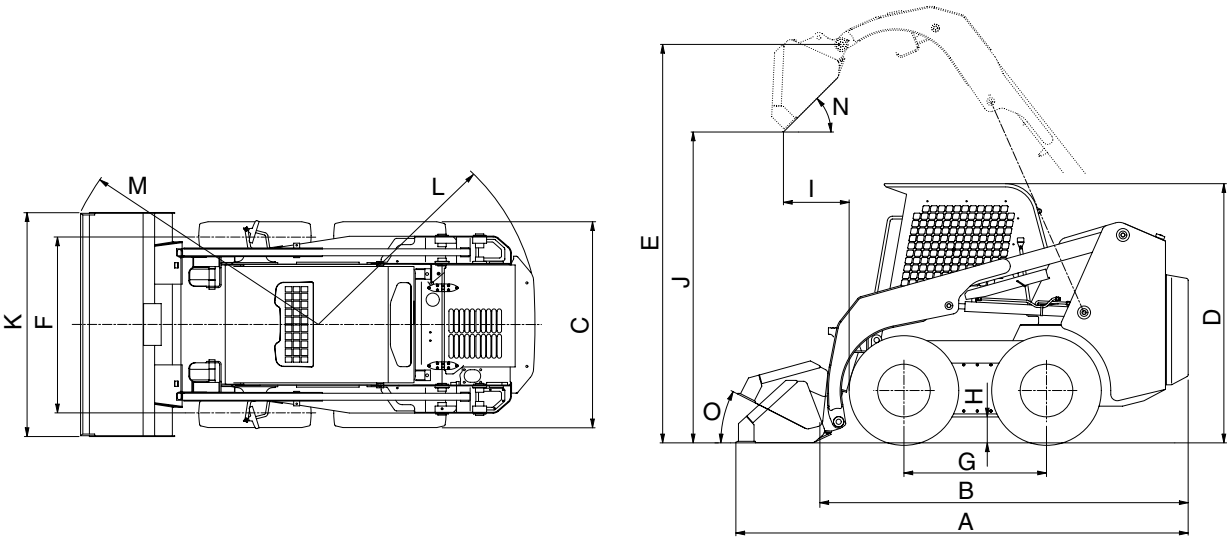
SECTION 1 GENERAL

2. SPECIFICATIONS

· WITH STANDARD BUCKET AND CANOPY



6507A2SP02

Description			Unit	Specification
Operating weight			kg(lb)	2690(5790)
Bucket capacity		Struck	$m^3(yd^3)$	0.25(0.33)
		Heaped		0.31(0.41)
Overall length		A	mm(ft-in)	3270(10' 9")
Overall length(Without bucket)		B		2625(8 ' 7")
Overall width(Except bucket)		C		1515(5' 0")
Overall height		D		1965(6' 5")
Overall height(To hinge pin)		E		2915(9' 7")
Tread		F		1255(4' 1")
Wheelbase		G		990(3' 3")
Ground clearance		H		183(0' 7 ")
Dump reach		I		550(1' 10")
Dump height		J		2240(7' 4")
Bucket width		K		1625(5' 4")
Clearance circle(Rear)		L		1560(5' 1")
Clearance circle(Front / bucket)		M		1920(6' 4")
Dump angle		N	Degree(°)	45
Roll back angle(Carry position)		O		27
Cycle time	Boom	Up	sec	3.9
		Down		2.3
	Bucket	Dump		1.9
		Roll back		1.3
Maximum travel speed			km/hr(mph)	11.1(6.9)
Minimum turning radius(Without bucket)			mm(ft-in)	1300(4' 3")
Gradeability			Degree(°)	20

8. QUANTITY OF OIL AND LUBRICATION

1) CHAIN SPROCKET CASE

Put the loader at a flat place and remove the check/fill plug between the two wheels to check oil level. If oil can be detected by inserting a finger through the check/fill plug opening, the level is satisfactory. If not, add 15W-40(API CH-4) oil as required through the same plug opening.

2) OIL TANK

Put the loader at a flat place and check the sight gauge plug after oil cools. If the fluid level of oil can be seen on plug nothing is abnormal. If it is not seen on the plug fill up the oil immediately.

3) ENGINE OIL

The fluid level of oil should be on top of the deep stick.

4) COOLING SYSTEM

To check coolant level open the rear door. Check to see that the coolant level lies between FULL and LOW.

5) SPLINE

Paint molybdenum disulfide compound to the splines in the operating motor and pump.

6) GREASE FITTING

(1) Inject grease into these parts.

