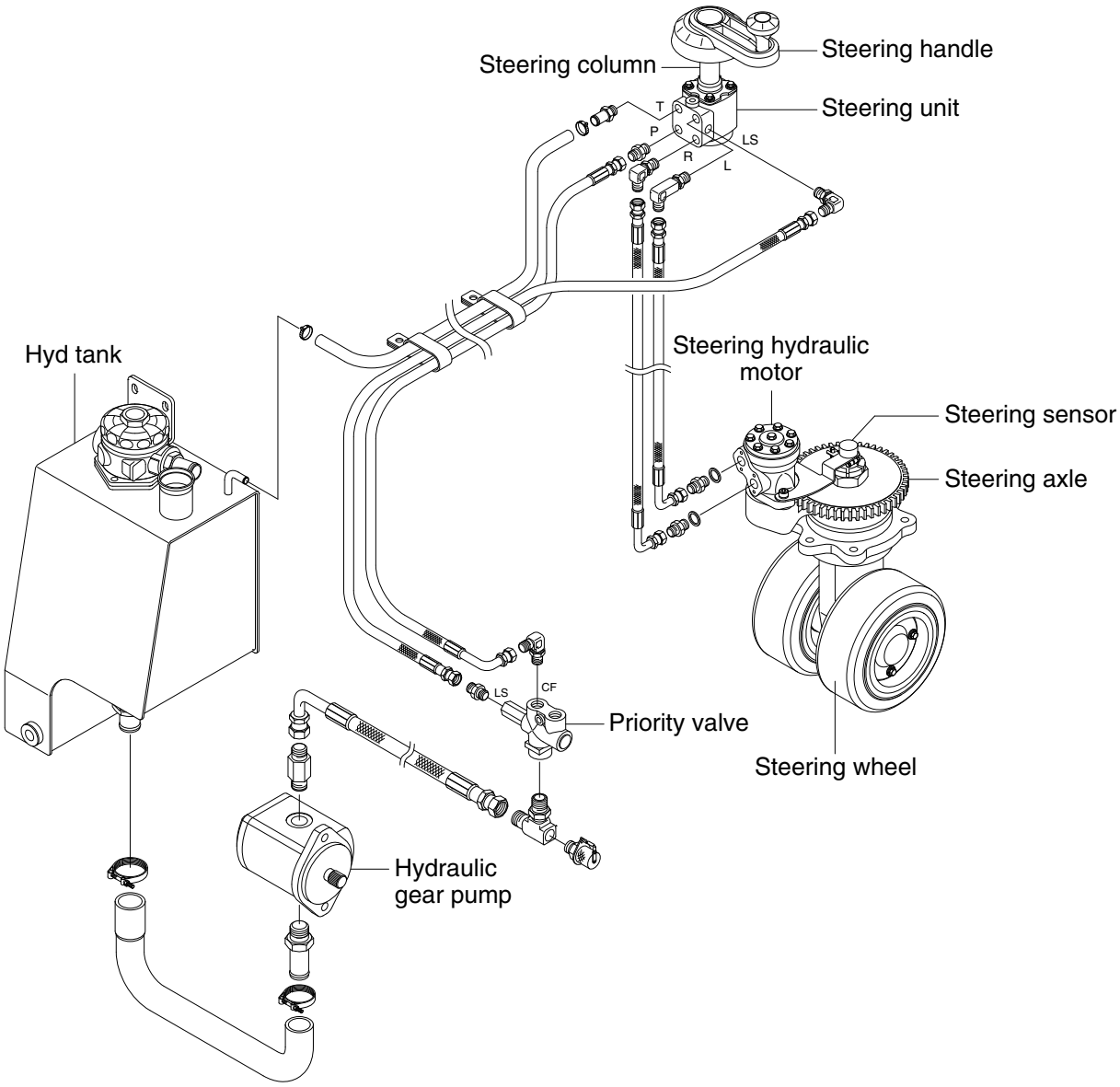
SECTION 5 STEERING SYSTEM

GROUP 1 STRUCTURE AND FUNCTION

1. OUTLINE



18BCS9SS01

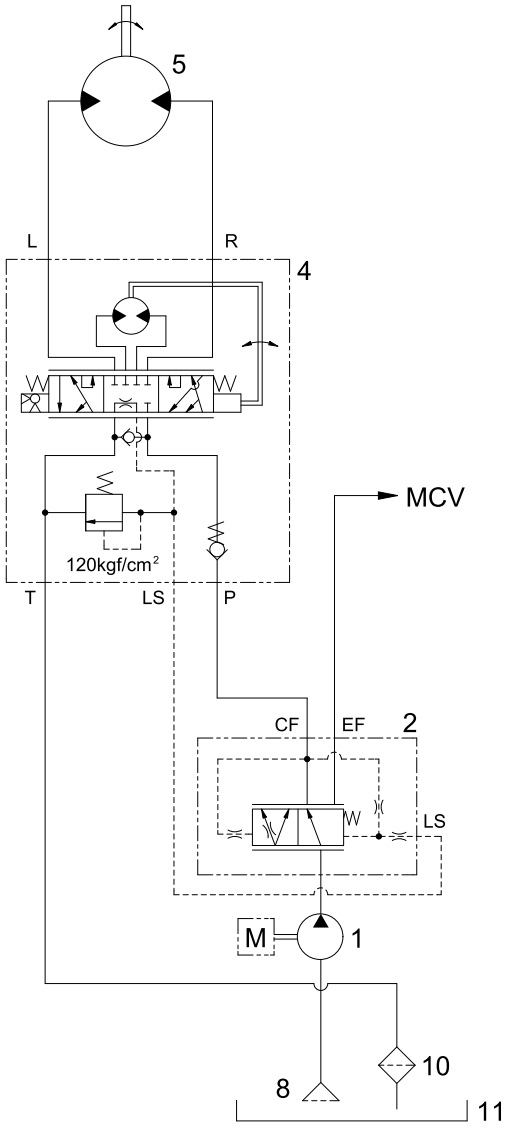
The steering system for this truck is composed of steering wheel assembly, steering unit, steering hydraulic motor, steering axle and pipings. The steering force given to the steering wheel enters the steering unit through the steering column. The required oil flow is sensed by the function of the control section of the steering unit, and pressurized oil delivered from the hydraulic pump is fed to the steering hydraulic motor.

The force produced by the steering hydraulic motor rotates the steering axle through the steering pinion.

Steering axle is mounting to the main frame by the hexagon bolt.

Steering wheels are mounted to the steering axle with the ball bearing.

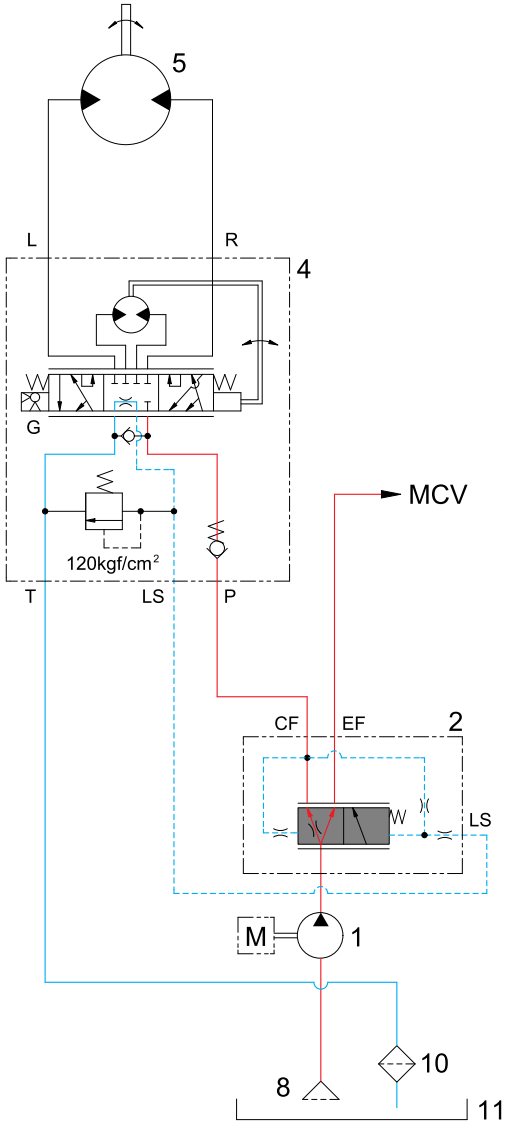
2. HYDRAULIC CIRCUIT



18BCS9SS26

1	Hydraulic gear pump	8	Suction strainer
2	Priority valve	10	Return filter
4	Steering unit	11	Hydraulic tank
5	Steering hydraulic motor		

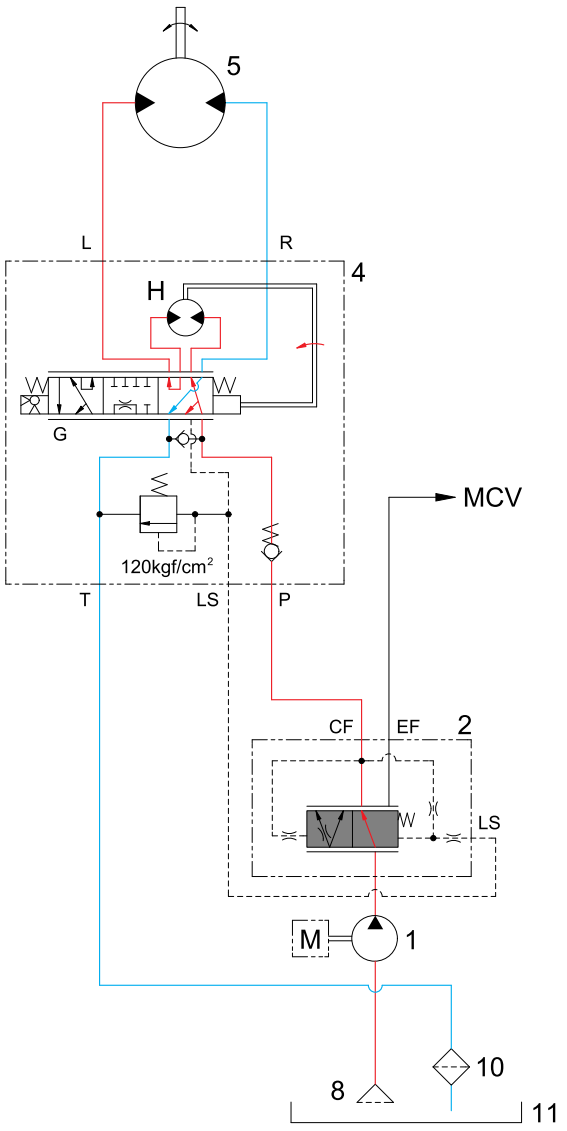
(1) NEUTRAL



18BCS9SS04

The steering wheel is not being operated so control spool (G) does not move.
The oil from the hydraulic gear pump (1) enters P port of the steering unit (4) through the priority valve (4) and standby for steering system.
Almost all of pump flow goes to the attachment system (main control valve) through the EF port and partly flows into the hydraulic tank (11) through the control spool (G).

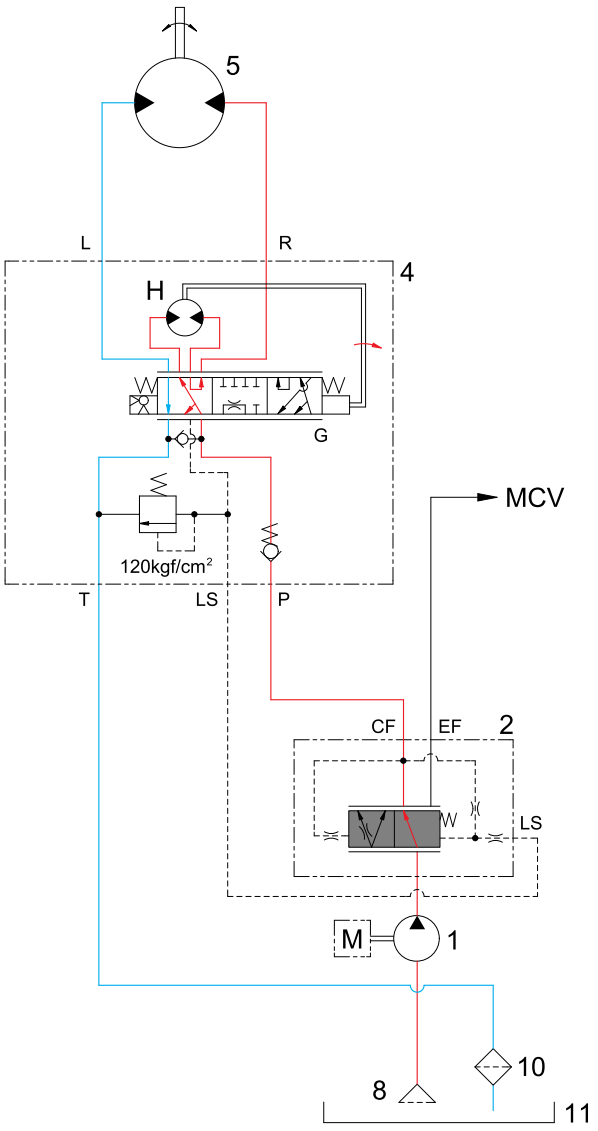
(2) LEFT TURN



18BCS9SS06

When the steering handle is turned to the left, the spool (G) within the steering unit (4) connected with steering column turns in left hand direction.
At this time, the oil discharged from hydraulic gear pump (1) flows into the spool (G) of the steering unit (4) through the inlet port (P) and flows to gerotor(H).
Oil flow from the gerotor flows back into the spool (G) where it is directed out to the left work port (L).
Oil returned from steering hydraulic motor (5) returns to hydraulic tank (11) through the spool (G).
When the above operation is completed, the truck turns to the left.

(3) RIGHT TURN

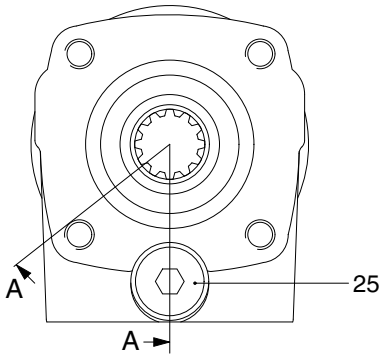


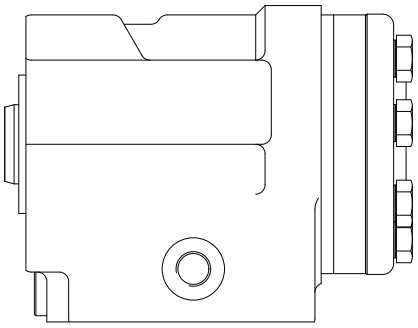
18BCS9SS08

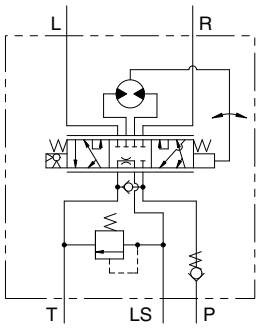
When the steering handle is turned to the right, the spool (G) within the steering unit (4) connected with steering column turn in right hand direction.
At this time, the oil discharged from hydraulic gear pump (1) flows into the spool (G) of the steering unit (4) through the inlet port (P) and flows to gerotor (H).
Oil flow from the gerotor flows back into the spool (G) where it is directed out to the right work port (R).
Oil returned from steering hydraulic motor (5) returns to hydraulic tank (11) through the spool (G).
When the above operation is completed, the truck turns to the right.

