CRAWLER EXCAVATOR

SERVICE MANUAL

R160,180LC-9S

HYUNDAI

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5. LIFTING CAPACITIES

1) R180LC-9S

(1) 5.1 m (16' 9") boom, 2.6 m (8' 6") arm equipped with 0.76 m³ (SAE heaped) bucket and 600 mm (24") triple grouser shoe and 2900 kg (6390 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)		Capacity		Reach
														m (ft)
7.5 m (25.0 ft)	kg											*3380	*3380	6.11
	lb											*7450	*7450	(20.0)
6.0 m (20.0 ft)	kg							*3020	*3020			*3360	2660	7.37
	lb							*6660	*6660			*7410	5860	(24.2)
4.5 m (15.0 ft)	kg							*3770	3720			*3410	2190	8.11
	lb							*8310	8200			*7520	4830	(26.6)
3.0 m (10.0 ft)	kg			*7910	*7910	*5310	*5310	*4300	3560	*2810	2420	3130	1970	8.48
	lb			*17440	*17440	*11710	*11710	*9480	7850	*6190	5340	6900	4340	(27.8)
1.5 m (5.0 ft)	kg			*8120	*8120	*6650	5270	*4920	3380	*3650	2350	3050	1900	8.53
	lb			*17900	*17900	*14660	11620	*10850	7450	*8050	5180	6720	4190	(28.0)
Ground Line	kg			*7910	*7910	*7500	5010	5220	3240	*3470	2280	3170	1970	8.28
	lb			*17440	*17440	*16530	11050	11510	7140	*7650	5030	6990	4340	(27.2)
-1.5 m (-5.0 ft)	kg	*6710	*6710	*10690	9550	*7620	4900	5140	3170			3560	2220	7.69
	lb	*14790	*14790	*23570	21050	*16800	10800	11330	6990			7850	4890	(25.2)
-3.0 m (-10.0 ft)	kg	*9990	*9990	*10280	9680	*6960	4930	*4870	3200			*3750	2830	6.64
	lb	*22020	*22020	*22660	21340	*15340	10870	*10740	7050			*8270	6240	(21.8)
-4.5 m (-15.0 ft)	kg			*7470	*7470	*4960	*4960							
	lb			*16470	*16470	*10930	*10930							

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.

