CRAWLER EXCAVATOR

SERVICE MANUAL

R140LC-9A

HYUNDAI

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5. LIFTING CAPACITIES

1) R140LC-9A

(1) 4.60 m (15' 1") boom, 2.50 m (8' 2") arm equipped with 0.58 m³ (SAE heaped) bucket and 600 mm (24") triple grouser shoe.

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

Load point height		Load radius								At max. reach		
		1.5 m (5 ft)		3.0 m (10 ft)		4.5 m (15 ft)		6.0 m (20 ft)		Capacity		Reach
												m (ft)
6.0 m (20.0 ft)	kg									*2810	1920	6.69
	lb									*6190	4230	(21.9)
4.5 m (15.0 ft)	kg							*2770	2270	2440	1500	7.53
	lb							*6110	5000	5380	3310	(24.7)
3.0 m (10.0 ft)	kg			*4930	*4930	*3830	3570	*3380	2190	2170	1310	7.95
	lb			*10870	*10870	*8440	7870	*7450	4830	4780	2890	(26.1)
1.5 m (5.0 ft)	kg			*8030	6240	*5010	3300	3380	2070	2100	1250	8.03
	lb			*17700	13760	*11050	7280	7450	4560	4630	2760	(26.3)
Ground Line	kg			*8780	5800	5200	3090	3270	1970	2180	1300	7.77
	lb			*19360	12790	11460	6810	7210	4340	4810	2870	(25.5)
-1.5 m (-5.0 ft)	kg	*5740	*5740	*9910	5700	5080	2990	3220	1920	2500	1500	7.15
	lb	*12650	*12650	*21850	12570	11200	6590	7100	4230	5510	3310	(23.5)
-3.0 m (-10 ft)	kg	*8760	*8760	*9040	5770	5100	3000			3340	2030	6.01
	lb	*19310	*19310	*19930	12720	11240	6610			7360	4480	(19.7)
-4.5 m (-15.0 ft)	kg			*6590	6030							
	lb			*14530	13290							

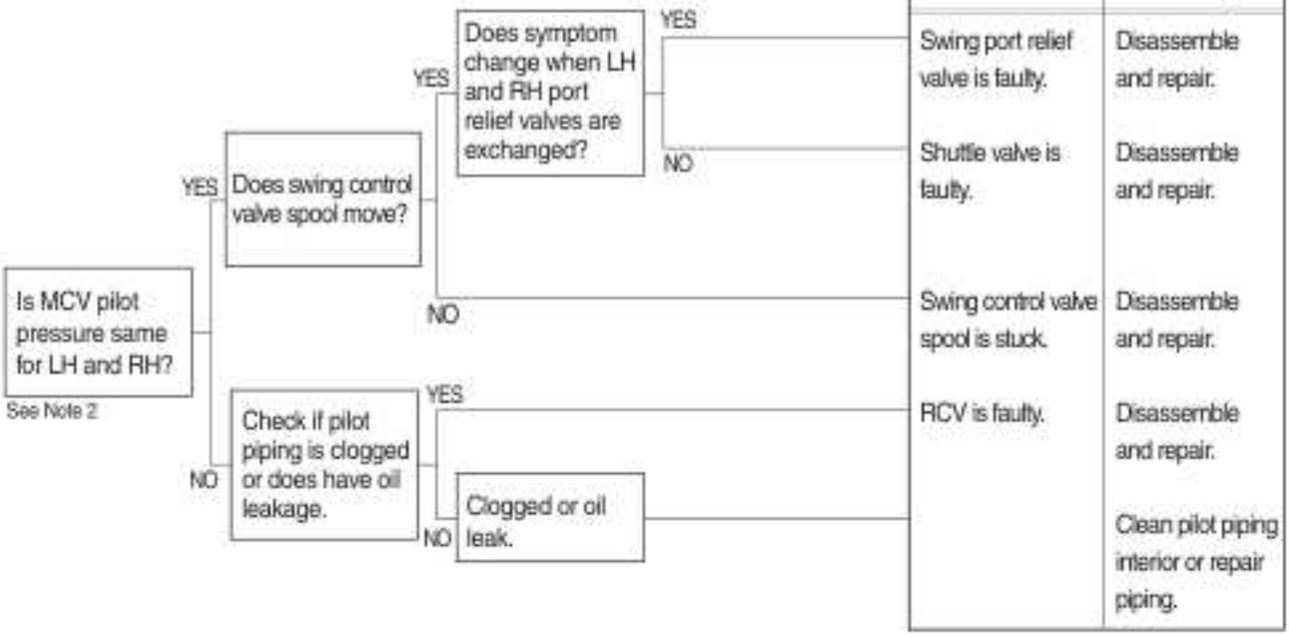
Note 1. Lifting capacity are based on SAE J1097 and ISO 10567.
2. Lifting capacity of the ROBEX series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.
3. The load point is a hook located on the back of the bucket.
4. *indicates load limited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

