WHEELED EXCAVATOR

SERVICE MANUAL

HW140A

HYUNDAI

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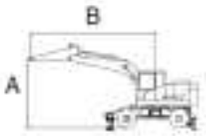
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Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW140A	MONO BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		4600	2000	2200	-	500	-	Up	-	-

· : Rating over-front · : Rating over-side or 360 degree



Lift-point height (A)		Lift-point radius (B)								At max. reach		
		1.5 m (4.9 ft)		3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		Capacity		Reach
												m (ft)
6.0 m	kg					*4420	3630			*3330	2900	5.15
(19.7 ft)	lb					*9740	8000			*7340	6390	(16.9)
4.5 m	kg					*4790	3540	*3600	2240	*3110	2190	6.08
(14.8 ft)	lb					*10560	7800	*7940	4940	*6860	4830	(19.9)
3.0 m	kg					*5740	3320	3780	2180	*3140	1900	6.53
(9.8 ft)	lb					*12650	7320	8330	4810	*6920	4190	(21.4)
1.5 m	kg					5680	3110	3680	2090	3190	1820	6.62
(4.9 ft)	lb					12520	6860	8110	4610	7030	4010	(21.7)
0.0 m	kg			*6510	5380	5550	3000	3620	2040	3350	1900	6.34
(0.0 ft)	lb			*14350	11860	12240	6610	7980	4500	7390	4190	(20.8)
-1.5 m	kg	*6490	*6490	*9460	5430	5540	3000			3960	2220	5.66
(-4.9 ft)	lb	*14310	*14310	*20860	11970	12210	6610			8730	4890	(18.6)
-3.0 m	kg			*6990	5610					*4600	3270	4.37
(-9.8 ft)	lb			*15410	12370					*10140	7210	(14.3)

Note 1. Lifting capacity are based on ISO 10567.
2. Lifting capacity of the HX series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.
3. The Lift-point is bucket pivot mounting pin on the arm (without bucket mass).
4. *Indicates load limited by hydraulic capacity.

※ Lifting capacities are based upon a standard machine conditions.
Lifting capacities will vary with different work tools, ground conditions and attachments.
The difference between the weight of a work tool attachment must be subtracted.
Consult with your local HD Hyundai Construction Equipment dealer regarding the lifting capacities for specific work tools and attachments.

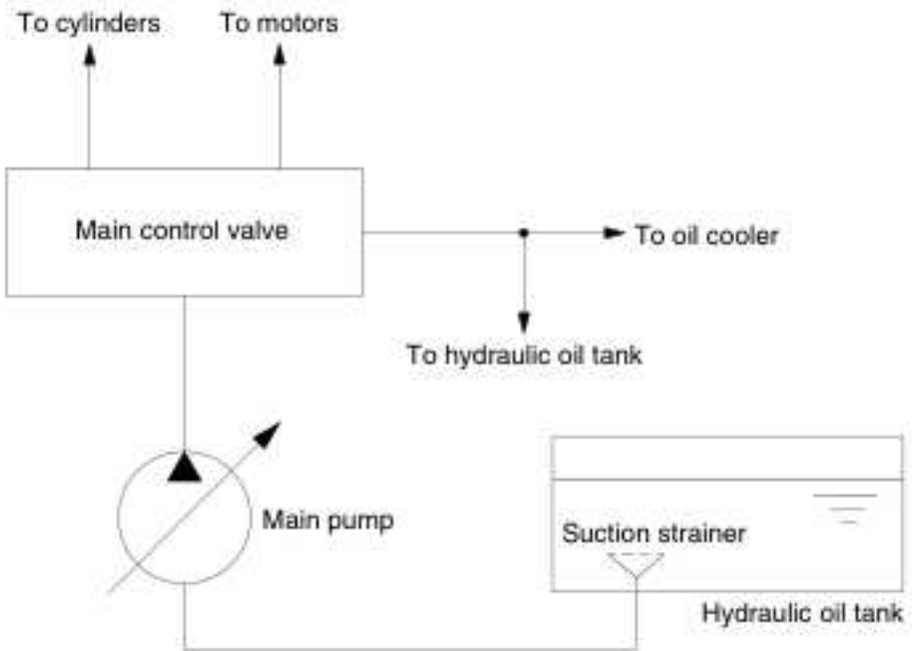
⚠ Failure to comply to the rated load can cause surious injury, death, or property damage. Make adjustments to the rated load as necessory for non-standard configurations.

