

SERVICE MANUAL

**WHEEL LOADER
HL730TM-7**

HYUNDAI

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SECTION 2 STRUCTURE AND FUNCTION

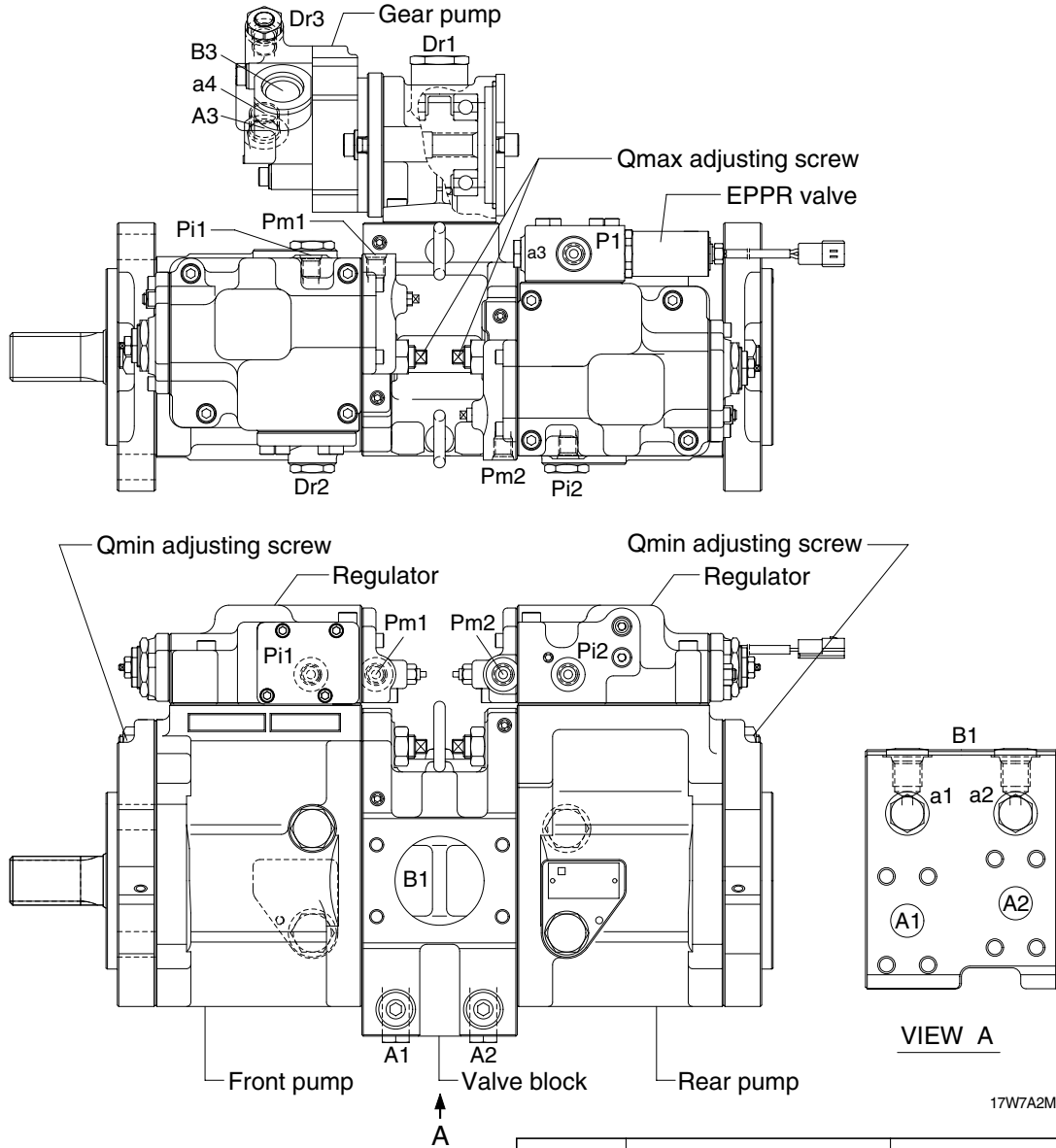
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SECTION 2 STRUCTURE AND FUNCTION