(2) 4.60 m (15' 1") boom, 1.90 m (6' 3") arm equipped with 0.58 m³ (SAE heaped) bucket and 600 mm (24") triple grouser shoe.

Load point height		Load radius								At max. reach		
		1.5 m (5 ft)		3.0 m (10 ft)		4.5 m (15 ft)		6.0 m (20 ft)		Capacity		Reach
												m (ft)
6.0 m (20.0 ft)	kg					*3340	*3340			*3170	2350	5.95
	lb					*7360	*7360			*6990	5180	(19.5)
4.5 m (15.0 ft)	kg					*3550	*3550			2820	1760	6.90
	lb					*7830	*7830			6220	3880	(22.6)
3.0 m (10.0 ft)	kg			*6270	*6270	*4440	3510	3480	2170	2480	1520	7.37
	lb			*13820	*13820	*9790	7740	7670	4780	5470	3350	(24.2)
1.5 m (5.0 ft)	kg			*8490	6040	5400	3270	3380	2080	2390	1450	7.45
	lb			*18720	13320	11900	7210	7450	4590	5270	3200	(24.4)
Ground Line	kg			*8230	5790	5200	3100	3300	2000	2510	1520	7.17
	lb			*18140	12760	11460	6830	7280	4410	5530	3350	(23.5)
-1.5 m (-5.0 ft)	kg	*6670	*6670	*9690	5800	5140	3050			2960	1810	6.48
	lb	*14700	*14700	*21360	12790	11330	6720			6530	3990	(21.3)
-3.0 m (-10 ft)	kg	*10970	*10970	*8330	5930	5220	3110			*3690	2670	5.15
	lb	*24180	*24180	*18360	13070	11510	6860			*8140	5890	(16.9)

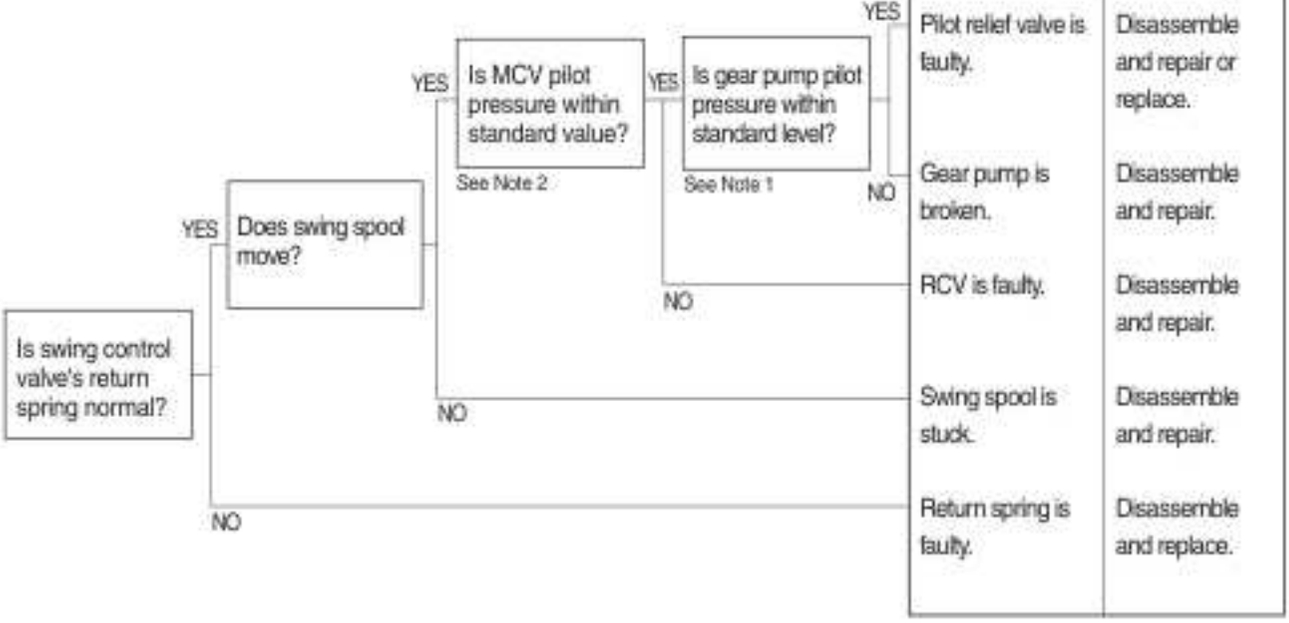
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3) SWING MOTION IS IMPOSSIBLE IN ONE DIRECTION