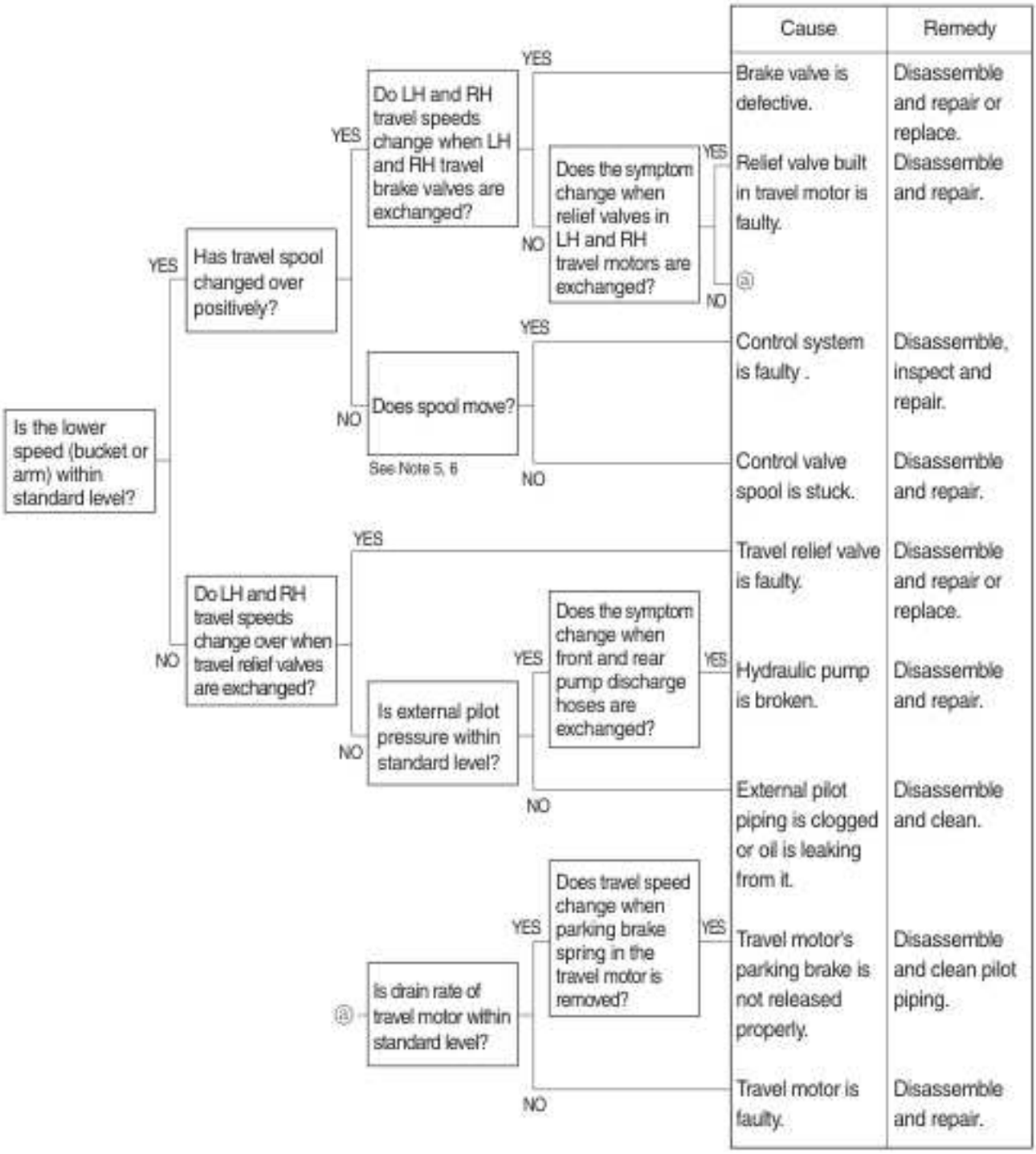
4. *indicates load limited by hydraulic capacity.

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Error code No.	Description
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	Boom priority solenoid circuit is open or shorted to ground
56	Travel alarm buzzer circuit is shorted to battery +
58	Boom priority solenoid circuit is shorted to battery +