3. STEERING UNIT

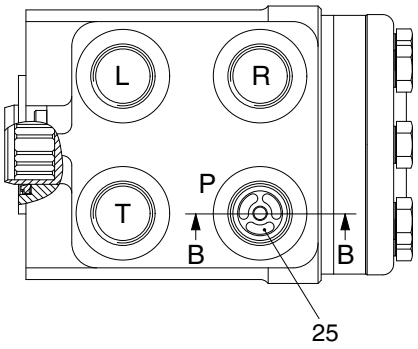
1) STRUCTURE

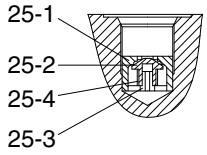




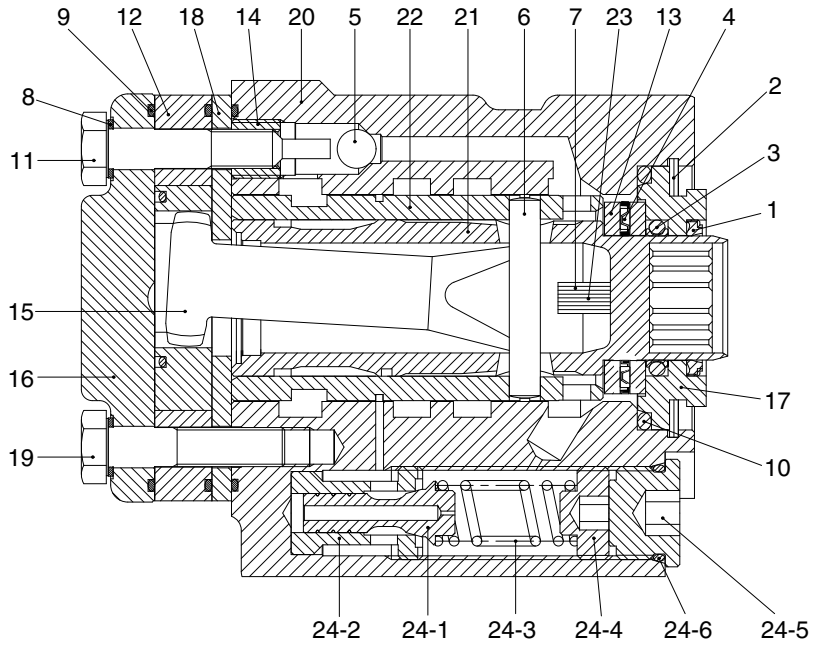


Hydraulic circuit





SECTION B-B



SECTION A - A

18BCS9SE32

1	Dust seal	10	O-ring	19	Cap screw	24-4	Spring seat
2	Retaining ring	11	Rolled screw	20	Housing	24-5	Plug
3	Cap seal	12	Gerotor set	21	Spool	24-6	O-ring
4	Thrust bearing	13	Bearing race	22	Sleeve	25	P-port check valve
5	Ball	14	Bore screw	23	Plate spring	25-1	Plug
6	Pin	15	Drive	24	Relief valve	25-2	Poppet
7	Center spring	16	End cap	24-1	Spool	25-3	Spring seat
8	Washer	17	Gland bushing	24-2	Bushing	25-4	Spring
9	O-ring	18	Plate	24-3	Spring		

2) OPERATION

The steering unit is composed of the control valve (rotary valve) and the metering device. The control valve controls the flow of oil from the pump in the interior of the unit depending on the condition of the steering wheel. The metering device is a kind of hydraulic motor composed of a stator and a rotor. It meters the required oil volume, feeds the metered oil to the steering hydraulic motor and detects steering hydraulic motor's motion value, that is, steering hydraulic motor's motion rate.

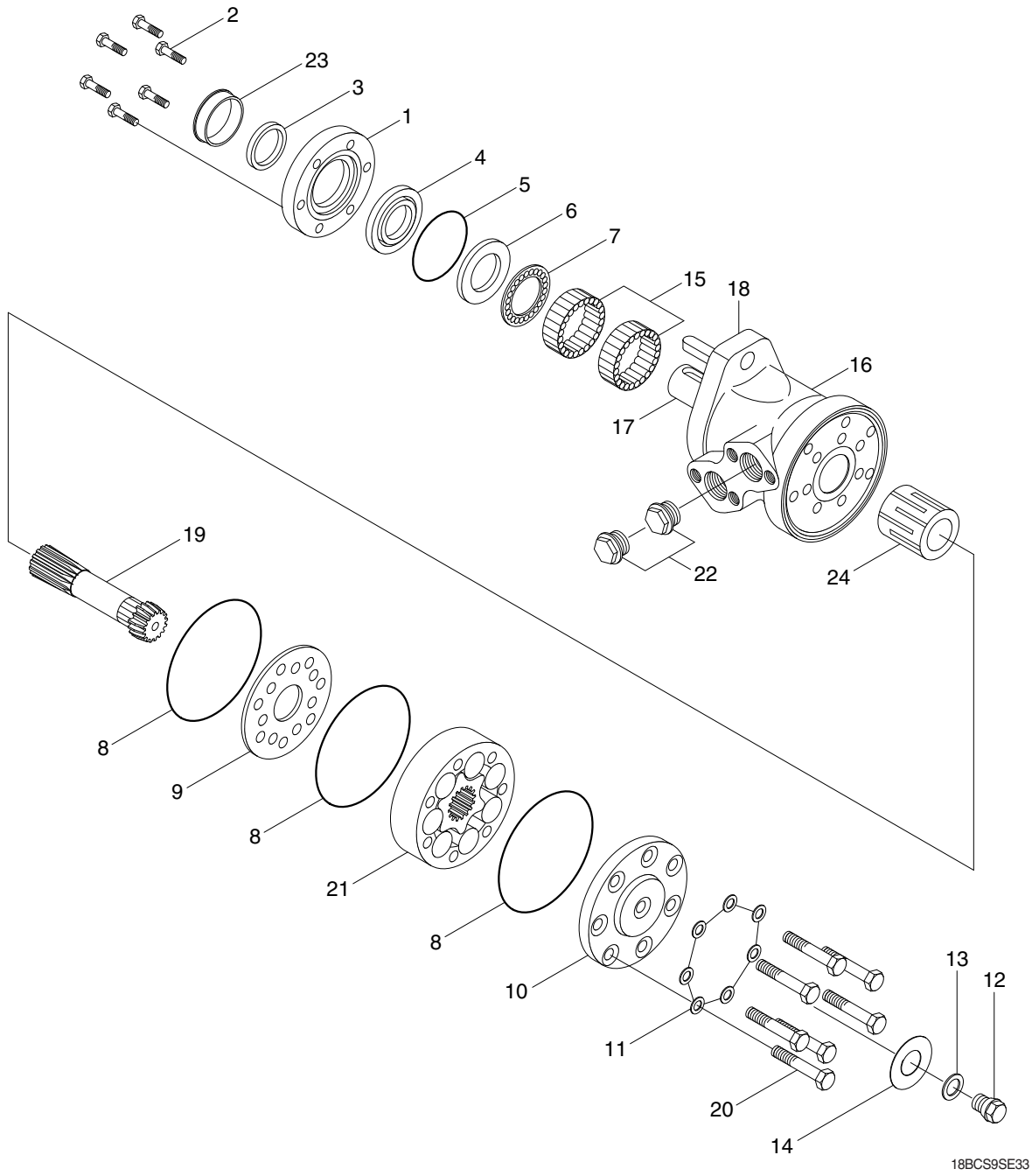
When the steering wheel is turned, the spool turns, the oil path is switched and the oil is fed into the metering device. As a result, the rotor is caused to run by oil pressure, and the sleeve is caused to run through the drive shaft and cross pin. Therefore, when the spool is turned, the spool turns by the same value in such a manner that it follows the motion of the spool. Steering motion can be accomplished when this operation is performed in a continuous state.

⚠ If the hoses of the steering system are incorrectly connected, the steering wheel can turn very rapidly when the key switch is ON. Keep clear of the steering wheel when the key switch is ON.

The centering spring for the spool and sleeve is provided to cause the valve to return to the neutral position. It is therefore possible to obtain a constant steering feeling, which is transmitted to the hands of the driver. Return to the center position occurs when the steering wheel is released.

4. STEERING HYDRAULIC MOTOR

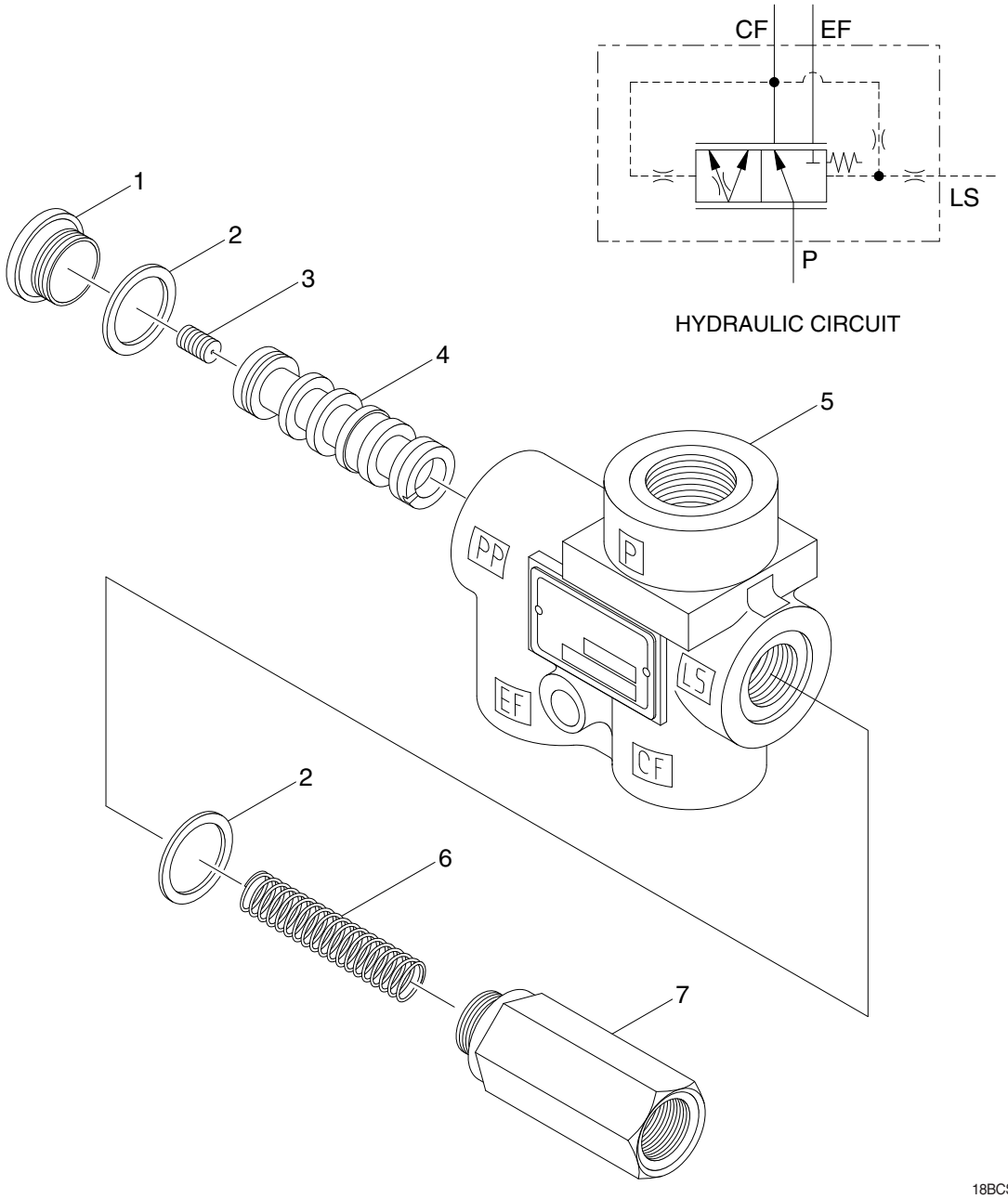
1) STRUCTURE



1	Spigot flange	9	Distributor plate	17	Output shaft
2	Screw	10	End cover	18	Parallel key
3	Dust seal	11	Washer	19	Cardan shaft
4	Shaft seal	12	Drain plug	20	Screw
5	O-ring	13	Washer	21	Gear wheel set
6	Bearing race	14	Name plate	22	Plug
7	Needle bearing	15	Needle bearing	23	Ring
8	O-ring	16	Housing	24	Pin

5. PRIORITY VALVE

1) STRUCTURE



18BCS9SE06

1	Plug	4	Spool	7	Plug
2	Seal	5	Housing		
3	Orifice	6	Spring		

2) OPERATION

The oil from the hydraulic gear pump flows to the priority valve.

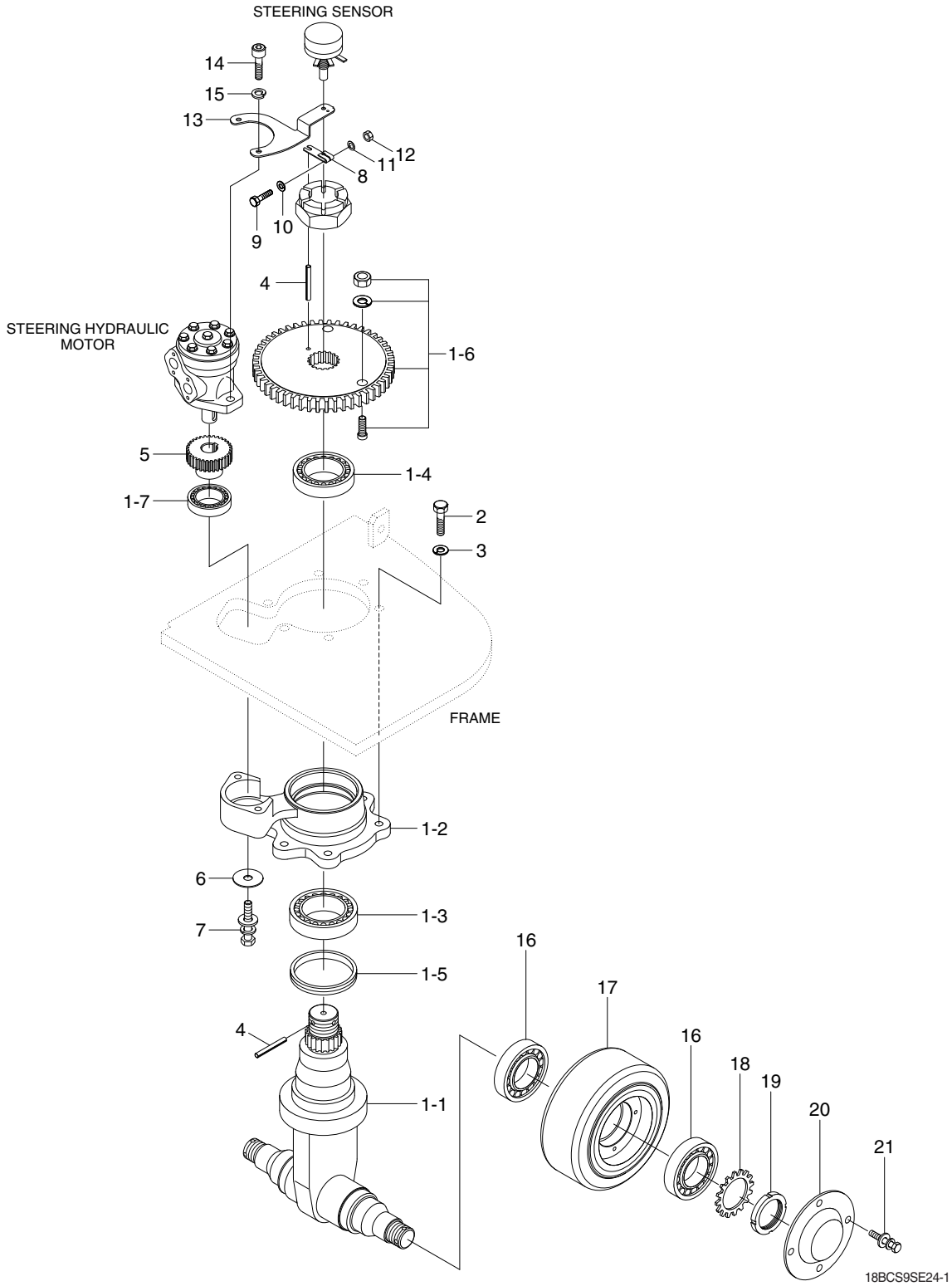
The priority valve supplies a flow of oil to the steering system and lift, tilt system.

The steering flow is controlled by the steering unit to operate the steering hydraulic motor.

The remainder of the oil flow from the pump flows to the main control valve.

