WHEELED EXCAVATOR

SERVICE MANUAL

R140W-7A

HYUNDAI

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5. LIFTING CAPACITIES

1) ROBEX 140W-7A

(1) 4.60m (15' 1") boom, 2.1m (6'11") arm equipped with 0.58m³ (SAE heaped) bucket and rear dozer blade down with 1900kg counterweight.

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

Load point height		Load radius								At max. reach		
		1.5m (5ft)		3.0m (10ft)		4.5m (15ft)		6.0m (20ft)		Capacity		Reach
												m (ft)
6.0m (20ft)	kg					*2900	*2900			*2800	1960	6.43
	lb					*6390	*6390			*6170	4320	(21.1)
4.5m (15ft)	kg					*3280	*3280	*3120	2130	*2910	1530	7.23
	lb					*7230	*7230	*6880	4700	*6420	3370	(23.7)
3.0m (10ft)	kg			*6190	*6190	*4190	3330	*3480	2060	*3040	1340	7.59
	lb			*13650	*13650	*9240	7340	*7670	4520	*6700	2950	(24.9)
1.5m (5ft)	kg			*8430	5770	*5180	3070	*3910	1940	3180	1300	7.59
	lb			*18580	12720	*11420	6770	*8620	4280	7010	2870	(24.9)
Ground Line	kg			*8950	5560	*5780	2920	*4200	1860	*3350	1400	7.24
	lb			*19730	12260	*12740	6440	*9260	4100	*7390	3090	(23.8)
-1.5m (-5ft)	kg	*7320	*7320	*8840	5580	*5780	2880			*3470	1710	6.45
	lb	*16140	*16140	*19490	12300	*12740	6350			*7650	3770	(21.2)
-3.0m (-10ft)	kg	*11630	*11630	*7390	5740	*4820	2970					
	lb	*25640	*25640	*16290	12650	*10630	6550					

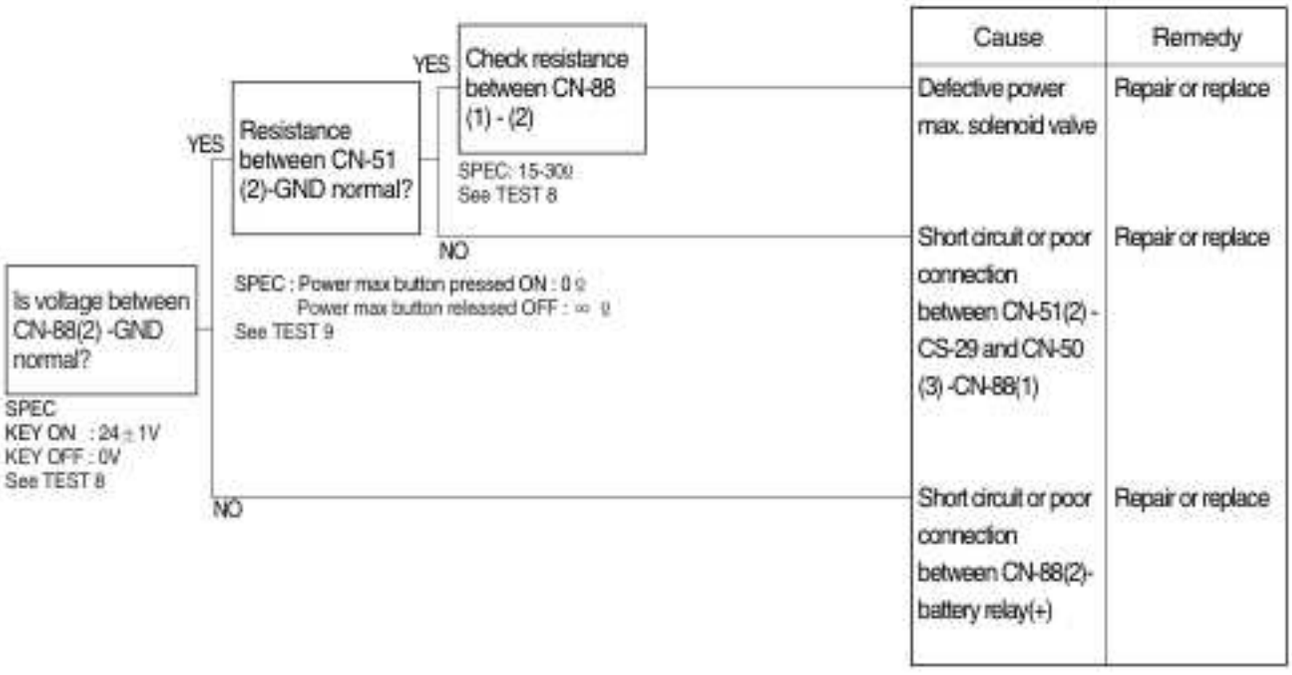
Note
1. Lifting capacity are based on SAE J1097 and ISO 10567.
2. Lifting capacity of the ROBEX series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.
3. The load point is a hook located on the back of the bucket.
4. *indicates load limited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

