CRAWLER EXCAVATOR

SERVICE MANUAL

R380LC-9SH

HYUNDAI

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5. LIFTING CAPACITIES

1) 6.5 m (21' 4") boom, 3.2 m (10' 6") arm equipped with 1.62 m³ (SAE heaped) bucket and 600 mm (24") triple grouser shoe and 6500 kg (14330 lb counterweight.

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

Load point height		Load radius												At max. reach		
		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		9.0 m (30.0 ft)		Capacity		Reach
																m (ft)
9.0 m (30 ft)	kg													*5950	*5950	7.97
	lb													*13120	*13120	(26.1)
7.5 m (25.0 ft)	kg									*4560	*4560			*6020	4890	9.12
	lb									*10050	*10050			*13270	10780	(29.9)
6.0 m (20.0 ft)	kg									*6620	*6620			*6110	4070	9.87
	lb									*14590	*14590			*13470	8970	(32.4)
4.5 m (15.0 ft)	kg							*8260	*8260	*7320	6610	*4450	*4450	*6190	3600	10.32
	lb							*18210	*18210	*16140	14570	*9810	*9810	*13650	7940	(33.9)
3.0 m (10.0 ft)	kg					*13520	*13520	*9960	9020	*8240	6240	*6360	4490	6010	3360	10.50
	lb					*29810	*29810	*21960	19890	*18170	13760	*14020	9900	13250	7410	(34.4)
1.5 m (5.0 ft)	kg					*16390	13030	*11570	8370	*9170	5880	*7510	4300	5960	3310	10.45
	lb					*36130	28730	*25510	18450	*20220	12960	*16560	9480	13140	7300	(34.3)
Ground Line	kg			*13090	*13090	*17880	12390	*12690	7930	*9880	5600	*7070	4150	6200	3430	10.14
	lb			*28860	*28860	*39420	27320	*27980	17480	*21780	12350	*15590	9150	13670	7560	(33.3)
-1.5 m (-5.0 ft)	kg	*13720	*13720	*17520	*17520	*18150	12180	*13170	7710	9860	5450			6810	3800	9.57
	lb	*30250	*30250	*38620	*38620	*40010	26850	*29030	17000	21740	12020			15010	8380	(31.4)
-3.0 m (-10.0 ft)	kg	*17880	*17880	*22800	*22800	*17430	12250	*12880	7690	9860	5450			*7730	4560	8.65
	lb	*39420	*39420	*50270	*50270	*38430	27010	*28400	16950	21740	12020			*17040	10050	(28.4)
-4.5 m (-15.0 ft)	kg	*22600	*22600	*21880	*21880	*15520	12550	*11510	7890					*7690	6290	7.25
	lb	*49820	*49820	*48240	*48240	*34220	27670	*25380	17390					*16950	13870	(23.8)
-6.0 m (-20.0 ft)	kg					*11410	*11410									
	lb					*25150	*25150									

Note 1. Lifting capacity are based on SAE J1097 and ISO 10567.
2. Lifting capacity of the ROBEX series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.
3. The load point is a hook located on the back of the bucket.
4. *indicates load limited by hydraulic capacity.

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Error code No.	Description
35	Controller input voltage is below 38V
36	Communication error with cluster
37	Engine speed sensor circuit is open or shorted to ground
38	Aati-restart relay circuit is open or shorted to ground
39	Accel actuator does not stop at a target position
40	There is more than 500 rpm difference between target speed and actual speed
41	Hydraulic oil temperature sensor circuit is shorted to ground
42	Fuel level sensor circuit is shorted to ground
43	Coolant temperature sensor circuit is shorted to ground
44	Boom up pressure sensor circuit is shorted to power supply (24V) line
45	Hydraulic oil temperature sensor circuit is open or shorted to battery +
46	Fuel level sensor circuit is open or shorted to battery +
47	Coolant temperature sensor circuit is open or shorted to battery +
48	Boom up pressure sensor circuit is open or shorted to ground
49	Engine preheater circuit is shorted to battery +
51	Heavy duty work solenoid circuit is open or shorted to battery +
56	Travel alarm buzzer circuit is shorted to battery +
58	Heavy duty work solenoid circuit is shorted to battery +