Cause	Remedy
Swing port relief valve is faulty.	Disassemble and repair.
Shuttle valve is faulty.	Disassemble and repair.
Swing control valve spool is stuck.	Disassemble and repair.
RCV is faulty.	Disassemble and repair.
	Clean pilot piping interior or repair piping.

4) MACHINE SWINGS BUT DOES NOT STOP



Cause	Remedy
Pilot relief valve is faulty.	Disassemble and repair or replace.
Gear pump is broken.	Disassemble and repair.
RCV is faulty.	Disassemble and repair.
Swing spool is stuck.	Disassemble and repair.
Return spring is faulty.	Disassemble and replace.

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15. MALFUNCTION OF BOOM PRIORITY EPPR VALVE

- Fault code : HCESPN 141, FMI 5 or 6

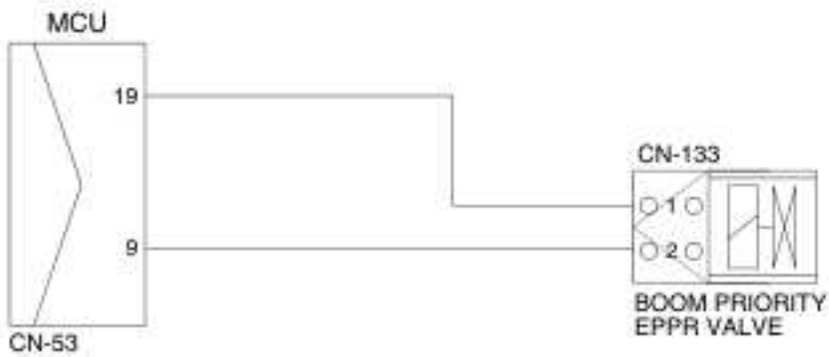
※ Before carrying out below procedure, check all the related connectors are properly inserted.

1) INSPECTION PROCEDURE



Cause	Remedy
Short circuit or poor connection between CN-53(19)-CN-133 (1) or CN-53(9)-CN-133(2)	Repair or replace
Defective EPPR valve	Repair or replace

Wiring diagram



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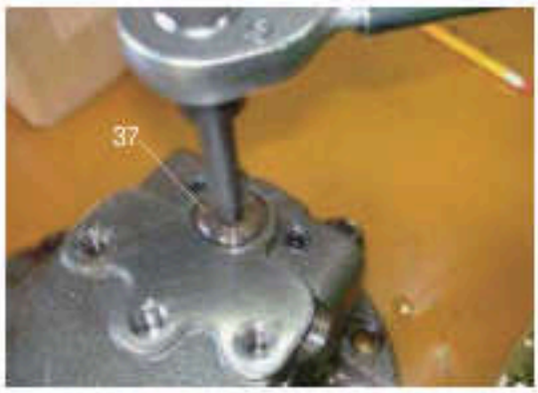
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(11) Put spring (36), two speed control spool (35) into valve casing (25) in regular sequence and assemble plug (37) into valve casing (25) using a torque wrench.

· Tighten torque : 10 kgf-m (72.3 lbf-ft)



145Z9A8TM70



145Z9A8TM71

(12) Assemble check (30), spring (29), plug (27) into main spool (26) in regular sequence.



