WHEELED EXCAVATOR

SERVICE MANUAL

HW170A CR

HYUNDAI

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DTC		Diagnostic Criteria	Application		
HCESPN	FMI		G	C	W
841	2	10 seconds continuous, ECM Communication Data Error	●		
	(Results / Symptoms) 1. Control Function – ECM operation failure (Checking list) 1. CN-93 (#22) – CN-52 (#02) Checking Open/Short 2. CN-93 (#46) – CN-52 (#01) Checking Open/Short				
848	2	(When mounting the Jog Dial Module) 60 seconds continuous, Jog Dial Module Communication Data Error	●		
	(Results / Symptoms) 1. Control Function – Jog Dial Module operation failure (Checking list) 1. CN-8 (#2) – CN-51 (#09) Checking Open/Short 2. CN-8 (#3) – CN-51 (#08) Checking Open/Short				
850	2	(When mounting the RMCU) 60 seconds continuous, RMCU communication Data Error	●		
	(Resuluts / Symptoms) 1. Control Function – RMCU operation failure (Checking list) 1. CN-125A (#3) – CN-51 (#09) Checking Open/Short 2. CN-125A (#11) – CN-51 (#08) Checking Open/Short				
866	2	(When mounting the AAVM) 60 seconds continuous, AAVM communication Data Error	●		
	(Results / Symptoms) 1. Control Function – AAVM operation failure (Checking list) 1. CN-401 (#15) – CN-51 (#09) Checking Open/Short 2. CN-401 (#3) – CN-51 (#08) Checking Open/Short				
867	2	60 seconds continuous, RDU communication Data Error	●		
	(Results / Symptoms) 1. Control Function – RDU operation failure (Checking list) 1. CN-376 (#10) – CN-51 (#09) Checking Open/Short 2. CN-376 (#18) – CN-51 (#08) Checking Open/Short				

※ Some error codes are not applied to this machine.

G : General C : Crawler Type W : Wheel Type

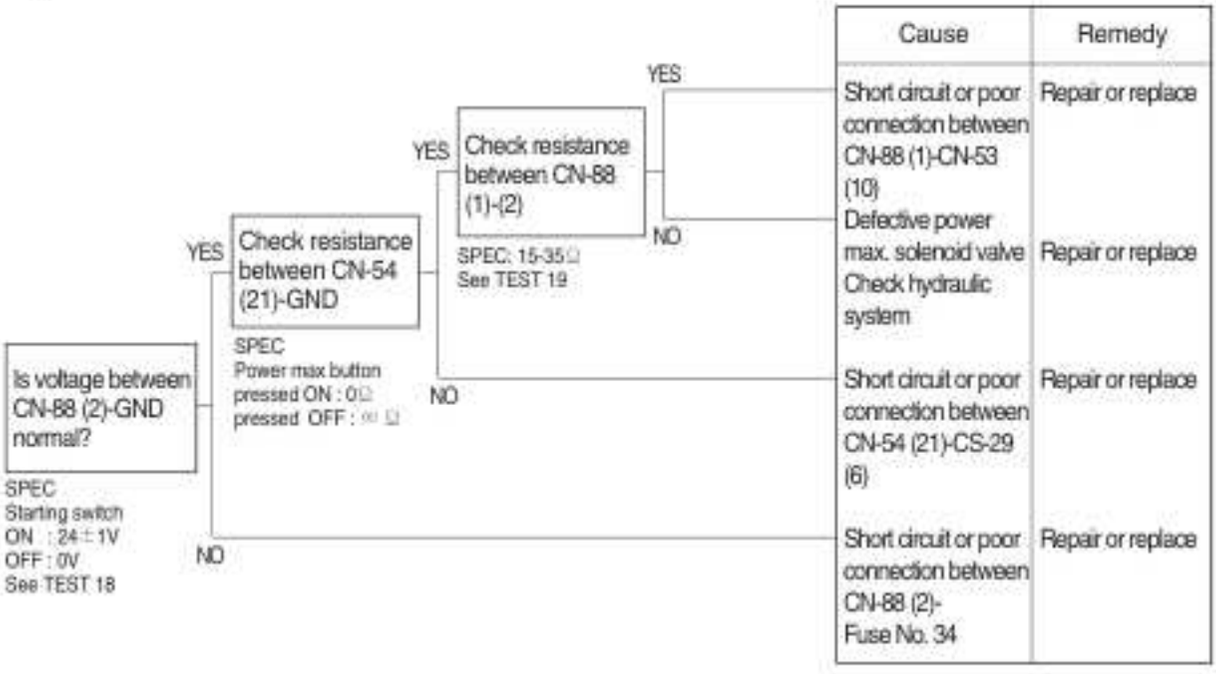
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12. MALFUNCTION OF POWER MAX

