CRAWLER EXCAVATOR

SERVICE MANUAL

R130LC-3

HYUNDAI

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4. WEIGHT

Item	R130LC-3		R130LCM-3	
	kg	lb	kg	lb
Upperstructure assembly	6145	13550	6460	14240
Main frame weld assembly	1050	2310	1150	2540
Engine assembly	330	730	←	
Main pump assembly	85	190	←	
Main control valve assembly	105	230	←	
Swing motor assembly	110	240	←	
Hydraulic oil tank assembly	175	390	←	
Fuel tank assembly	95	210	←	
Counterweight	2400	5290	←	
Cab assembly	300	660	←	
Undercarriage assembly	5415	11940	6465	14650
Track frame weld assembly	1640	3620	1920	4230
Swing bearing	190	410	←	
Travel motor assembly	210	460	←	
Turning joint	40	80	←	
Track recoil spring and idler	195	420	←	
Idler	100	220	←	
Carrier roller	30	60	35	80
Track roller	35	80		
Track-chain assembly (600 ㎜ triple grouser shoe)	1060	2340	1550	3420
Front attachment assembly (4.6 m boom, 2.5 arm, 0.51 ㎥ (PCSA heaped) bucket)	2040	4500	←	
4.6 m boom assembly	790	1740	←	
2.5 m arm assembly	380	840	←	
0.51 ㎥ (PCSA heaped)	440	970	←	
Boom cylinder assembly	125	270	←	
Arm cylinder assembly	155	340	←	
Bucket cylinder assembly	100	210	←	
Bucket control rod assembly	40	80	←	

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3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	10cc/rev
Maximum pressure	35kgf/cm²(500psi)
Rated oil flow	22ℓ/min(5.8U.S. gpm/4.8U.K. gpm)

4) MAIN CONTROL VALVE

Item	Specification
Type	7 spools
Operating method	Hydraulic pilot system
Main relief valve pressure	320kgf/cm²(4550psi) [350kgf/cm²(4980psi)]
Overload relief valve pressure	380kgf/cm²(5400psi)

[ ]: Power boost

5) SWING MOTOR

Item	Specification	
	UP TO #1904	#1905 AND UP
Type	Fixed displacement axial piston motor	
Capacity	79cc/rev	64cc/rev
Relief pressure	220kgf/cm²(3130psi)	240kgf/cm²(3415psi)
Braking system	Automatic, spring applied hydraulic released	
Braking torque	12kgf.m(87lbf.ft)	22kgf.m(160lbf.ft)
Brake release pressure	17~40kgf/cm²(240~570psi)	22~40kgf/cm²(313~570psi)
Reduction gear type	2 - stage planetary	
Swing speed	13rpm	

6) TRAVEL MOTOR

Item	Specification	
	UP TO #1563	#1564 AND UP
Type	Variable displacement axial piston motor	
Operating pressure	320kgf/cm²(4550psi) [350kgf/cm²(4980psi)]	
Reduction gear type	3-stage planetary	
Braking system	Automatic, spring applied hydraulic released	
Brake release pressure	11kgf/cm²(156psi)	6.0kgf/cm²(86psi)
Braking torque	132kgf.m(955lbf.ft)	40.6kgf.m(294lbf.ft)