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GROUP 2 MAIN CIRCUIT

The main hydraulic circuit consists of suction circuit, delivery circuit, return circuit and drain circuit.
The hydraulic system consists of one main pump, one control valve, one swing motor, four cylinders and two travel motors.
The swash plate type variable displacement axial piston pump is used as the main pump and it is driven by the engine at ratio 1.0 of engine speed.

1. SUCTION AND DELIVERY CIRCUIT



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The pumps receive oil from the hydraulic tank through a suction strainer. The discharged oil from the pump flows into the control valve and goes out the tank ports.
The oil discharged from the main pump flows to the actuators through the control valve.
The control valve controls the hydraulic functions.
The return oil from the actuators flows to the hydraulic tank through the control valve and the oil cooler.

※ The circuit diagram may differ from the equipment, so please check before a repair.

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SECTION 6 TROUBLESHOOTING

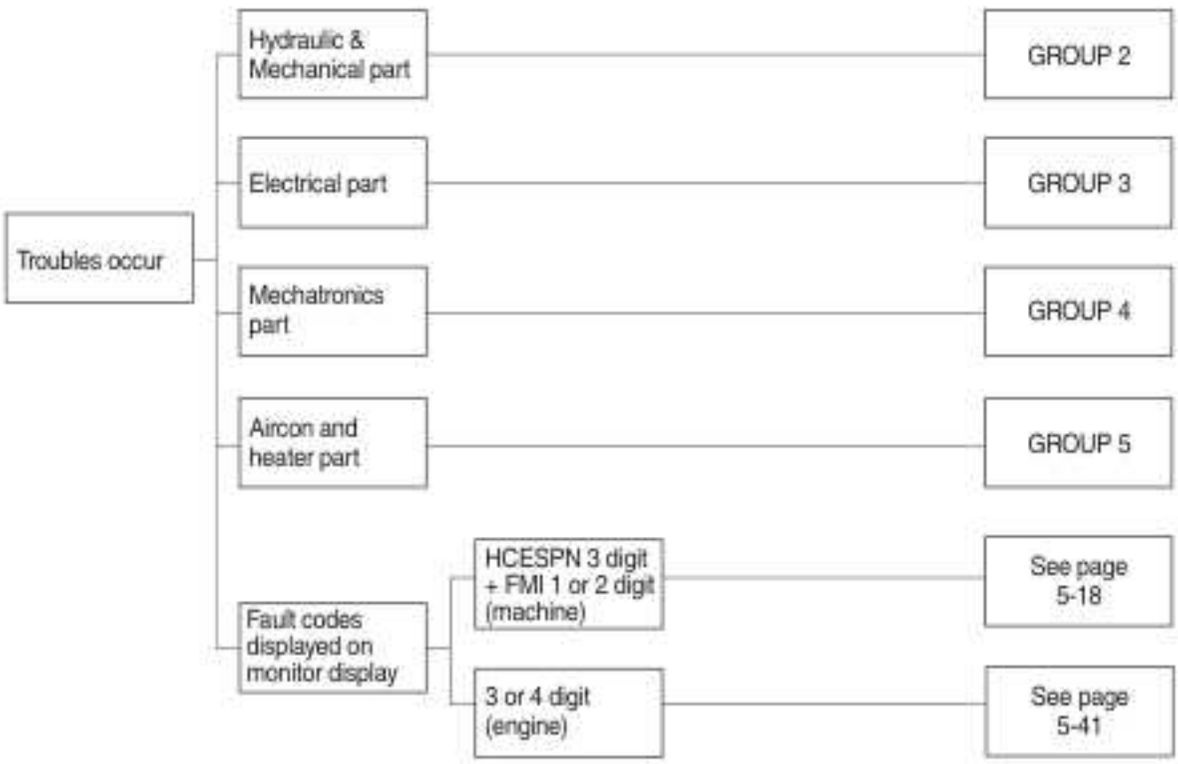
GROUP 1 BEFORE TROUBLESHOOTING

1. INTRODUCTION

When a trouble is occurred in the machine, this section will help an service man to repair the machine with easy.