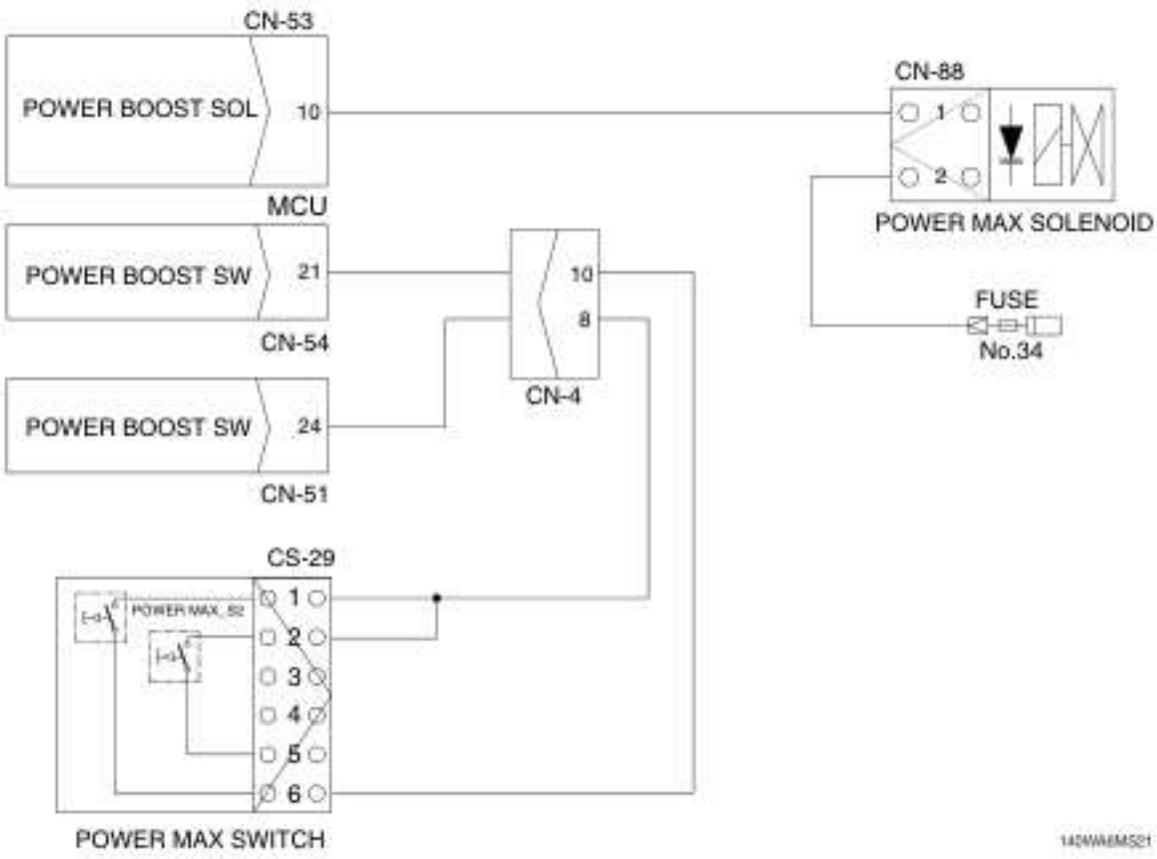
- Fault code : HCESPN 166, FMI 4 or 6

※ Before carrying out below procedure, check all the related connectors are properly inserted.

1) INSPECTION PROCEDURE



Wiring diagram



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(2) Read dimension II (pinion dimension).

Dim. II e.g. . . . . 116.00 mm

In case of a + or - deviation of the pinion dimension for production reasons, the respective value is marked by hand on the pinion.

Pinion dim. (without + or – deviation) = 116.0 mm

Pinion dim. with + 0.1 deviation value = 116.1 mm

Pinion dim. with - 0.1 deviation value = 115.9 mm



17W99PA0078

(3) Determine dimension III (bearing width).