145Z9A8TM72



145Z9A8TM73



145Z9A8TM74



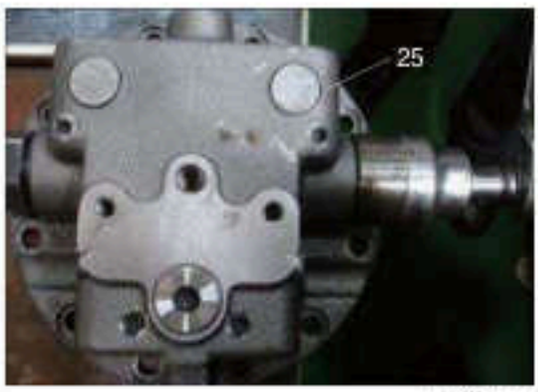
145Z9A8TM75

(13) Put the main spool (26) into valve casing (25) and assemble plate (31), spring (29) into it. Tighten main spool plug (32) using a torque wrench.

· Tighten torque : 45 kgf-m (325.5 lbf-ft)



145Z9A8TM76



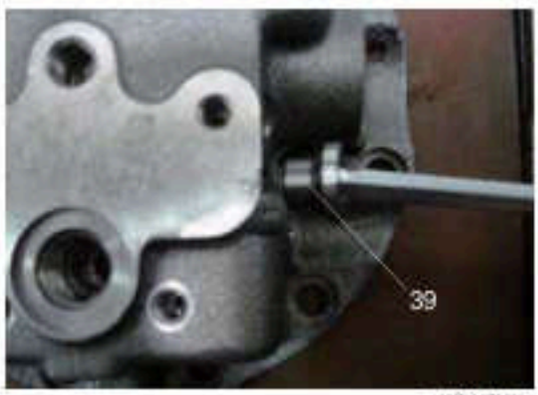
145Z9A8TM77

(14) Put relief valve damping piston (38) into valve casing (25) and assemble plug (39) into valve casing (25).

· Tighten torque : 6 kgf-m (43.4 lbf-ft)



145Z9A8TM78



145Z9A8TM79

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③ Machine Information



- This can confirm the identification of the cluster, MCU, engine and machine.