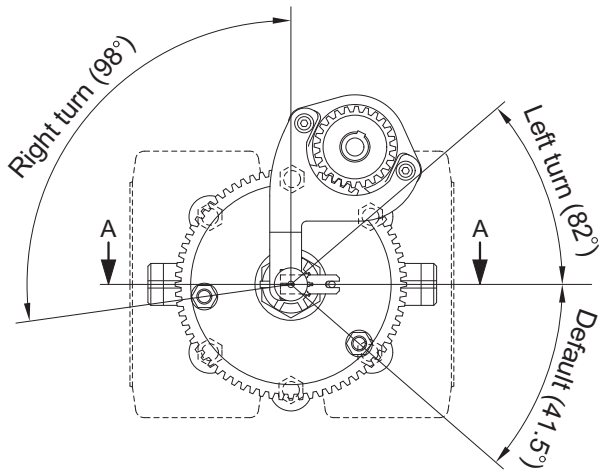
6. STEERING AXLE AND WHEEL

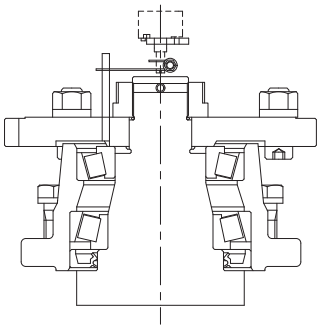
1) STRUCTURE

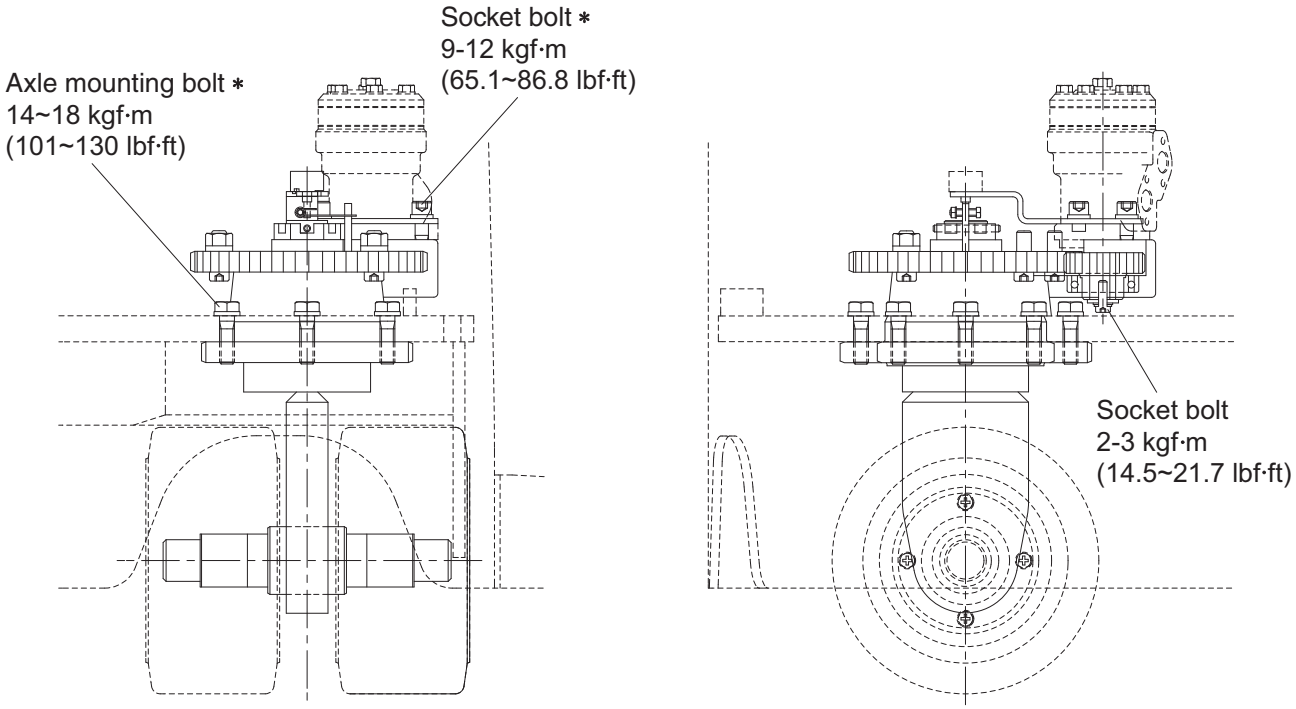


1	Steering axle assy	1-7	Bearing	8	Lever	15	Spring washer
1-1	Steering axle wa	2	Bolt	9	Hexagon bolt	16	Ball beating
1-2	Bracket	3	Spring washer	10	Spring washer	17	Rear tire
1-3	Taper roller bearing	4	Spring pin	11	Plain washer	18	Washer bearing
1-4	Taper roller bearing	5	Steering pinion	12	Hexagon nut	19	Rolling bearing nut
1-5	Oil seal	6	Special bolt	13	Bracket	20	End cover
1-6	Steering gear assy	7	Bolt with washer	14	Socket bolt	21	Washer with bolt

2) TIGHTENING TORQUE AND SPECIFICATION







* Apply loctite #277 on the thread of the bolt before tightening.

18BCS9SE25

Item	Unit	Specification
Tread	mm (in)	265 (10.4)

GROUP 2 OPERATIONAL CHECKS AND TROUBLESHOOTING

1. OPERATIONAL CHECKS

<table>
<tr><th>Check item</th><th>Checking procedure</th></tr>
<tr><td>Knuckle</td><td>· Check knuckle visually or use crack detection method. If the knuckle is bent, the tire wear is uneven, so check tire wear.</td></tr>
<tr><td>Steering axle</td><td>· Ask assistant to drive machine at minimum turning radius.
· Fit bar and a piece of chalk at outside edge of counterweight to mark line of turning radius.
· Min turning radius (Outside)
<table><tr><td>15BCS-9</td><td>1397 mm (4' 7"))</td></tr><tr><td>18BCS-9</td><td>1397 mm (4' 7"))</td></tr><tr><td>20BCS-9</td><td>1467 mm (4' 10")</td></tr></table></td></tr>
<tr><td>Hydraulic pressure of power steering</td><td>Remove plug from outlet port of flow divider and install oil pressure gauge.
Turn steering wheel fully and check oil pressure.
※ Oil pressure : 120 kgf/cm^2 (1710 bar)</td></tr>
</table>

2. TROUBLESHOOTING

1) STEERING SYSTEM

Problem	Cause	Remedy
Steering wheel drags.	· Low oil pressure. · Bearing faulty. · Spring spool faulty. · Reaction plunger faulty. · Ball-and-screw assembly faulty. · Sector shaft adjusting screw excessively tight. · Gears poorly meshing. · Flow divider coil spring fatigued.	· Check lockout. Repair. · Clean or replace. · Clean or replace. · Replace. · Clean or replace. · Adjust. · Check and correct meshing. · Replace.
Steering wheel fails to return smoothly.	· Bearing faulty. · Reaction plunger faulty. · Ball-and-screw assy faulty · Gears poorly meshing.	· Clean or replace. · Replace. · Clean or replace. · Check and correct meshing.

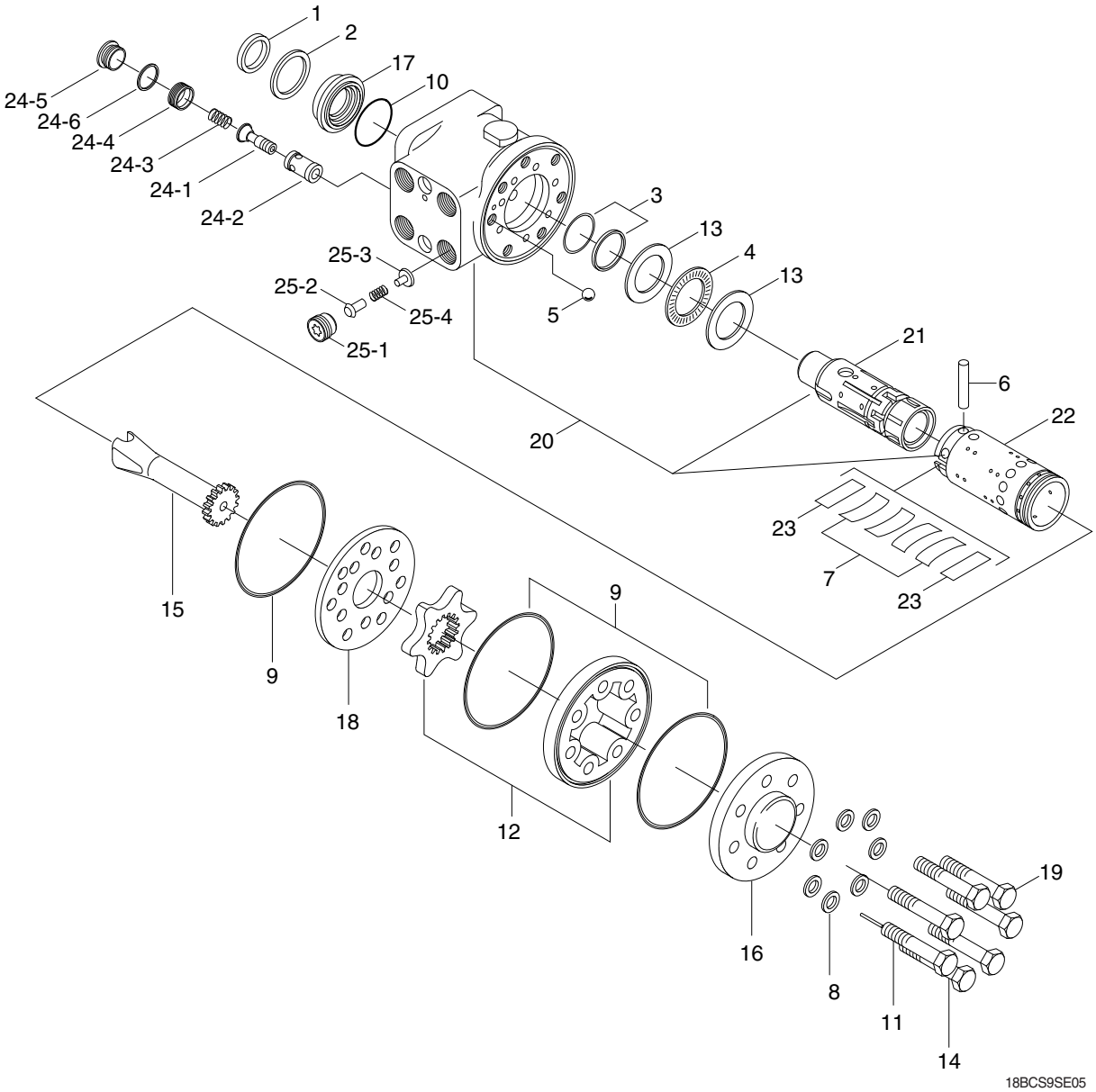
Problem	Cause	Remedy
Steering wheel turns unsteadily. Steering system makes abnormal sound or vibration.	· Lockout loosening. · Metal spring deteriorated. · Gear backlash out of adjustment. · Lockout loosening. · Air in oil circuit.	· Retighten. · Replace. · Adjust. · Retighten. · Bleed air.
Abnormal sound heard when steering wheel is turned fully	Valve · Faulty. (Valve fails to open.) Piping · Pipe (from pump to power steering cylinder) dented or clogged.	· Adjust valve set pressure and check for specified oil pressure. · Repair or replace.
Piping makes abnormal sounds.	Oil pump · Lack of oil. · Oil inlet pipe sucks air. · Insufficient air bleeding.	· Add oil. · Repair. · Bleed air completely.
Valve or valve unit makes abnormal sounds.	Oil pump · Oil inlet pipe sucks air. Valve · Faulty. (Unbalance oil pressure) Piping · Pipe (from pump to power steering) dented or clogged. · Insufficient air bleeding.	· Repair or replace. · Adjust valve set pressure and check specified oil pressure. · Repair or replace. · Bleed air completely.
Insufficient or variable oil flow.	· Flow control valve orifice clogged.	· Clean
Insufficient or variable discharge pressure.	Piping · Pipe (from tank to pipe) dented or clogged.	· Repair or replace.
Steering cylinder head leakage (Piston rod)	· Packing foreign material. · Piston rod damage. · Rod seal damage and distortion. · Chrome gilding damage.	· Replace · Grind surface with oil stone. · Replace · Grind
Steering cylinder head thread (A little bit leak is no problem)	· O-ring damage.	· Replace
Welding leakage	· Cylinder tube damage.	· Tube replace.
Rod	· Tube inside damage. · Piston seal damage and distortion	· Grind surface with oil store. · Replace
Piston rod bushing inner diameter excessive gap	· Bushing wear.	· Replace

2) POWER STEERING UNIT

Problem	Cause	Remedy
Oil leakage	· Fittings loose, worn, or damaged.	· Check and replace the damaged parts.
	· Deteriorated seals by excessive heat.	· Replace the seals.
	· Loose screw or its deteriorated sealing.	· Replace the sealing and tighten screw appropriately.
	· Internal seals worn or damaged.	· Replace it.
	· Damaged seal grooves.	· Replace the unit or related parts.
	· Housing crack.	· Replace the unit.
Noise or vibration	· Air inclusion in the system.	· Bleed the air.
	· Valve timing error when the unit is assembled.	· Correct the timing.
	· Hydraulic pipe noise interference.	· Consult the component manufacturer.
	· Control valve damage or clogging.	· Replace the valve.
Heavy steering operation	· Lack of sufficient oil supply.	· Check the pump and the line.
	· Excessive heat.	· Locate the heat source and correct it.
	· Broken pump.	· Replace it.
	· Leakage in the line or connections.	· Replace it.
	· Clogged orifice.	· Disassemble, clean, and reassemble it.
	· High back pressure.	· Adjust the pressure.
Irregular or no response	· Broken pump.	· Replace it.
	· Excessive heat.	· Locate the heat source and remove it.
	· Broken centering spring.	· Replace it.
	· Misalignment with column.	· Disassemble and adjust it.
	· Incorrect piping to the four port.	· Correct it.
	· Parts missing.	· Install the parts correctly.
	· High back pressure.	· Adjust the pressure.
	· Corrosion on the moving parts.	· Replace it.

1. STEERING UNIT

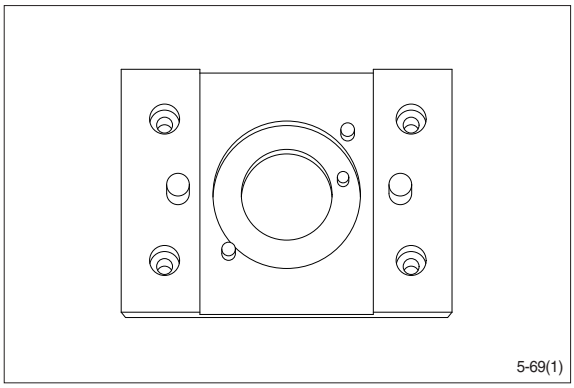
1) STRUCTURE



1	Dust seal	10	O-ring	19	Cap screw	24-4	Spring seat
2	Retaining ring	11	Rolled screw	20	Housing	24-5	Plug
3	Cap seal	12	Gerotor set	21	Spool	24-6	O-ring
4	Thrust bearing	13	Bearing race	22	Sleeve	25	P-port check valve
5	Ball	14	Bore screw	23	Plate spring	25-1	Plug
6	Pin	15	Drive	24	Relief valve	25-2	Poppet
7	Center spring	16	End cap	24-1	Spool	25-3	Spring seat
8	Washer	17	Gland bushing	24-2	Bushing	25-4	Spring
9	O-ring	18	Plate	24-3	Spring		

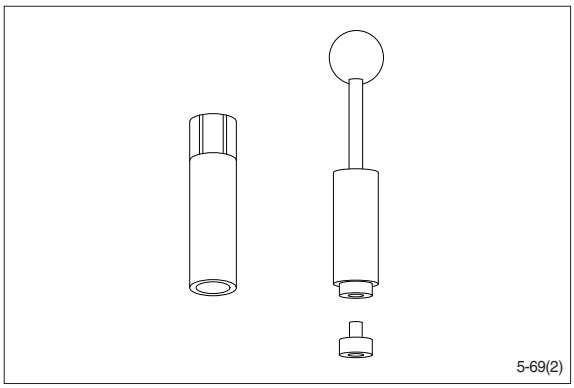
2) TOOLS

(1) Holding tool.



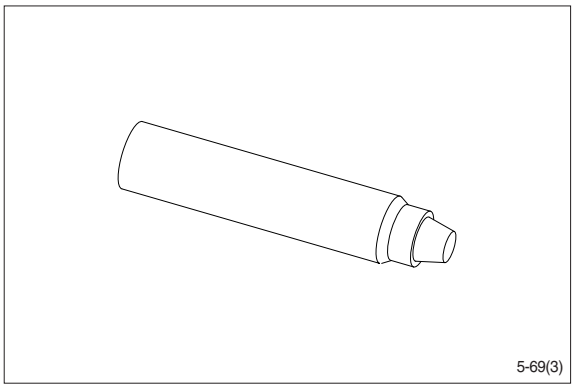
5-69(1)

(2) Assembly tool for O-ring and kin-ring.



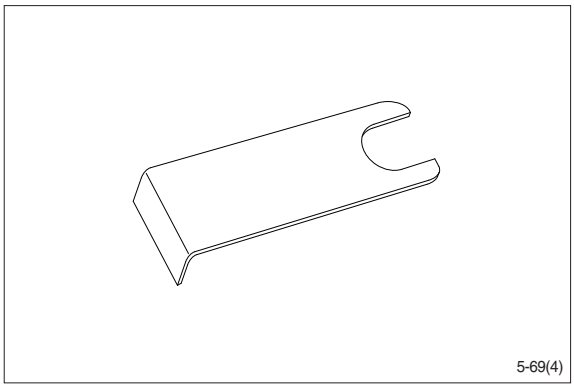
5-69(2)

(3) Assembly tool for lip seal.



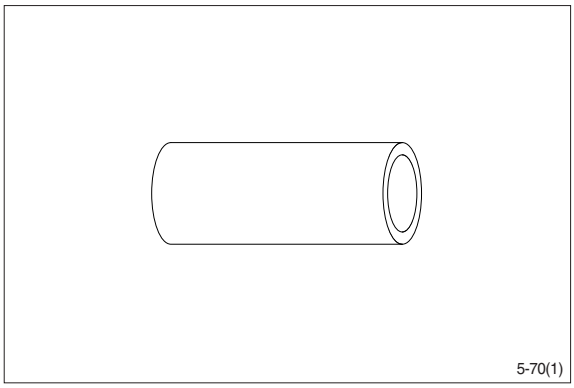
5-69(3)

(4) Assembly tool for cardan shaft.



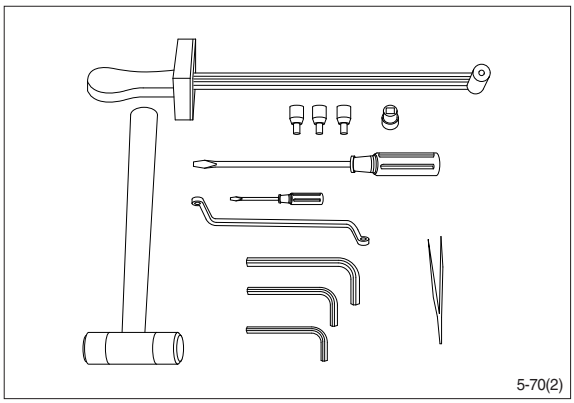
5-69(4)

(5) Assembly tool for dust seal.



