CRAWLER EXCAVATOR

SERVICE MANUAL

HX220A L

HYUNDAI

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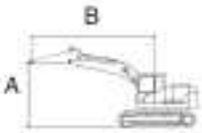
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Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HX220A HW	MONO BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5700	3500	3800	600	-	-	-	-	-

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



Lift-point height (A)		Lift-point radius (B)										At max. reach		
		1.5 m (4.9 ft)		3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		7.5 m (24.6 ft)		Capacity		Reach
														m (ft)
7.5 m (24.6 ft)	kg											*3590	*3590	7.05
	lb											*7910	*7910	(23.1)
6.0 m (19.7 ft)	kg							*4260	*4260	*4310	4130	*3410	*3410	8.02
	lb							*9390	*9390	*9500	9110	*7520	*7520	(26.3)
4.5 m (14.8 ft)	kg							*4850	*4850	*4530	4050	*3400	3210	8.62
	lb							*10690	*10690	*9990	8930	*7500	7080	(28.3)
3.0 m (9.8 ft)	kg					*7240	*7240	*5710	5460	*4960	3910	*3510	2970	8.93
	lb					*15960	*15960	*12590	12040	*10930	8620	*7740	6550	(29.3)
1.5 m (4.9 ft)	kg					*8970	7800	*6600	5180	*5430	3770	*3750	2890	8.97
	lb					*19780	17200	*14550	11420	*11970	8310	*8270	6370	(29.4)
0.0 m (0.0 ft)	kg			*6530	*6530	*10020	7450	*7260	4980	5740	3650	*4170	2950	8.76
	lb			*14400	*14400	*22090	16420	*16010	10980	12650	8050	*9190	6500	(28.7)
-1.5 m (-4.9 ft)	kg	*5900	*5900	*9710	*9710	*10280	7320	*7520	4870	5680	3600	*4910	3170	8.26
	lb	*13010	*13010	*21410	*21410	*22660	16140	*16580	10740	12520	7940	*10820	6990	(27.1)
-3.0 m (-9.8 ft)	kg	*9580	*9580	*14270	*14270	*9790	7350	*7230	4880			*5470	3680	7.43
	lb	*21120	*21120	*31460	*31460	*21580	16200	*15940	10760			*12060	8110	(24.4)
-4.5 m (-14.8 ft)	kg			*11750	*11750	*8290	7530	*5870	5030			*5650	4900	6.13
	lb			*25900	*25900	*18280	16600	*12940	11090			*12460	10800	(20.1)

Note 1. Lifting capacity are based on ISO 10567.
2. Lifting capacity of the HX series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.
3. The Lift-point is bucket pivot mounting pin on the arm (without bucket mass).
4. *Indicates load limited by hydraulic capacity.

※ Lifting capacities are based upon a standard machine conditions.
Lifting capacities will vary with different work tools, ground conditions and attachments.
The difference between the weight of a work tool attachment must be subtracted.
Consult with your local HD Hyundai Construction Equipment dealer regarding the lifting capacities for specific work tools and attachments.

⚠ Failure to comply to the rated load can cause serious injury, death, or property damage. Make adjustments to the rated load as necessory for non-standard configurations.