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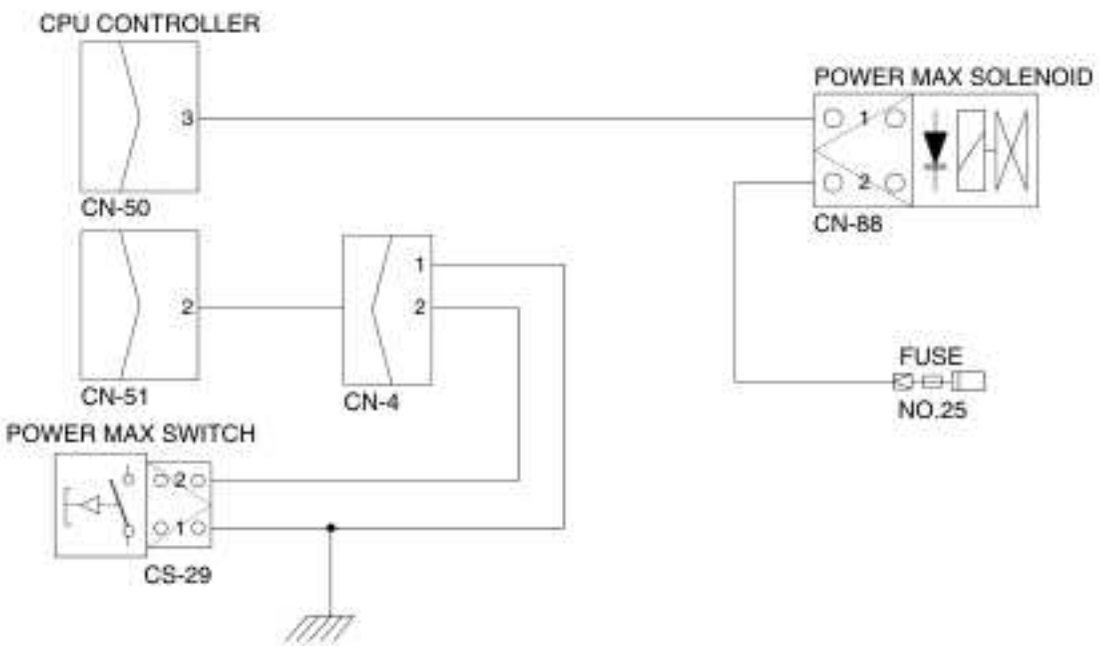
6. MALFUNCTION OF POWER MAX

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

1) INSPECTION PROCEDURE



Wiring diagram



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2) TOOLS AND TIGHTENING TORQUE

(1) Tools

Allen wrench	6	
	8	
	14	
	17	
Spanner	7	
	8	
(-) Driver	Small and large sizes	
Torque wrench	Capable of tightening with the specified torques	