5-70(1)

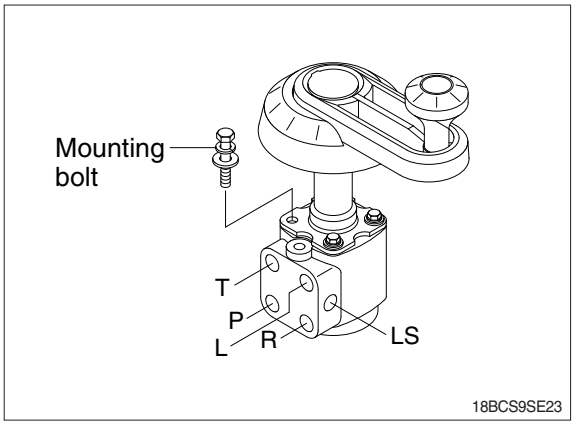
(6) Torque wrench 0~7.1 kgf · m
(0~54.4 lbf · ft)
13 mm socket spanner
6, 8 mm and 12 mm hexagon sockets
12 mm screwdriver
2 mm screwdriver
13 mm ring spanner
6, 8 and 12 mm hexagon socket spanners
Plastic hammer
Tweezers



5-70(2)

3) TIGHTENING TORQUE

L : Left port
R : Right port
T : Tank port
P : Pump port
LS : Load sensing port

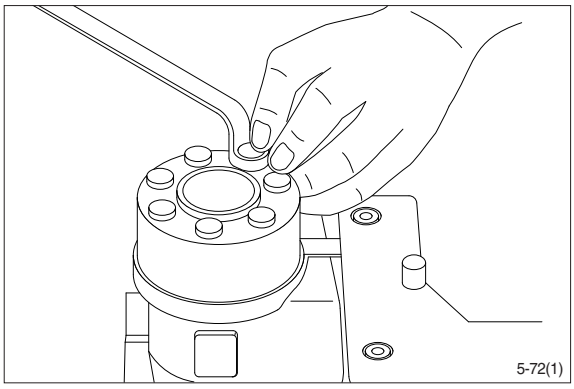


18BCS9SE23

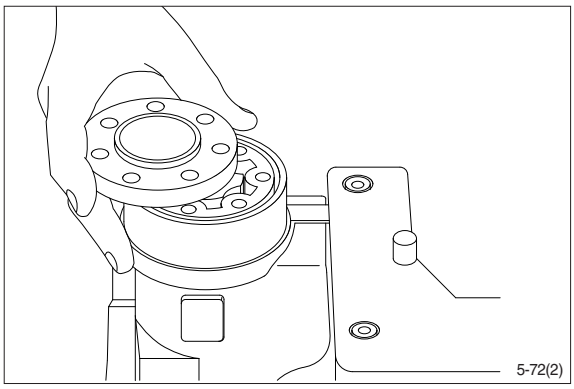
Port	Size	Torque [kgf · m (lbf · ft)]
L	3/4-16 UNF - 16	6.1±0.6 (44.1±4.3)
R	3/4-16 UNF - 16	6.1±0.6 (44.1±4.3)
T	3/4-16 UNF - 16	6.1±0.6 (44.1±4.3)
P	3/4-16 UNF - 16	6.1±0.6 (44.1±4.3)
LS	7/16 - 20UNF	4.0±0.5 (28.9±3.6)
Mounting bolt	M10×1.5	4.0±0.5 (28.9±3.6)

4) DISASSEMBLY

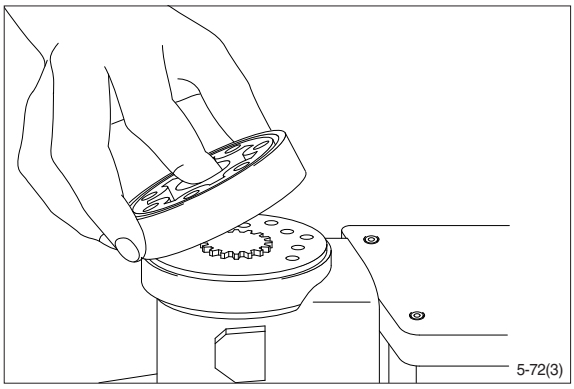
(1) Disassemble steering column from steering unit and place the steering unit in the holding tool.
Screw out the screws in the end cover (6-off plus one special screw).


5-72(1)

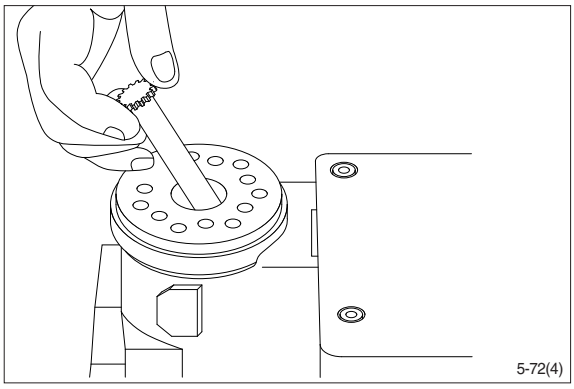
(2) Remove the end cover, sideways.


5-72(2)

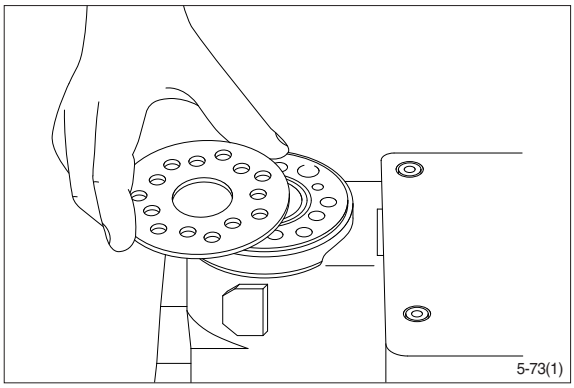
(3) Lift the gearwheel set off the unit.
Take out the two O-rings.


5-72(3)

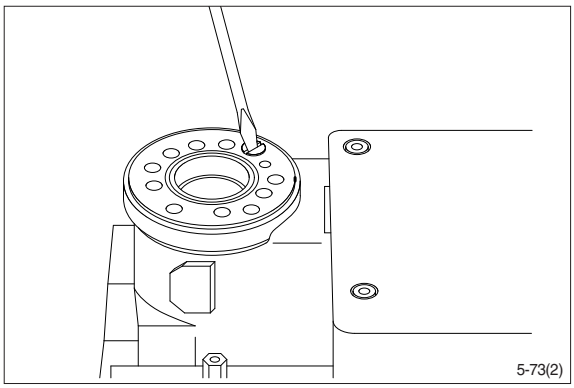
(4) Remove cardan shaft.


5-72(4)

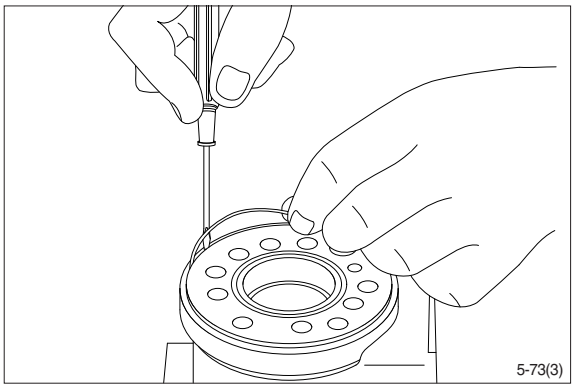
(5) Remove distributor plate.



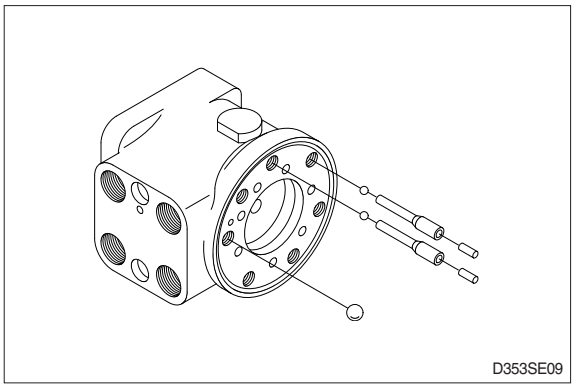
(6) Screw out the threaded bush over the check valve.



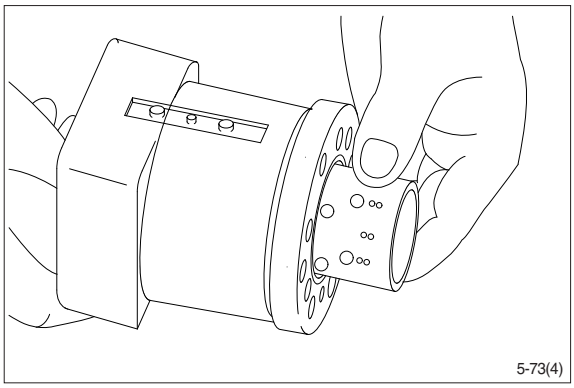
(7) Remove O-ring.



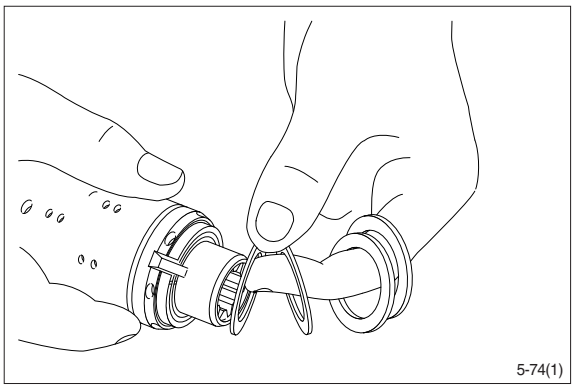
(8) Shake out the check valve ball and suction valve pins and balls.



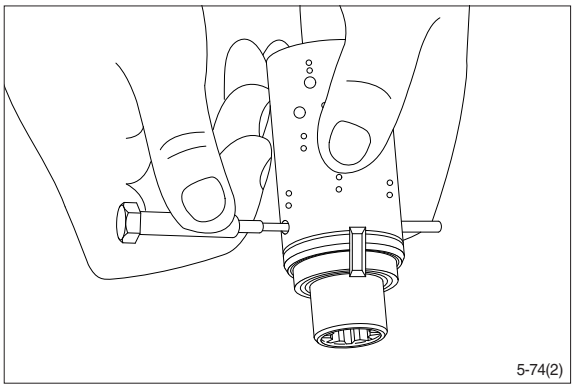
(9) Take care to keep the cross pin in the sleeve and spool horizontal. The pin can be seen through the open end of the spool. Press the spool inwards and the sleeve, ring, bearing races and thrust bearing will be pushed out of the housing together.


5-73(4)

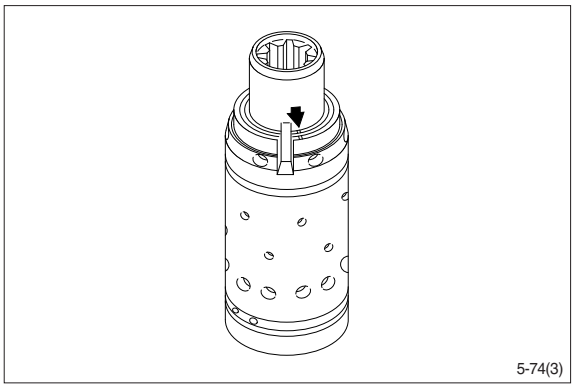
(10) Take ring, bearing races and thrust bearing from sleeve and spool. The outer (Thin) bearing race can sometimes "stick" in the housing, therefore check that it has come out.


5-74(1)

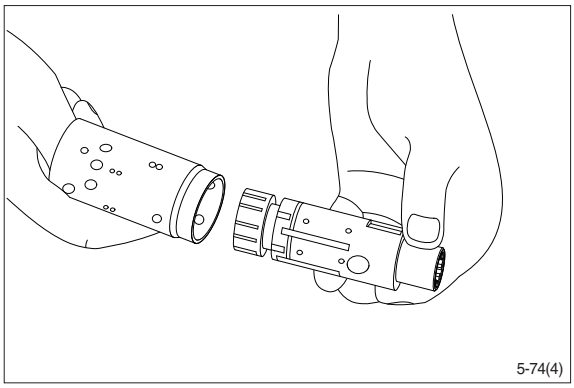
(11) Press out the cross pin. Use the special screw from the end cover.


5-74(2)

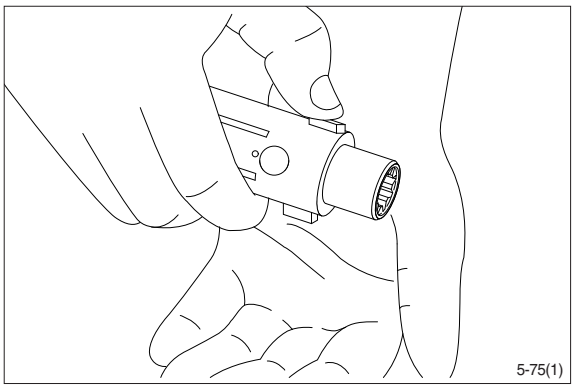
※ A small mark has been made with a pumice stone on both spool and sleeve close to one of the slots for the neutral position springs (See drawing).
If the mark is not visible, remember to leave a mark of your own on sleeve and spool before the neutral position springs are disassembled.


5-74(3)

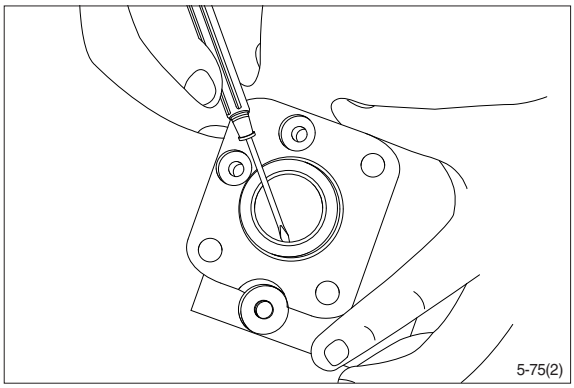
(12) Carefully press the spool out of the sleeve.



(13) Press the neutral position springs out of their slots in the spool.

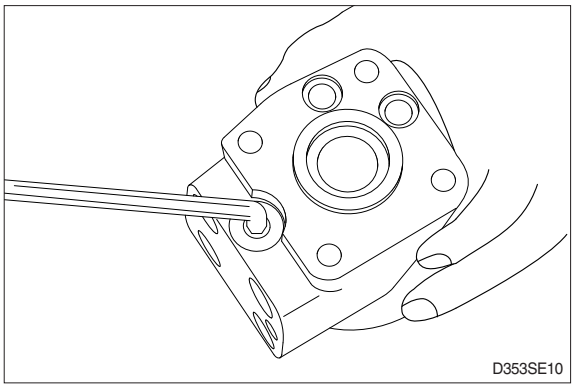


(14) Remove dust seal and O-ring.

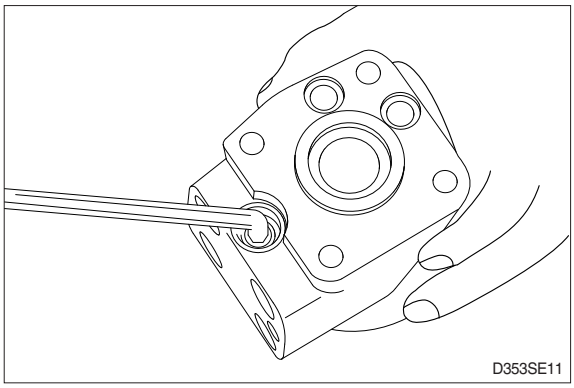


Disassembling the pressure relief valve

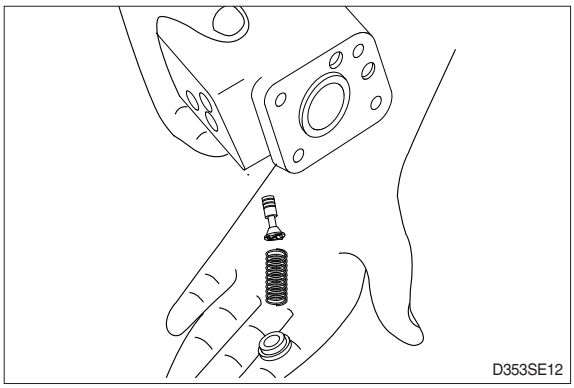
(15) Screw out the plug using an 8mm hexagon socket spanner.
Remove seal washers.



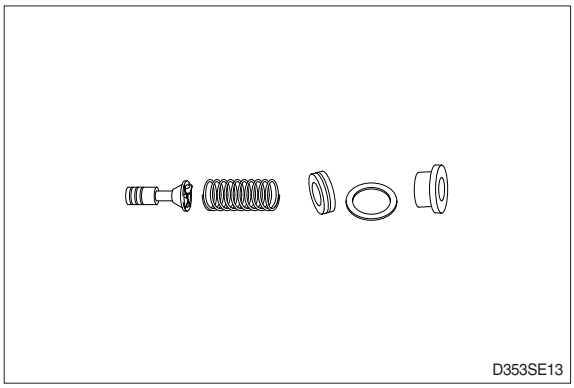
(16) Unscrew the setting screw using an 8mm hexagon socket spanner.