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Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CN-246A	DEUTSCH	4	Preheater harness	DT06-4S-EP06	-
CN-246B	DEUTSCH	4	Preheater harness	-	DT04-4P-EP06
CN-247	DEUTSCH	3	Proportional valve-LH	DT06-3S	DT04-3P
CN-249	DEUTSCH	6	Rear view camera	DT06-6S-EP06	DT04-6P-E005
CN-258	KET	1	Air compressor power	MG640944-5	MG650943-5
CN-259	AMP	6	Camera	S816-006002	S816-106002
CN-260	-	3/2	Siren speaker	21K4-40890	21K4-40880
CN-261	MTA	4	Siren AMP	MG610047	MG620046
CN-262	DEUTSCH	2	I/conn (Frame harness - S/travel harness)	DT06-2S-EP06	DT04-2P-E005
CN-262A	DEUTSCH	2	Straight travel solenoid 1	DT06-2S-EP06	-
CN-262B	DEUTSCH	2	Straight travel solenoid 2	DT06-2S-EP06	-
CN-263	DEUTSCH	2	Air compressor relay	DT06-2S-EP06	DT04-2P-E005
CN-265	VW	8	Controller	3A0973734	-
CN-267	MOLEX	10	Preheater timer	15-97-5101	-
CN-269	TE	2	Dosing pump	282189-1	-
CN-270	DEUTSCH	4	2D/3D MG	DT06-4S-EP06	DT04-4P-E005
CN-305	DEUTSCH	12	Proportional-connector-1	DTM06-12SA	-
CN-306	DEUTSCH	12	Proportional-connector-2	DTM06-12SB	-
CN-307	DEUTSCH	3	Proportional-service tool	DT06-3S-EP06	DT06-3P-E005
CN-308	AMP	4	Proportional-PVG32	2-967059-1	-
CN-309	DEUTSCH	2	Proportional-EPPR valve-A1	DT06-2S-EP06	-
CN-310	DEUTSCH	2	Proportional-EPPR valve-A2	DT06-2S-EP06	-
CN-342	AMP	2	P1 pump regulator solenoid	S816-002002	-
CN-343	AMP	2	P2 pump regulator solenoid	S816-002002	-
CN-363	AMP	12	Jog dial module	174045-2	-
CN-365	DEUTSCH	2	Attach EPPR valve-LH	DT06-2S-EP06	DT04-2P-E005
CN-366	DEUTSCH	2	Attach EPPR valve-RH	DT06-2S-EP06	DT04-2P-E005
CN-367	AMP	2	Boom down floating solenoid	85202-1	DT04-2P-E005
CN-368	DEUTSCH	2	Boom up floating solenoid	DT06-2S-EP06	DT04-2P-E005
CN-369	DEUTSCH	2	Boom down cut off solenoid	DT06-2S-EP06	DT04-2P-E005
CN-370	DEUTSCH	2	Swing fine control solenoid	DT06-2S-EP06	DT04-2P-E005
CN-376	TYCO	23	Membrane controller	7706087-2	-
CN-381	DEUTSCH	2	DEF line heater 3	DT06-2S-EP06	-
CN-382	DEUTSCH	2	DEF line heater 2	DT06-2S-EP06	-
CN-383	DEUTSCH	2	DEF line heater 1	DT06-2S-EP06	-
CN-384	TE	2	Coolant valve solenoid	1-967325-3	-
CN-385	-	7	Fan clutch	965570	-
CN-399	DEUTSCH	4	DEF tank level sensor	DT06-4S-EP06	-
CN-401	FCI	90	AAVM controller	-	-