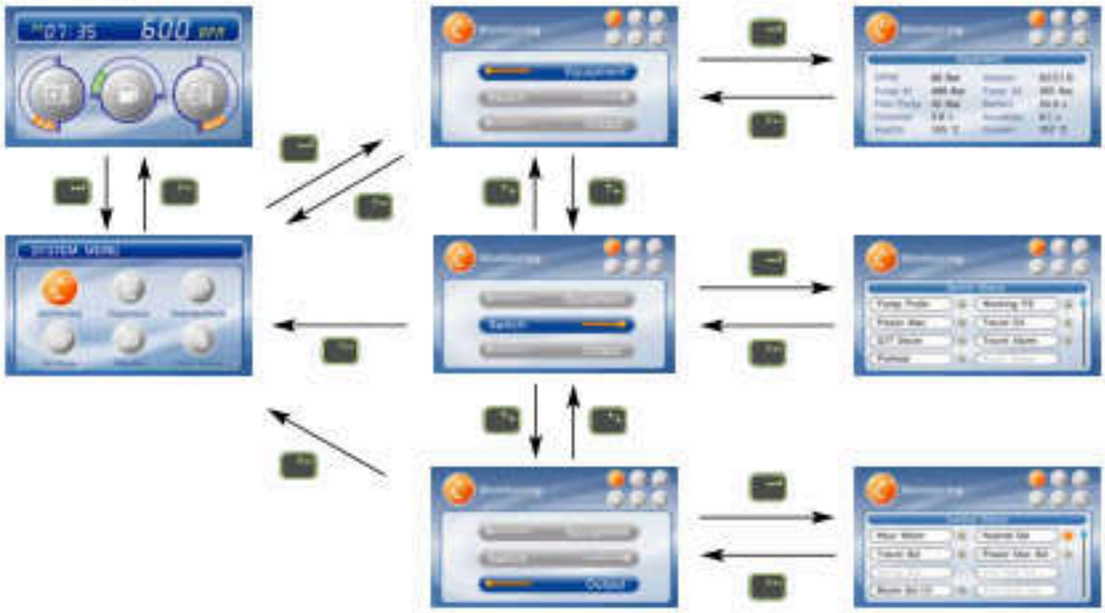
(2) Tightening torque

Part name		Item	Size	Torque	
				kgf · m	lbf · ft
Socket head bolt	Bucket cylinder	22	M16	23±2.0	166±14.5
	Boom cylinder		M16	23±2.0	166±14.5
	Arm cylinder	24	M18	32±3.0	232±21.7
	Outrigger cylinder	19	M16	23±2.0	166±14.5
	Dozer cylinder	24	M8	2.7±0.3	19.5±2.2
	Outrigger cylinder				
	Dozer cylinder	25	M10	5.4±0.5	39.1±3.6
	Outrigger cylinder				
Hexagon head bolt	Bucket	27	M10	5.4±0.5	39.1±3.6
	Boom	28, 29	M8	2.7±0.3	19.6±2.2
	Arm	30	M10	5.4±0.5	39.1±3.6
Lock nut	Bucket cylinder	21	M45	100±10.0	723±72.3
	Boom cylinder	21	M50		
	Arm cylinder	23	M55		
	Dozer cylinder - Front	19	M45	292±29	2112±210
Piston	Bucket cylinder	15	-	150±15.0	1085±109
	Boom cylinder				
	Arm cylinder				
	Dozer cylinder	13			
	Outrigger cylinder	12			