(17) Shake out spring and piston. The valve seat is bonded into the housing and cannot be removed.



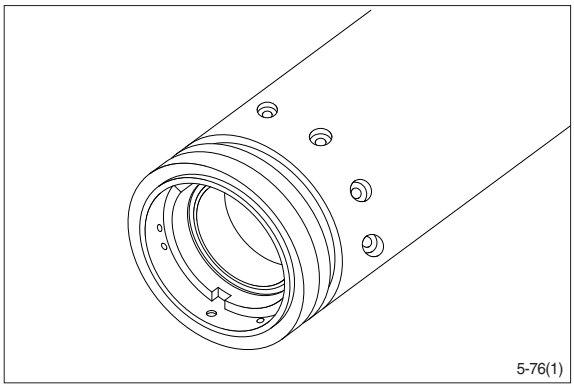
(18) The pressure relief valve is now disassembled.



5) ASSEMBLY

(1) Assemble spool and sleeve.

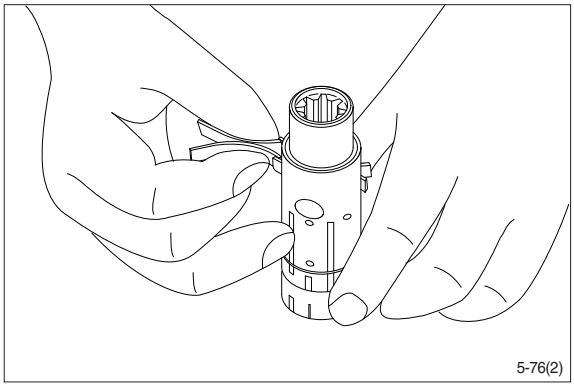
※ When assembling spool and sleeve only one of two possible ways of positioning the spring slots is correct. There are three slots in the spool and three holes in the sleeve in the end of the spool / sleeve opposite to the end with spring slots. Place the slots and holes opposite each other so that parts of the holes in the sleeve are visible through the slots in the spool.



5-76(1)

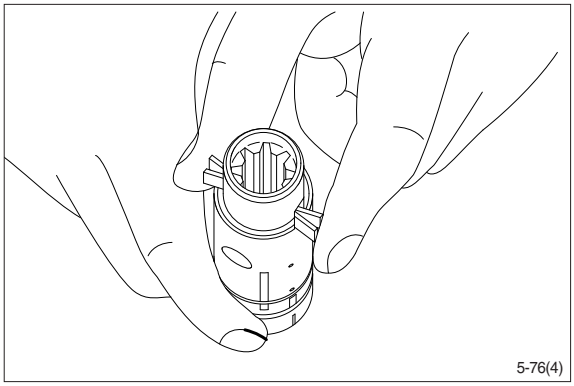
(2) Place the two flat neutral position springs in the slot.

Place the curved springs between the flat ones and press them into place (see assembly pattern).



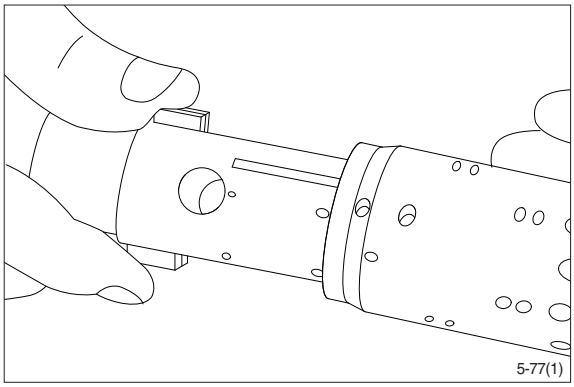
5-76(2)

(3) Line up the spring set.



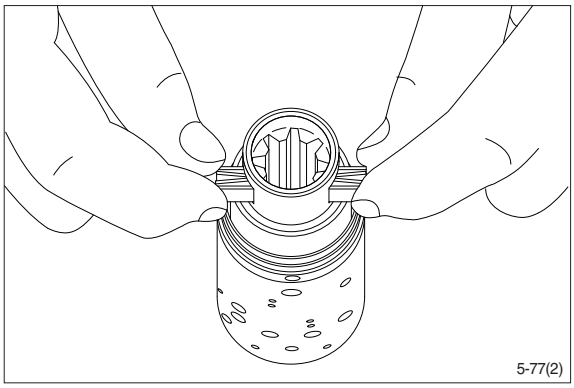
5-76(4)

(4) Guide the spool into the sleeve. Make sure that spool and sleeve are placed correctly in relation to each other.

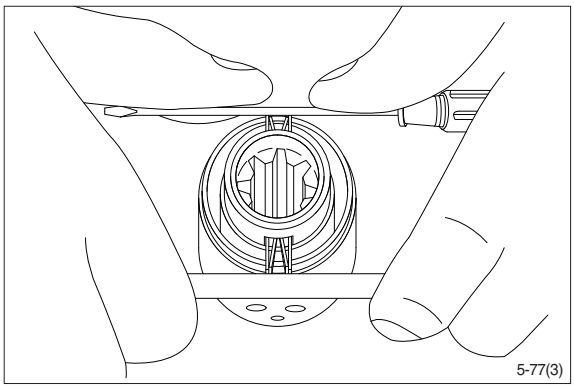


5-77(1)

(5) Press the springs together and push the neutral position springs into place in the sleeve.

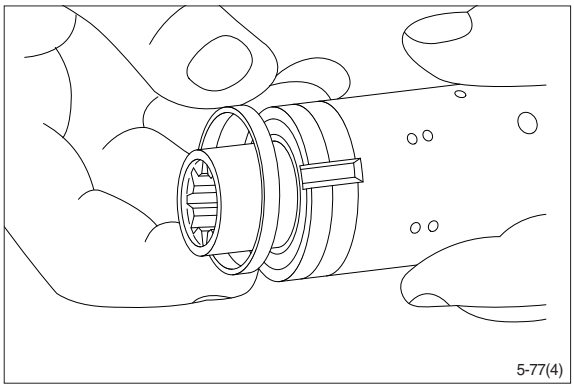

5-77(2)

(6) Line up the springs and center them.

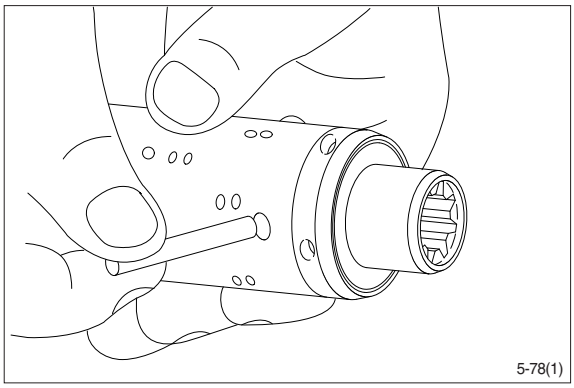

5-77(3)

(7) Guide the ring down over the sleeve.

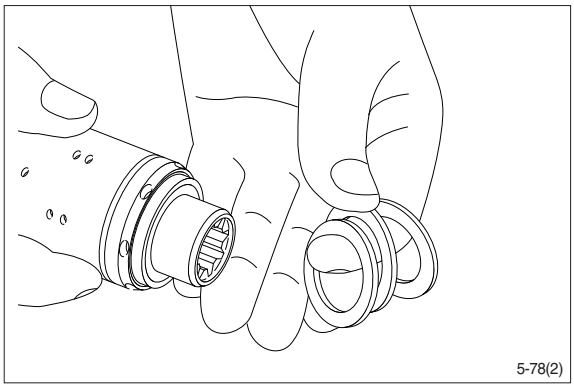
※ The ring should be able to rotate free of the springs.


5-77(4)

(8) Fit the cross pin into the spool / sleeve.

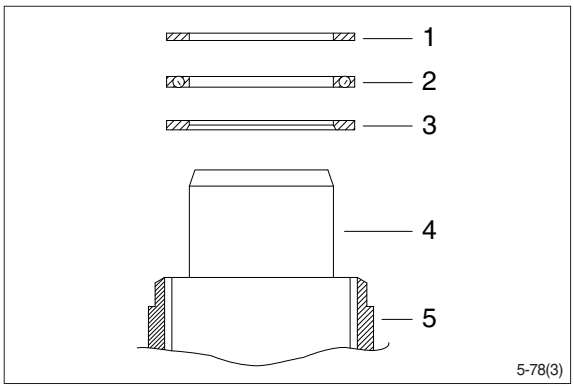

5-78(1)

(9) Fit bearing races and needle bearing as shown on below drawing.



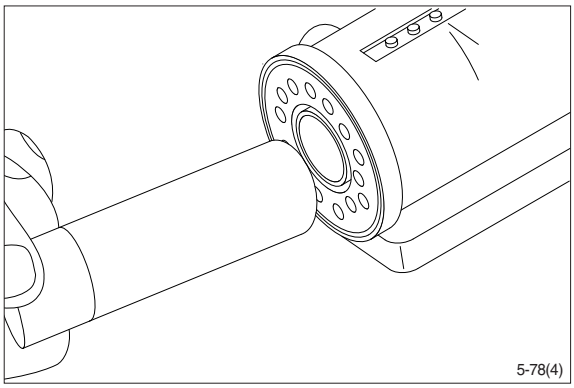
※ **Assembly pattern for standard bearings**

1 Outer bearing race
2 Thrust bearing
3 Inner bearing race
4 Spool
5 Sleeve

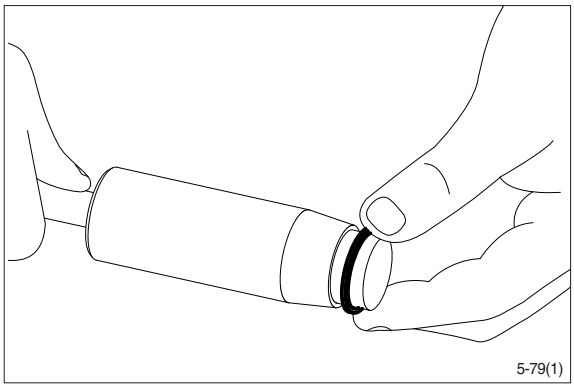


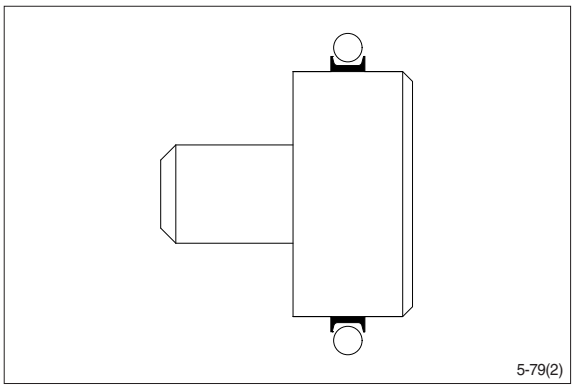
Installation instruction for O-ring

(10) Turn the steering unit until the bore is horizontal. Guide the outer part of the assembly tool into the bore for the spool / sleeve.

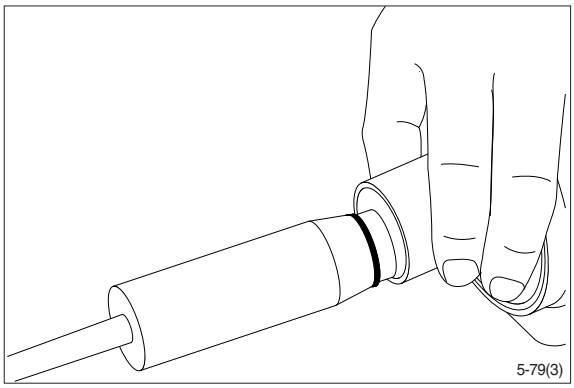


(11) Grease O-ring with hydraulic oil and place them on the tool.

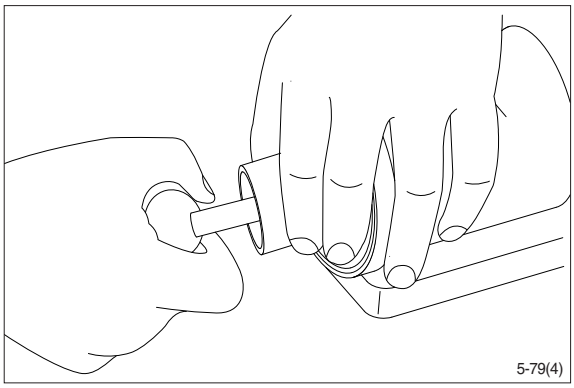

5-79(1)


5-79(2)

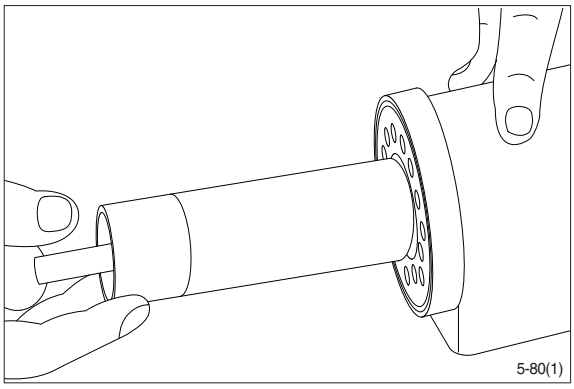
(12) Hold the outer part of the assembly tool in the bottom of the steering unit housing and guide the inner part of the tool right to the bottom.


5-79(3)

(13) Press and turn the O-ring into position in the housing.

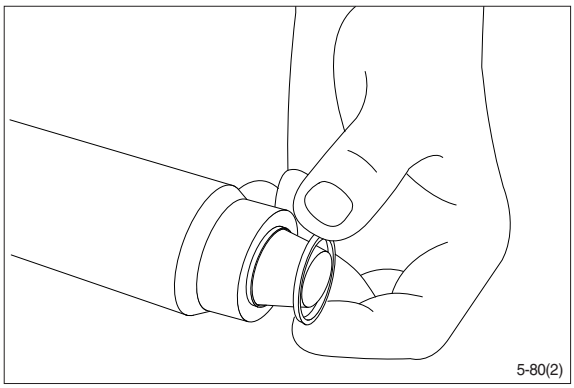

5-79(4)

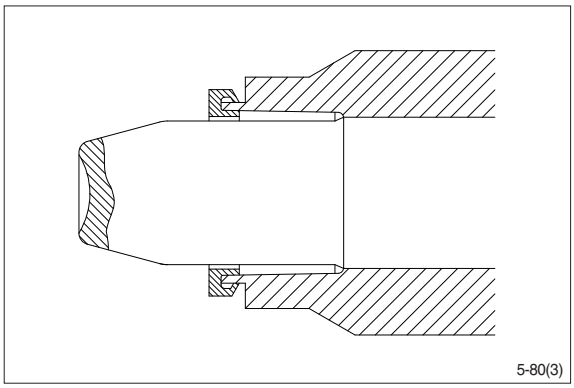
(14) Draw the inner and outer parts of the assembly tool out of the steering unit bore, leaving the guide from the inner part in the bore.



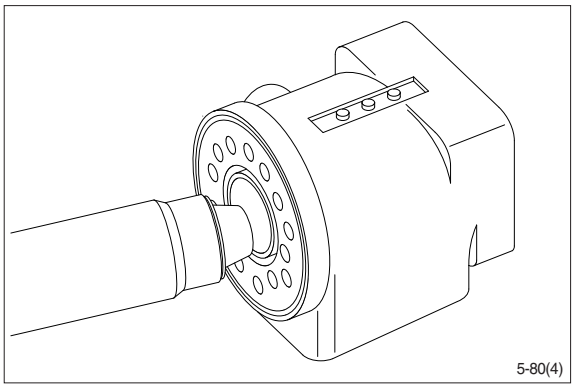
Installation instructions for lip seal

(15) Lubricate the lip seal with hydraulic oil and place it on the assembly tool.

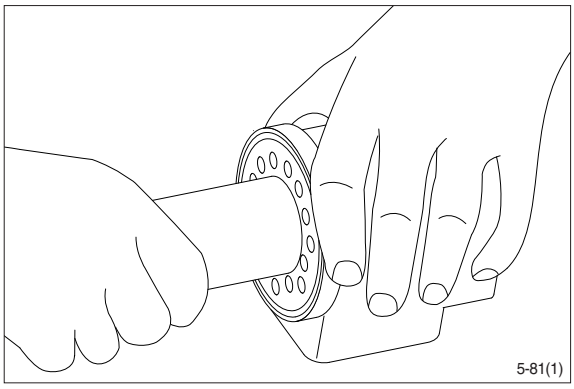




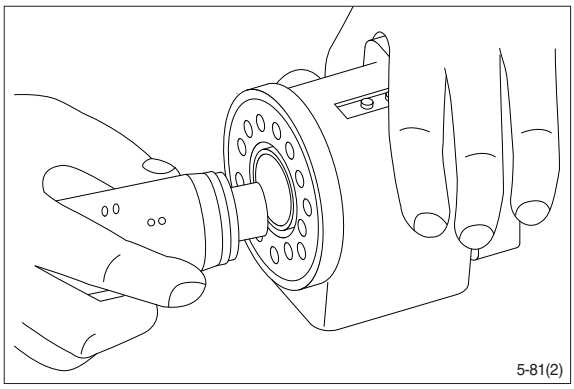
(16) Guide the assembly tool right to the bottom.