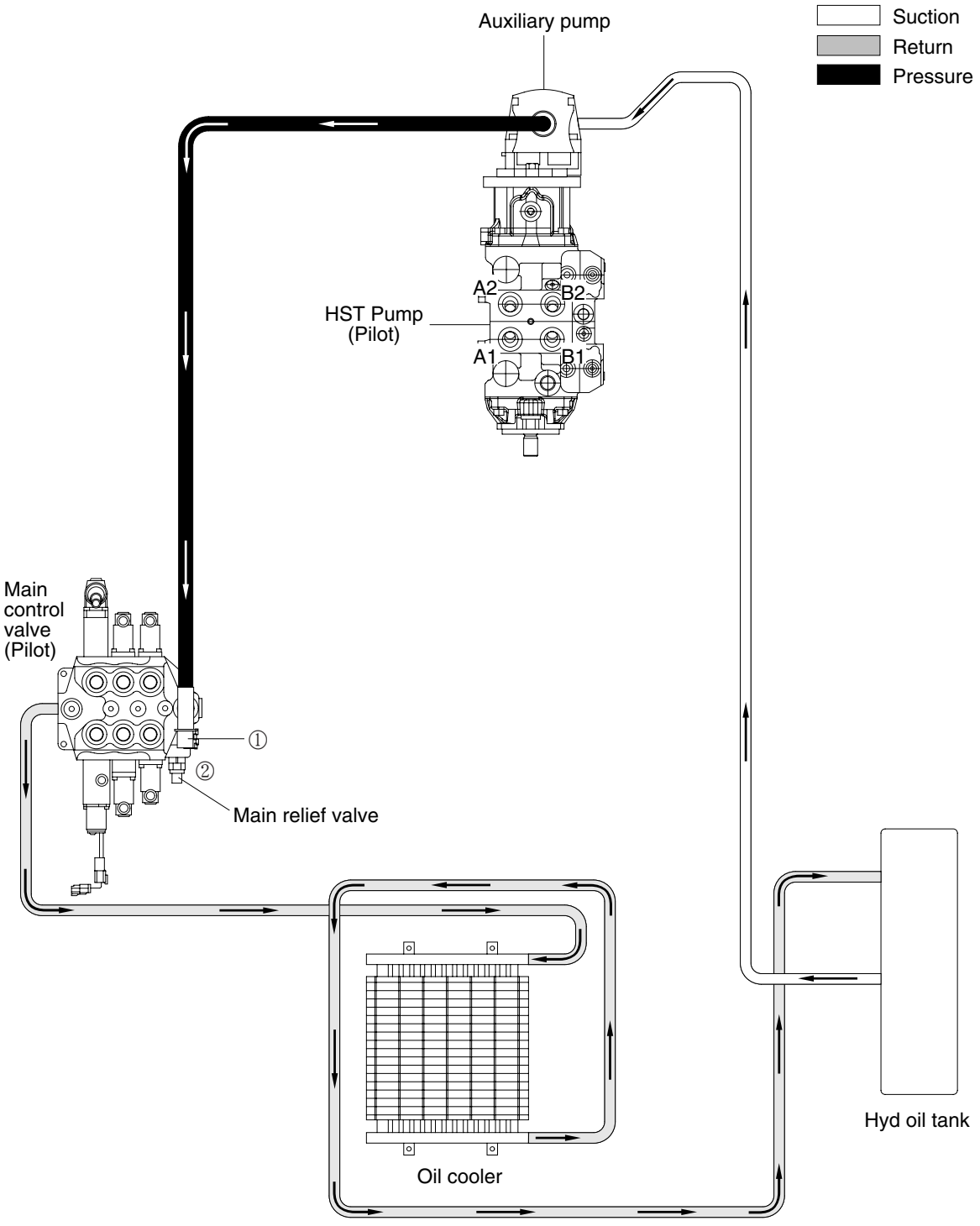
- Rear boom pivot pin(2)
- Implement pivot pin(2)
- Boom and tilt cylinder(8)

(2) Remove the extra grease.

2. PILOT TYPE

1) MAIN CONTROL VALVE SYSTEM PRESSURE

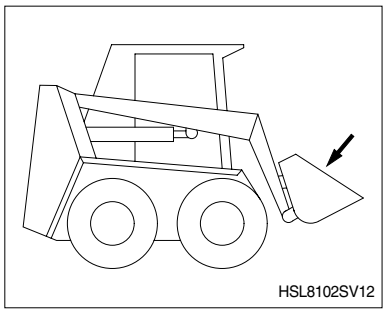
With a pressure gauge installed at test location ① and engine at 2700rpm ; Move the working control lever(RH side) to relief condition. The pressure reading should be 2490psi(175bar). If pressure is not correct, replace or adjust the main relief valve cartridge at location ②.
(Test port size ① : M16×2.0)

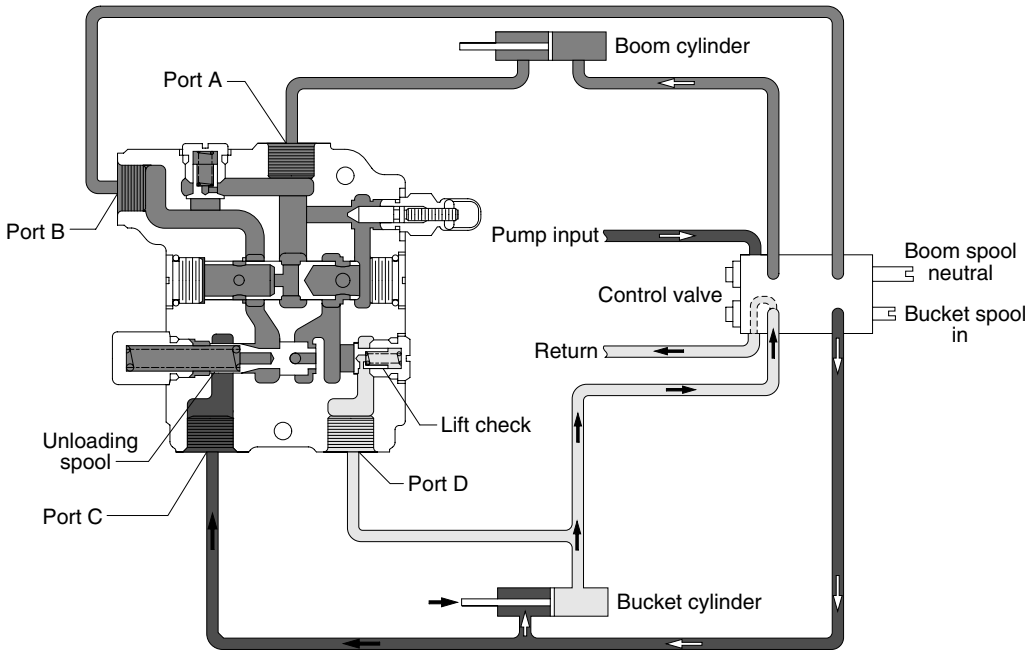


6507AHT01B

7. RETRACTING BUCKET CYLINDER

With the bucket spool shifted in, oil flow is directed to the rod port of the bucket cylinder. Flow also enters port C on the self level valve through a tee connection but is blocked by the unloading spool. Oil returning from the head port is directed back to the control valve and returns to tank. Oil flow from the head port enters port D on the self level valve through a tee connection but is blocked by the lift check.


