CRAWLER EXCAVATOR

SERVICE MANUAL

R380LC-9A

HYUNDAI

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8. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Cummins QSL9
Type	4-cycle turbocharged charger air cooled diesel engine
Cooling method	Water cooling
Number of cylinders and arrangement	6 cylinders, in-line
Firing order	1-5-3-6-2-4
Combustion chamber type	Direct injection type
Cylinder bore × stroke	114 × 145 mm (4.49" × 5.69")
Piston displacement	8900 cc (540 cu in)
Compression ratio	17.8 : 1
Rated gross horse power (SAE J1995)	310 Hp at 1650 rpm (231 kW at 1650 rpm)
Maximum torque	148 kgf · m (1070 lbf · ft) at 1400 rpm
Engine oil quantity	26.4 ℓ (7.0 U.S. gal)
Dry weight	710 kg (1565 lb)
Low idling speed	800 ± 100 rpm
High idling speed	2000 + 50 rpm
Rated fuel consumption	161.1 g/Hp · hr at 1650 rpm
Starting motor	Denso (24V-7.8 kW)
Alternator	Delco Remy 24V-95A
Battery	2 × 12V × 160Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 175 cc/rev
Maximum pressure	330 kgf/cm² (4690 psi) [360 kgf/cm² (5120 psi)]
Rated oil flow	2 × 288.8 ℓ/min (76.3 U.S. gpm / 63.5 U.K. gpm)
Rated speed	1650 rpm

[ ]: Power boost

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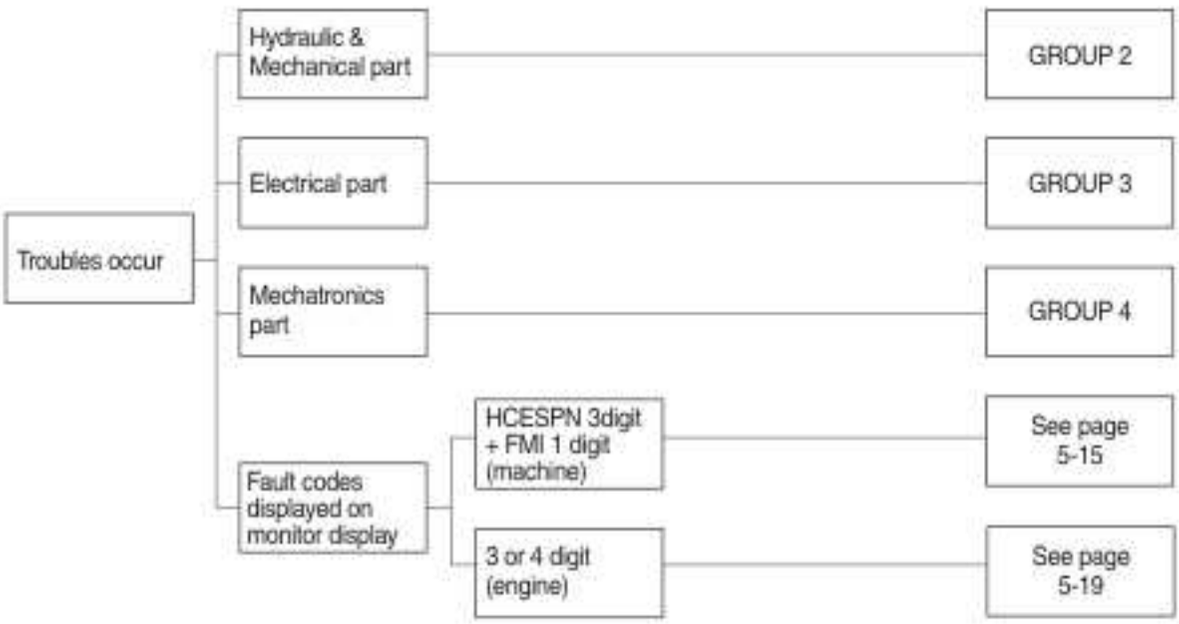
GROUP 1 BEFORE TROUBLESHOOTING

1. INTRODUCTION

When a trouble is occurred in the machine, this section will help an operator to maintain the machine with easy.

The trouble of machine is parted Hydraulic & Mechanical system, Electrical system and Mechatronics system. At each system part, an operator can check the machine according to the troubleshooting process diagram.