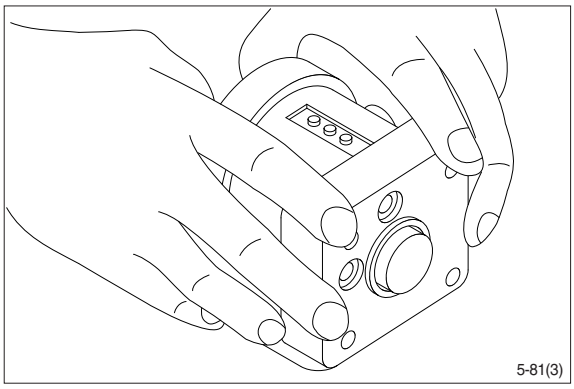
(17) Press and turn the lip seal into place in the housing.



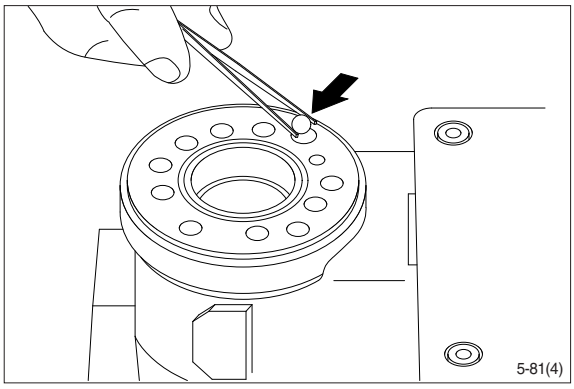
(18) With a light turning movement, guide the spool and sleeve into the bore.
Fit the spool set holding the cross pin horizontal.



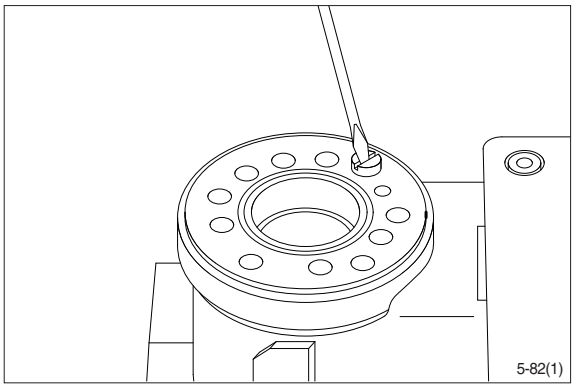
(19) The spool set will push out the assembly tool guide. The O-ring are now in position.



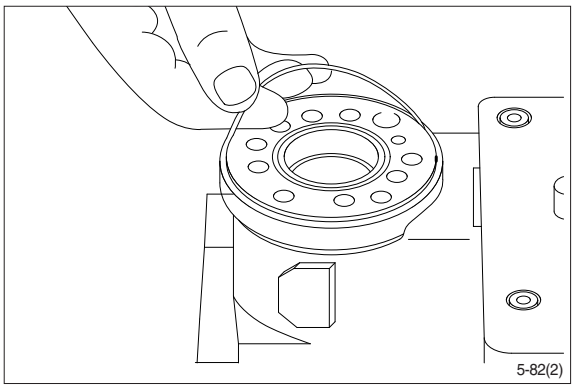
(20) Turn the steering unit until the bore is vertical again. Put the check valve ball into the hole indicated by the arrow.



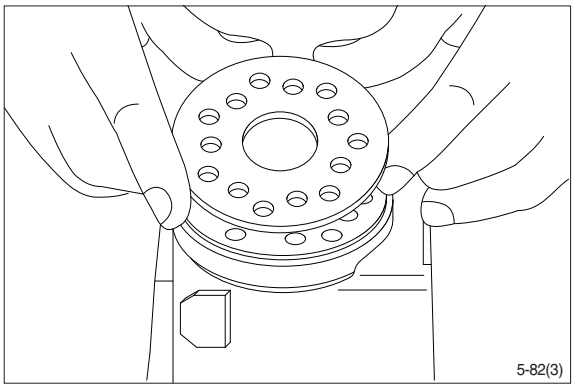
(21) Screw the threaded bush lightly into the check valve bore. The top of the bush must lie just below the surface of the housing.



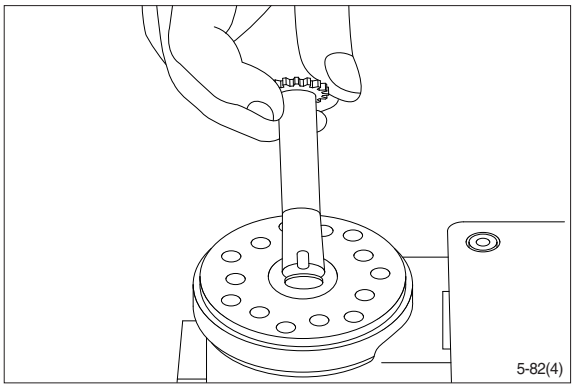
(22) Grease the O-ring with mineral oil approx. viscosity 500 cSt at 20 °C .



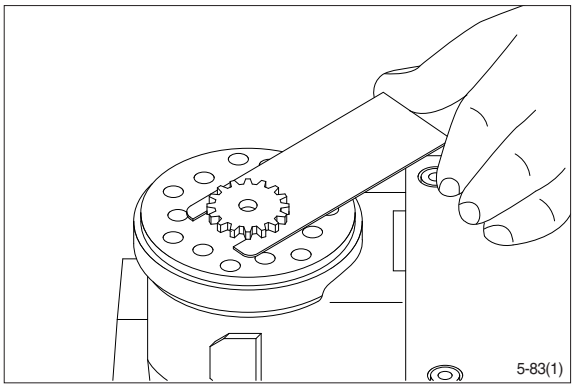
(23) Place the distributor plate so that the channel holes match the holes in the housing.



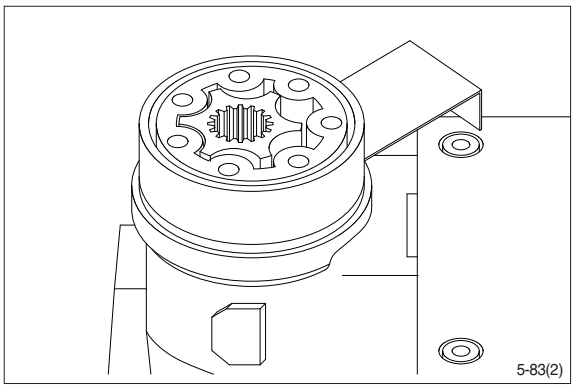
(24) Guide the cardan shaft down into the bore so that the slot is parallel with the connection flange.



(25) Place the cardan shaft as shown - so that it is held in position by the mounting fork.



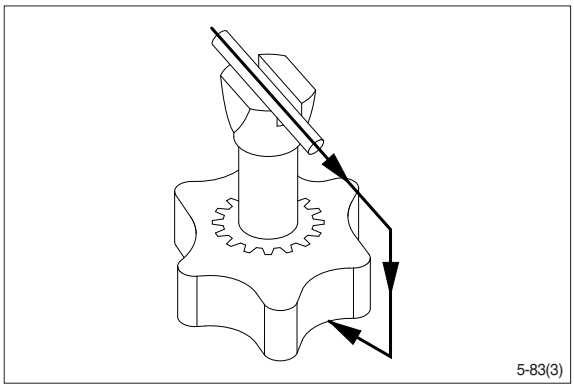
(26) Grease the two O-rings with mineral oil approx. viscosity 500 cSt at 20 °C and place them in the two grooves in the gear rim. Fit the gearwheel and rim on the cardan shaft.



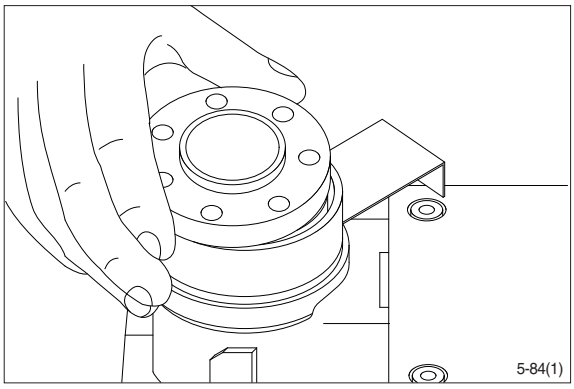
(27) Important

Fit the gearwheel (Rotor) and cardan shaft so that a tooth base in the rotor is positioned in relation to the shaft slot as shown.

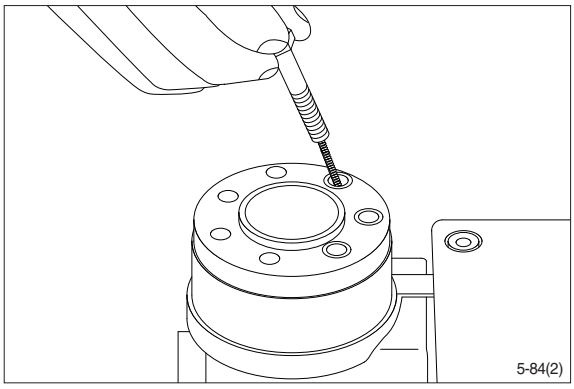
Turn the gear rim so that the seven through holes match the holes in the housing.



(28) Place the end cover in position.

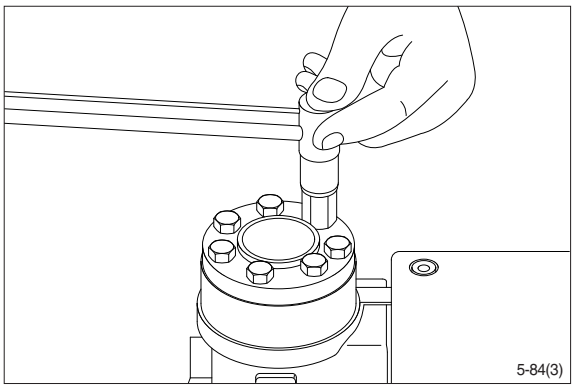


(29) Fit the special screw with washer and place it in the hole shown.

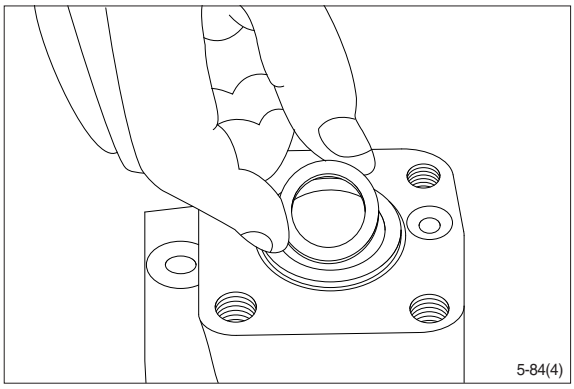

5-84(2)

(30) Fit the six screws with washers and insert them. Cross-tighten all the screws and the rolled pin.

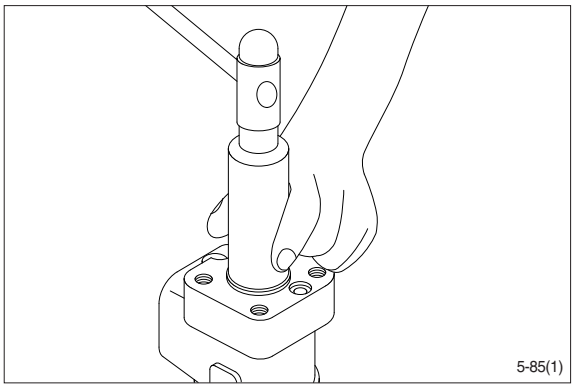
· Tightening torque : 4.0±0.5 kgf · m
(28.9±3.6 lbf · ft)


5-84(3)

(31) Place the dust seal ring in the housing.

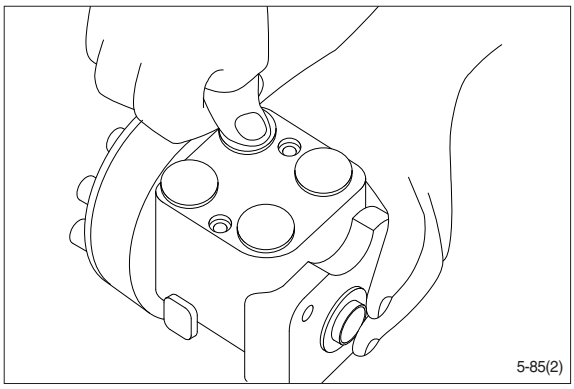

5-84(4)

(32) Fit the dust seal ring in the housing.


5-85(1)

(33) Press the plastic plugs into the connection ports.

※ Do not use a hammer!



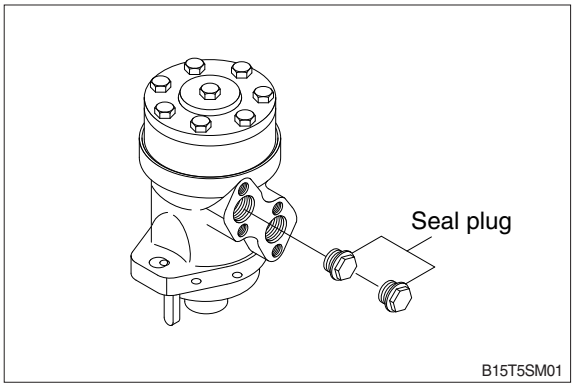
2. HYDRAULIC MOTOR

1) DISASSEMBLY

(1) Seal plugs

Put the motor in a holding tool, with the output shaft downward.

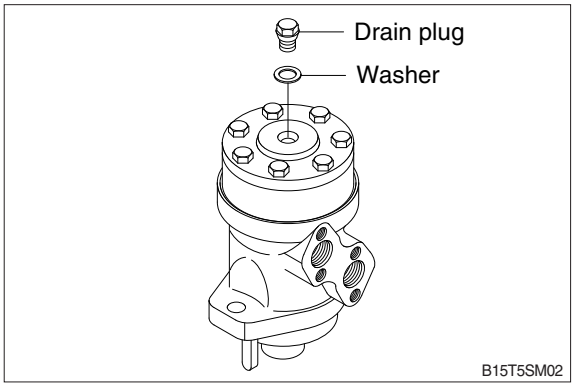
For end port version, use 10 mm (0.4 in) hexagon socket spanner.



(2) Drain plug and washer

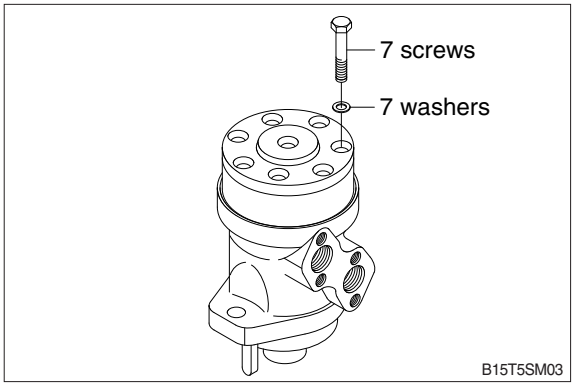
A/flat, other version : 19 mm (0.75 in)

Not SAE washer.



(3) Screws, washers (7 off)

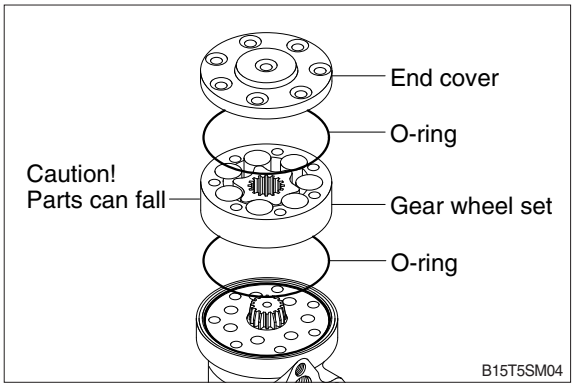
Use a 13 mm (0.5 in) spanner socket.



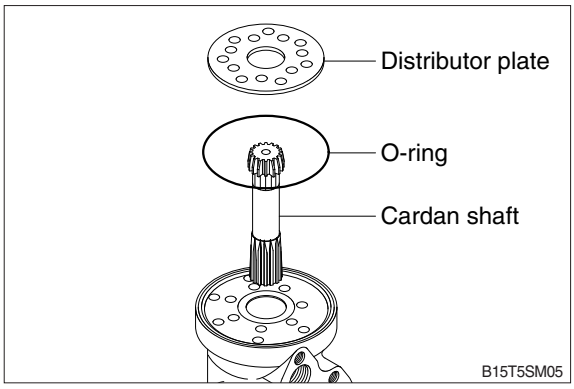
(4) End cover, gear wheel set, O-ring (2 off)

Remove end cover sideways.

Keep fingers under the gear wheel set to prevent the parts from falling out.

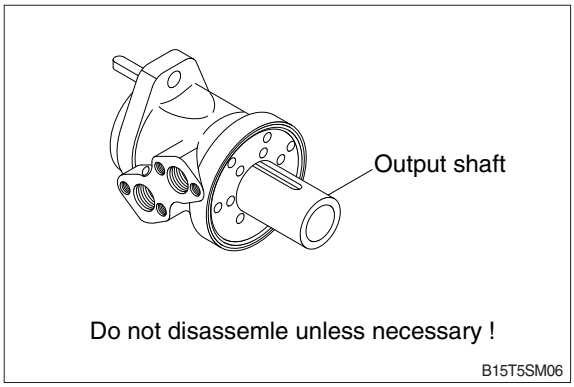


(5) Cardan shaft, plate, O-ring.
Remove orderly.