HSL8102SV12



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Trapped oil
Pressure free oil
Pressurized oil

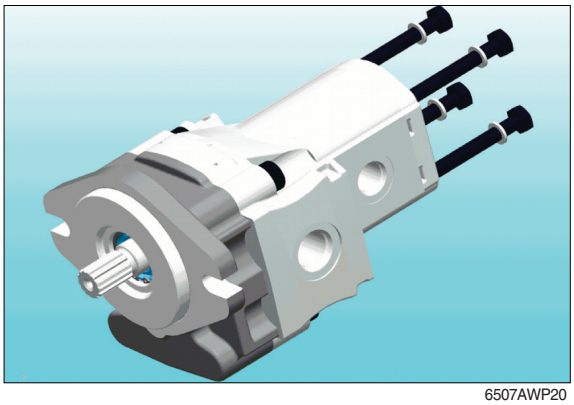
3) IMPORTANT

(1) Check immediately that any spare parts you receive have not been damaged in shipment.
(2) Always work in a clean environment.
(3) Wash all components in solvent and blow dry with compressed air before refitting.
(4) Take care not to damage rubber seals.
(5) Avoid damaging precision machined surfaces.
(6) Components should fit into their housings without excessive force. If force is necessary, this normally means that the component does not have the correct dimensional tolerances of is aligned incorrectly.
(7) When hand pressure is insufficient, only use presses or rubber hammer to fit components.
(8) Never strike components with steel hammers.
(9) Steel bush must be fitted only with a suitable press.
(10) Do not use hammers to fit bearings.
(11) Always respect the direction of rotation when assembling components.

4) DISASSEMBLY

(1) Separation 1st & 2nd working bodies

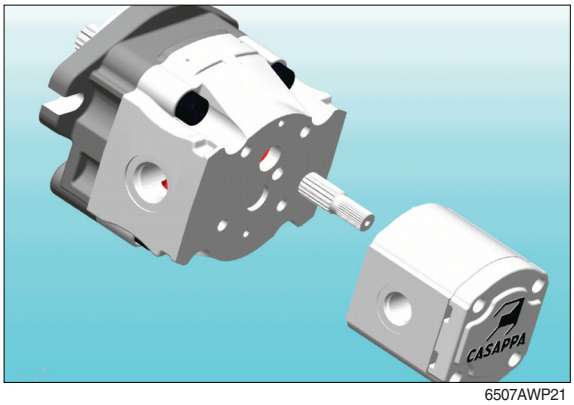
① Loosen and remove the assembling bolts and washers from the pump.



6507AWP20

② Remove the complete 2nd working section.

③ Remove through shaft.



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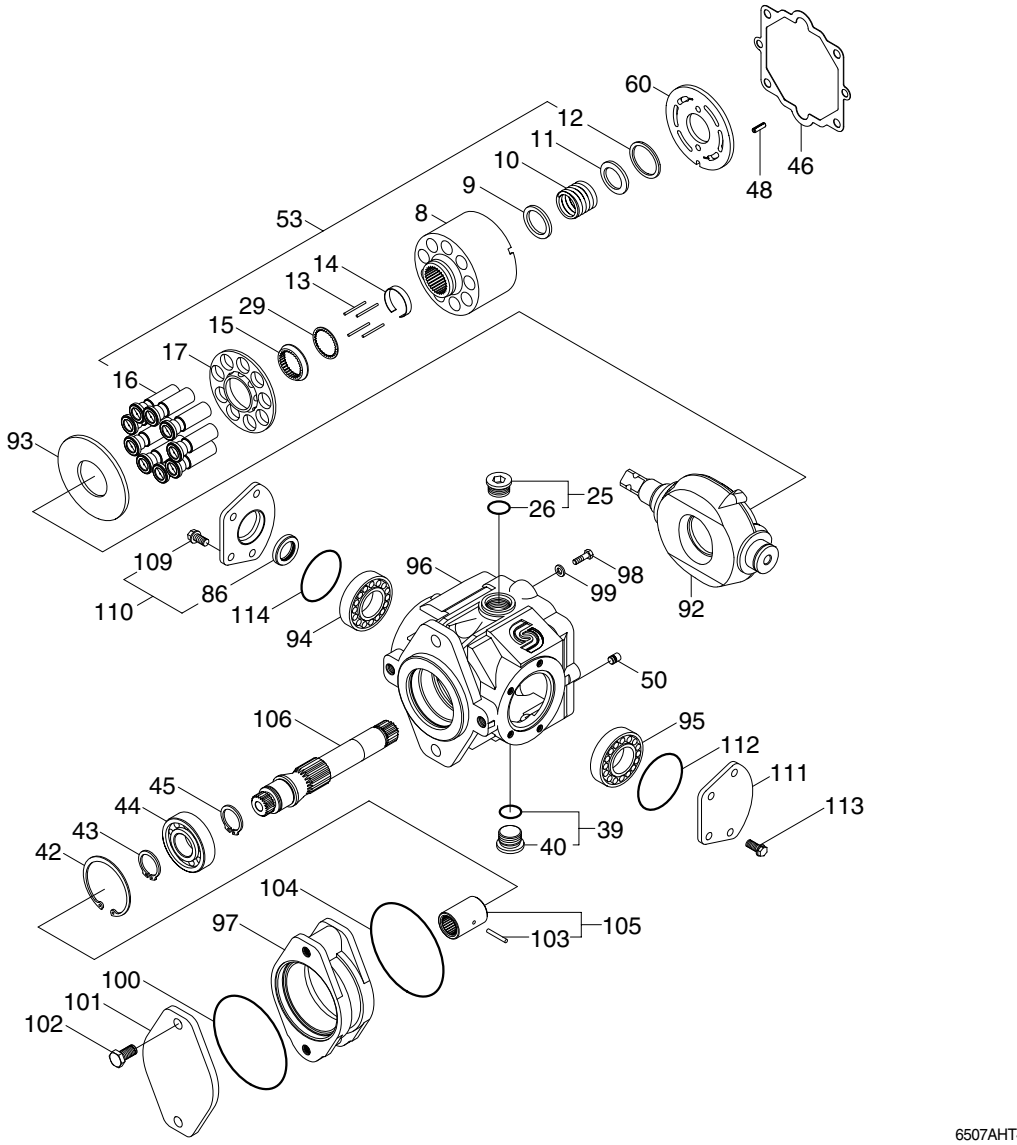
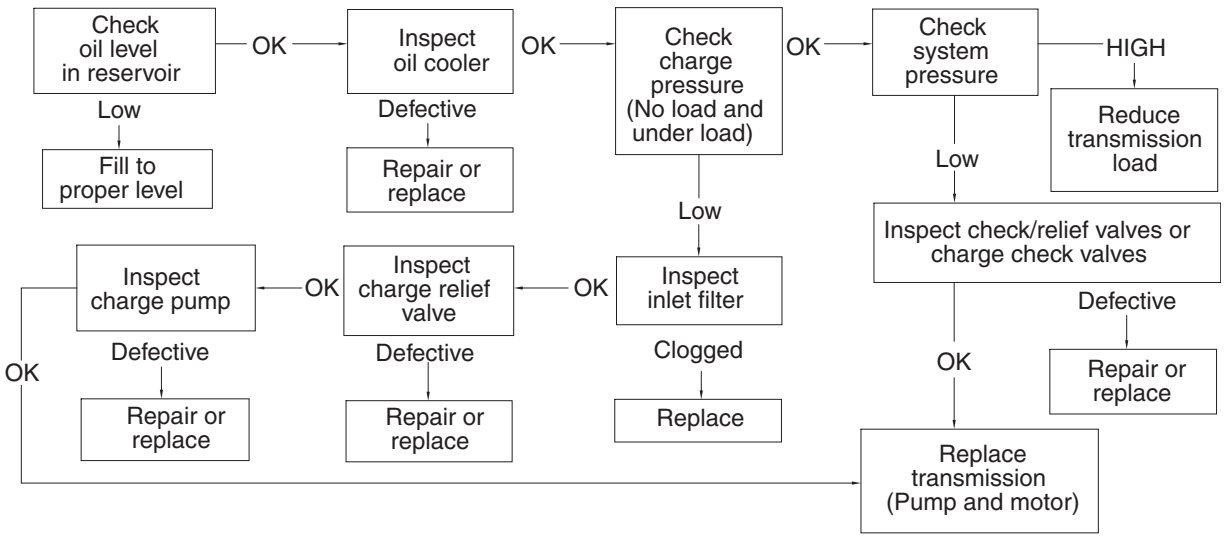
STRUCTURE(3/3)