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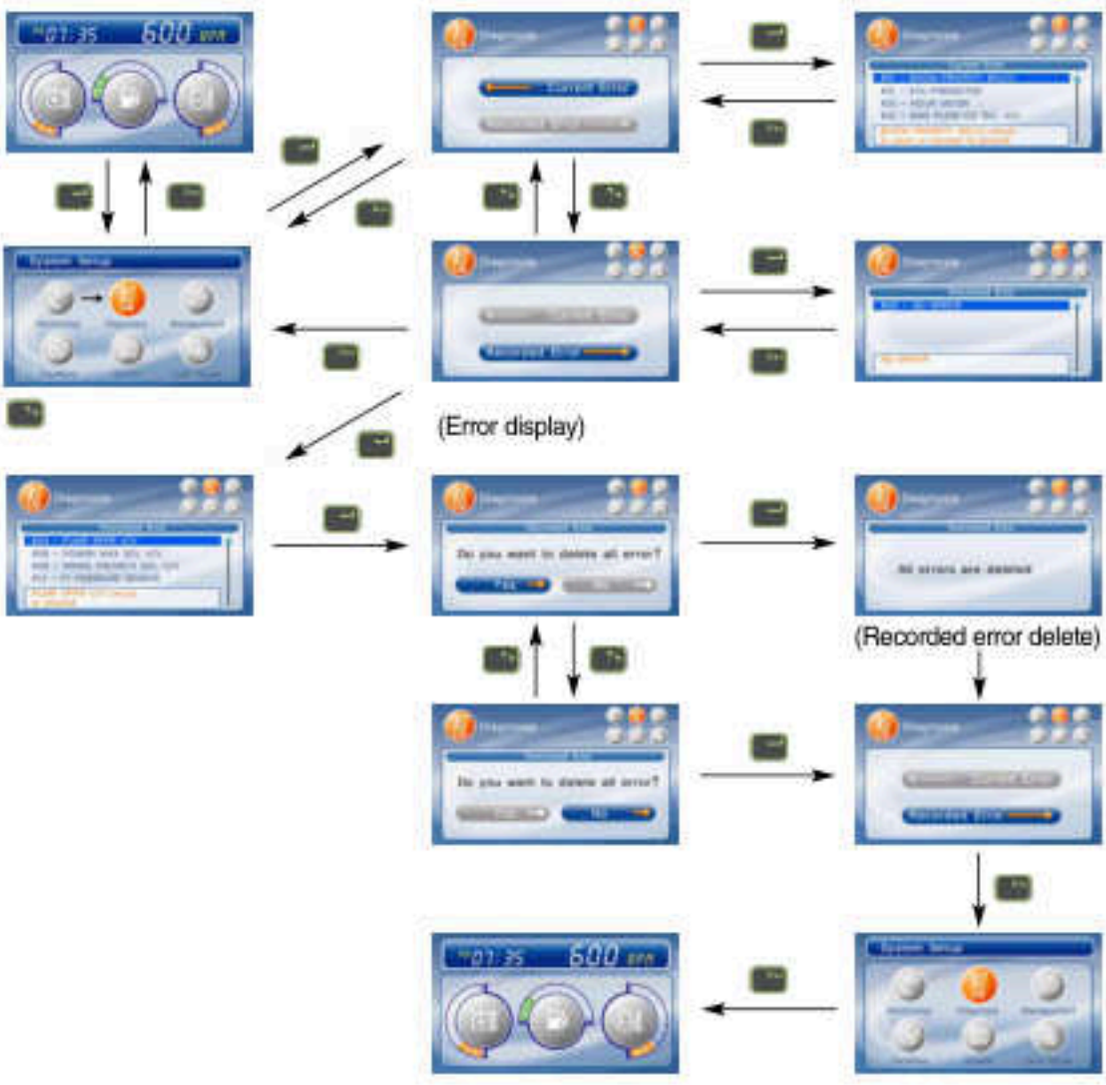
(2) Display map

