CRAWLER EXCAVATOR

SERVICE MANUAL

HX235LCR Tier 3

HYUNDAI

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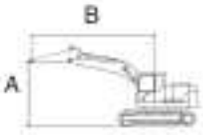
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Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HX235LCRT3 W/DOZER	MONO BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5700	2920	5300	600	-	-	Up	-	-

· : 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)
9.0 m (29.5 ft)	kg											*5,230	*5,230	4.25
	lb											*11,530	*11,530	(13.9)
7.5 m (24.6 ft)	kg					*5,260	*5,260	*4,810	*4,810			*4,320	*4,320	6.15
	lb					*11,600	*11,600	*10,600	*10,600			*9,520	*9,520	(20.2)
6.0 m (19.7 ft)	kg					*5,520	*5,520	*5,070	*5,070			*4,020	3,860	7.27
	lb					*12,170	*12,170	*11,180	*11,180			*8,860	8,510	(23.9)
4.5 m (14.8 ft)	kg			*6,640	*6,640	*6,490	*6,490	*5,470	5,170	*4,910	3,620	*3,950	3,270	7.96
	lb			*19,050	*19,050	*14,310	*14,310	*12,060	11,400	*10,820	7,980	*8,710	7,210	(26.1)
3.0 m (9.8 ft)	kg					*7,870	7,540	*6,070	4,930	*5,130	3,520	*4,050	2,980	8.32
	lb					*17,350	16,620	*13,380	10,870	*11,310	7,760	*8,930	6,570	(27.3)
1.5 m (4.9 ft)	kg					*9,010	7,020	*6,630	4,660	5,140	3,400	*4,310	2,870	8.41
	lb					*19,860	15,480	*14,620	10,320	11,330	7,500	*9,500	6,330	(27.6)
0.0 m (0.0 ft)	kg			*5,310	*5,310	*9,370	6,740	*6,880	4,510	5,050	3,310	4,430	2,920	8.21
	lb			*11,710	*11,710	*20,660	14,860	*15,170	9,940	11,130	7,300	9,770	6,440	(26.9)
-1.5 m (-4.9 ft)	kg	*5,710	*5,710	*9,760	*9,760	*8,950	6,660	*6,670	4,430	5,020	3,290	*4,780	3,170	7.73
	lb	*12,590	*12,590	*21,520	*21,520	*19,730	14,680	*14,700	9,770	11,070	7,250	*10,540	6,990	(25.4)
-3.0 m (-9.8 ft)	kg			*10,420	*10,420	*7,780	6,720	*5,790	4,470			*4,630	3,740	6.89
	lb			*22,970	*22,970	*17,150	14,820	*12,760	9,850			*10,210	8,250	(22.6)
-4.5 m (-14.8 ft)	kg			*7,190	*7,190	*5,470	*5,470					*4,060	*4,060	5.52
	lb			*15,850	*15,850	*12,060	*12,060					*8,950	*8,950	(18.1)

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.

