SERVICE MANUAL

HYUNDAI

WHEEL LOADER

HL730TM-7

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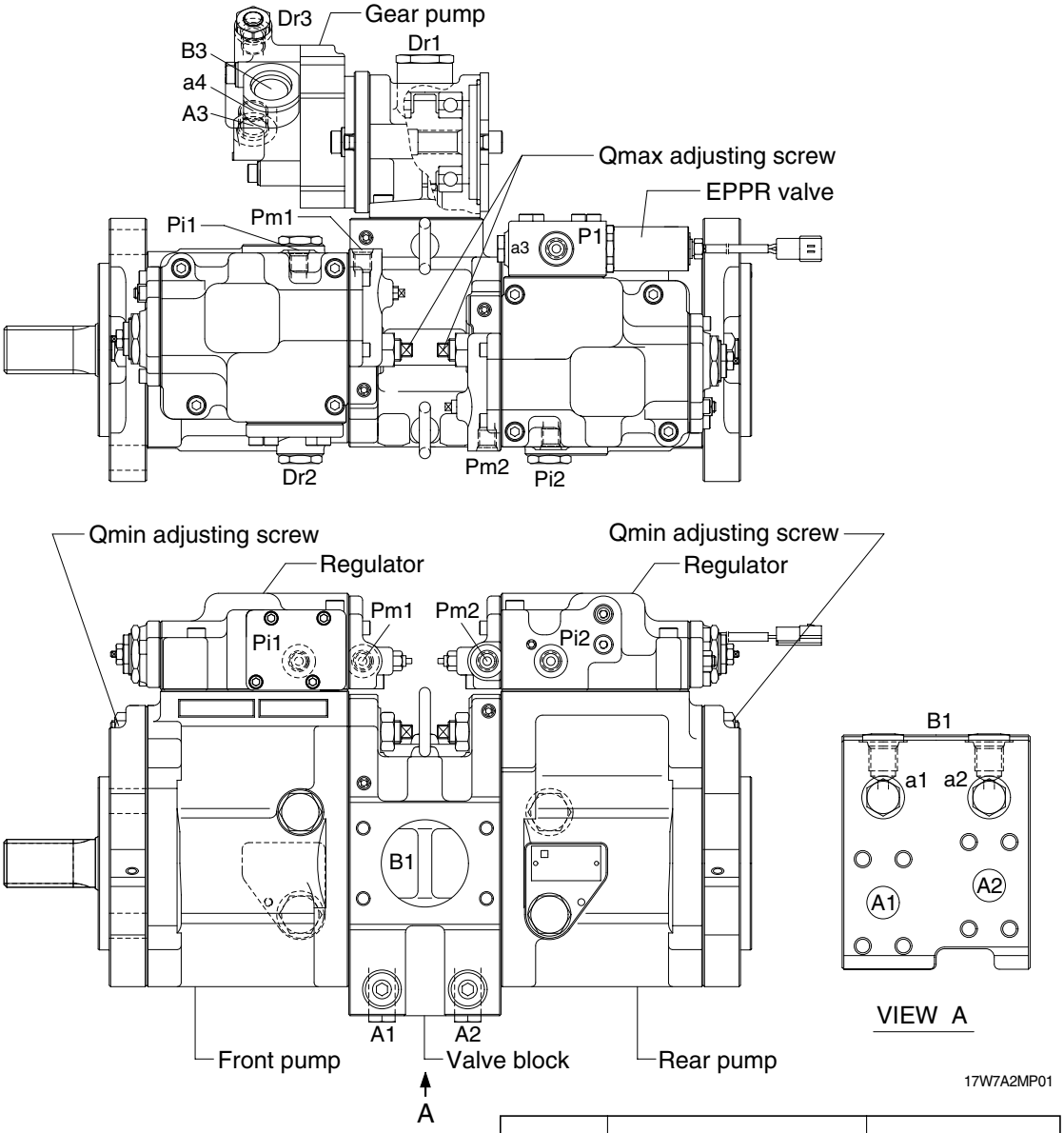
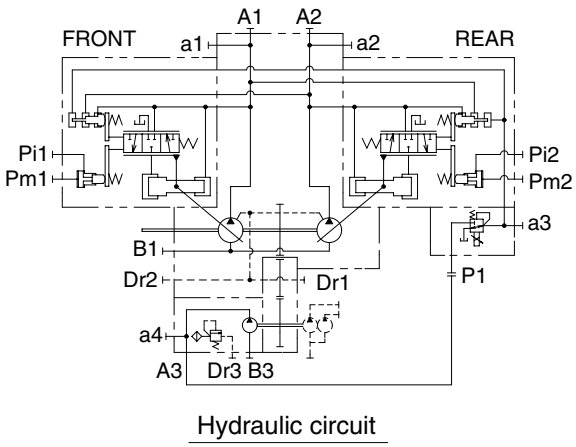
GROUP 1 PUMP DEVICE

1. STRUCTURE

The pump device consists of main pump, regulator and gear pump.