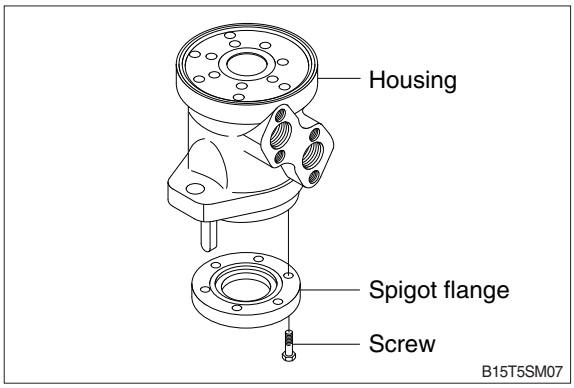
(6) Output shaft

Shaft and bearings should normally not be removed from housing. However, if necessary for inspecfion and cleaning, remove the shaft from the housing front end. The rear bearing can thus remain in the housing. After this, turn the motor.



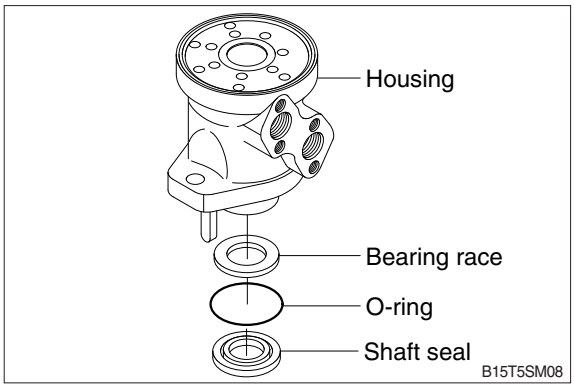
(7) Screws, spigot flange

Use torques-spanner type T30, 9 mm (0.35 in)screw driver or hexagon socket spanner 4 or 5 mm (0.16 or 0.20 in).



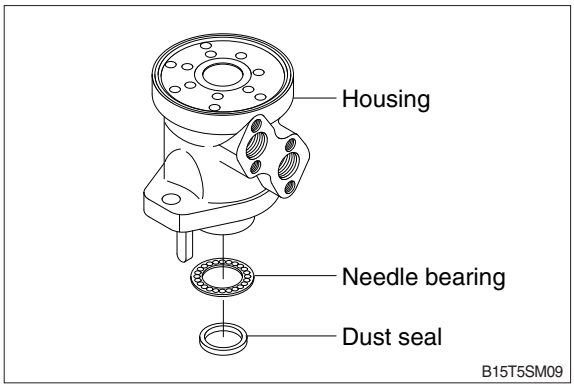
(8) O-ring, bearing race, shaft seal

Use a 2 mm (0.08 in) screw driver.



(9) Dust seal, needle bearing

Use a 4 mm (0.16 in) screw driver.

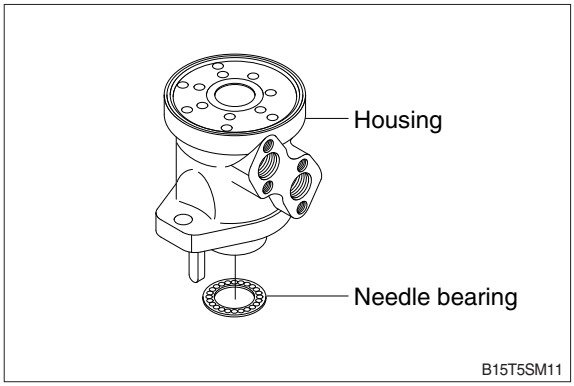


2) ASSEMBLY

- Clean all parts carefully with low aromatic kerosine
- Check all parts carefully and replace if necessary
- Before assembly, lubricate all parts with hydraulic oil and grease rubber parts with vaseline.

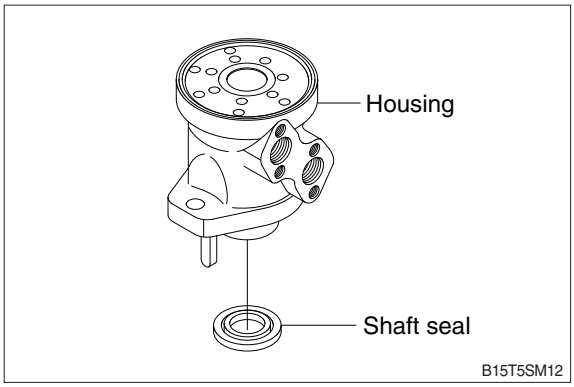
(1) Needle bearing

Place needle bearing onto the output shaft side.



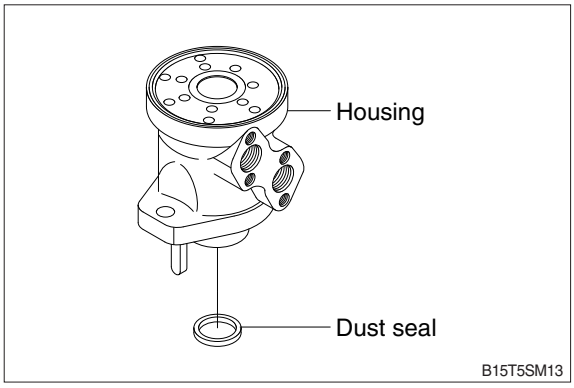
(2) Shaft seal

Knock the seal into position in the spigot flange. Check that the seal lies against the cover recess.



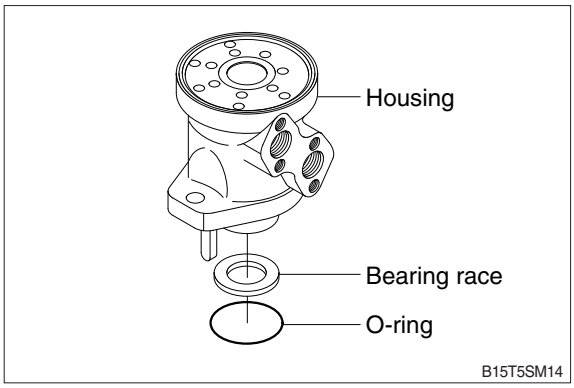
(3) Dust seal ring

Place the dust seal ring in the spigot flange and knock it into position with a plastic hammer and appropriate mandrel.



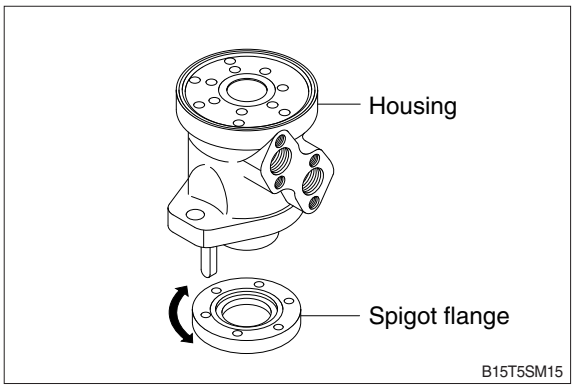
(4) Bearing race, O-ring

Grease the O-ring with vaseline and fit the bearing race and O-ring into the spigot flange.



(5) Spigot flange

Turn so that the holes line up.



(6) Screws (6 off)

· Tightening torque

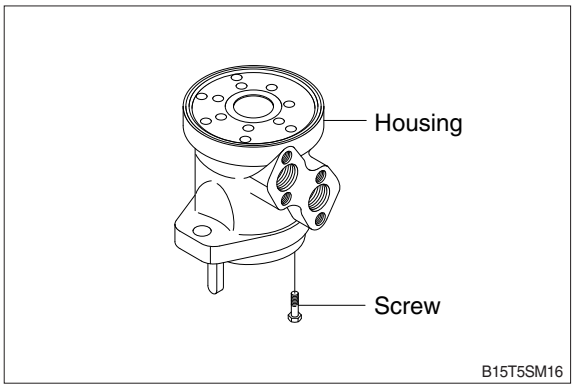
① Slotted screw M6
0.5~0.8 kgf · m (3.6~5.8 lbf · ft)

② Hexagon socket screws M5
0.5~1.0 kgf · m (3.6~7.2 lbf · ft)

③ Hexagon socket screws M6
1.2~1.5 kgf · m (8.7~10.8 lbf · ft)

④ Torx screws M6
0.5~0.8 kgf · m (3.6~5.8 lbf · ft)

※ Omit spring washer, if the screw head is protruding from spigot flange when screw has been tightened (old OMR metric version only). After this, turn the motor.

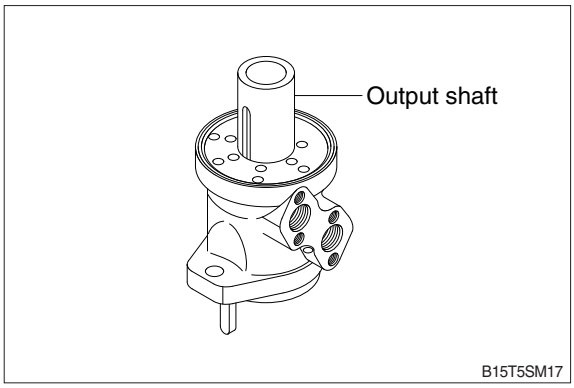


(7) Output shaft (1 1/4 inch splined shaft)

The rear shaft end of 1 1/4 inch splined shafts must be marked before fitted.

The mark must be positioned vertically above a communication slot leading up to the front annular channel.

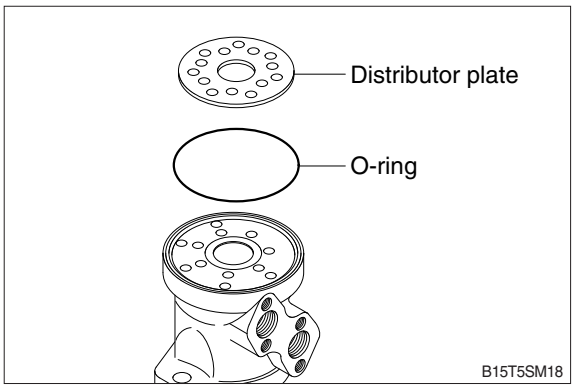
Grease the journals with hydraulic oil.



(8) O-ring, distributor plate

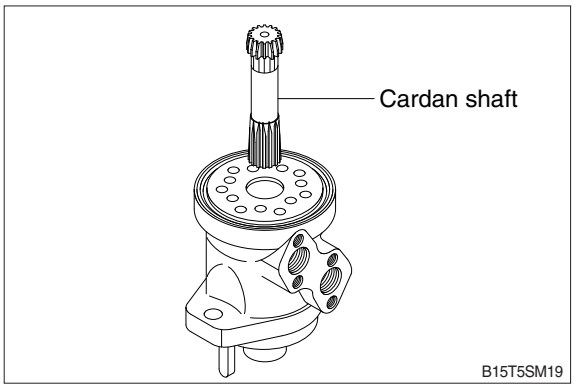
Grease the O-ring and put it in the O-ring groove of the housing.

Turn the distributor plate so that the holes line up.



(9) Cardan shaft

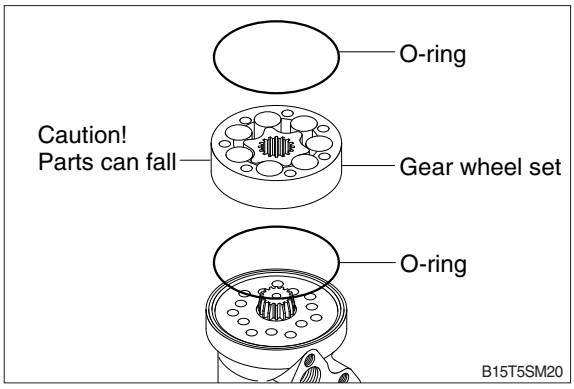
Guide the cardan shaft down into the motor housing.



(10)Gear wheel set, O-rings

Place the O-rings (greased) in the O-ring grooves of the gearwheel.

In gearwheels with non through splines place the gearwheel with the recess in the spline hole facing down towards the housing.

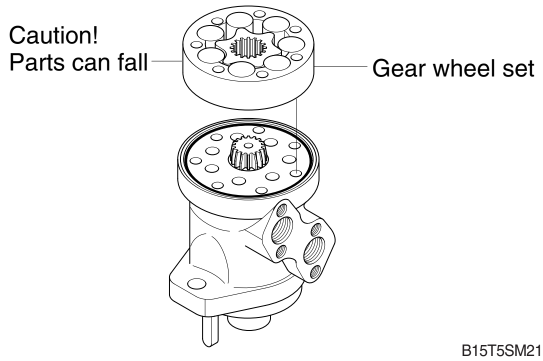


(11)Gear wheel set

Place the gearwheel set on the cardan shaft so that the top of a tooth in the external teeth of the gearwheel are vertically above the key slot in the output shaft (cylindrical or tapered) or the top of a tooth on a 1 inch splined shaft. In motors with 1 1/4 inch splined shaft the tooth top must be positioned vertically above the mark, see point 13.

Turn the gearwheel set counter clockwise until the cardan shaft and the gearwheel start to mesh (15°).

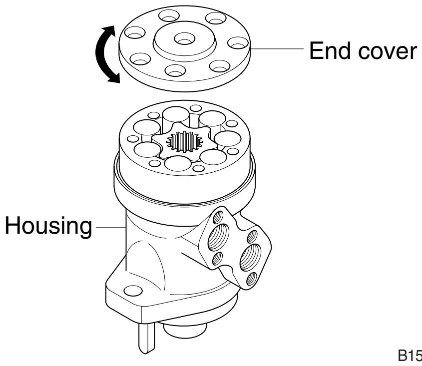
Turn the gearwheel rim so that the holes made for the screws line up.



B15T5SM21

(12)End cover

Turn the end cover so that the holes line up.

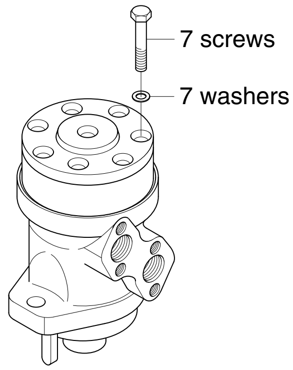


B15T5SM22

(13)Washer, screws (7 off)

Use a 13 mm spanner socket.

· Tightening torque :
  3.0~3.5 kgf · m (21.7~25.3 lbf · ft)

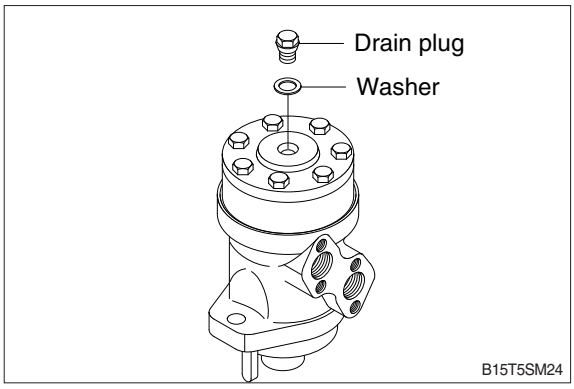


B15T5SM23

(14)Washer, drain plug

Use a 19 mm spanner socket.