④ A/S phone number

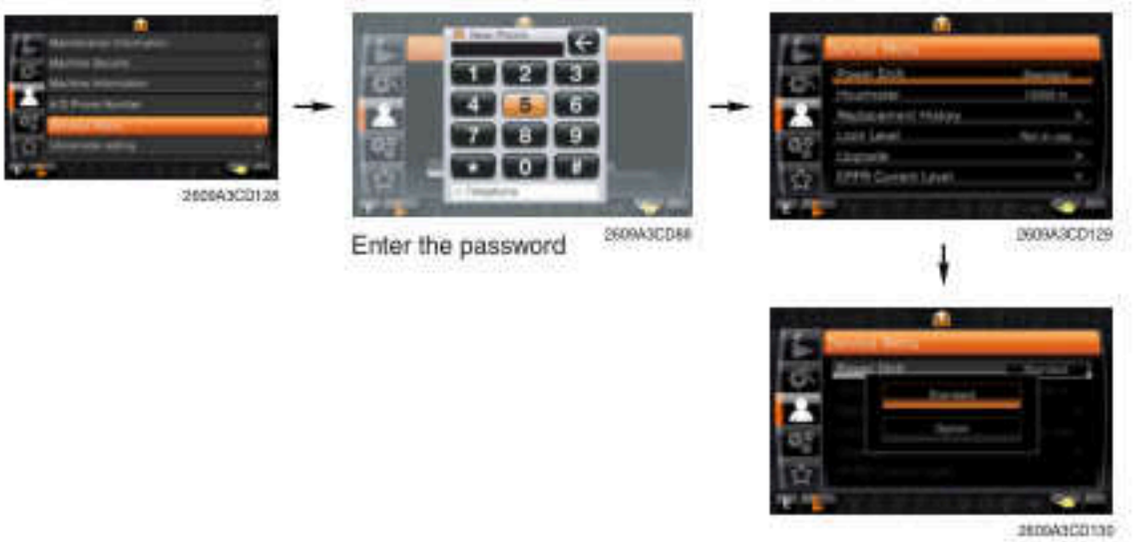


Enter the new A/S phone number



The new phone number is stored in MCU

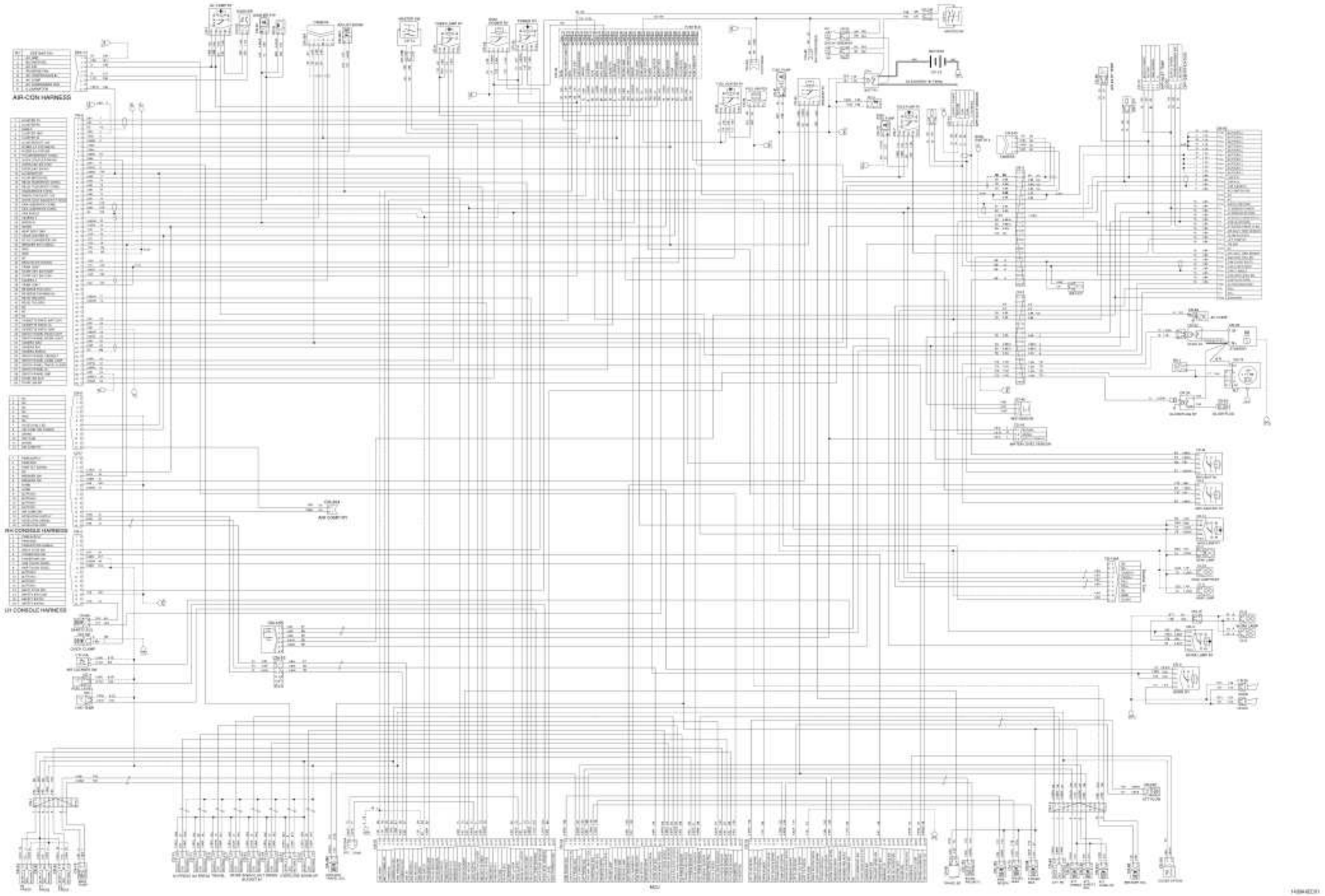
⑤ Service menu



Enter the password

- Power shift (standard/option) : Power shift pressure can be set by option menu.
- Hourmeter : Operating hours since the machine line out can be checked by this menu.
- Replacement history : Replacement history of the MCU and cluster can be checked by this menu.
- Lock level (not in use/in use)
- Upgrade : Firm ware can be upgraded by this menu. (the USB port is located under the cluster)
- EPPR current level (attach EPPR/boom priority EPPR)

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