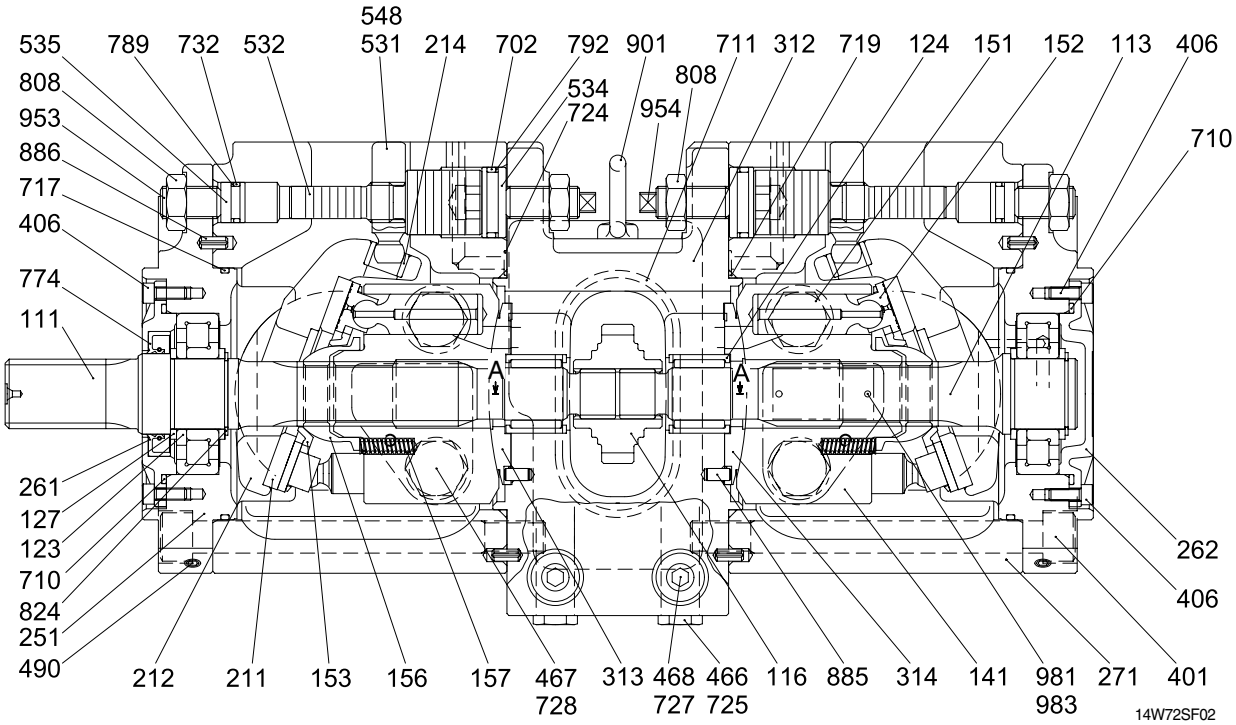


Hydraulic circuit

Port	Port name	Port size
A1,2	Delivery port	SAE6000psi 3/4"
B1	Suction port	SAE2500psi 2 1/2"
Dr1	Drain port	PF 3/4 - 20
Dr2	Drain port	PF 1/2 - 19
Dr3	Drain port	PF 3/8 - 15
Pi1,Pi2	Pilot port	PF 1/4 - 15
Pm1,Pm2	Qmax cut port	PF 1/4 - 15
P1	EPPR valve primary port	PF 1/4 - 15
a1,2,3	Gauge port	PF 1/4 - 15
a4	Gauge port	PF 1/4 - 14
A3	Gear pump delivery port	PF 1/2 - 19
B3	Gear pump suction port	PF 3/4 - 20.5