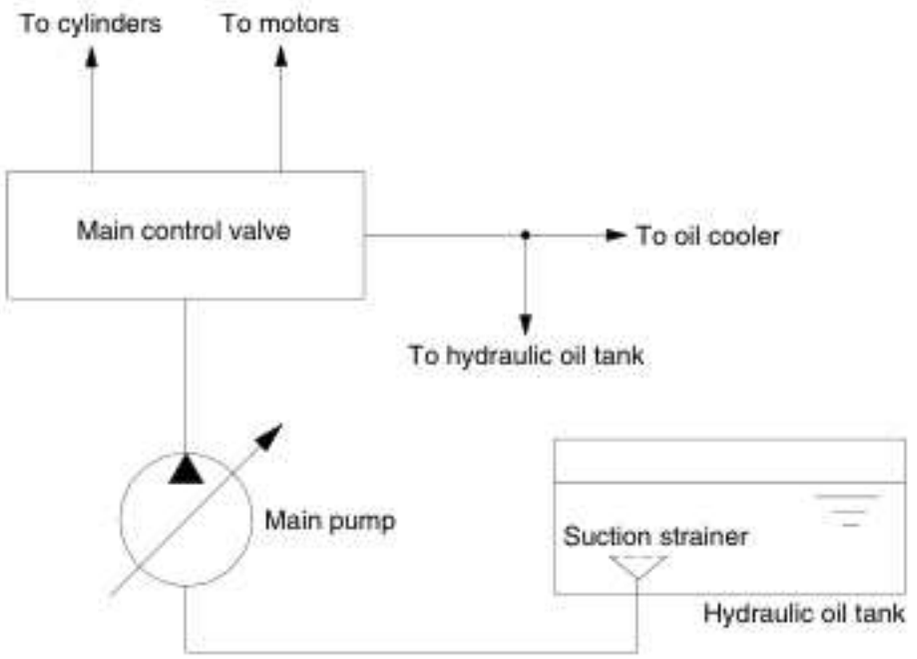
※ Lifting capacities are based upon a standard machine conditions.
Lifting capacities will vary with different work tools, ground conditions and attachments.
The difference between the weight of a work tool attachment must be subtracted.
Consult your HD Hyundai Construction Equipment dealer regarding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

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 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



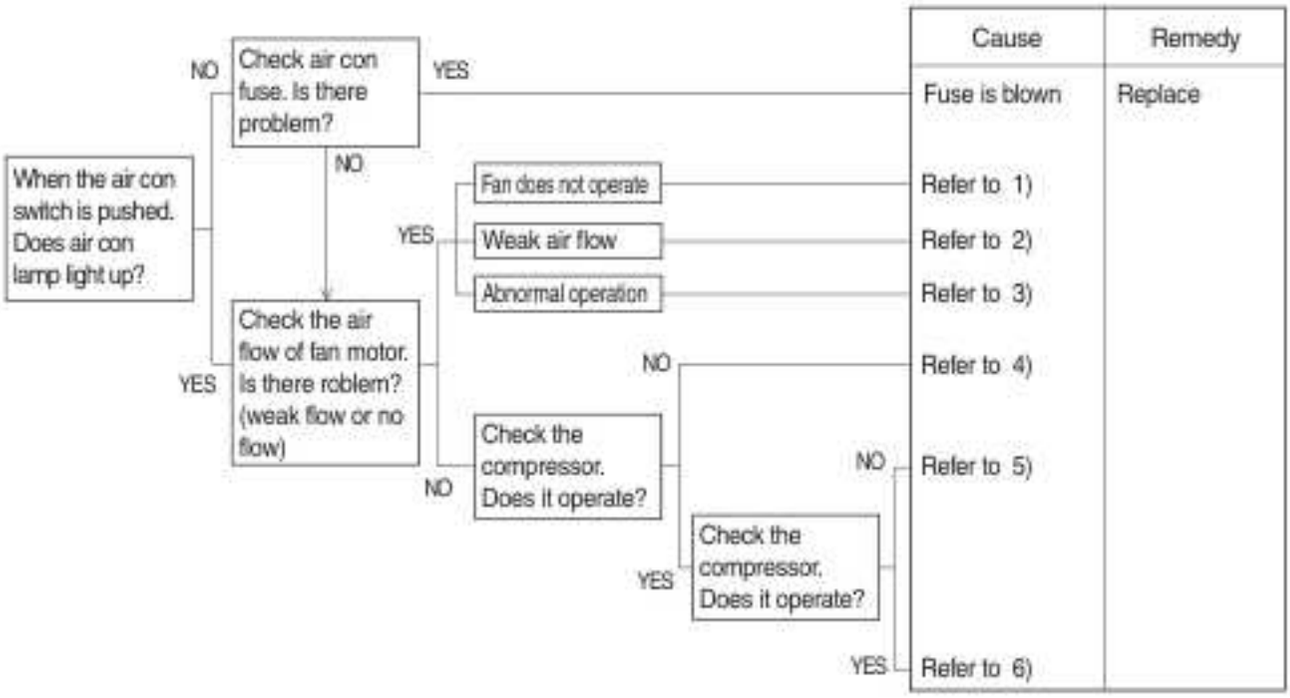
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The pumps receive oil from the hydraulic tank through a suction strainer. The discharged oil from the pump flows into the control valve and goes out the tank ports.
The oil discharged from the main pump flows to the actuators through the main control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