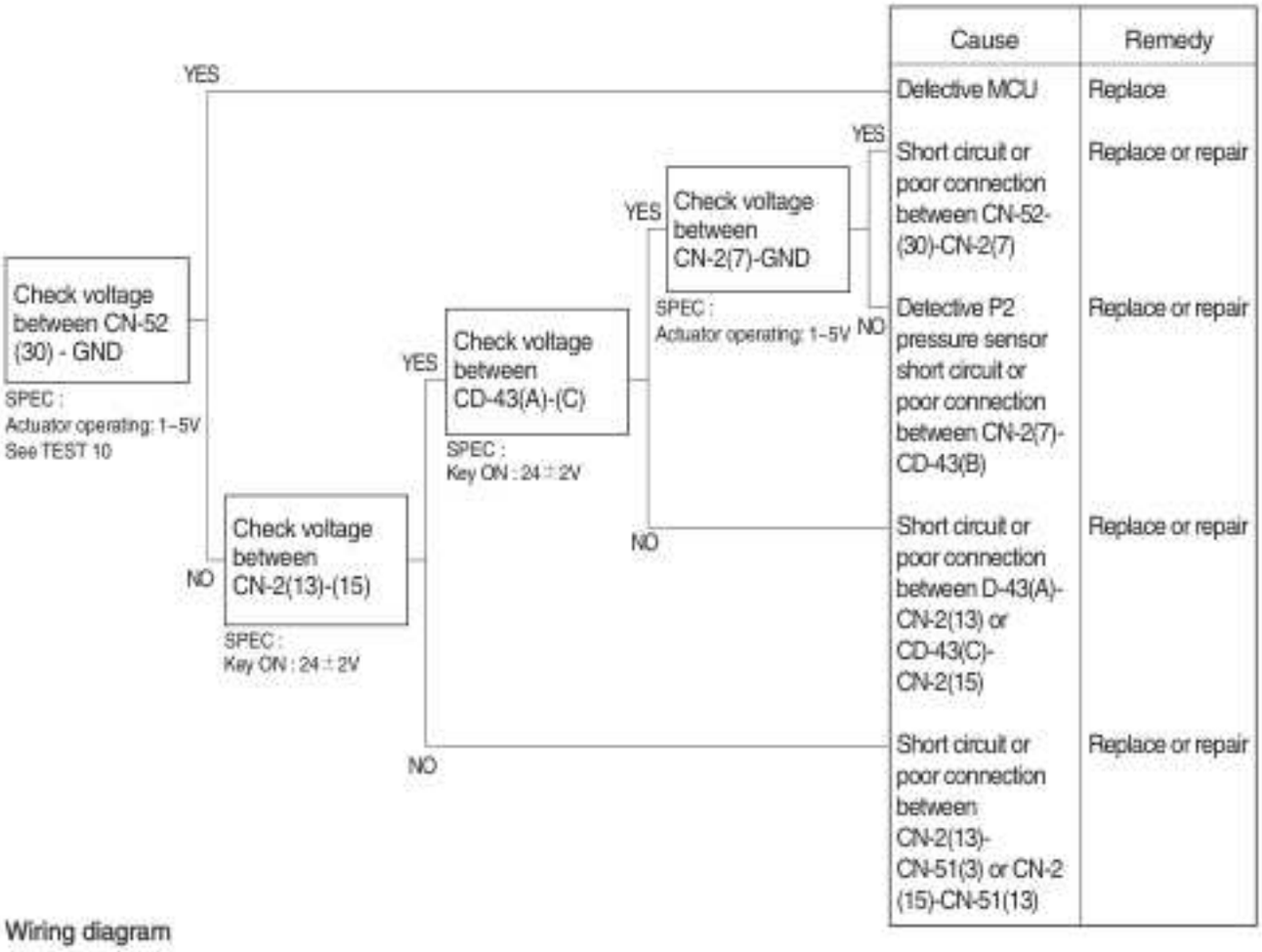
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7. MALFUNCTION OF PUMP 2 PRESSURE SENSOR