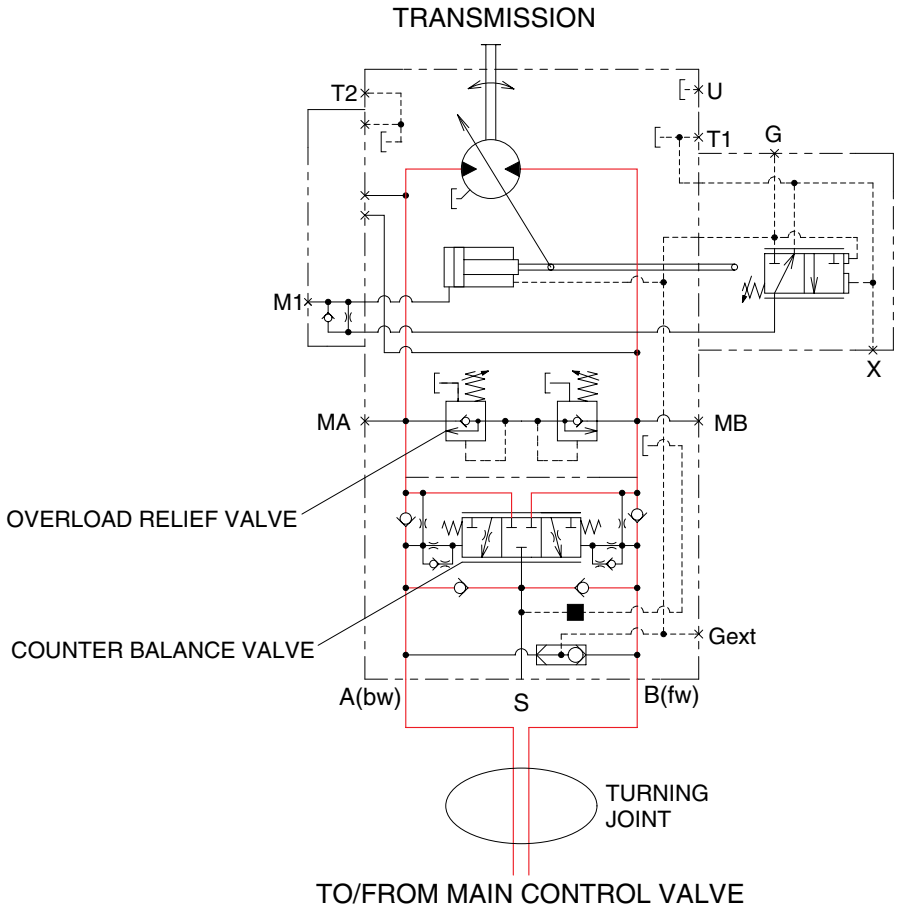
1) MAIN PUMP(1/2)

The main pump consists of two piston pumps(front & rear) and valve block.



111	Drive shaft(F)	312	Valve block	724	O-ring
113	Drive shaft(R)	313	Valve plate(R)	725	O-ring
116	Gear	314	Valve plate(L)	727	O-ring
123	Roller bearing	401	Hexagon socket bolt	728	O-ring
124	Needle bearing	406	Hexagon socket bolt	732	O-ring
127	Bearing spacer	466	VP Plug	774	Oil seal
141	Cylinder block	467	VP Plug	789	Back up ring
151	Piston	468	VP Plug	792	Back up ring
152	Shoe	490	Plug	808	Hexagon head nut
153	Push-plate	531	Tilting pin	824	Snap ring
156	Bushing	532	Servo piston	885	Pin
157	Cylinder spring	534	Stopper(L)	886	Spring pin
211	Shoe plate	535	Stopper(S)	901	Eye bolt
212	Swash plate	548	Pin	953	Set screw
214	Bushing	702	O-ring	954	Set screw
251	Support	710	O-ring	981	Name plate
261	Seal cover(F)	711	O-ring	983	Pin
262	Seal cover(R)	717	O-ring		
271	Pump casing	719	O-ring		

TRAVEL CIRCUIT OPERATION



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Valves are provided on travel motor to offer the following functions.

