CRAWLER EXCAVATOR

SERVICE MANUAL

HX380AL

HYUNDAI

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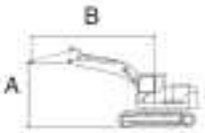
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Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HX380A L	MONO BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		6150	2500	6500	600	-	-	-	-	-

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



Lift-point height (A)		Lift-point radius (B)								At max. reach		
		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					*9240	*9240			*9470	*9470	6.71
	lb					*20370	*20370			*20880	*20880	(22.0)
6.0 m (19.7 ft)	kg					*9720	*9720	*9360	7940	*9400	7600	7.69
	lb					*21430	*21430	*20640	17500	*20720	16760	(25.2)
4.5 m (14.8 ft)	kg			*14000	*14000	*11060	10960	*9770	7760	*9530	6610	8.27
	lb			*30860	*30860	*24380	24160	*21540	17110	*21010	14570	(27.1)
3.0 m (9.8 ft)	kg					*12720	10380	*10540	7500	*9770	6130	8.55
	lb					*28040	22880	*23240	16530	*21540	13510	(28.1)
1.5 m (4.9 ft)	kg					*14120	9910	*11290	7250	9800	6000	8.56
	lb					*31130	21850	*24890	15980	21610	13230	(28.1)
0.0 m (0.0 ft)	kg			*20360	14680	*14840	9650	*11690	7090	10180	6200	8.29
	lb			*44890	32360	*32720	21270	*25770	15630	22440	13670	(27.2)
-1.5 m (-4.9 ft)	kg	*14540	*14540	*19660	14710	*14710	9590	*11390	7090	*10910	6830	7.72
	lb	*32060	*32060	*43340	32430	*32430	21140	*25110	15630	*24050	15060	(25.3)
-3.0 m (-9.8 ft)	kg	*24010	*24010	*17760	14950	*13350	9750			*11280	8310	6.77
	lb	*52930	*52930	*39150	32960	*29430	21500			*24870	18320	(22.2)
-4.5 m (-14.8 ft)	kg			*13520	*13520					*11150	*11150	5.23
	lb			*29810	*29810					*24580	*24580	(17.2)

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.

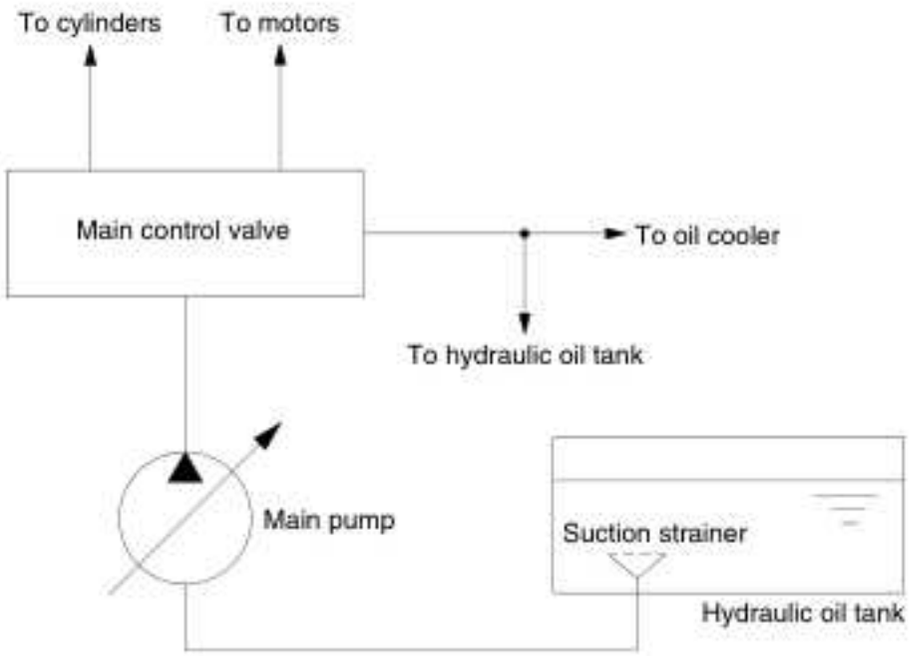
※ Lifting capacities are based upon a standard machine conditions.
Lifting capacities will vary with different work tools, ground conditions and attachments.
The difference between the weight of a work tool attachment must be subtracted.
Consult your HD Hyundai Construction Equipment dealer regarding the lifting capacities for specific work tools and attachments.
Failure to comply to the rated load can cause possible personal injury or property damage.
Make adjustments to the rated load as necessory for non-standard configurations.