※ Make sure that the rollers are located without any play (rotate bearing inner ring several times in both directions roller setting).

Since the installed roller bearing is subject to a preload in installation position, deduct an experience value of 0.1 mm.

Dimension III, e.g. 36.60 mm - 0.1 mm = 36.50 mm

(S) Gage blocks 5870 200 066



17W99PA0079

(4) Calculation example :

Dimension I . . . . . 154.05 mm
Dimension X . . . . . - 152.50 mm
Difference = shim s = 1.55 mm

Place the determined shim (e.g. thickness = 1.55 mm) into the inner bearing hole.



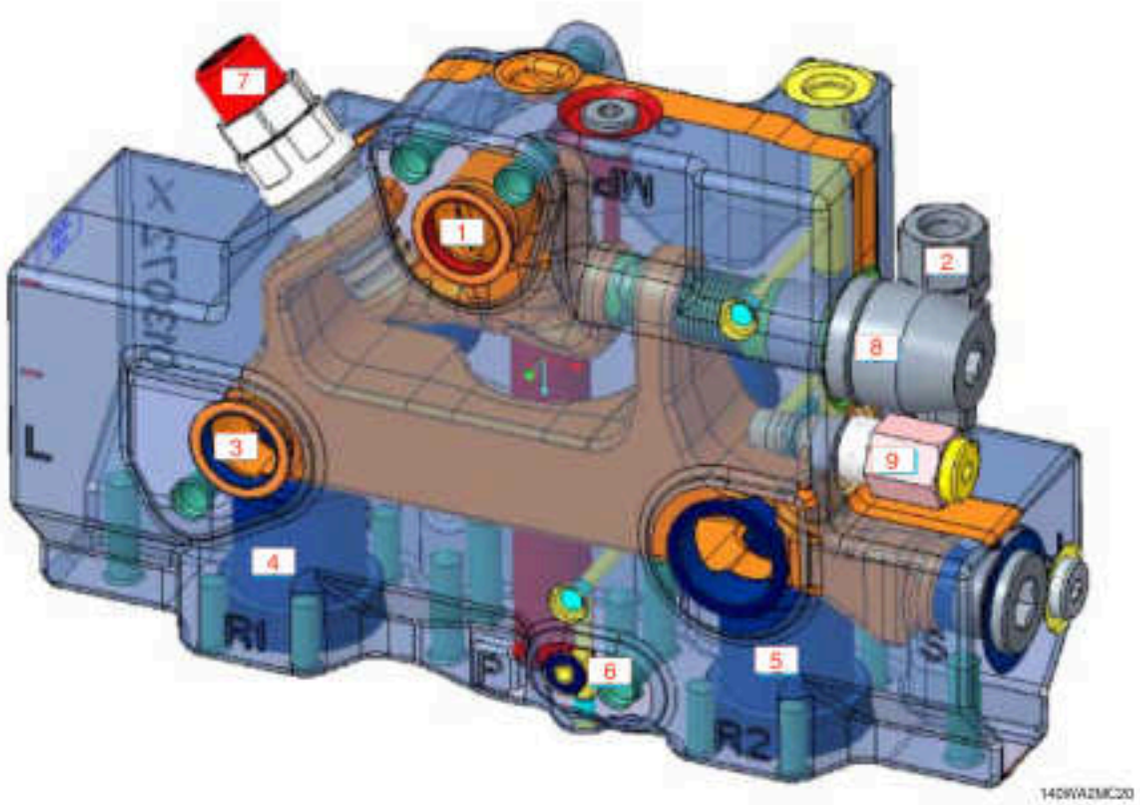
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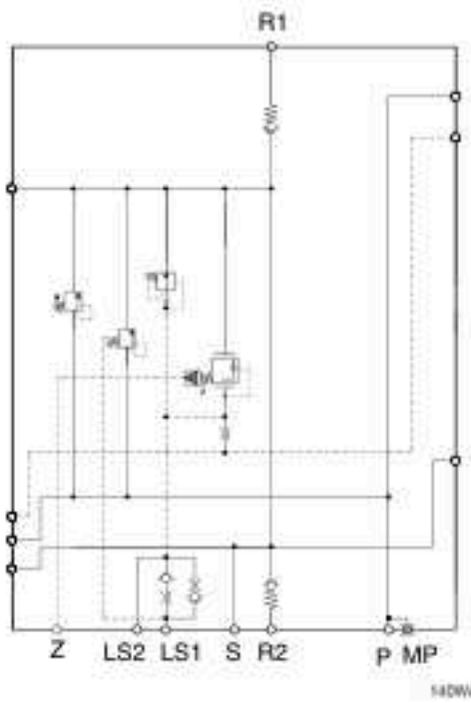
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4. FUNCTION