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GROUP 5 CONNECTORS

1. CONNECTOR DESTINATION

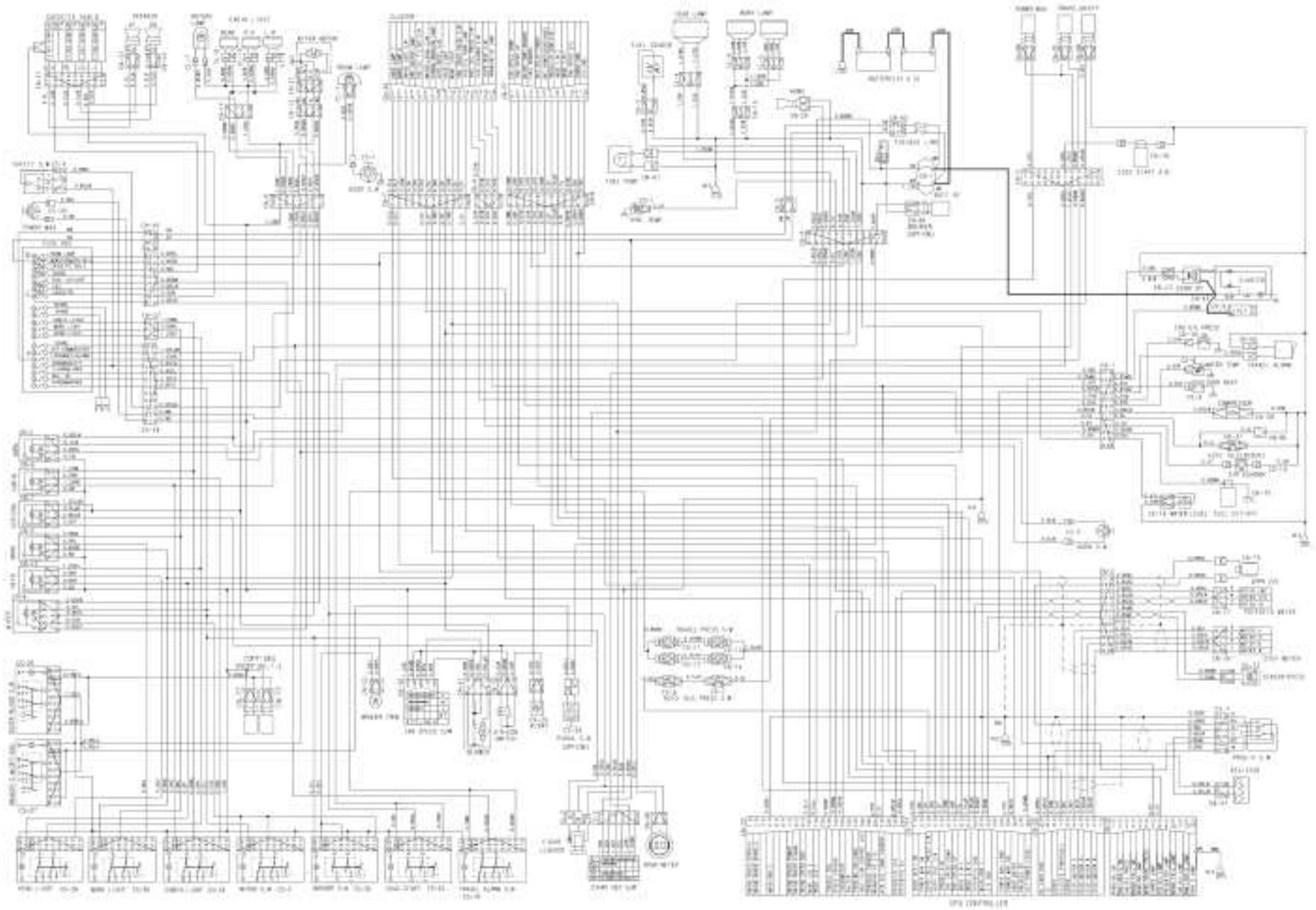
Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CN-1	SWP	12	I/conn(Engine harness-main harness)	S814-012000	S814-112000
CN-2	SWP	12	I/conn(Engine harness-main harness)	S814-012000	S814-112000
CN-3	SWP	8	I/conn(solenoid harness-main harness)	S814-008000	S814-108000
CN-4	SWP	12	I/conn(R.H harness-main harness)	S814-012000	S814-112000
CN-5	370FASTON	2	I/conn(R.H harness-main harness)	S813-030200	S813-130200
CN-6	SWP	8	I/conn(Cabin harness-main harness)	S814-008000	S814-108000
CN-7	SWP	12	I/conn(Cabin harness-main harness)	S814-012000	S814-112000
CN-8	SWP	12	I/conn(Cabin harness-main harness)	S814-012000	S814-112000
CN-9	SWP	4	I/conn(Cabin harness-main harness)	S814-004000	S814-104000
CN-13	CN	4	I/conn(Wiper harness-main harness)	S810-004204	S810-104204
CN-14	CN	4	I/conn(Cabin harness-main harness)	S810-004204	-
CN-18	BS	3	I/conn(Boom harness-main harness)	S812-003011	-
CN-20	MARK- II	1	Horn	S819-010122	-
CN-21	CN	4	Wiper motor	S810-004204	-
CN-22	CN	2	Washer tank	S810-002204	-
CN-23	-	1	Speaker (LH)	S810-014004	S822-114004
CN-24	-	1	Speaker (RH)	S822-014004	S822-114004
CN-27	PA	9	Cassette & radio	S811-009003	-
CN-28	CN	2	Compressor	S810-002202	-
CN-29	-	4	R/dryer	S812-002001	-
CN-30	CN	6	Fan speed switch	S810-006202	-
CN-31	CN	4	Blower	S810-004202	-
CN-32	PA	3	Air-con switch	S811-003001	-
CN-36	SWP	12	Fuse box	S814-012000	-
CN-37	AMP	3	Fuse box	S810-003202	-
CN-38	SWP	8	Fuse box	S814-008000	-
CN-40	58-L	2	Fuse box	S813-030200	-
CN-45	RING-TERM	-	Start motor B^+	S820-031000	-
CN-47	CN	2	Resistor	S810-002202	-
CN-48	CN	2	Hour motor	S810-002202	-
CN-50	LC	10	CPU & controller	S815-010000	-
CN-51	LC	18	CPU & controller	S815-018000	-
CN-52	LC	24	CPU & controller	S815-024000	-
CN-53	PA	13	CPU & controller	AMP,172498-1	-
CN-56	ML	16	Cluster	AMP,174046-2	-
CN-57	ML	12	Cluster	AMP,174045-2	-
CN-60	58-L	2	Fusible link	-	S813-130200
CN-61	-	1	Fuel filler pump	S822-015000	-
CN-65	-	1	Travel alarm	S822-014000	-