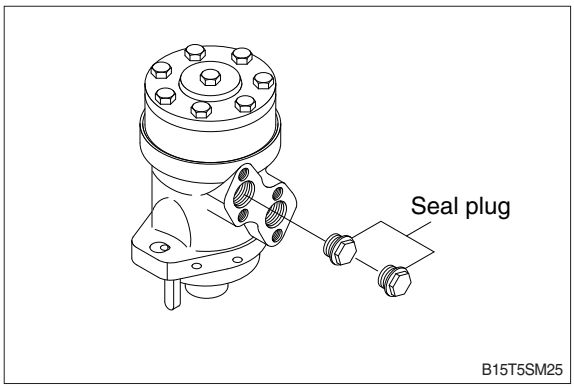
· Tightening torque :
3~6 kgf · m (21.7~43.4 lbf · ft)



(15)Seal plugs (threaded plugs)

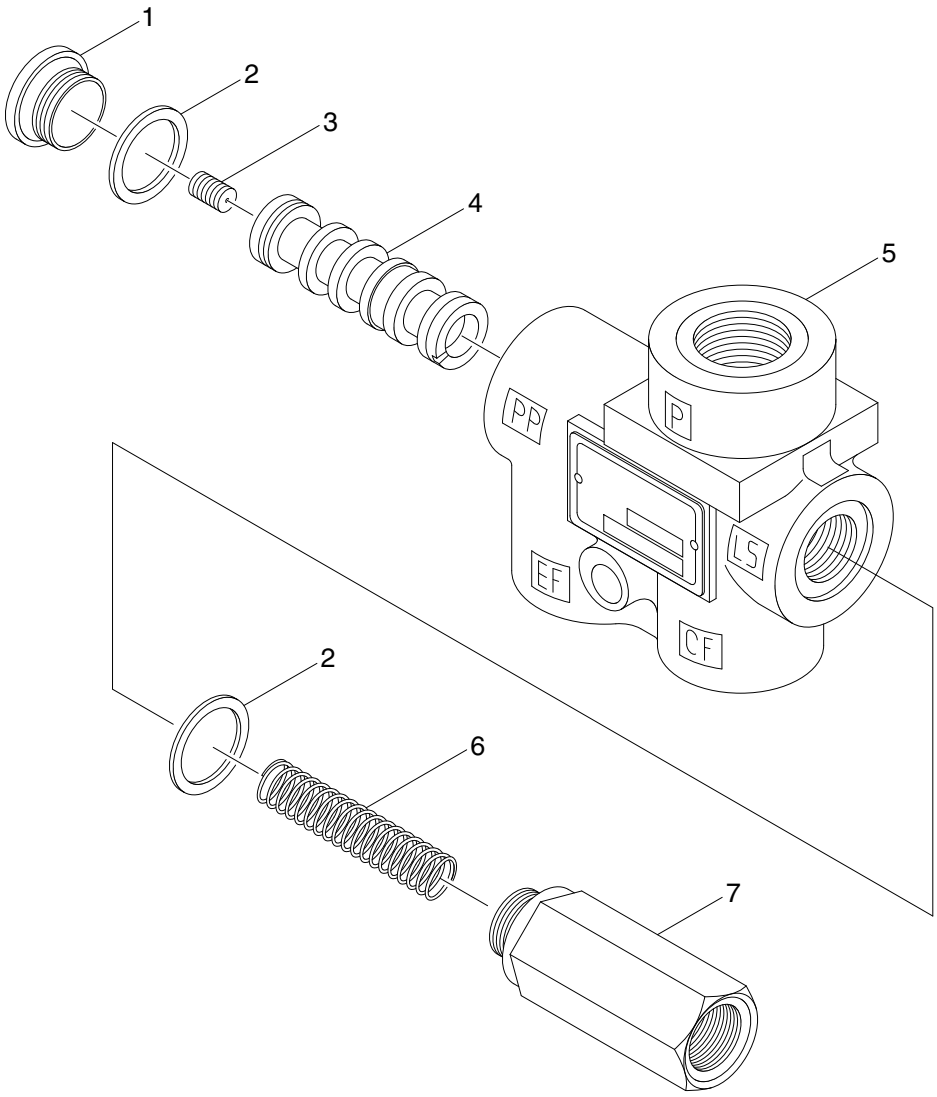
Side port version.

Screw plastic plugs.



3. PRIORITY VALVE

1) STRUCTURE



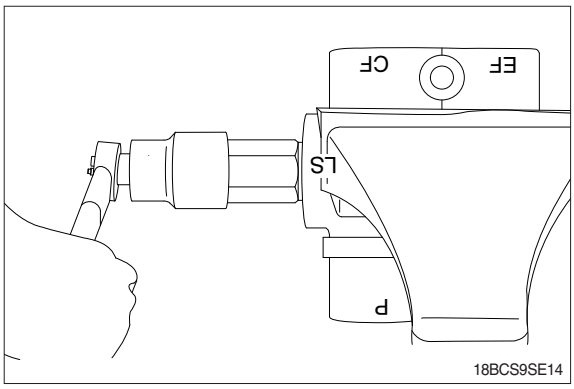
18BCS9SE08

1	Plug	4	Spool	7	Plug
2	Seal	5	Housing		
3	Orifice	6	Spring		

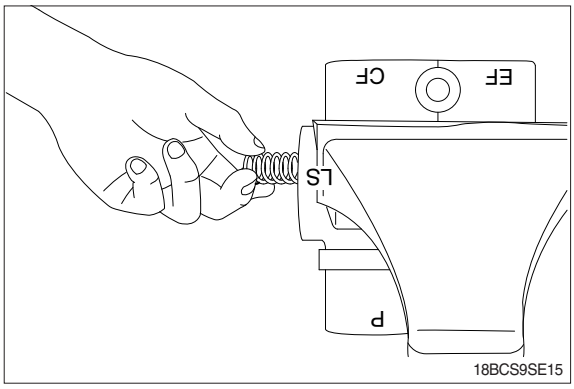
2) DISASSEMBLY

※ Cleanliness is the primary means of assuring satisfactory the priority valve life.
Select clean place.
Before removing the piping, clean the surrounding area of valve ports.

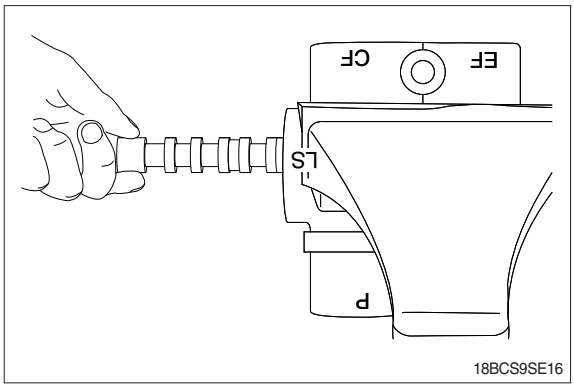
(1) Fix the housing (5) in a vise with copper or lead sheets.
Do not over tighten jaws.
(2) Loosen plug (7) for LS port.



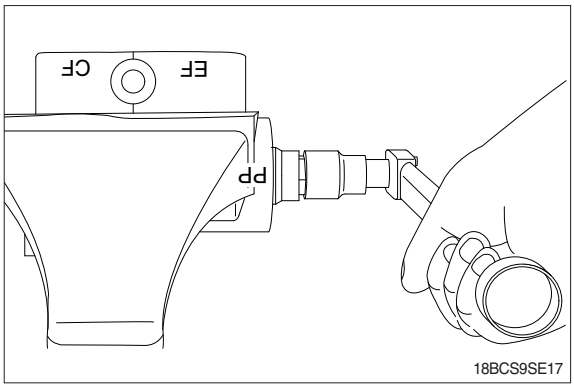
(3) Remove spring (6).



(4) Remove spool assy (4).
※ Can't remove the orifice (3) from spool (4), because the orifices were locked at the spool.



(5) Remove plug (1) and separate seal (2) and plug (1, 7) individually.



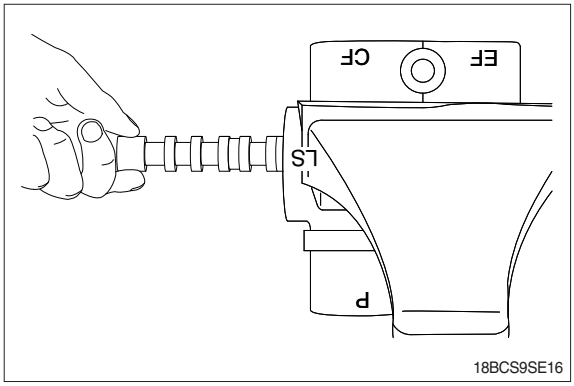
18BCS9SE17

3) ASSEMBLY

※ Clean all metal parts in clean solvent and blow dry with air and correct any damage, burrs and rust.
※ Do not wipe dry with cloth or paper towel.
※ Replace seals with new ones as a rule and coat with grease.

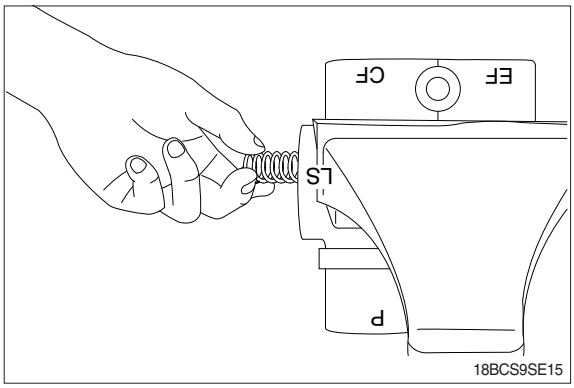
(1) Fix the housing (5) in a vise.
(2) Insert the spool (4).

※ Secure the spool (4) remain in their correct direction.
※ Secure the spool (4) to move smoothly by finger.



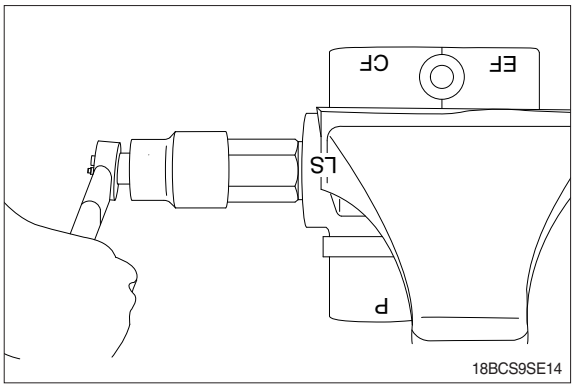
18BCS9SE16

(3) Insert the spring (6) into the housing (5).



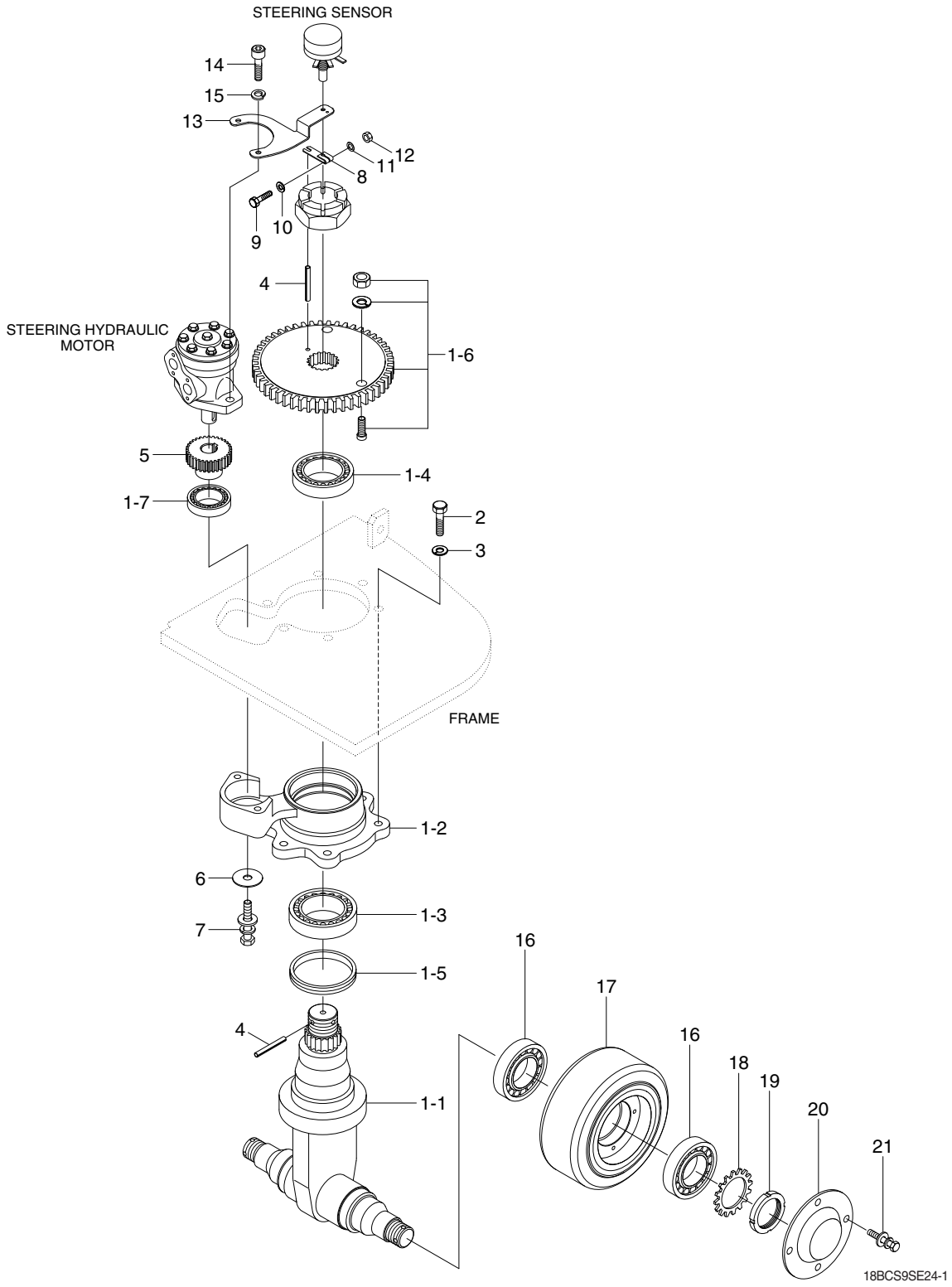
18BCS9SE15

(4) Install the seal (2) onto plug (1, 7) and install the plug (1, 7) into the housing (5).
- Tighten torque : 4.5 kgf · m (32.5 lbf · ft)



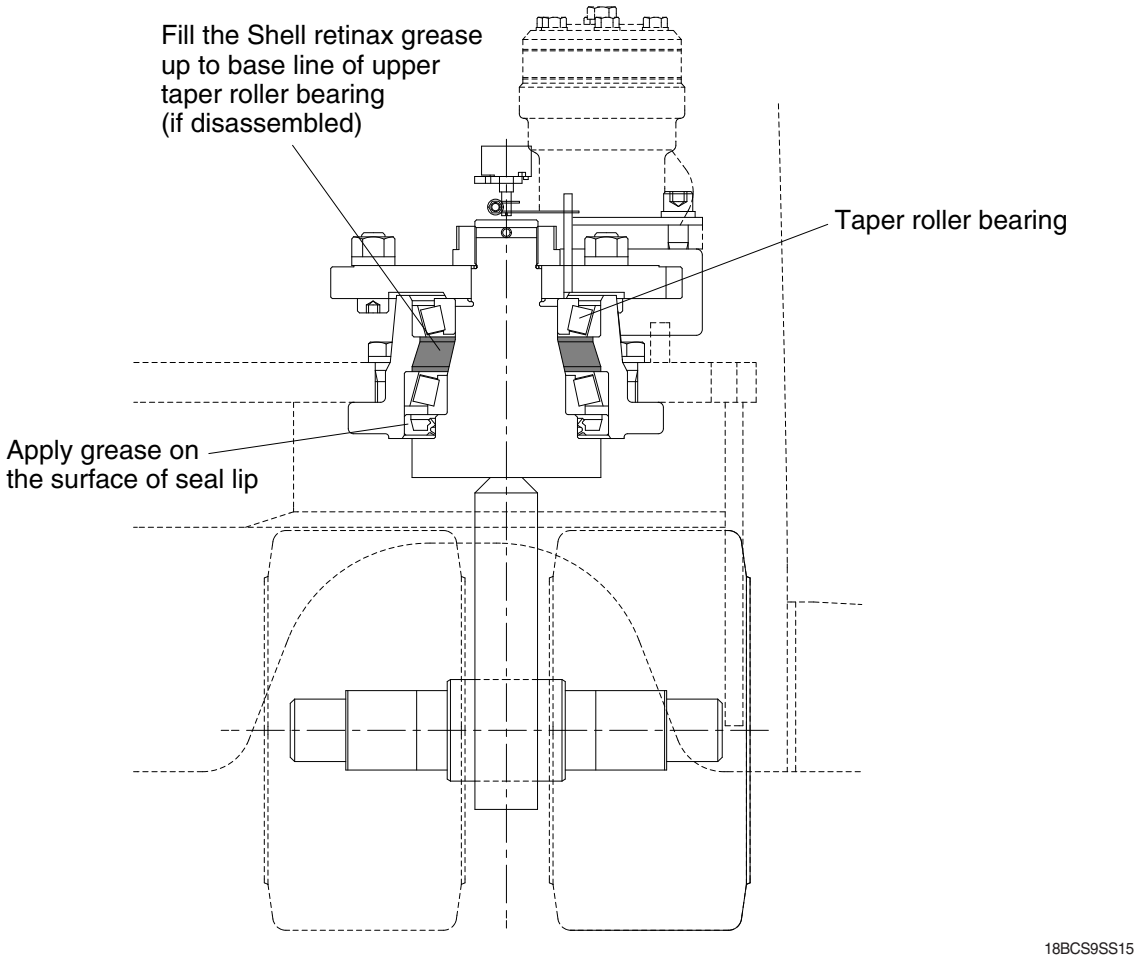
4. STEERING AXLE AND WHEEL

1) STRUCTURE



1	Steering axle assy	1-7	Bearing	8	Lever	15	Spring washer
1-1	Steering axle wa	2	Bolt	9	Hexagon bolt	16	Ball beating
1-2	Bracket	3	Spring washer	10	Spring washer	17	Rear tire
1-3	Taper roller bearing	4	Spring pin	11	Plain washer	18	Washer bearing
1-4	Taper roller bearing	5	Steering pinion	12	Hexagon nut	19	Rolling bearing nut
1-5	Oil seal	6	Special bolt	13	Bracket	20	End cover
1-6	Steering gear assy	7	Bolt with washer	14	Socket bolt	21	Washer with bolt

2) CHECK AND INSPECTION



(1) Check for any bend or twist. Slight bend or twist can be straightened by press, however, if not, replace the axle.

(2) Make visual check for cracks or other defects, also check the condition of fit of bearings.

(3) Check play of axle and sleeve bearing of bracket.
Replace the bracket if the play is excessive.