6507AHT49

8	Cylinder block	43	Ring	99	Washer
9	Washer	44	Ball bearing	100	Seal
10	Cylinder block spring	45	Ring	101	Flange cover
11	Washer	46	Gasket	102	Screw
12	Retaining ring	48	Spring pin	103	Pin
13	Dowel pin	50	Pin	104	O-ring
14	Retaining ring	53	Cylinder block kit	105	Coupling assembly
15	Guide	60	Valve plate-LH	106	Rear shaft
16	Piston assy	86	Lip seal	109	Screw
17	Retainer	92	Swash plate	110	Trunnion cover assy
25	Plug	93	Thrust plate	111	Trunnion cover
26	O-ring	94	Taper roller bearing	112	O-ring
29	Thrust washer	95	Taper roller bearing	113	Screw
39	Plug	96	Pump housing	114	O-ring
40	O-ring	97	Flange adapter		
42	Retaining ring	98	Screw		

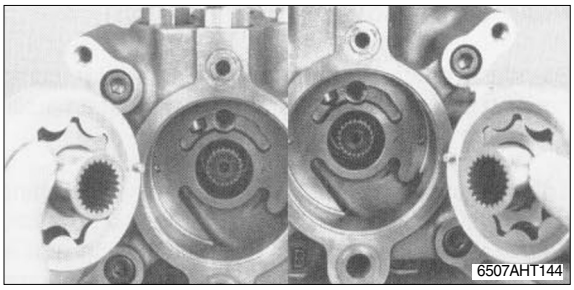
(3) Loss of power or transmission will not operate in either direction



6507AHT46

(10) Install the locating pin into the gerotor spacer.

※ The charge pump rotation is determined by the position of the gerotor spacer and locating pin in the front pump end cap.

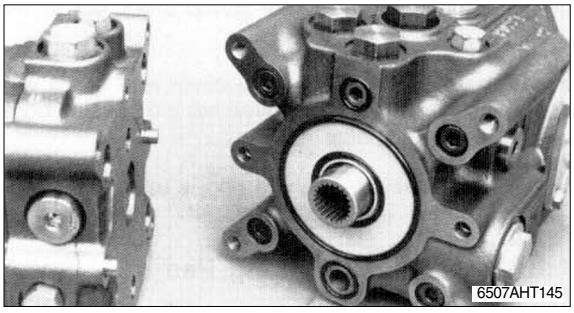


CW CCW

(11) Install the gerotor spacer (with locating pin, gerotor assembly, and drive coupling), into the front pump end cap, orienting the spacer for the proper input shaft rotation direction. The pin in the gerotor spacer should be located in the end cap hole farthest away from the charge pump inlet port for clockwise (CW) input rotation, and closets to the inlet port for counterclockwise (CCW) input rotation.

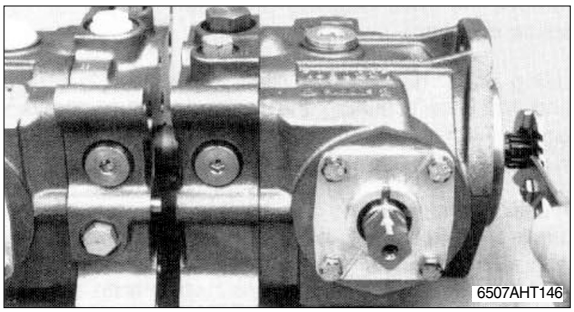
(12) For units less charge pump, install the shaft coupling onto the front pump shaft.

(13) Install the two small O-rings into the front section end cap. Install the single large O-ring into the front section end cap (units less charge pump), or the two O-rings into the grooves of the gerotor spacer (units with charge pump).

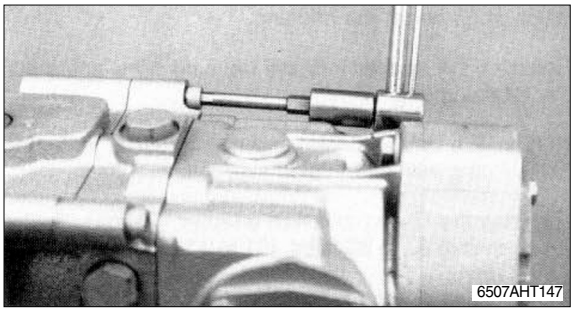


(14) Install the two alignment pins into the rear section end cap.