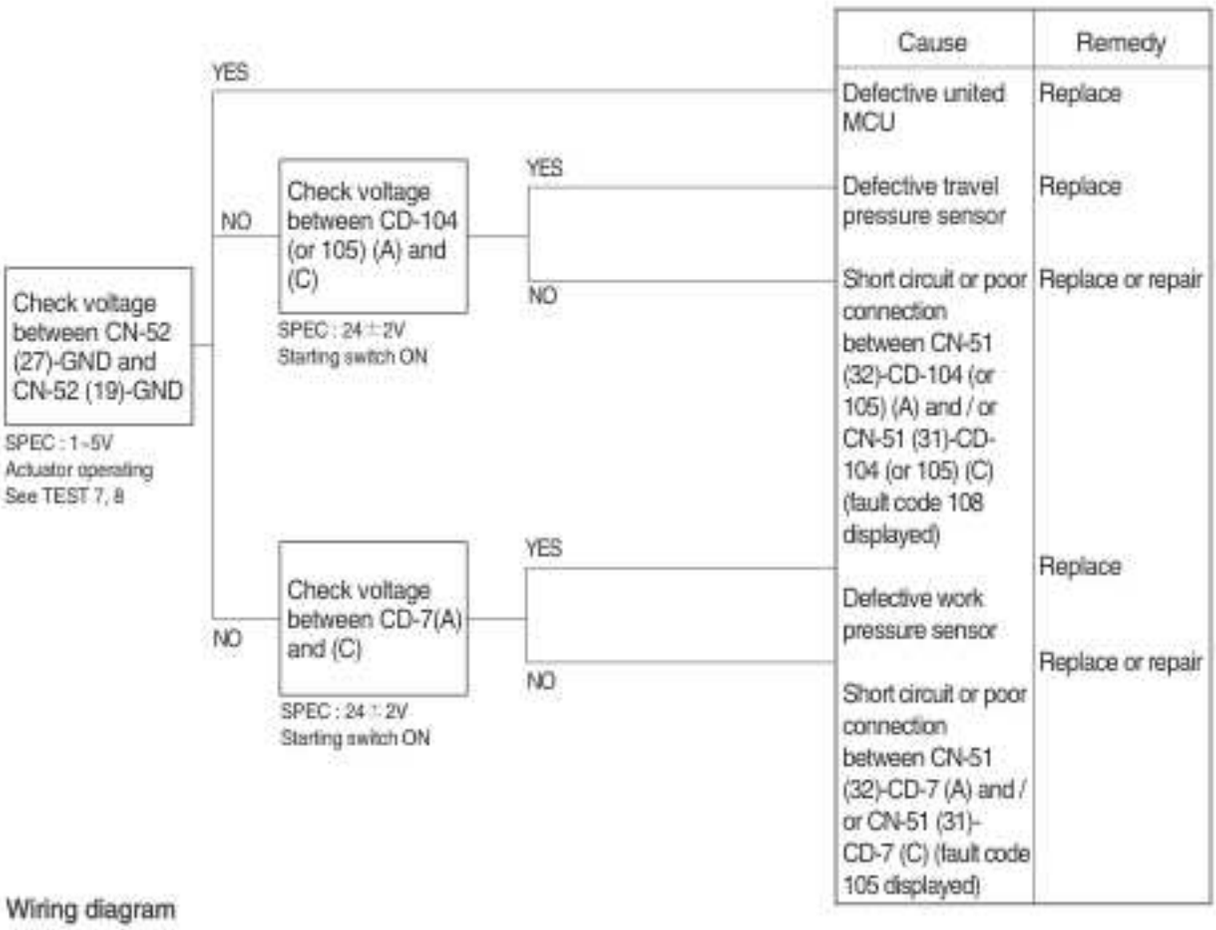
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4. AUTO DECEL SYSTEM DOES NOT WORK (N.A)

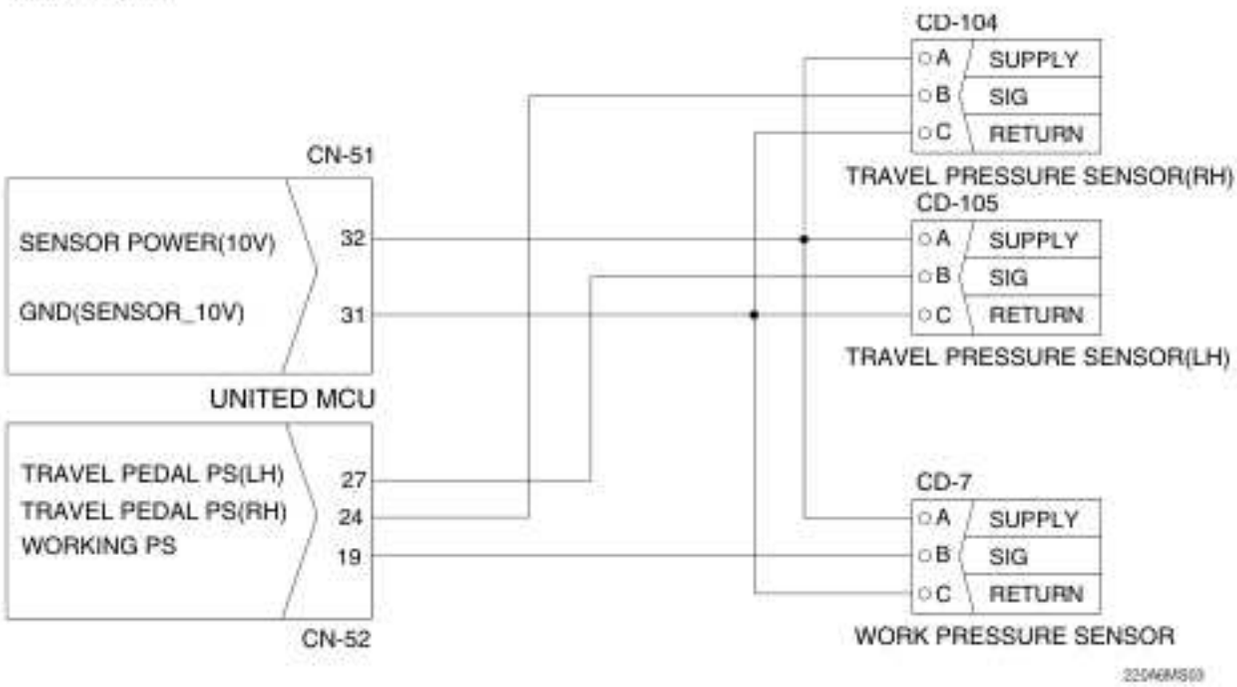
· Fault code : HCESPN 105, FMI 0~4 (work pressure sensor)
HCESPN 108, FMI 0~4 (travel oil pressure sensor)