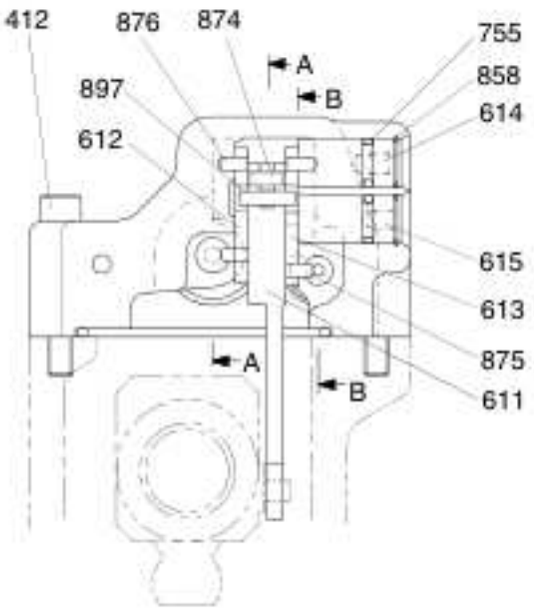
※ Before carring out troubleshooting procedure, check monitoring menu in the cluster.

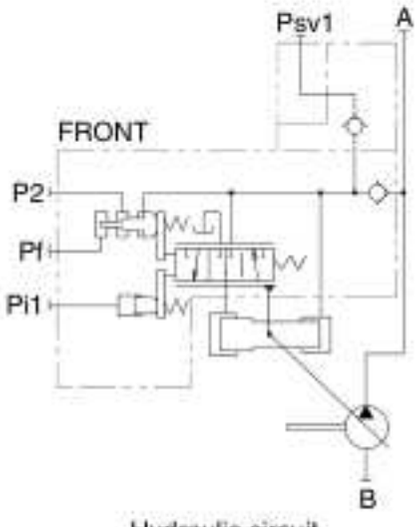


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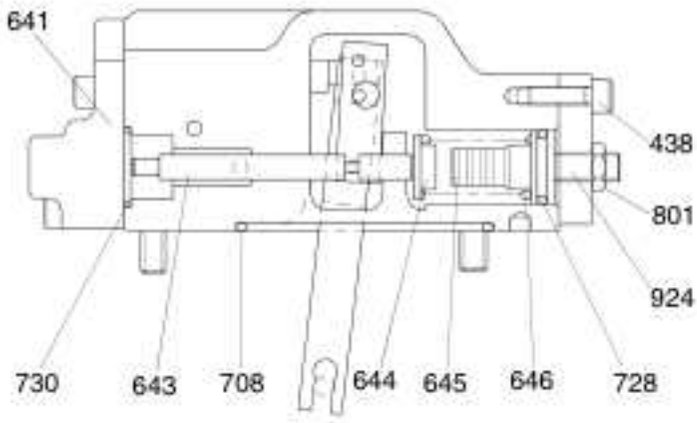
3. REGULATOR

1) STRUCTURE(1/2)

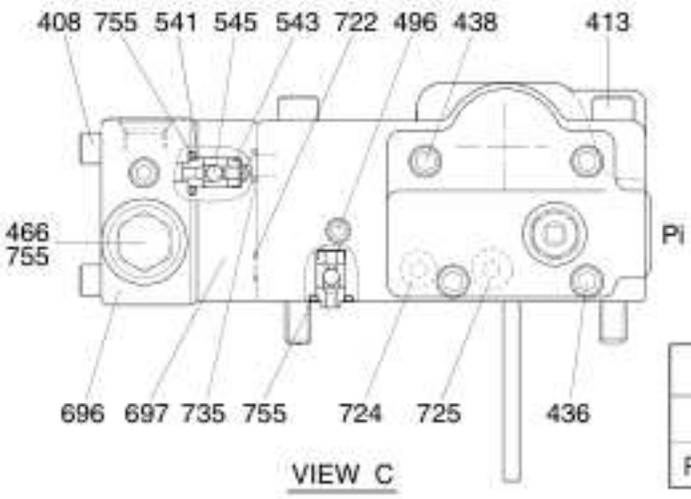




Hydraulic circuit



SECTION B-B



VIEW C

Port	Port name	Port size
Pi1,Pi2	Pilot port	PF 1/4-15
Psv1,Psv2	Servo assist port	PF 1/4-15

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(8) Remove carrier 2 (6), with planetary gears 2 (13), sun gear 3 (11), etc. fitted.

※ Use M10 eyebolt. In this case, thrust ring (26) is removed simultaneously.



(9) Disassembling of carrier 2 sub-assembly

① Push in spring pin (36), and remove pin 2 (16), from carrier 2.

※ Carry out the following check in advance. If any abnormality should be found, carry out disassembling.

- Is there any crevice, crack or pitting on tooth surface of planetary gear?
- When turning planetary gear lightly, is there any abnormal noise or eccentric clearance? Carry out check similarly to the above for carrier 3.