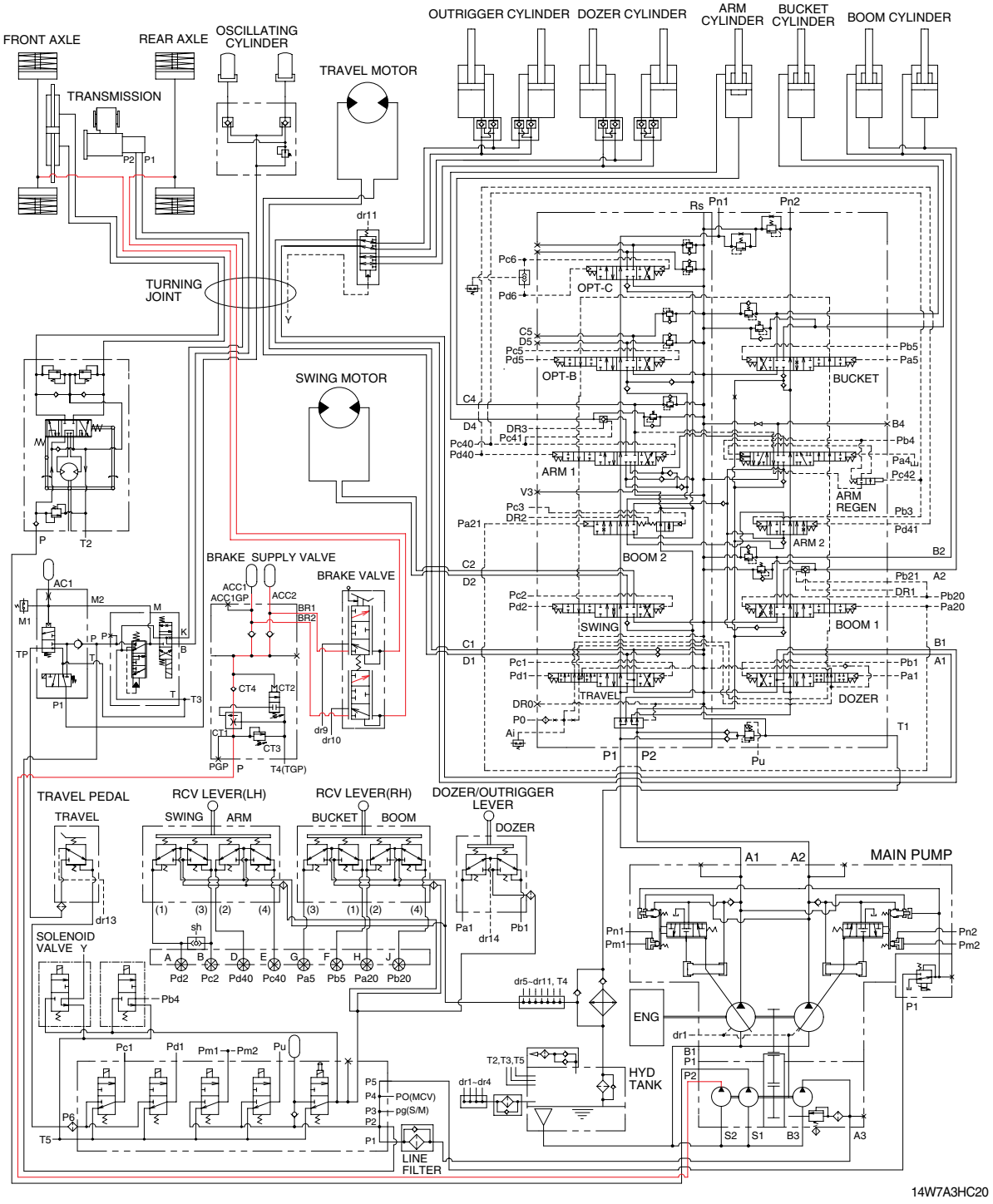
1) COUNTER BALANCE VALVE

When stopping the motor on a slope descending, this valve prevents the motor from over running.

2) OVERLOAD RELIEF VALVE

Relief valve limits the circuit pressure below 390kgf/cm^2 to prevent high pressure from being generated at the time of stopping the machine. When stopping the motor, this valve sucks the oil from lower pressure passage for preventing the negative pressure and the cavitation of the motor.