(15) Slide the front and rear sections of the pump together, rotating the front pump shaft to align the splines on the coupling and rear pump shaft.

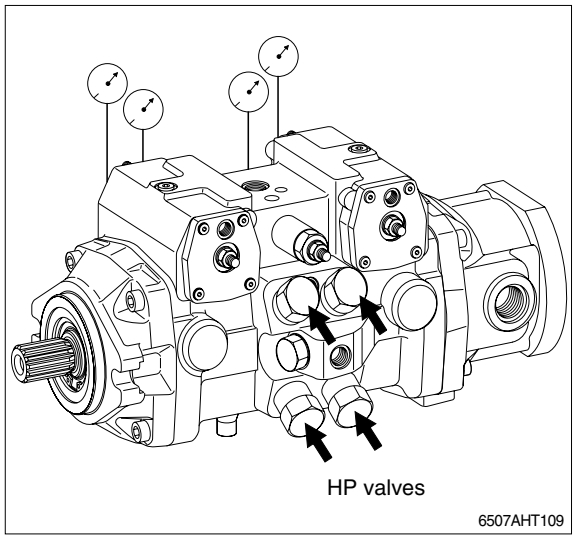


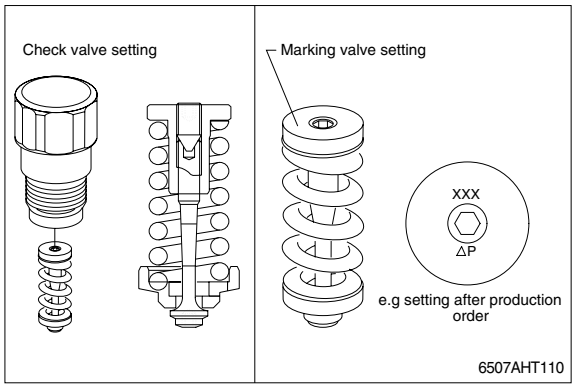
(16) Install the four socket head screws to retain the front and rear pump sections together. Torque the screws to 4.86~6.24kgf · m (35~45lbf · ft). Check for proper internal assembly by slowly rotating the pump shaft while tightening these screws.



3) HP-VALVES (High pressure)

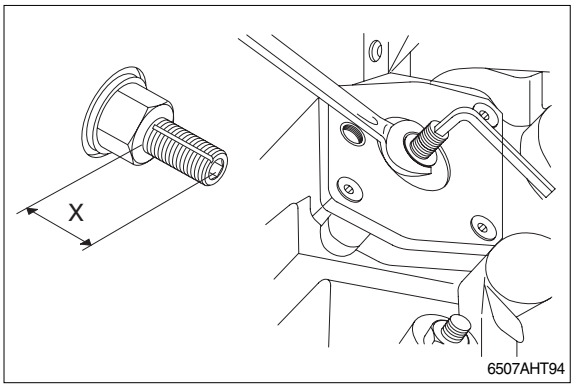
(1) Operate the valves with small pump flow over the valves.
Check setting value. (Only for a short moment - "Risk of over heating")



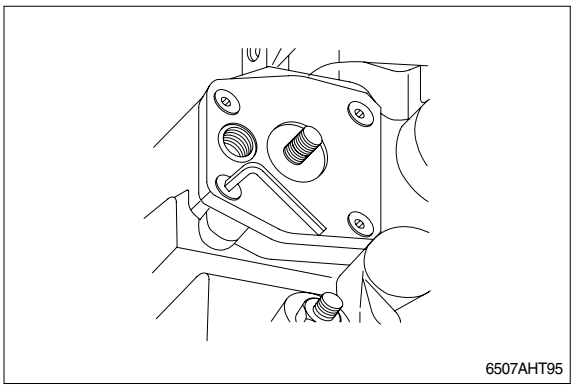


5) SEALING OF THE CONTROL PISTON COVER

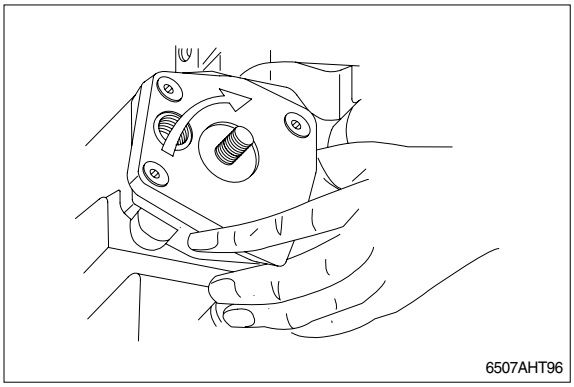
(1) Mark cover. Make a note of dimension X, loosen counter nut, hold adjustment screw.



(2) Remove cover.

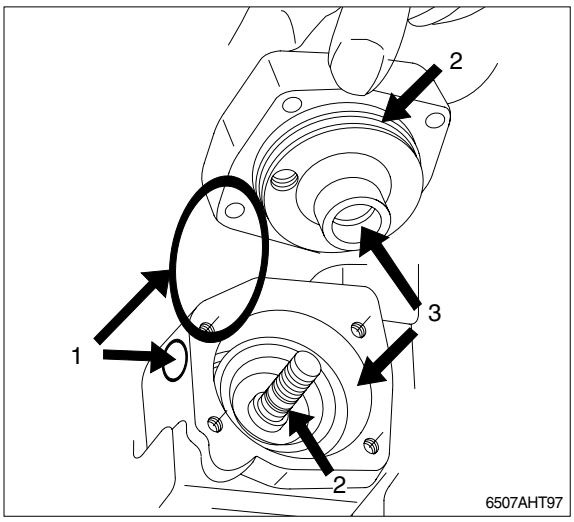


(3) Lift off by turning the setting screw.



(4) Check the O-ring (1), groove (2), housing (3).