① Monitoring



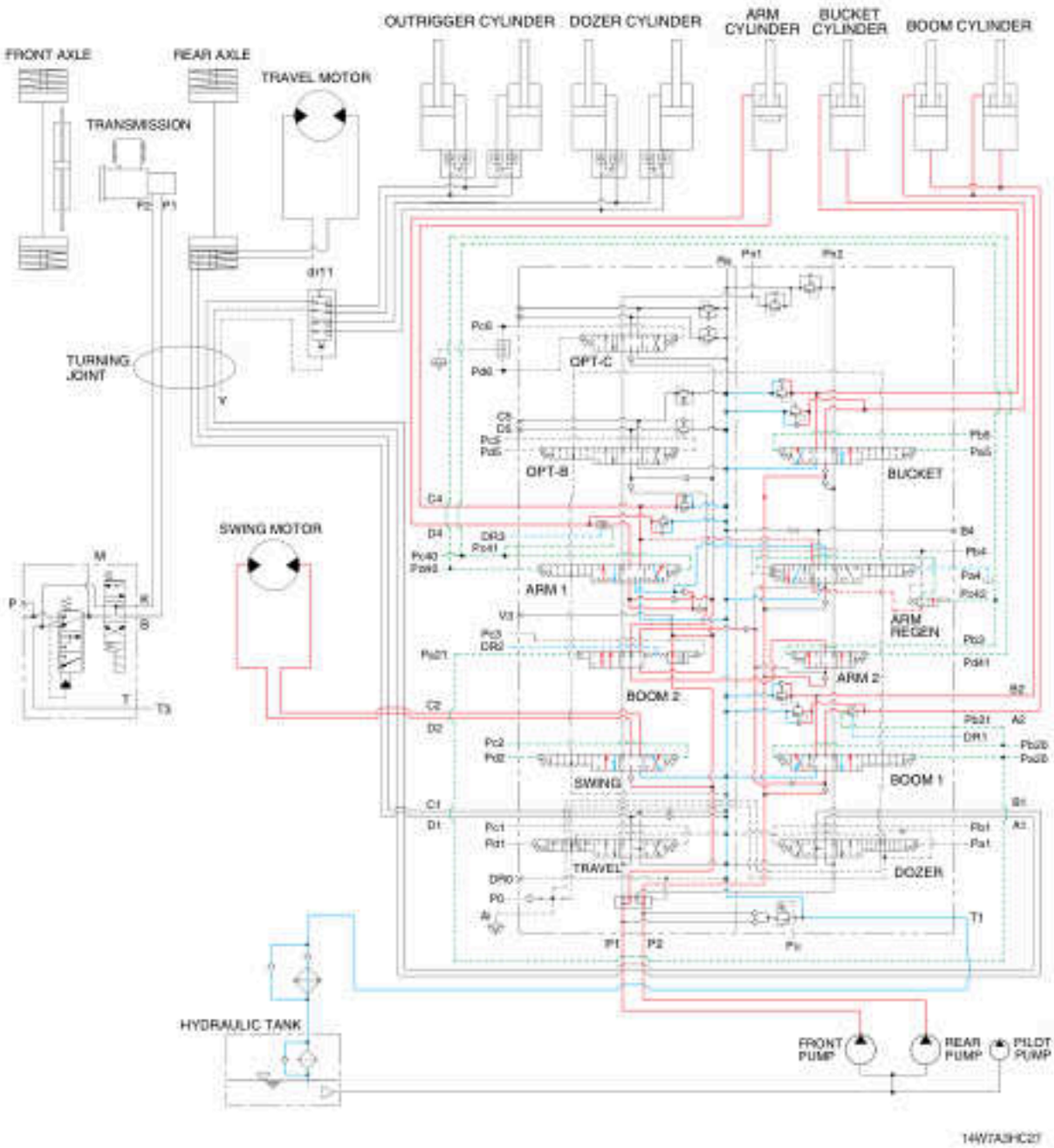
② Diagnosis

a. Protocol type 1



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5. COMBINED SWING, BOOM, ARM AND BUCKET OPERATION

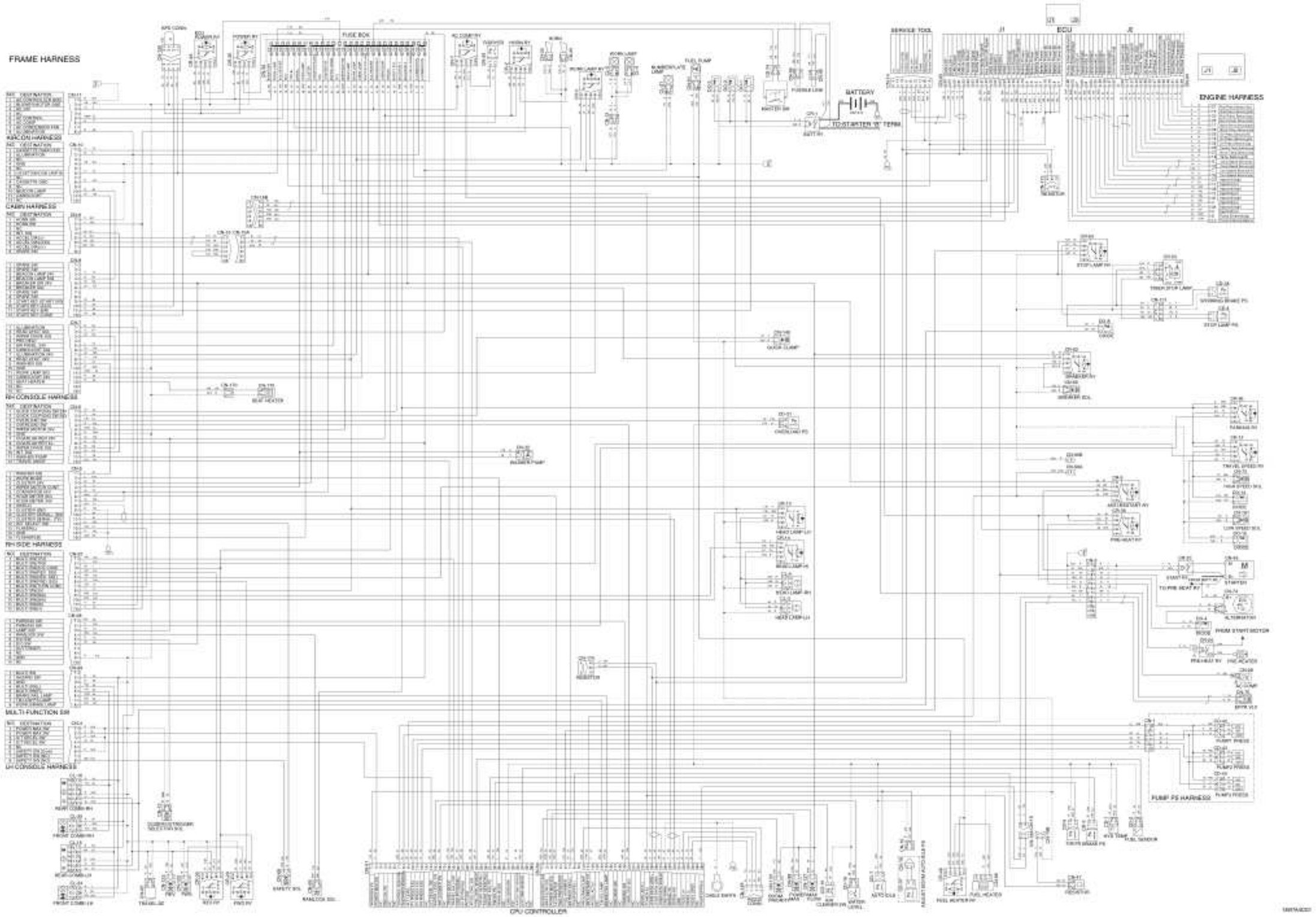


When the swing, boom, arm and bucket functions are operated, simultaneously each spool in the main control valve is moved to the functional position by the pilot oil pressure from the remote control valve.

The oil from the front pump flows into the swing motor, boom cylinders and arm cylinder through the swing spool, boom 2 spool, arm 1 spool, and the parallel and confluence oil passage in the left control valve. The oil from the rear pump flows into the boom cylinders, arm cylinder and bucket cylinder through the boom 1 spool, arm 2 spool, bucket spool and the parallel and confluence oil passage in the right control valve.

The superstructure swings and the boom, arm and bucket are operated.

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