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

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

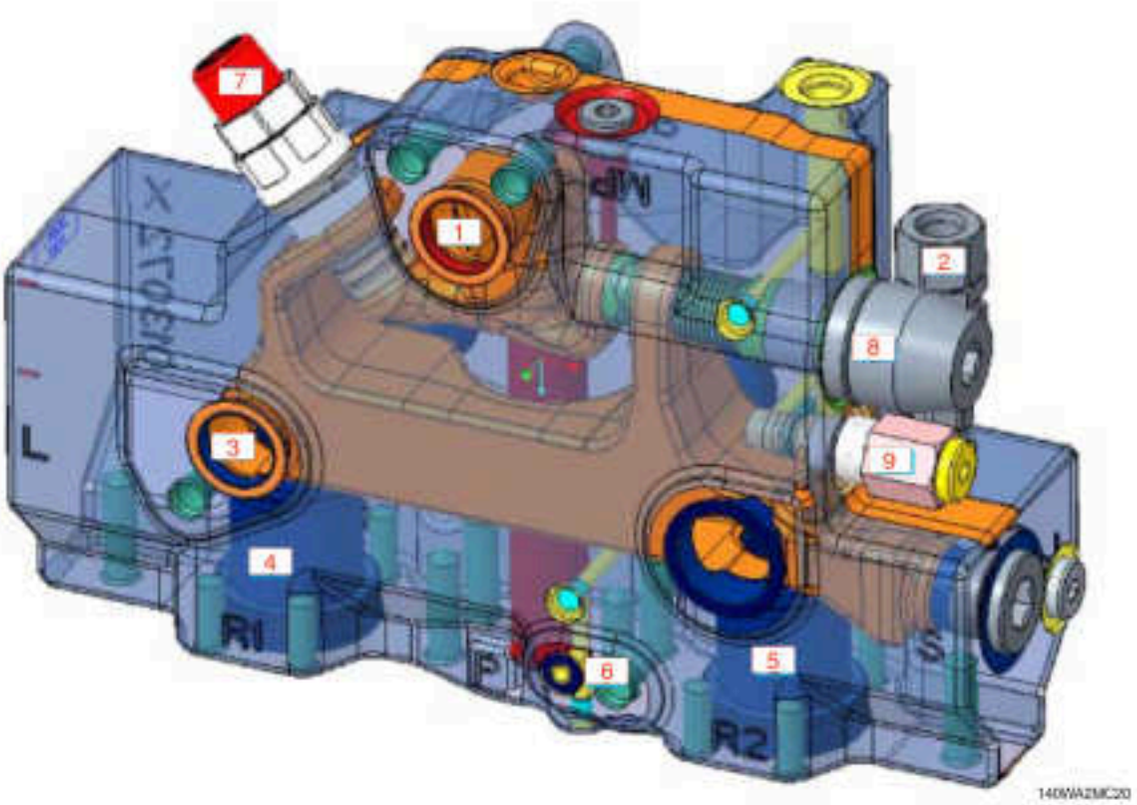


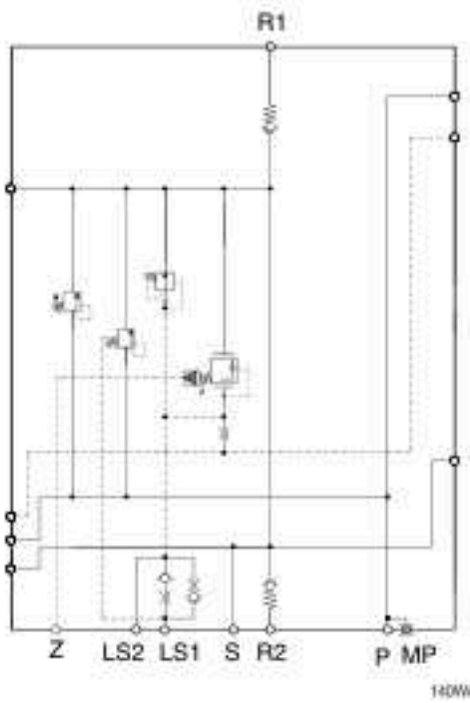
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4. FUNCTION