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5. ERROR CODES TABLE

Fault code No.	Description
1	Short circuit in governor motor system
2	Potentiometer circuit is shorted to Vcc(5V) or battery +
3	Short circuit in pump EPPR valve system
4	Short circuit in boom down EPPR valve system
5	Short circuit in travel speed solenoid system
6	Short circuit in power boost solenoid system
7	Short circuit in max flow solenoid system
10	Short circuit in hour-meter system
11	Accel dial circuit is shorted to Vcc(5V) or battery +
12	P1 pressure sensor circuit is shorted to power supply(24V) line
13	P2 pressure sensor circuit is shorted to power supply(24V) line
14	P3 pressure sensor circuit is shorted to power supply(24) line
15	Boom down pressure circuit is shorted to power supply(24V) line
16	Governor motor circuit is open or shorted to ground
17	Potentiometer circuit is open or shorted to ground
18	Pump EPPR valve circuit is open or shorted to ground
19	Boom down EPPR valve circuit is open or shorted to ground
20	Travel speed solenoid circuit is open or shorted to ground
21	Power boost solenoid circuit is open or shorted to ground
22	Max flow solenoid circuit is open or shorted to ground
25	Hour-meter circuit is open or shorted to ground
26	Accel dial circuit is open or shorted to ground
27	P1 pressure sensor circuit is open or shorted to ground
28	P2 pressure sensor circuit is open or shorted to ground
29	P3 pressure sensor circuit is open or shorted to ground
30	Boom down pressure sensor circuit is open or shorted to ground
31	Engine preheater circuit is open or shorted to ground
32	Travel alarm buzzer circuit is open or shorted to ground
33	Alternator circuit is open or shorted to ground
34	Controller input voltage is below 18V
35	Controller input voltage is over 38V
36	Communication error with cluster
37	Engine speed sensor circuit is open or shorted to ground
38	Anti-restart relay circuit is open or shorted to ground
39	Accel actuator does not stop at a target position
40	There is more than 500rpm difference between target speed and actual speed

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