1) INLET SECTION

(1) Structure

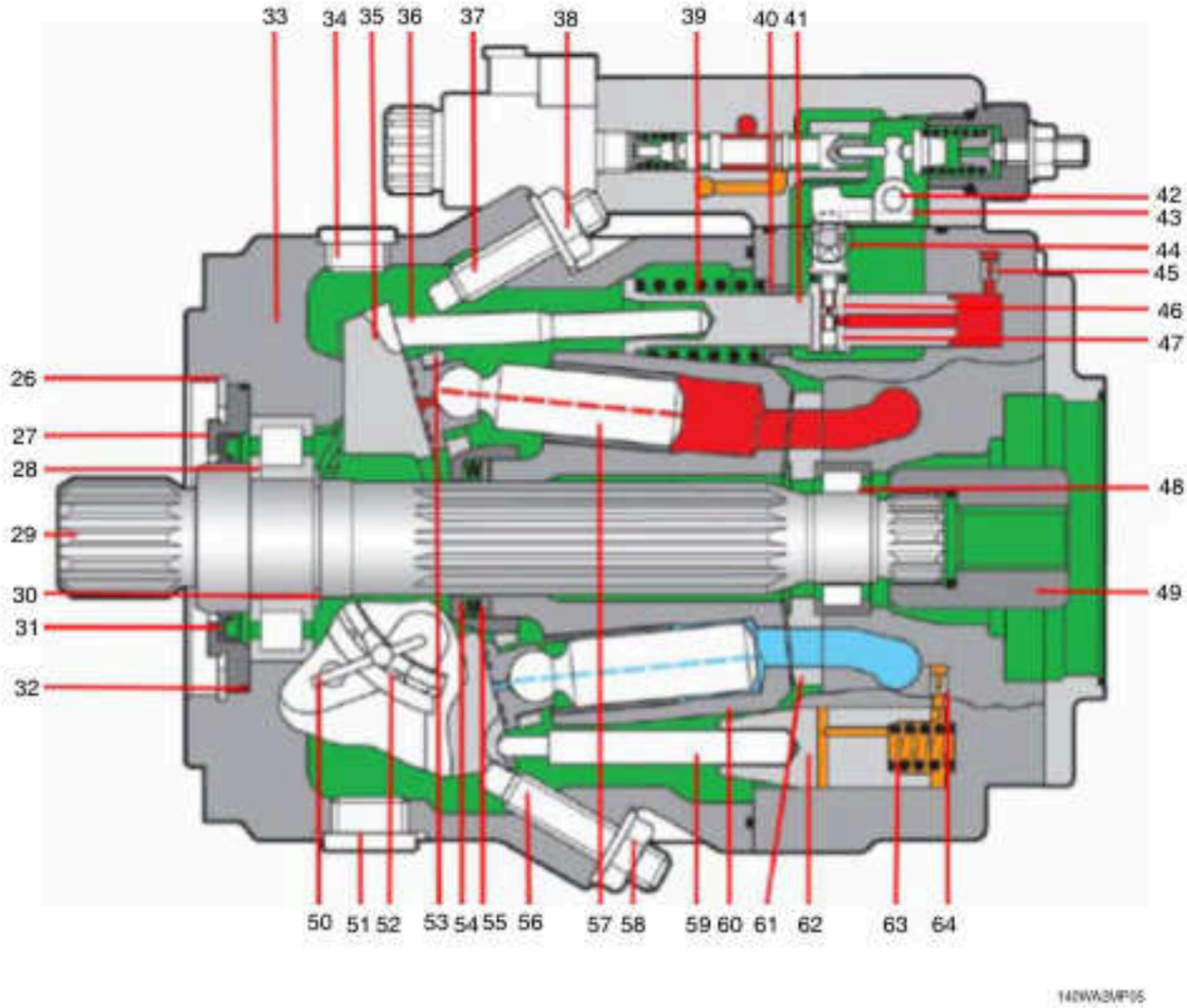




1 Pump channel (P)
2 2 stage LS pressure relief valve
3 Tank channel
4 Tank port (R1, cooler)
5 Tank port (R2)
6 LS channel
7 Primary relief valve
8 Unloading valve
9 LS drain valve