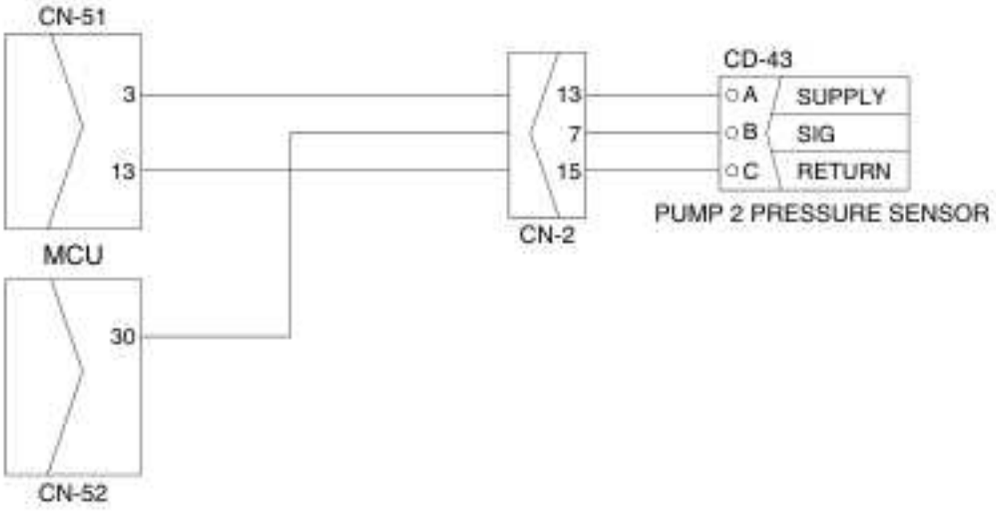
- Fault code : HCESPN 121, FMI 0~4

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

1) INSPECTION PROCEDURE



Wiring diagram



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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.





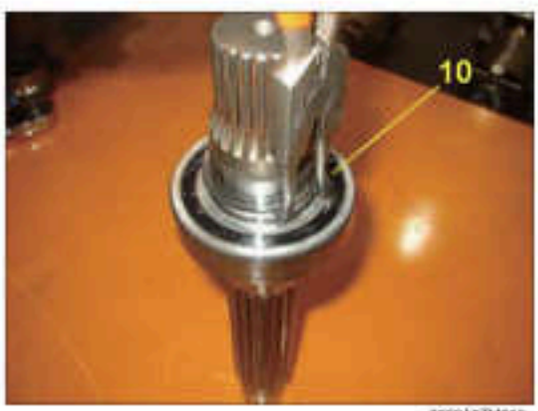
a. Induction heating apparatus temperature : 100˚C