※ **Adjustment of the correct zero position to be carried out after installation into the machine or on the test bench. (see adjustment instructions)**

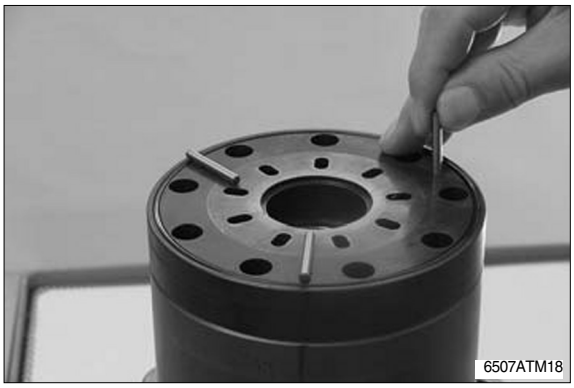


(5) Lift end cover (30).

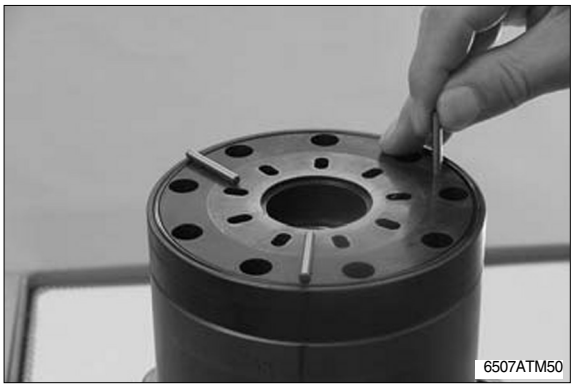
(6) Separate disc valve (20) from valve drive (18).

(7) Remove valve drive (18) and stop ring (19) from channel plate (17).

(8) Remove the three guide pins (16) from channel plate (17).



(40) Install the three guide pins (16).



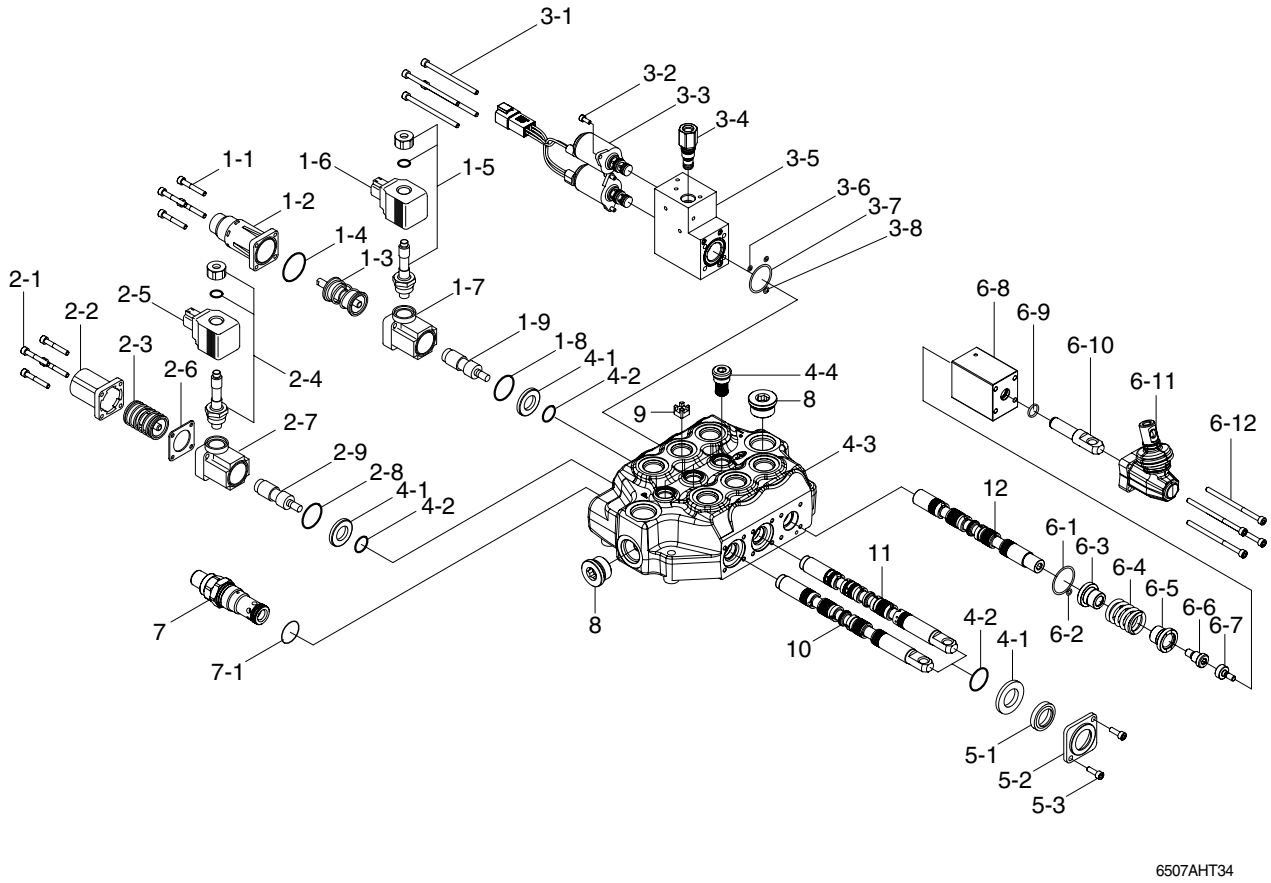
(41) Install drive shaft (18) in gear wheel splines. Fix valve drive with stop ring (19).

(42) Put distributor valve (20) onto drive shaft. Make sure that the motor is correctly timed (see the sketch, page 2-98).

(43) Mount end cover (including balance plate, spacer, O-ring and back up ring). If so required, fix spacer with Vaseline.