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GROUP 2 MAIN CIRCUIT (CURRENT VERSION)

The main hydraulic circuit consists of suction circuit, delivery circuit, return circuit and drain circuit.
The hydraulic system consists of one main pump, one control valve, one swing motor, four cylinders and two travel motors.
The swash plate type variable displacement tandem axial piston pump is used as the main pump and is driven by the engine at ratio 1.0 of engine speed.

1. SUCTION AND DELIVERY CIRCUIT



140L3C01

The pumps receive oil from the hydraulic tank through a suction strainer. The discharged oil from the pump flows into the control valve and goes out the tank ports.
The oil discharged from the main pump flows to the actuators through the control valve.
The control valve controls the hydraulic functions.
The return oil from the actuators flows to the hydraulic tank through the control valve and the oil cooler.

※ The circuit diagram may differ from the equipment, so please check before a repair.

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Fault code J1939 SPN J1939 FMI	Item	Description
294 441 4	Auxiliary temperature sensor input 1 circuit	Voltage below normal, or shorted to low source
297 1388 3	Auxiliary pressure sensor input 2 circuit	Voltage above normal, or shorted to high source
298 1388 4	Auxiliary pressure sensor input 2 circuit	Voltage below normal, or shorted to low source
322 651 5	Injector solenoid driver cylinder 1 circuit	Current below normal or open circuit
323 655 5	Injector solenoid driver cylinder 5 circuit	Current below normal or open circuit
324 653 5	Injector solenoid driver cylinder 3 circuit	Current below normal or open circuit
325 656 5	Injector solenoid driver cylinder 6 circuit	Current below normal or open circuit
331 652 5	Injector solenoid driver cylinder 2 circuit	Current below normal or open circuit
332 654 5	Injector solenoid driver cylinder 4 circuit	Current below normal or open circuit
334 110 2	Engine coolant temperature	Data erratic, intermittent or incorrect
343 629 12	Engine control module warning internal hardware failure	Bad intelligent device or component
349 191 16	Transmission output shaft speed	Data valid but above normal operating range - moderately severe level
351 3597 12	Injector power supply	Bad intelligent device or component
352 3509 4	Sensor supply 1 circuit	Voltage below normal, or shorted to low source
386 3509 3	Sensor supply 1 circuit	Voltage above normal, or shorted to high source
415 100 1	Engine oil rifle pressure	Data valid but below normal operational range - most severe level

※ Some fault codes are not applied to this machine.

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(8) Remove carrier 2 (6), with planetary gears 2 (13), sun gear 3 (11), etc. fitted.

※ Use M10 eyebolt. In this case, thrust ring (26) is removed simultaneously.



(9) Disassembling of carrier 2 sub-assembly

① Push in spring pin (36), and remove pin 2 (16), from carrier 2.

※ Carry out the following check in advance. If any abnormality should be found, carry out disassembling.

- Is there any crevice, crack or pitting on tooth surface of planetary gear?
- When turning planetary gear lightly, is there any abnormal noise or eccentric clearance? Carry out check similarly to the above for carrier 3.



② Remove side plate (20), planetary gear 2 (13), and needle bearing (22) from carrier 2.

③ Remove thrust ring (26).



④ Remove snap ring (46), and remove carrier 2 (6) from sun gear 3 (11).

⑤ Remove thrust ring (27) from sun gear 3 (11).



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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.



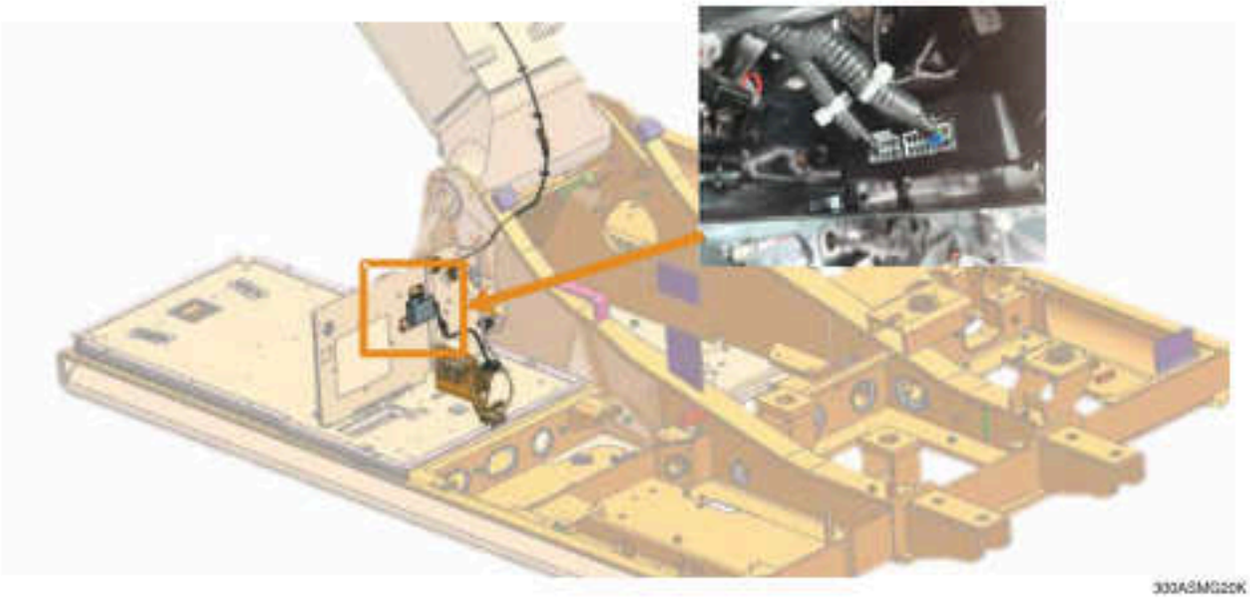
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※ CAN ID matching information for each sensor