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

1) INSPECTION PROCEDURE



Wiring diagram



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3) ASSEMBLING PINION GEAR SUB ASSY

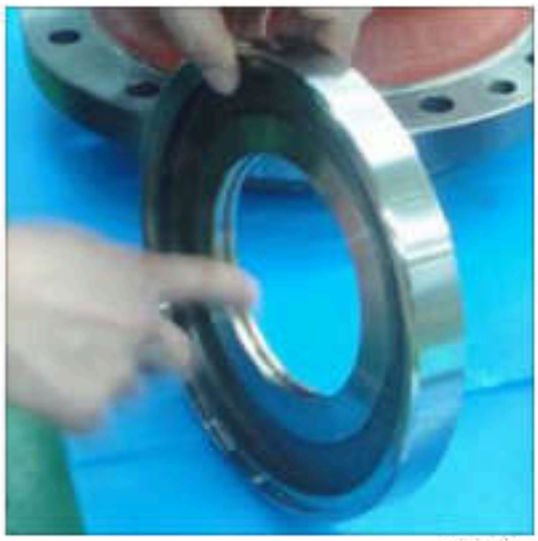
(1) Prepare drive shaft pinion gear vertical with ground.



(2) Fully apply grease (albania EP02) to O-ring groove of sleeve.

※ Be sure to maintain it vertical with ground when assembling it.

(3) Put O-ring into O-ring groove of sleeve. Fully apply grease on O-ring.



(4) Assemble taper bearing and sleeve into drive shaft using press jig.
Use special jig for pressing. Leave no space between sleeve and taper bearing.



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(3) Check whether the can gateway function abnormality.

① Check CAN data of attachment sensor line.

a. Disconnect the Deutsch 4-pin connector near the laser catcher and connect a CAN data collector (PCAN, CANoe, etc.)

b. Check whether the CAN ID data in the table below is being output.

c. If it is output at a period of 20 ms, suspect a malfunction of the CAN gateway itself.