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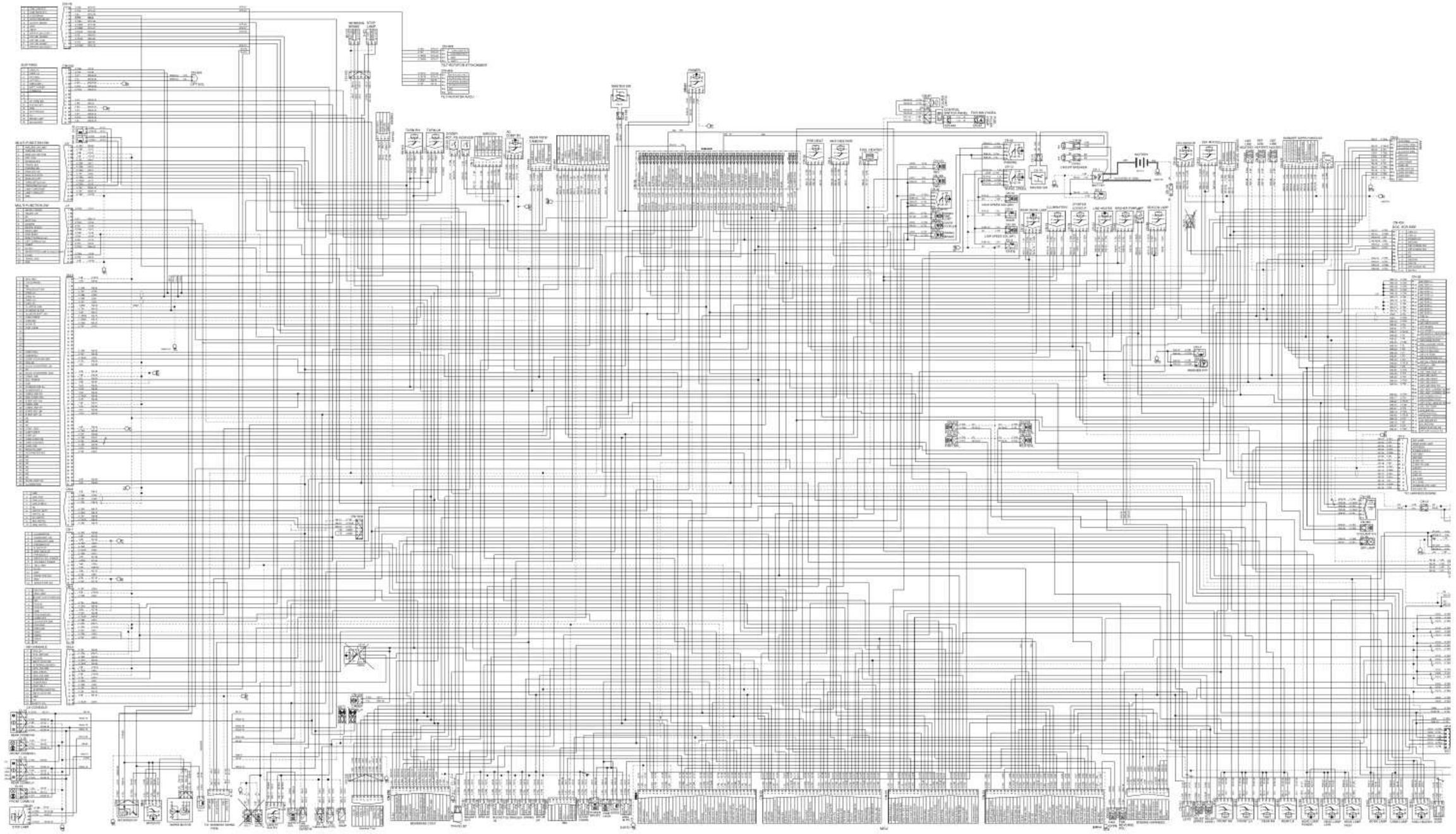
STRUCTURE (2/2)



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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