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



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

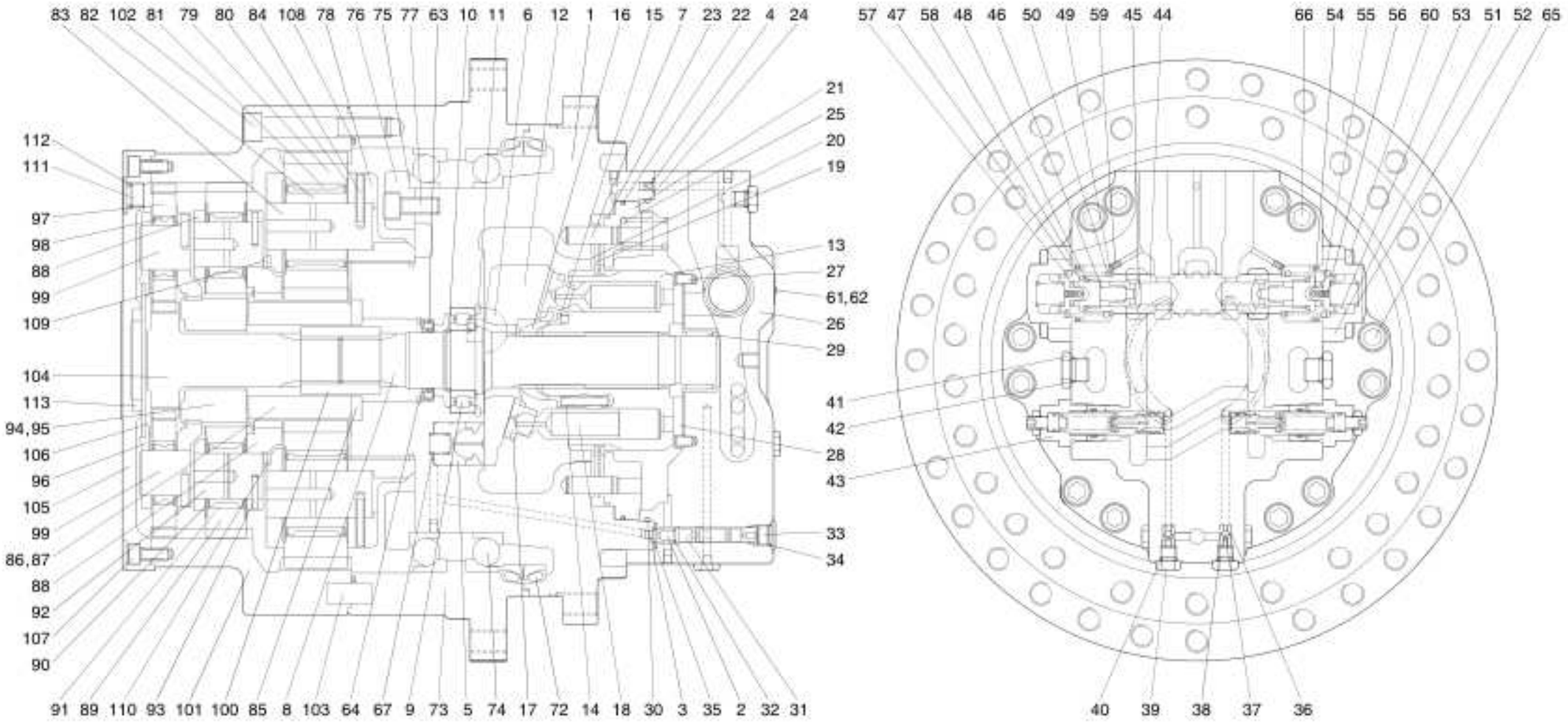
※ Pay attention to the direction of the stop ring. (round direction is bearing direction.)



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2. SPECIFICATION

1) TRAVEL MOTOR



3659A2TM22

1	Shaft casing	15	Spacer	29	Needle bearing	43	Relief valve assy	57	Spring seat	75	Shim	89	Planetary gear	103	Planetary pin
2	Plug	16	Ball guide	30	O-ring	44	Main spool	58	O-ring	76	Bearing guide	90	Plate	104	Drive gear
3	Orifice	17	Set plate	31	Swash spool	45	Check	59	Orifice	77	Wrench bolt	91	Needle bearing	105	End cover
4	Orifice screw	18	Piston & Shoe assy	32	Swash spring	46	Spring	60	Wrench bolt	78	Carrier	92	Pin	106	Plate
5	Swash piston	19	Friction plate	33	Plug	47	Plug	61	Name plate	79	Planetary gear	93	Spring pin	107	Wrench bolt
6	Swash ball	20	Separator plate	34	O-ring	48	O-ring	62	Rivet	80	Plate	94	Sun gear	108	O-ring
7	Brake pin	21	Brake piston	35	O-ring	49	Spring seat	63	Oil seal	81	Needle bearing	95	Snap ring	109	Ring
8	Shaft	22	Piston ring	36	Seat	50	Spring	64	Snap ring	82	Bearing bushing	96	Carrier	110	Ring
9	Roller bearing	23	Piston ring	37	Steel ball	51	Cover	65	Wrench bolt	83	Pin	97	Planetary gear	111	Plug
10	Stop ring	24	O-ring	38	Stopper	52	Spring	66	Wrench bolt	84	Spring pin	98	Needle bearing	112	O-ring
11	Lock ring	25	Brake spring	39	Plug	53	Spool	67	Spring pin	85	Thrust plate	99	Pin	113	Bushing
12	Swash plate	26	Valve casing	40	O-ring	54	Steel ball	72	Floating seal	86	Sun gear	100	Coupling		
13	Cylinder block	27	Valve plate pin	41	Plug	55	Spring	73	Hub	87	Snap ring	101	Ring gear		
14	Cylinder spring	28	Valve plate	42	O-ring	56	Plug	74	Bearing	88	Carrier	102	Wrench bolt		

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