② Remove side plate (20), planetary gear 2 (13), and needle bearing (22) from carrier 2.

③ Remove thrust ring (26).



④ Remove snap ring (46), and remove carrier 2 (6) from sun gear 3 (11).

⑤ Remove thrust ring (27) from sun gear 3 (11).



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3) ASSEMBLING TRAVEL MOTOR

(1) Shaft sub assembly

① Fit bearing spacer to shaft (08) and press-fit roller bearing (09).

※ Press the roller bearing after preheating.



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3809A2TM061

a. Induction heating apparatus temperature : 100˚C

b. Be careful not to damage the sliding surface for the seal on the shaft.



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② Insert stop ring (10) with snap ring pliers.

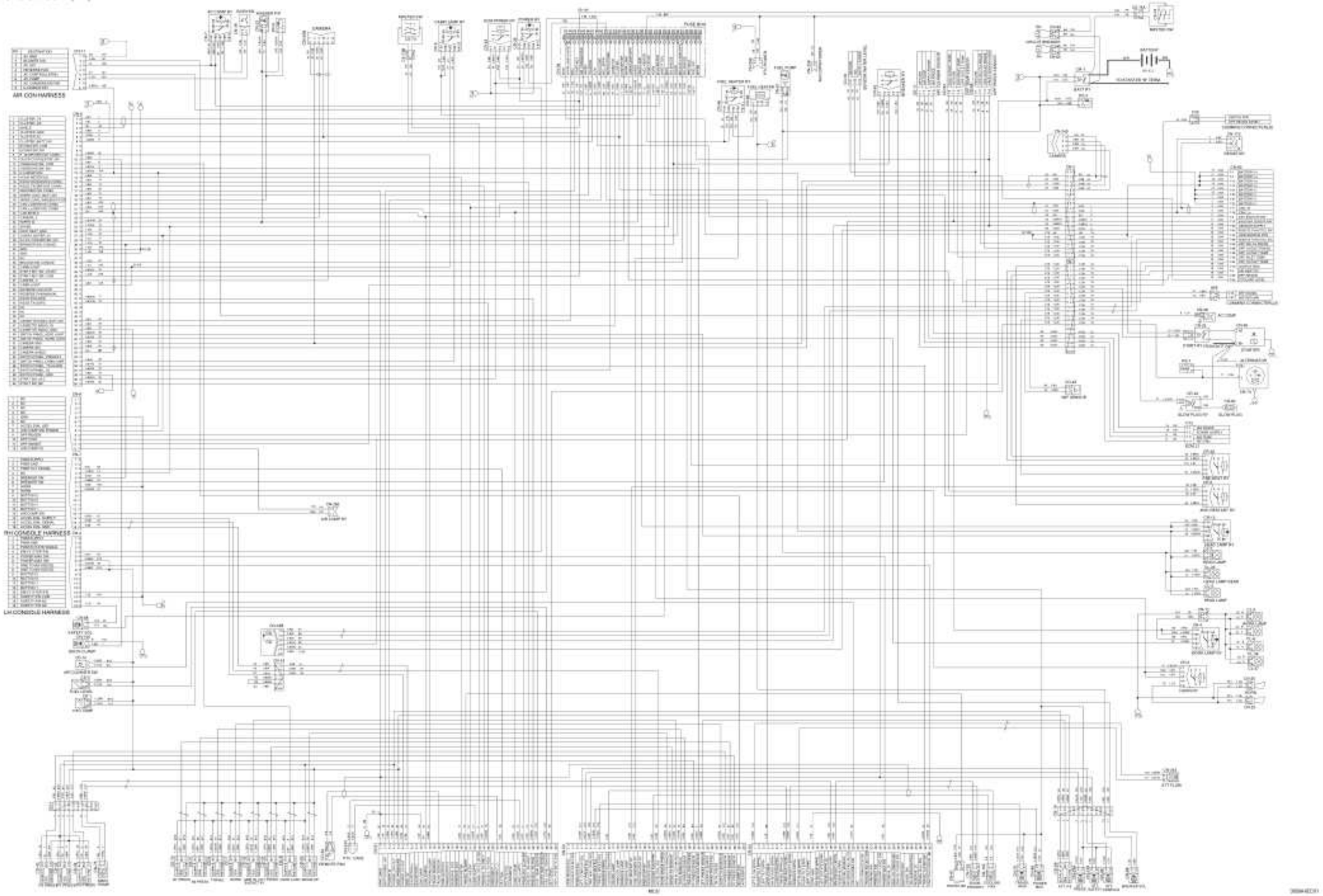
※ Pay attention to the direction of the stop ring. (round direction is bearing direction.)



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ELECTRICAL CIRCUIT (1/2)



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