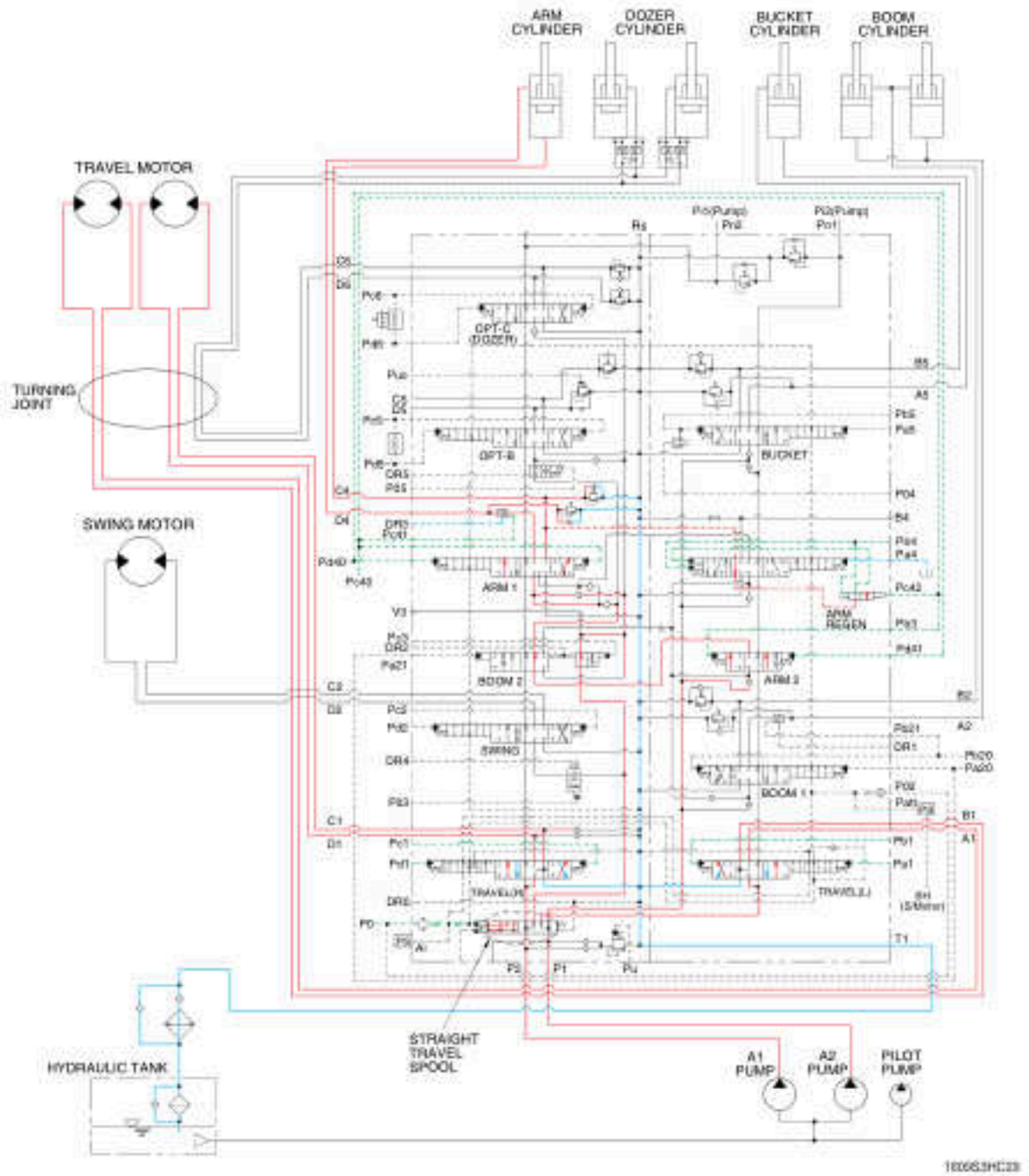
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2) SPEED ON ONE SIDE FALLS AND THE MACHINE CURVES