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.

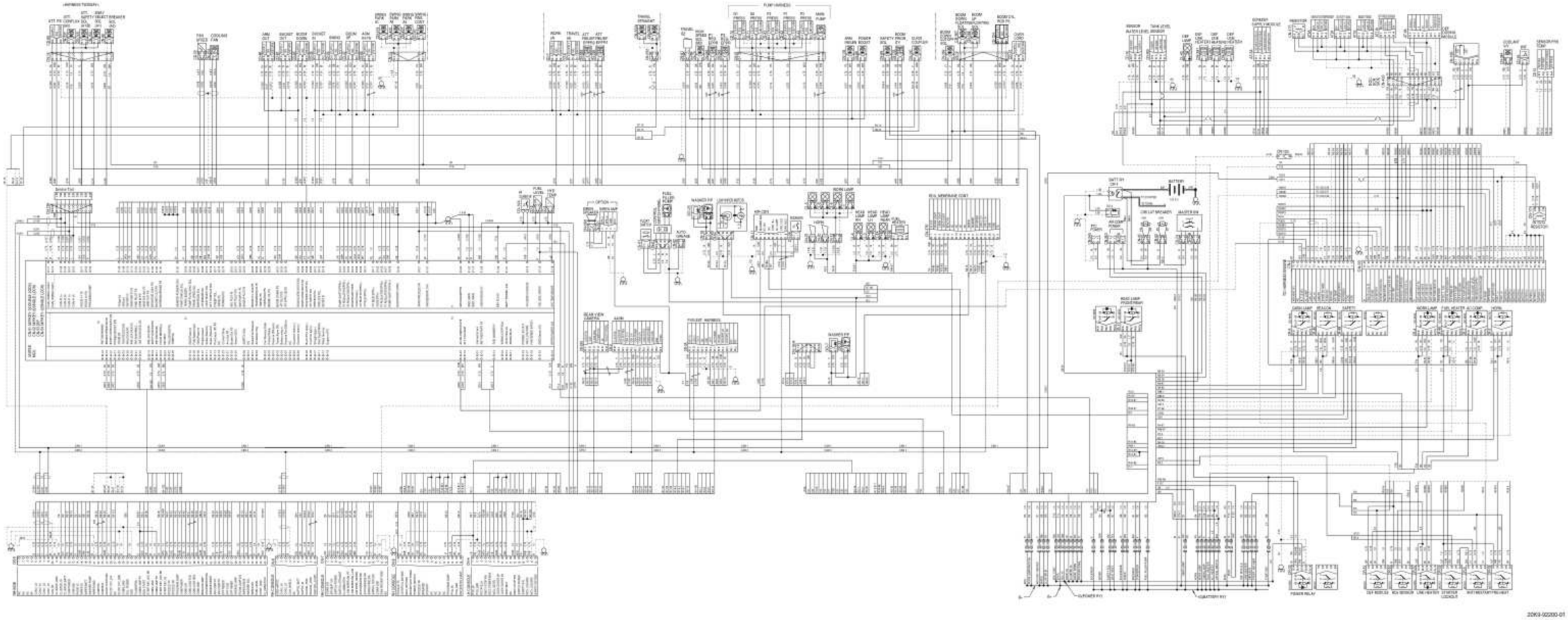


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· ELECTRICAL CIRCUIT (1/3)

- MACHINE SERIAL NO. : -#0162



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