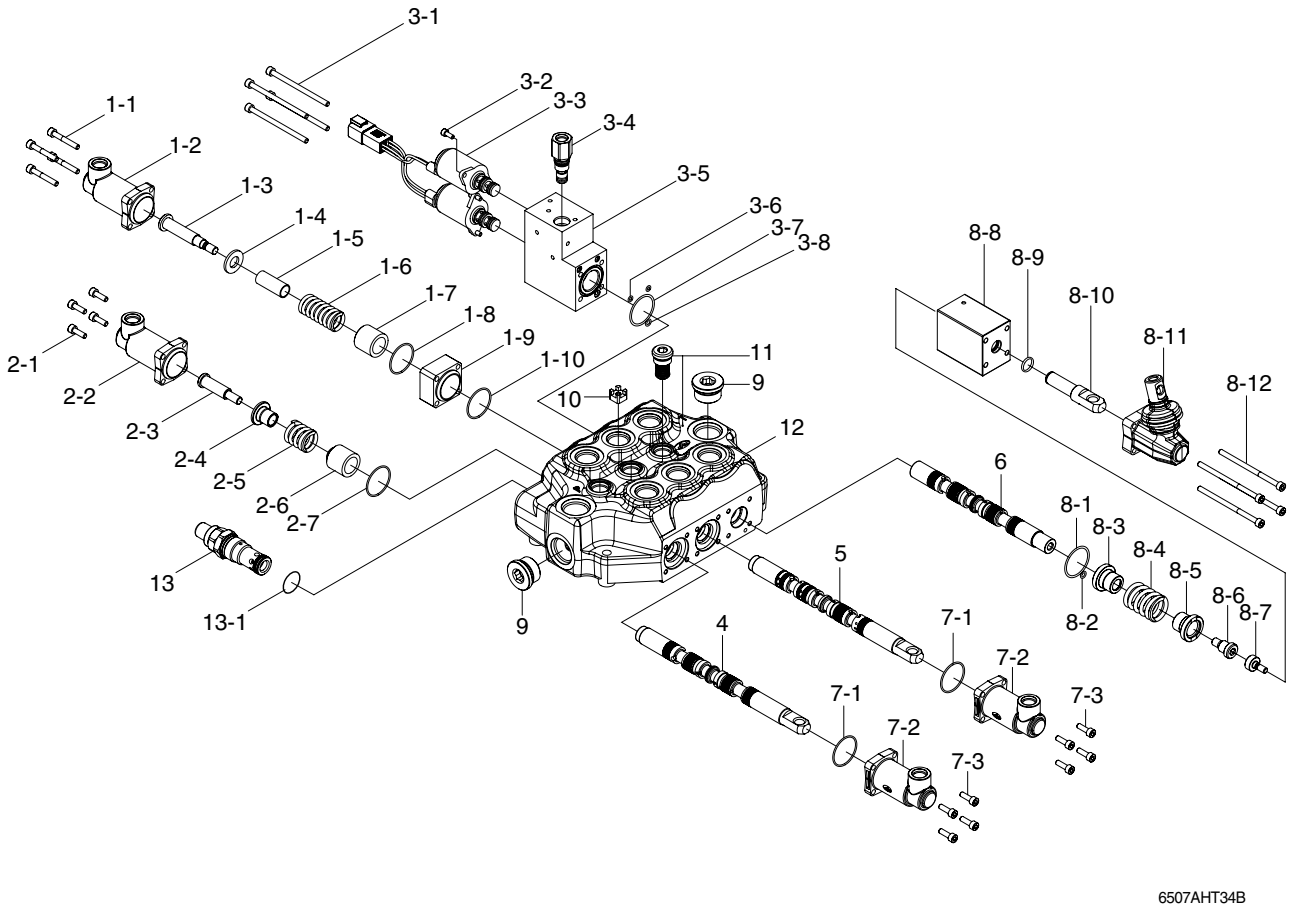
※ Use marks to ensure alignment.

2) STRUCTURE



1-1	Screw	2-6	Seal	4-3	Body	6-9	O-ring
1-2	End cap kit	2-7	Spacer	4-4	Load check valve	6-10	Emergency pin
1-3	Detent kit	2-8	O-ring seal	5-1	Dust wiper	6-11	Lever
1-4	O-ring	2-9	Joint	5-2	Flange	6-12	Screw
1-5	Spool assembly	3-1	Screw	5-3	Screw	7	Main relief valve
1-6	Coil	3-2	Screw	6	Plastic cover	7-1	O-ring
1-7	Spacer	3-3	Solenoid valve kit	6-1	O-ring	8	Plug
1-8	O-ring seal	3-4	Joint	6-2	O-ring	9	Orifice
1-9	Joint	3-5	End cap	6-3	Bushing	10	Bucket spool
2-1	Screw	3-6	O-ring	6-4	Spring	11	Boom spool
2-2	End cap	3-7	O-ring	6-5	Bushing	12	Auxiliary spool
2-3	Spring kit	3-8	O-ring	6-6	Screw		
2-4	Spool assembly	4-1	Ring	6-7	Block screw		
2-5	Coil	4-2	O-ring	6-8	End cap		

(3) Auxiliary spool



- Disassembly

① Remove the end cap(3-5) by removing the four mounting screws(3-1).

② Carefully remove the auxiliary spool(6) from the valve body(12) and inspect. If spool shows any signs of wear or scoring the entrire valve must be replaced.

③ Remove the O-ring(3-6, 3-7, 3-8) from the valve body(12) using care not to scratch the bore and not to contaminate the bore with foreign.

④ Clean and dry all parts with a suitable solvent. Use petrolum based fuel or mineral spirits.