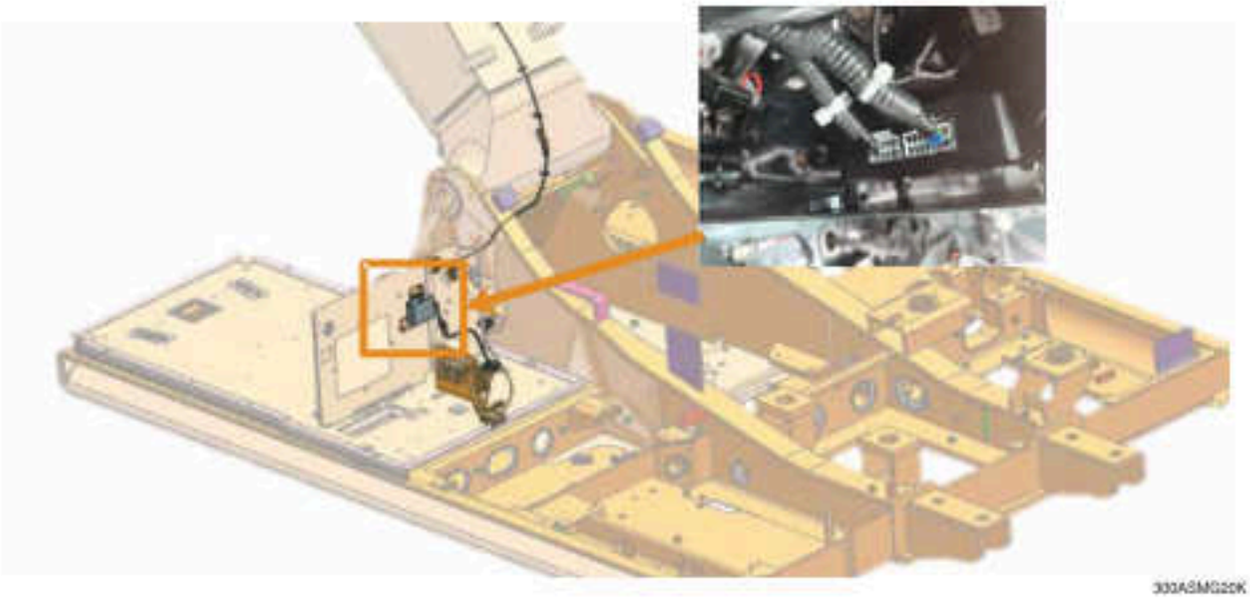
300ASMG19EC

※ CAN ID matching information for each sensor

Sensor	CAN ID
Boom sensor	0x18F029C1
Arm sensor	0x18F029C2
Bucket sensor	0x18F029C3
Body sensor	0x18F029C4

② Mounting location of CAN gateway

It is located near the RMCU at the bottom behind the seat in the cab.

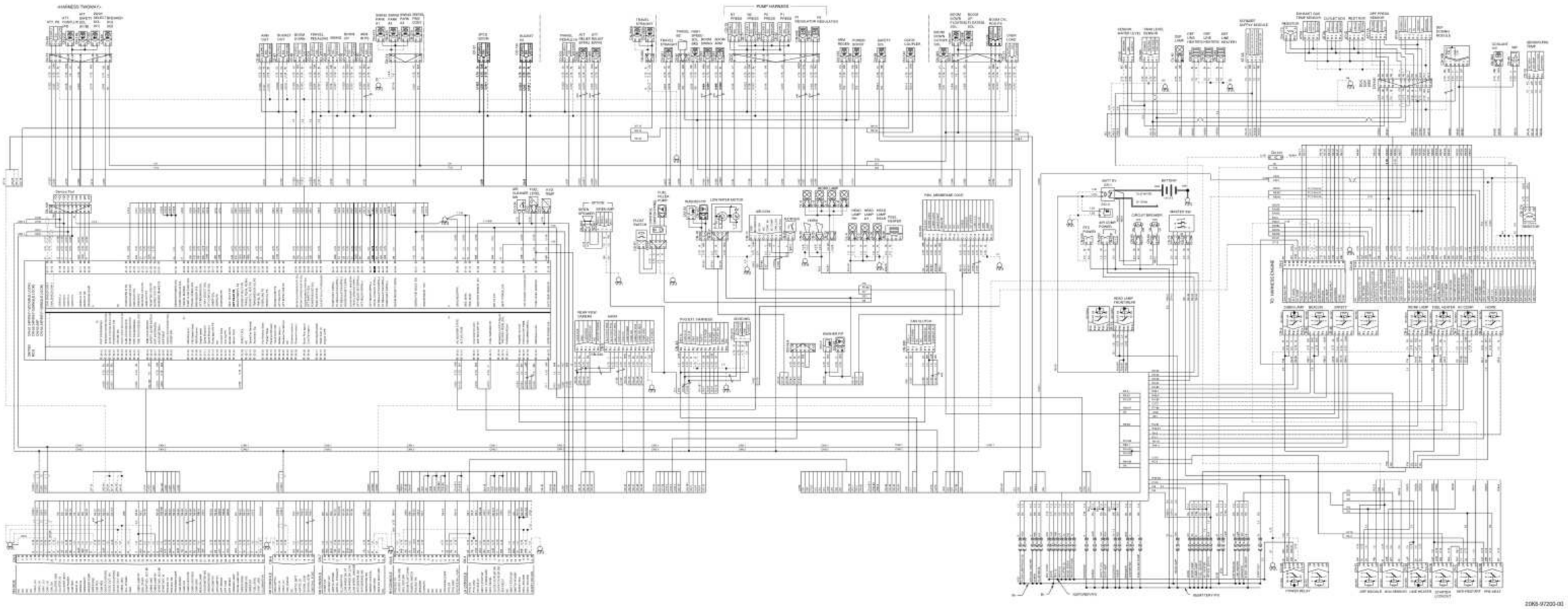


300ASMG20K

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· ELECTRICAL CIRCUIT (1/4)

- MACHINE SERIAL NO. : -#00120



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