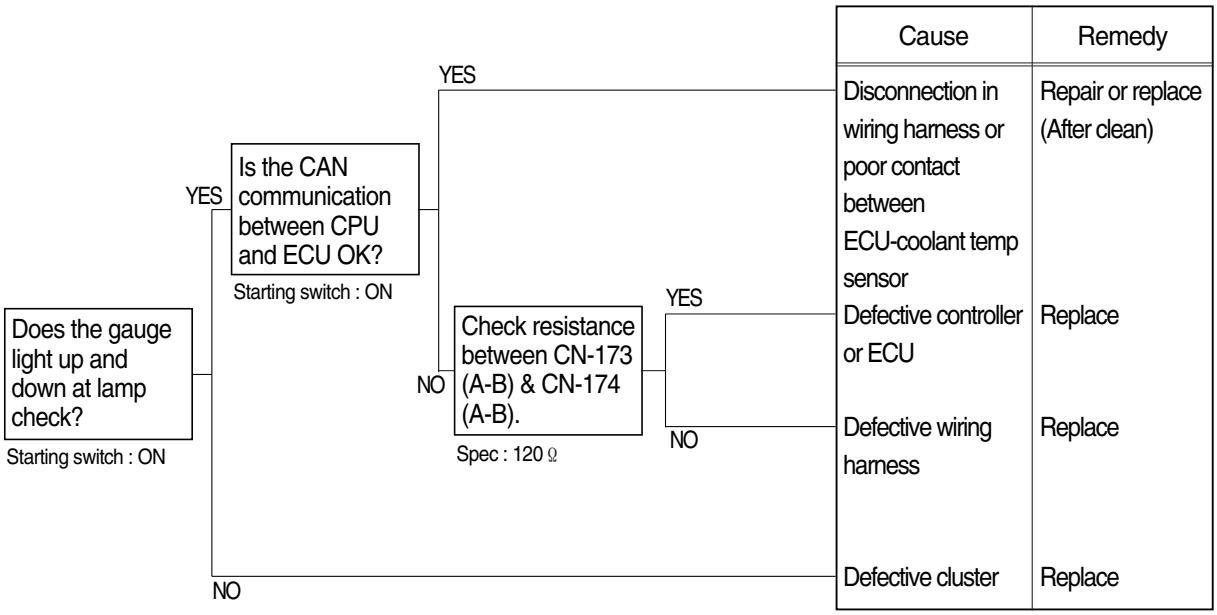
11. FRONT AND REAR AXLE BRAKE SYSTEM(SERVICE BRAKE)



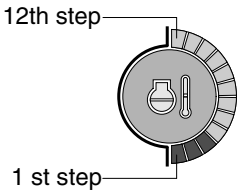
When the brake pedal (Valve) is pushed, the discharged oil from the gear pump (P2) flows into the front and rear axle brake disc through the solenoid valve of brake supply valve.
This pressure is applied to axle brake disc, thus the brake is applied.

8. WHEN COOLANT TEMPERATURE GAUGE DOES NOT OPERATE

- Before disconnecting the connector, always turn the starting switch OFF.
- Before carrying out below procedure, check all the related connectors are properly inserted.
- After checking, insert the disconnected connectors again immediately unless otherwise specified.

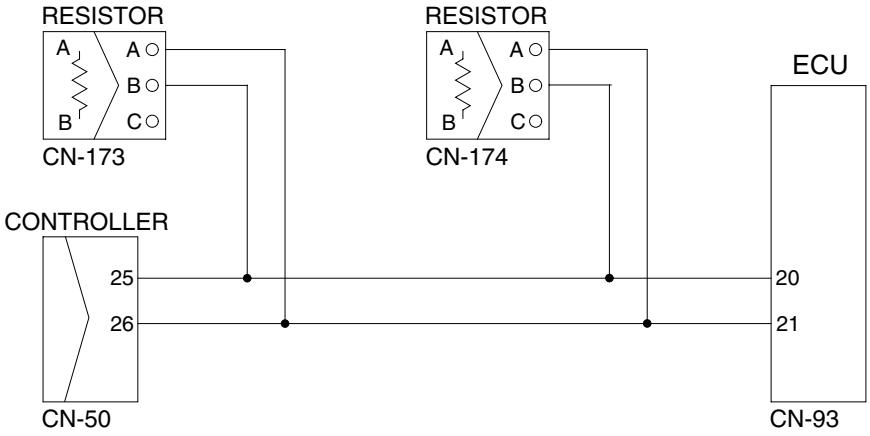


Cause	Remedy
Disconnection in wiring harness or poor contact between ECU-coolant temp sensor	Repair or replace (After clean)
Defective controller or ECU	Replace
Defective wiring harness	Replace
Defective cluster	Replace



Check Table

Range	1st step	2nd~10th step	11th~12th step
Temperature	~29˚C	30~105℃	105℃ ~



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