1) INLET SECTION

(1) Structure

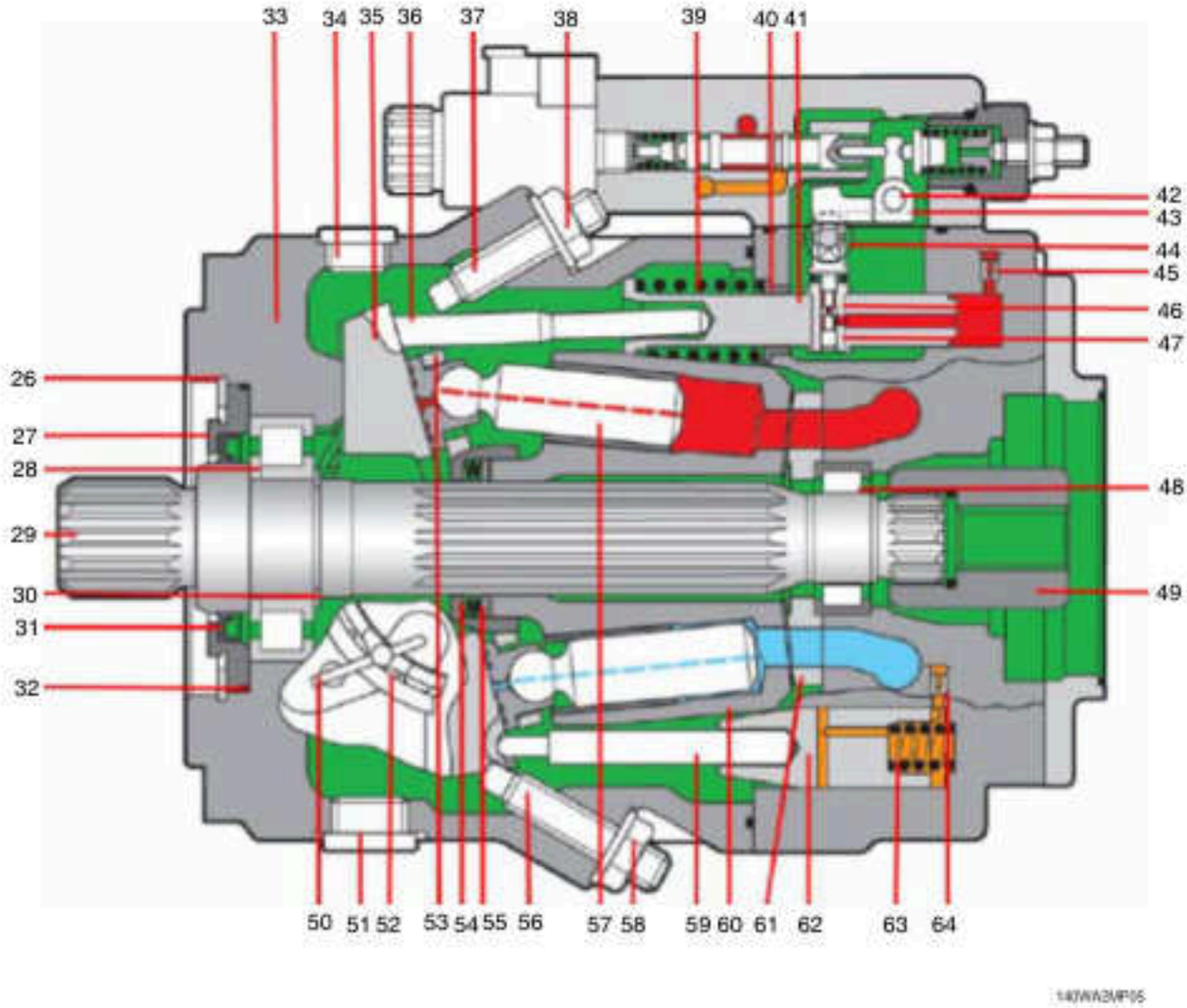




1 Pump channel (P)
2 2 stage LS pressure relief valve
3 Tank channel
4 Tank port (R1, cooler)
5 Tank port (R2)
6 LS channel
7 Primary relief valve
8 Unloading valve
9 LS drain valve

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STRUCTURE (2/2)