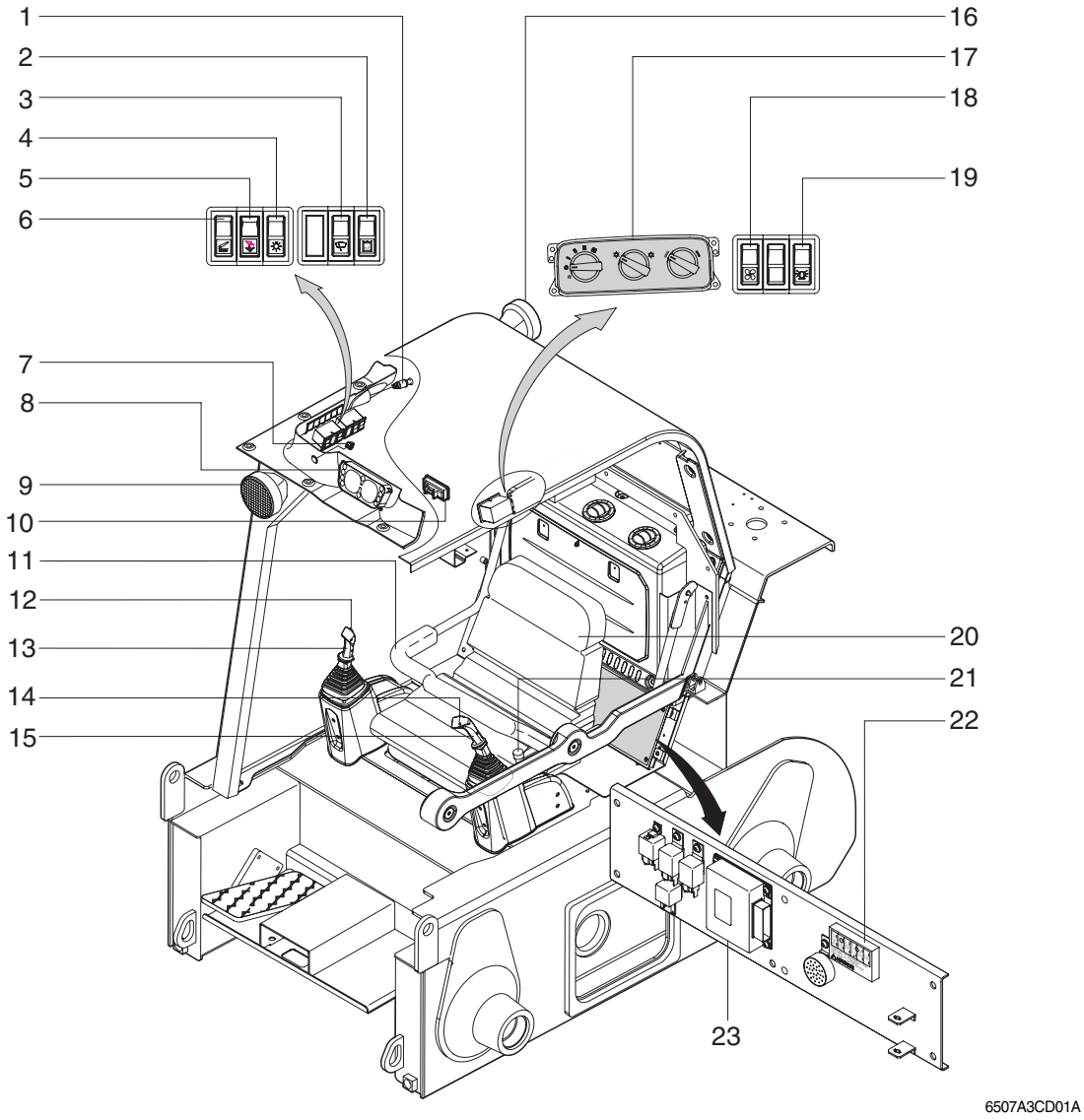
- Assembly

① Lubricate the new O-ring(3-7) with clean oil. Pinch the lubrificate O-ring and insert the O-ring(3-6, 3-7, 3-8) into the groove in the front and in the back of the valve. Use care not to cut or nick the O-ring during assembly.

② Insert the auxiliary spool(6) to the body(12).

③ Place the end cap(3-5) over the assembly and install the mounting screws(3-1) and tighten torque to 0.7kgf · m(54.2lbf · ft).

2. PILOT TYPE



1 Cigar lighter
2 High flow switch(Option)
3 Wiper switch(Option)
4 Main light switch
5 Self level switch(Option)
6 Reset switch
7 Start key switch
8 Warning indicator panel
9 Front work light(LH, RH)
10 Room lamp
11 Seat bar
12 Horn switch
13 RH control lever
14 Buzzer stop switch
15 LH control lever
16 Rear work light(Option)
17 Aircon & heater controller(Cab type, option)
18 Heater switch(Cab type, option)
19 Beacon switch(Option)
20 Operator's seat
21 Engine throttle lever
22 Fuse box
23 Control unit

5. PREHEATING CIRCUIT

When the start switch is set to the ON position, the control unit starts counting the specified time and the indicator is lit. After 5~20 seconds, the control unit turns OFF the indicator to indicate that preheating is completed.

1) OPERATING FLOW

※ **Start switch : ON position**

- Control unit [CN-58(30)] → I/conn [CN-1(6)] → Pre-heat relay [CR-24(C1)→(2)] → Preheating [CN-80]
- Control unit [CN-58(31)] → I/conn [CN-56(3)] → Glow(preheater) lamp ON

2) CHECK POINT

Engine	Start switch	Disconnect switch	Check point	Voltage
Stop	ON	ON	① - GND(Fusible link) ② - GND(Fusible link) ③ - GND(Start switch) ④ - GND(Glow relay) ⑤ - GND(preheater)	DC 10~13V

※ GND : Ground

※ The disconnect switch (Master switch) is assembled as an option.

Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
· Lamp					
CL-1	KET	2	Room lamp	MG610070	-
CL-2	FASTEN	3	Cigar lighter lamp	S810-003202	-
CL-5	SHUR	1	Work lamp-LH	S822-014004	S822-114004
CL-6	SHUR	1	Work lamp-RH	S822-014004	S822-114004
CL-7	SHUR	1	Beacon lamp	S822-014004	S822-114004
· Relay					
CR-2	FASTEN	4	Horn relay	S810-004202	-
CR-5	FASTEN	5	Anti-restart relay	S810-005203	-
CR-23	SWP	2	Start relay	S814-002001	-
CR-35	FASTEN	4	Power relay	S810-004202	-
CR-48	FASTEN	4	Safety relay	S810-004202	-
CR-51	FASTEN	4	Fuel cut-off relay	S810-004202	-
· Sensor, sender					
CD-1	AMP	1	Hydraulic temperature switch	1-150656-1	-
CD-2	AMP	3	Fuel sender	S816-003002	-
CD-8	AMP	2	Water temperature switch	368412-1	-
CD-31	DEUTSCH	2	Overload pressure switch	DT06-2S-EP06	-

3. INSTALL

※ **Carry out installation in the reverse order to removal.**

1) Install hand control lever assembly.
2) Secure the rod on the main control valve and install pin.
   Tighten the bolt.
3) Secure the rod end on the HST pump and install hex bolt.
4) Install rod end assy and bracket assy.
5) Adjust neutral position by procedure described on chapter 1. **ADJUSTMENT OF NEUTRAL**.