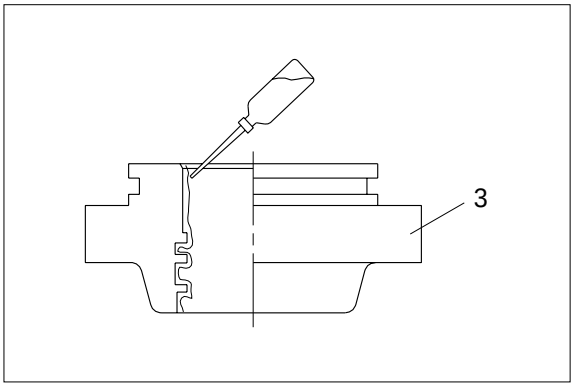


5) ASSEMBLY

(1) Assemble gland assembly

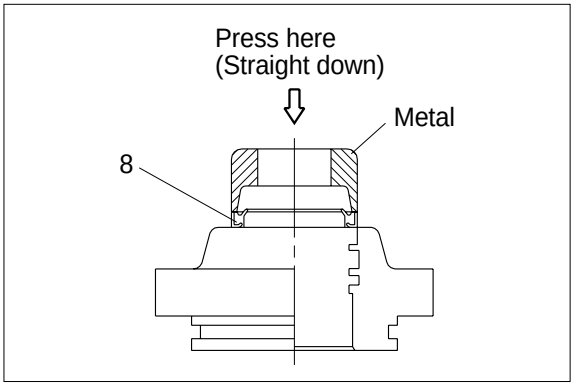
※ Check for scratches or rough surfaces if found smooth with an oil stone.

① Coat the inner face of gland(3) with hydraulic oil.



② Coat dust wiper(8) with grease and fit dust wiper(8) to the bottom of the hole of dust wiper.

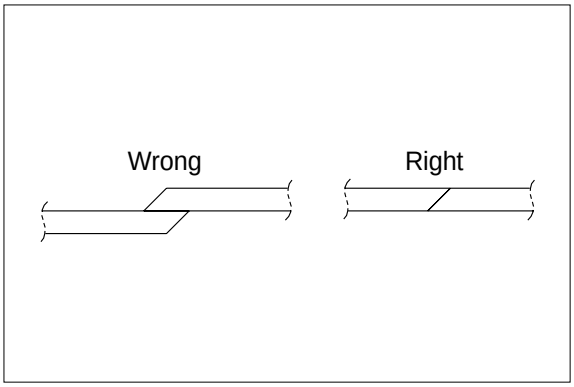
③ At this time, press a pad metal to the metal ring of dust seal.
Fit snap ring(9) to the stop face.



④ Fit back up ring(6), rod seal(5) and buffer ring(7) to corresponding grooves, in that order.

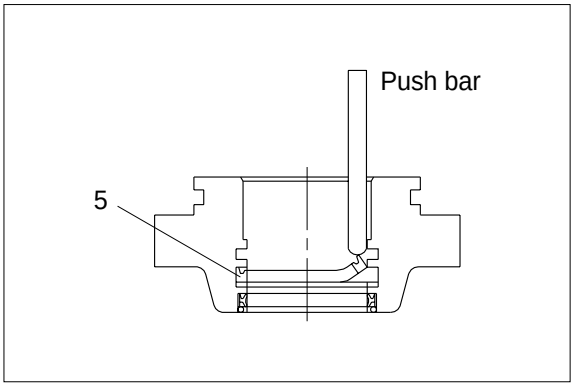
※ Coat each packing with hydraulic oil before fitting it.

※ Insert the backup ring until onside of it is inserted into groove.



※ Rod seal(5) has its own fitting direction. Therefore, confirm it before fitting them.

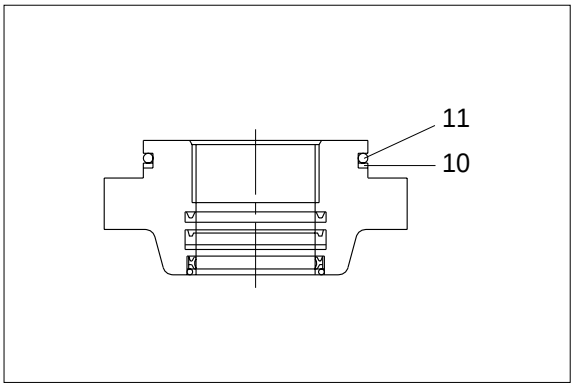
※ Fitting rod seal(5) up side down may damage its lip. Therefore check the correct direction that is shown in fig.



⑤ Fit back up ring(11) to gland(3).

※ Put the backup ring in the warm water of 30~50℃.

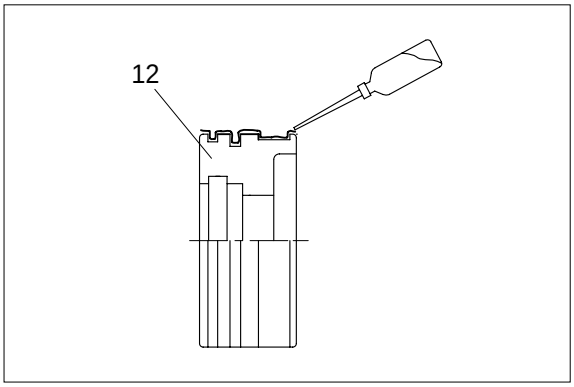
⑥ Fit O-ring(9) to gland(3).