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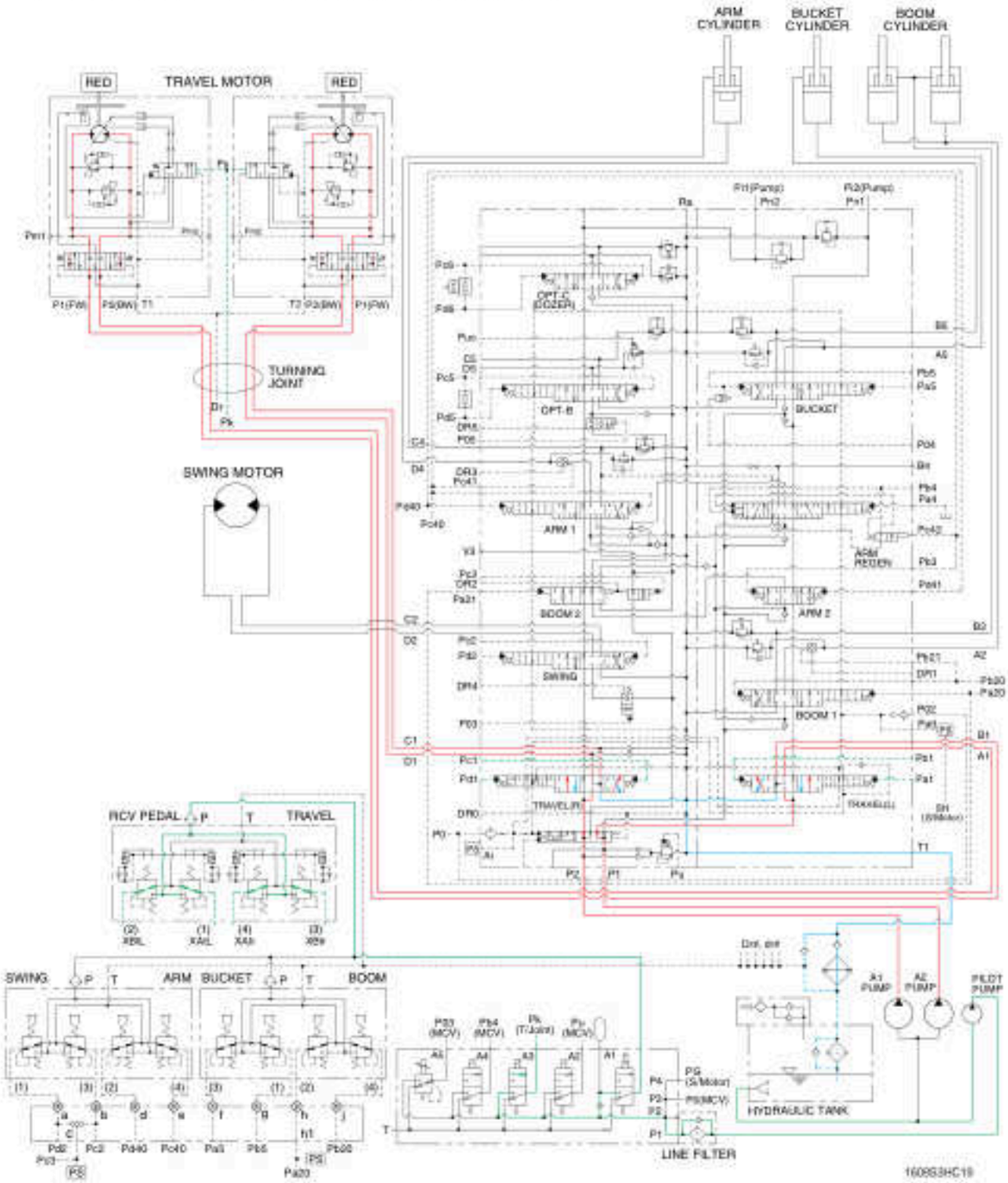
7. COMBINED ARM AND TRAVEL OPERATION



When the arm and travel functions are operated, simultaneously the arm spools and travel spools in the main control valve are moved to the functional position by the pilot oil pressure from the remote control valve and the straight travel spool is pushed to the right by the oil pressure from pilot pump.
The oil from the A1 pump flows into the travel motors through the RH travel spool of the left control valve and the LH travel spool of the right control valve via the straight travel spool.
The oil from the A2 pump flows into the arm cylinders through the arm 1 spool and arm 2 spool via the parallel and confluence oil passage. Also, the oil from the A2 pump flows into the travel motors through the LH travel spool via the check valve and orifice in the straight travel spool.
The arm is operated and the machine travels straight.

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8. TRAVEL FORWARD AND REVERSE OPERATION



When the travel levers are pushed forward or reverse position, the travel spools in the main control valve are moved to the forward or reverse travel position by the pilot oil pressure from the remote control valve.