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

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1. AIR CONDITIONER DOES NOT OPERATE



1) FAN DOES NOT OPERATE

Cause	Check	Remedy
Fuse is blown or abnormal relay operation	* Fuse * Does relay normally operate?	Replace
Harness short or poor contact	Check any harness short or abnormal contact of connnector	Repair shortage
Fan motor failure	Supply 24V to 2 lead wire from motor and check the operation	Replace
Resistor is broken	Check current flow of resistor with tester	Replace
Fan switch failure	Push fan switch by turn and check the operation	Replace

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3) ASSEMBLING PINION GEAR SUB ASSY

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

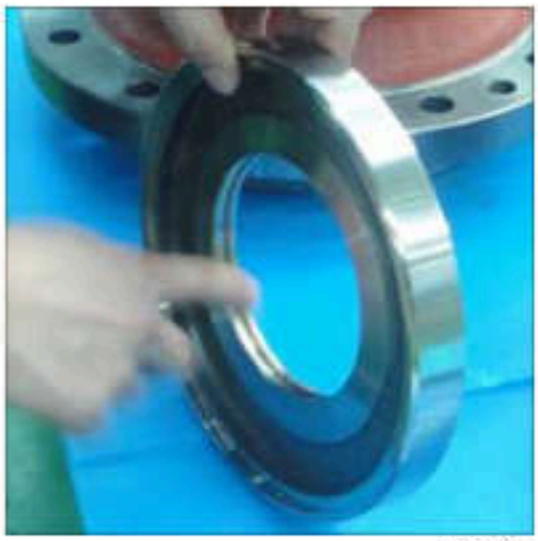


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(2) Fully apply grease (albania EP02) to O-ring groove of sleeve.

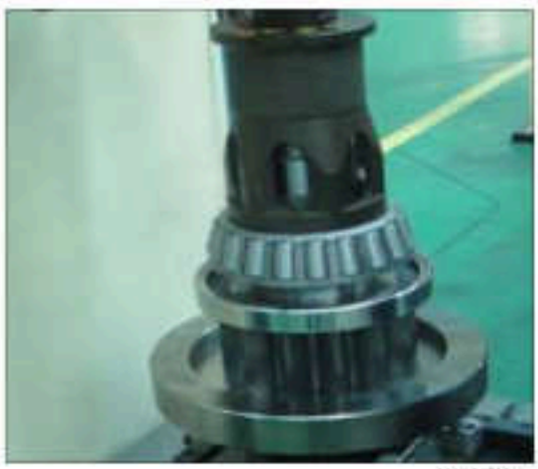
※ Be sure to maintain it vertical with ground when assembling it.

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



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(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 Assemble 9 piston assy (12) into retainer plate (11).

- Piston assy × 9EA
- Retainer plate × 1EA



④ Assemble parts of procedure ② and ③.



(3) Assemble valve casing sub

① Assemble make up check valve sub

Assemble check valve (24), O-ring (27), plug (26) in that order and then screw it torque wrench.

- Make up check valve × 2EA
- Spring × 2EA
- Plug × 2EA
- O-ring × 2EA



② Assemble reactionless valve assy

Assemble reactionless valve assy (31), plug (32), O-ring (33, 34) in that order and then screw it a torque wrench.