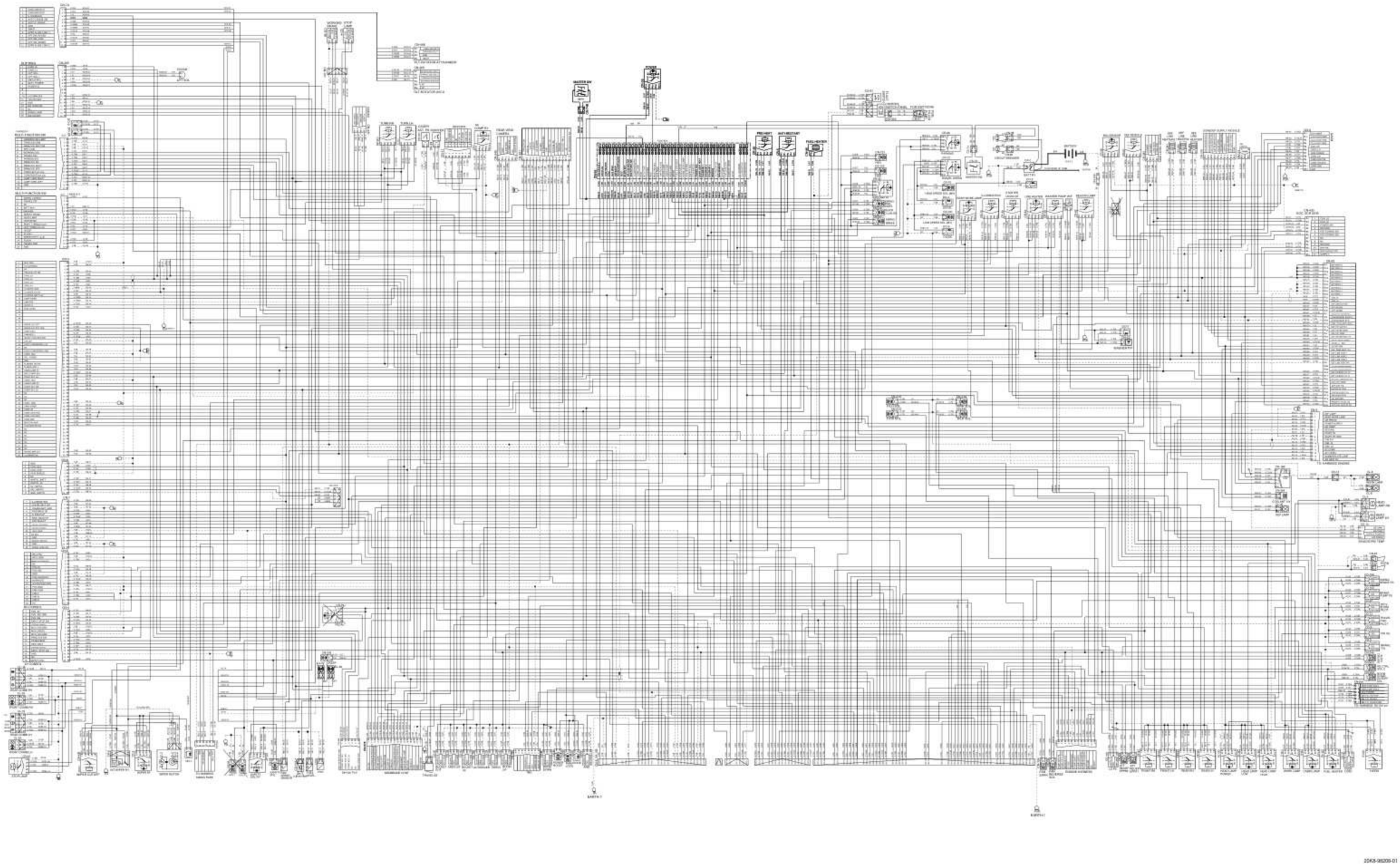


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26	Snap ring	39	Spring	52	Cage pair
27	Locking ring	40	Bushing	53	Retaining plate
28	Cylinderical roller bearing	41	Adjusting bushing small	54	Retaining ball
29	Drive shaft	42	Bolt	55	Cup spring stack
30	Snap ring	43	Angle lever	56	Adjusting screw
31	Shaft seal ring	44	Measuring roll	57	Piston pad
32	O-ring	45	Orifice	58	Sealing nut
33	Housing	46	Measuring bushing	59	Adjusting rod big
34	Screw plug	47	Measuring piston	60	Cylinder
35	Cradle	48	Cylinderical roller bearing	61	Control plate
36	Adjusting rod small	49	Coupling hub	62	Adjusting bushing big
37	Adjusting screw	50	Wire	63	Spring
38	Sealing nut	51	Screw plug	64	Orifice

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· ELECTRICAL CIRCUIT (1/3)



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