GROUP 1 PUMP DEVICE

1. STRUCTURE

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

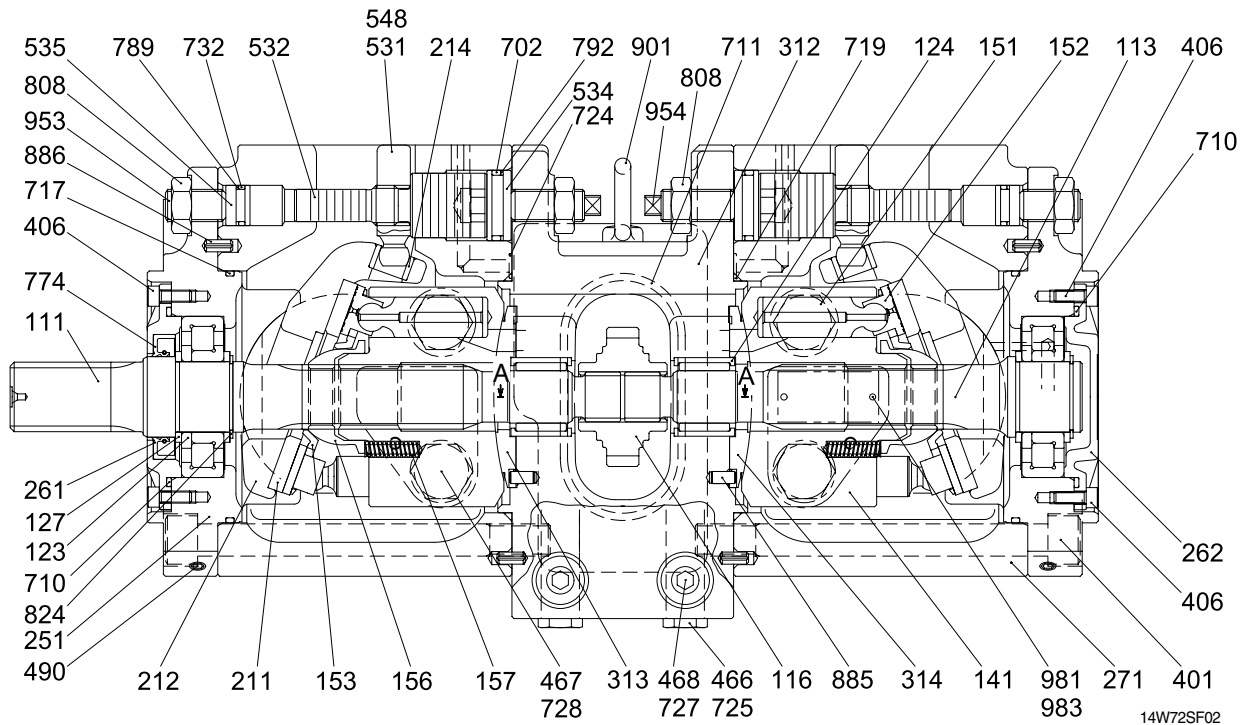


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| Port | Port name | Port size |
|---------|-------------------------|-------------------|
| A1,2 | Delivery port | SAE6000psi 3/4" |
| B1 | Suction port | SAE2500psi 2 1/2" |
| Dr1 | Drain port | PF 3/4 - 20 |
| Dr2 | Drain port | PF 1/2 - 19 |
| 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)

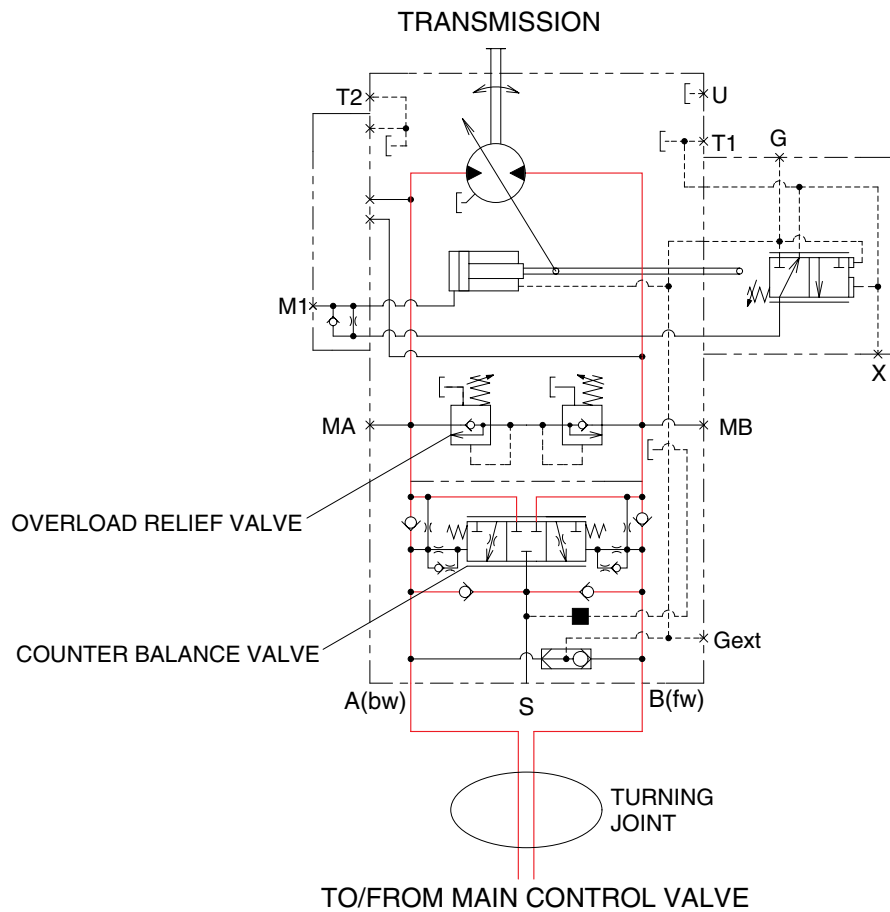
The main pump consists of two piston pumps(front & rear) and valve block.