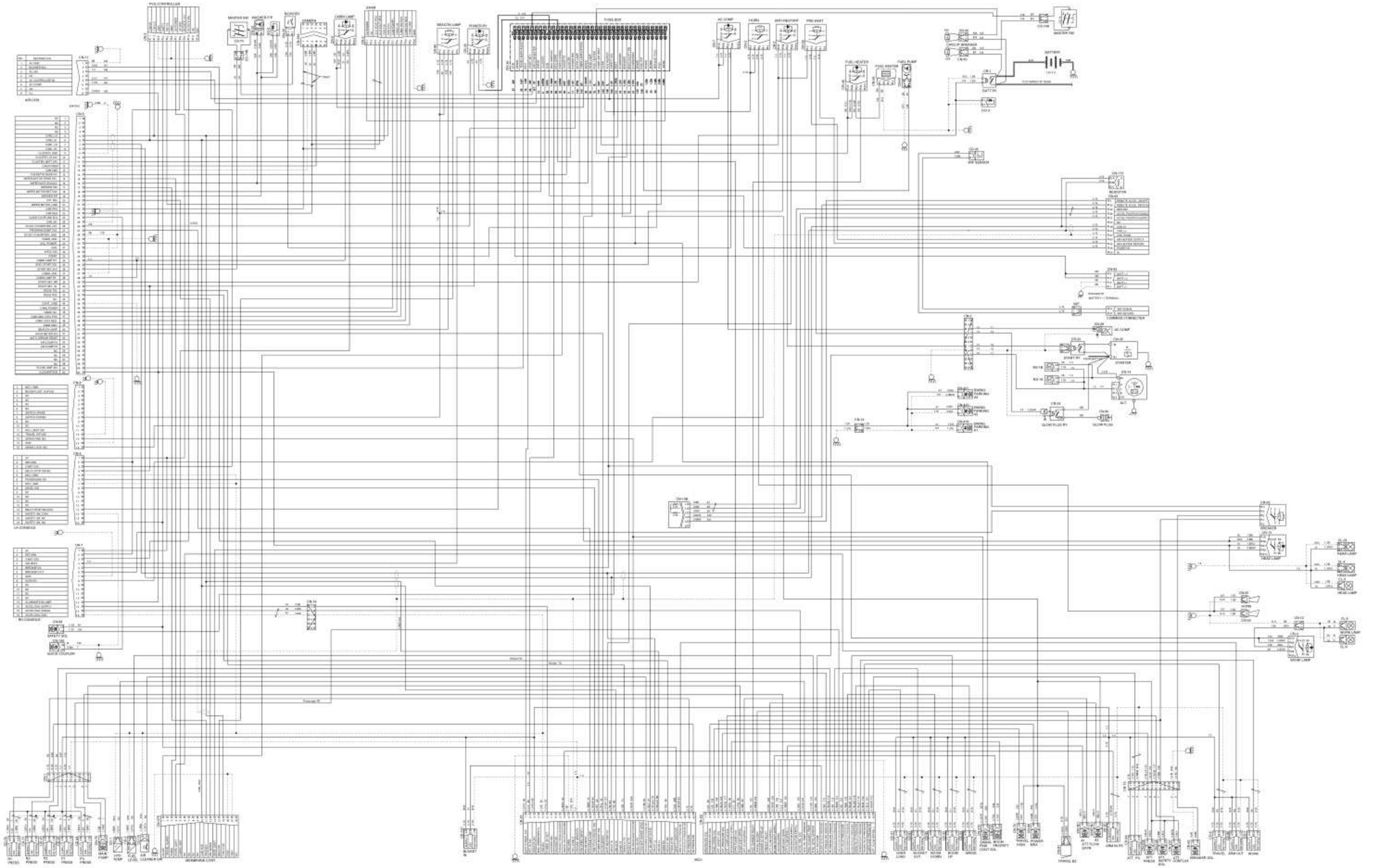
- Anti-rotation valve assy (31) × 2EA
- Plug (32) × 2EA
- O-ring (33, 34) × 2EA



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· ELECTRICAL CIRCUIT (1/2)

- MACHINE SERIAL NO. : -#0045



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