(2) Assemble piston assembly

※ Check for scratches or rough surfaces if found smooth with an oil stone.

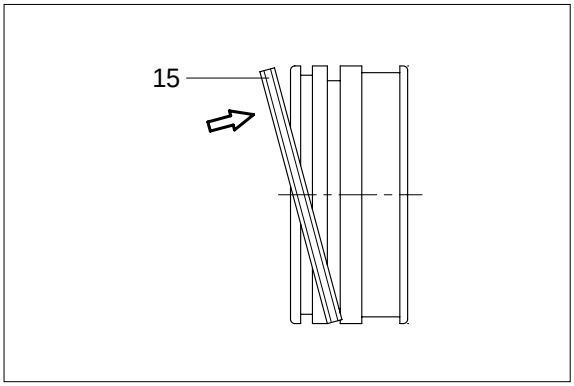
① Coat the outer face of piston(12) with hydraulic oil.



② Fit piston seal(15) to piston

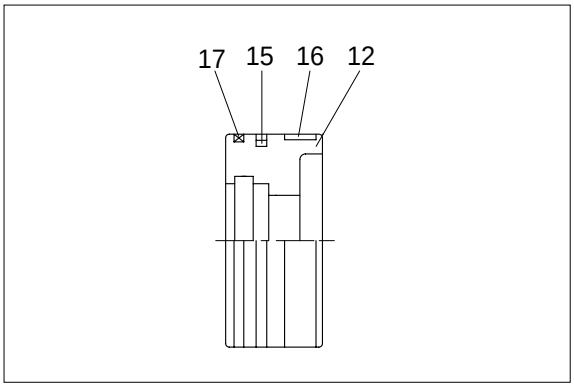
※ Put the piston seal in the warm water of 60~100℃ for more than 5 minutes.

※ After assembling the piston seal, press its outer diameter to fit in.



③ Fit wear ring(16), dust ring(17) to piston(12).

④ Fit O-ring(13) and backup ring(14) to piston(12).

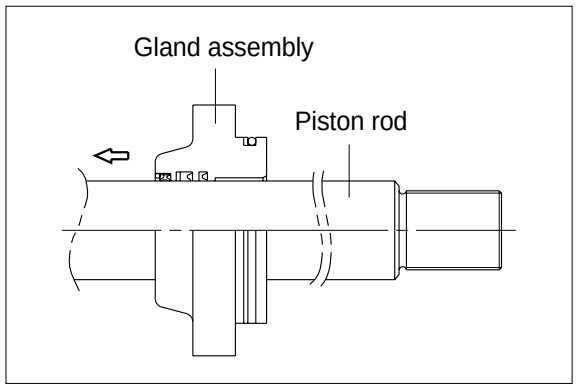


(3) Install piston and gland assembly

① Fix the piston rod assembly to the work bench.

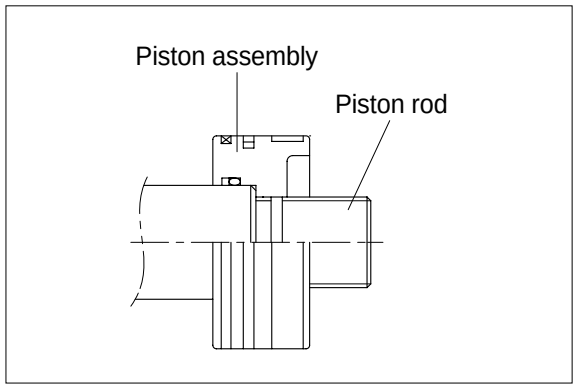
② Apply hydraulic oil to the outer surface of piston rod(2), the inner surface of piston and gland.

③ Insert gland assembly to piston rod(2).



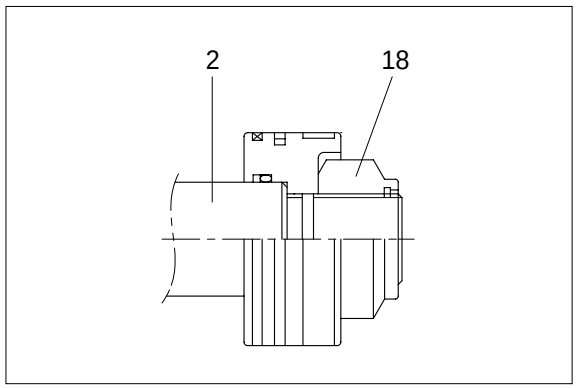
④ Fit piston assembly to piston rod.

· Tightening torque : 200±20kgf · m
(Bucket cyl only) (1447±145lbf · ft)



⑤ Tighten nylon nut(18) to piston rod(2)

· Tightening torque : 250±20kgf · m
(1808±145lbf · ft)



(4) Overall assemble

① Place a V-block on a rigid work bench. Mount the cylinder tube assembly(1) on it and fix the assembly by passing a bar through the clevis hole to lock the assembly.

② Insert the piston rod assembly in to the cylinder tube assembly, while lifting and moving the piston rod assembly with a crane.

※ Be careful not to damage piston seal by thread of cylinder tube.

③ Match the bolts holes in the cylinder head flange to the tapped holes in the cylinder tube assembly and tighten socket bolts to a specified torque.

※ Refer to the table of tightening torque.