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| | | |
|---------------------|-------------------------|----------------------|
| 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.

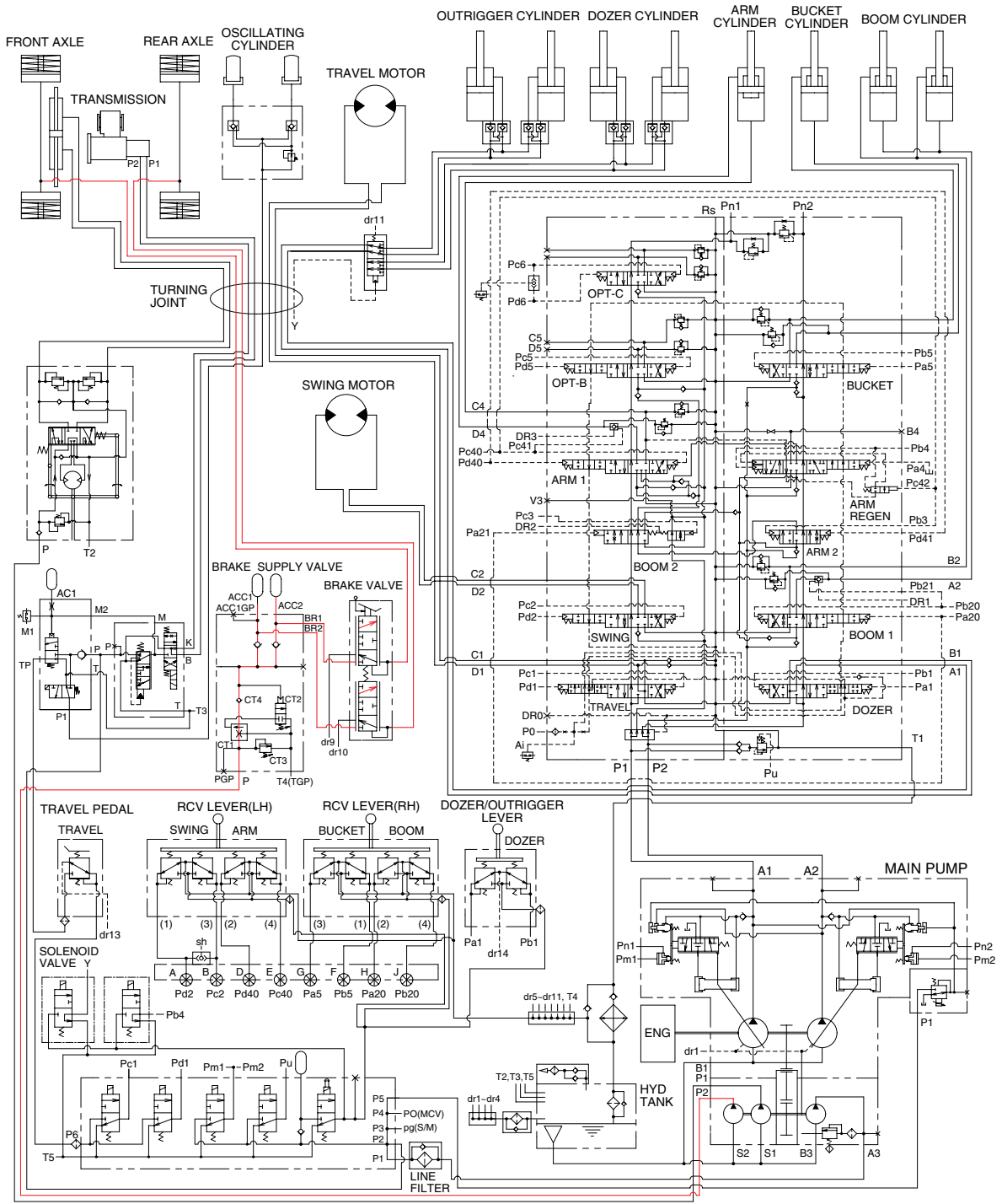
1) COUNTER BALANCE VALVE

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)