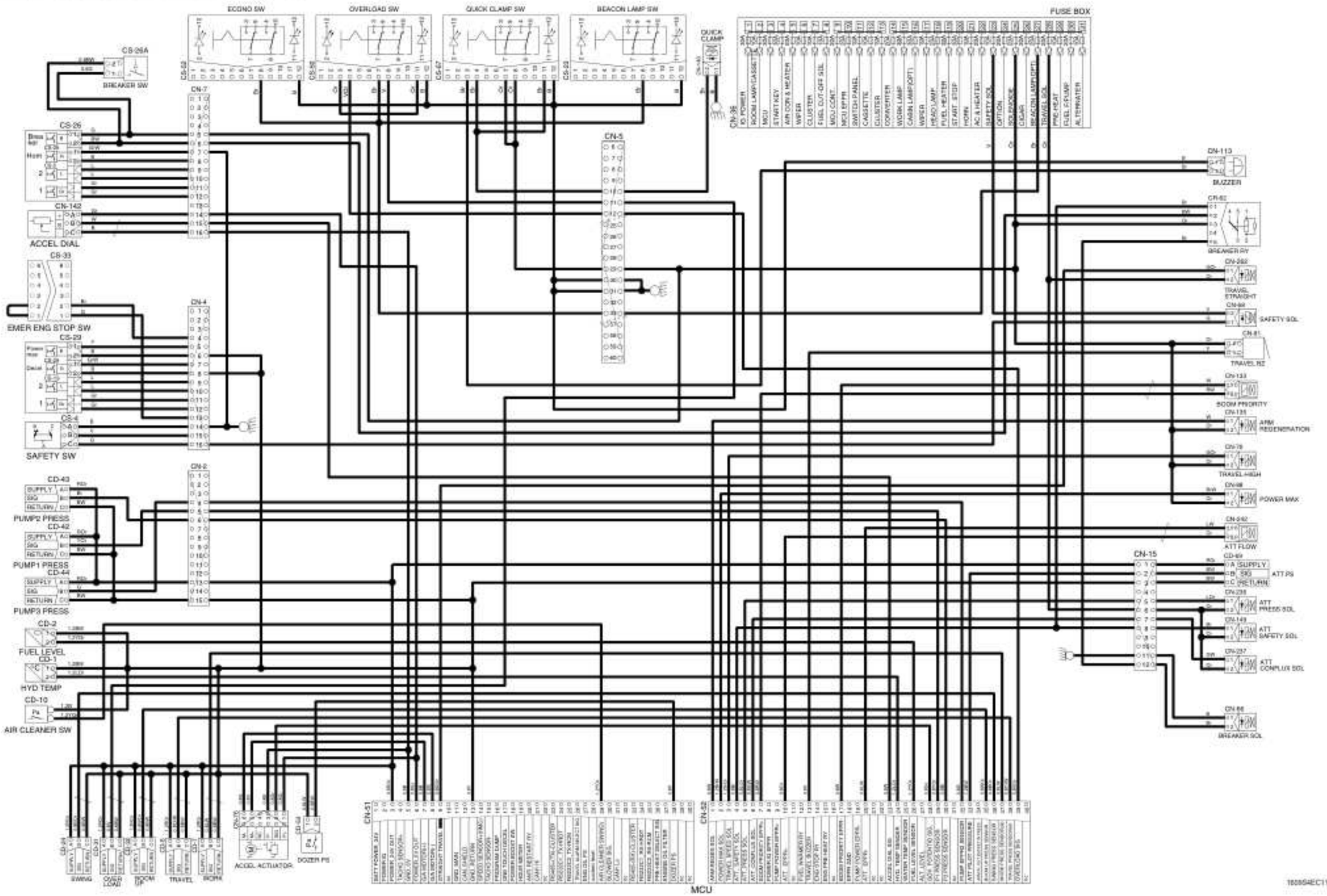
The oil from the each pump flows into the main control valve and then goes to the each travel motor through the turning joint.

The return oil from both travel motors returns to the hydraulic oil tank through the turning joint and the travel spools in the main control valve.

When this happens, the machine moves to the forward or reverse.

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ELECTRIC CIRCUIT FOR HYDRAULIC (CLUSTER TYPE 1)



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