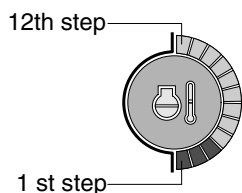
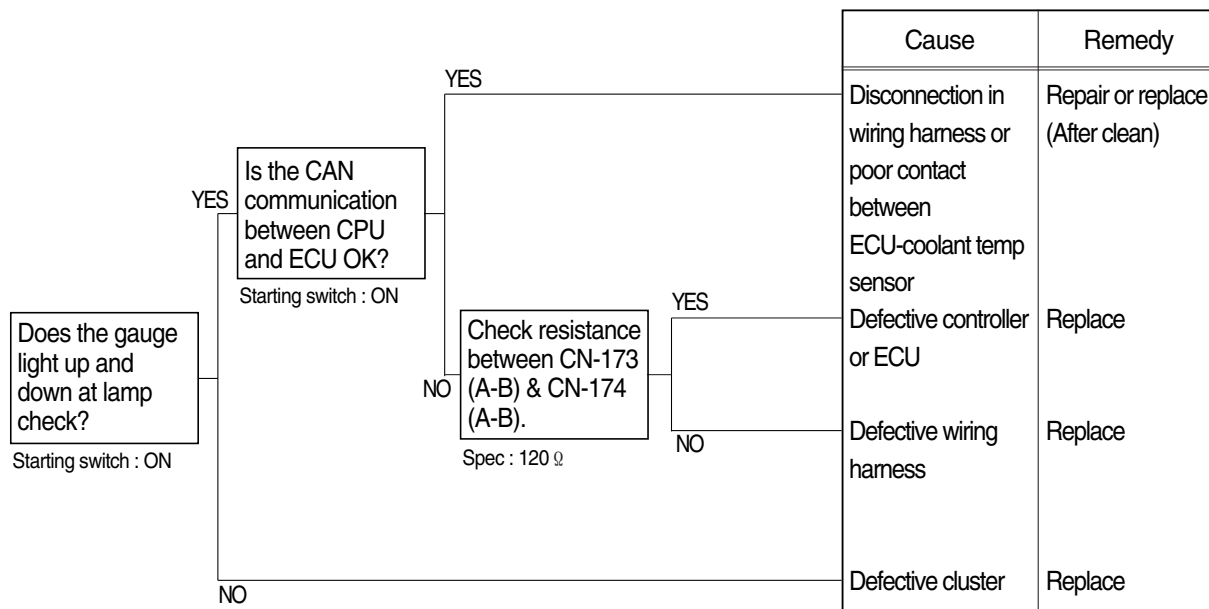


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When the brake pedal (Valve) is pushed, the discharged oil from the gear pump (P2) flows into the front and rear axle brake disc through the solenoid valve of brake supply valve. This pressure is applied to axle brake disc, thus the brake is applied.

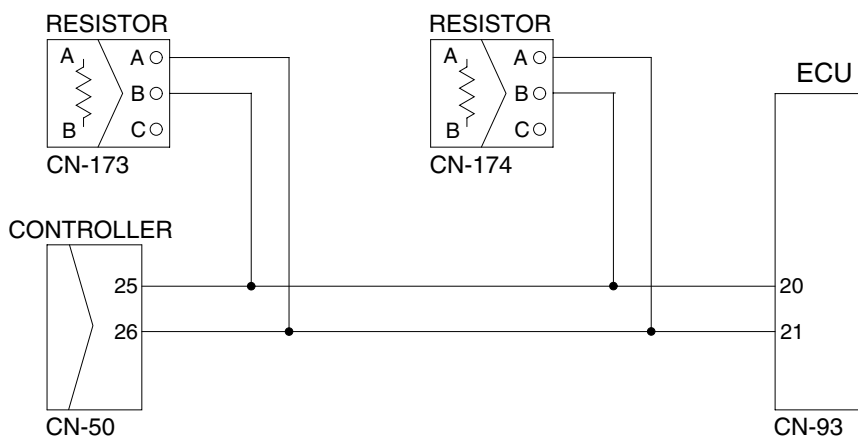
8. WHEN COOLANT TEMPERATURE GAUGE DOES NOT OPERATE

- 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.



Check Table

| Range | 1st step | 2nd~10th step | 11th~12th step |
|-------------|----------|---------------|----------------|
| Temperature | ~29°C | 30~105°C | 105°C ~ |



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