CRAWLER EXCAVATOR

SERVICE MANUAL

HX65A

HYUNDAI

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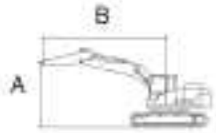
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Model	Type	Boom	Arm	Counterweight	Wheel	Dozer		Outrigger	
HX65A	MONO BOOM	Length [mm]	Length [mm	weight [kg]	width [mm]	Front	Rear	Front	Rear
		3000	1600	335	-	Up	-	-	-

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



Lift-point height (A)		Lift-point radius (B)								At max. reach		
		2.0 m (6.6 ft)		3.0 m (9.8 ft)		4.0 m (13.1 ft)		5.0 m (16.4 ft)		Capacity		Reach
												m (ft)
4.0 m	kg					*1220	1180			*1280	1060	4.26
(13.1 ft)	lb					*2690	2600			*2820	2340	(14.0)
3.0 m	kg					*1270	1170			1040	850	4.87
(9.8 ft)	lb					*2800	2580			2290	1870	(16.0)
2.0 m	kg			*1960	1710	1390	1120	990	800	930	750	5.18
(6.6 ft)	lb			*4320	3770	3060	2470	2180	1760	2050	1650	(17.0)
1.0 m	kg			2040	1600	1340	1070	960	780	900	720	5.24
(3.3 ft)	lb			4500	3530	2950	2360	2120	1720	1980	1590	(17.2)
0.0 m	kg			1980	1540	1300	1030	950	760	930	750	5.09
(0.0 ft)	lb			4370	3400	2870	2270	2090	1680	2050	1650	(16.7)
-1.0 m	kg	*3080	2910	1970	1530	1290	1020			1040	830	4.67
(-3.3 ft)	lb	*6790	6420	4340	3370	2840	2250			2290	1830	(15.3)
-2.0 m	kg	*3610	2970	2000	1550					1360	1080	3.90
(-6.6 ft)	lb	*7960	6550	4410	3420					3000	2380	(12.8)
-3.0 m	kg											
(-9.8 ft)	lb											

※ Note

1. Lifting capacity are based on SAE J1097 and 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.

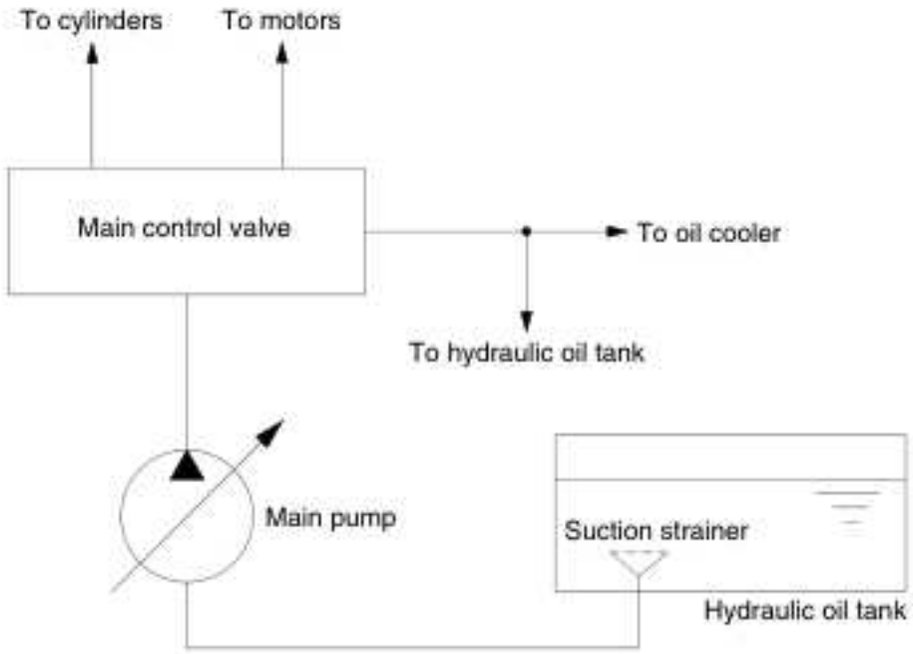
⚠ Failure to comply to the rated load can cause possible personal injury or property damage.
Make adjustments to the rated load as necessary for non-standard configurations.

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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



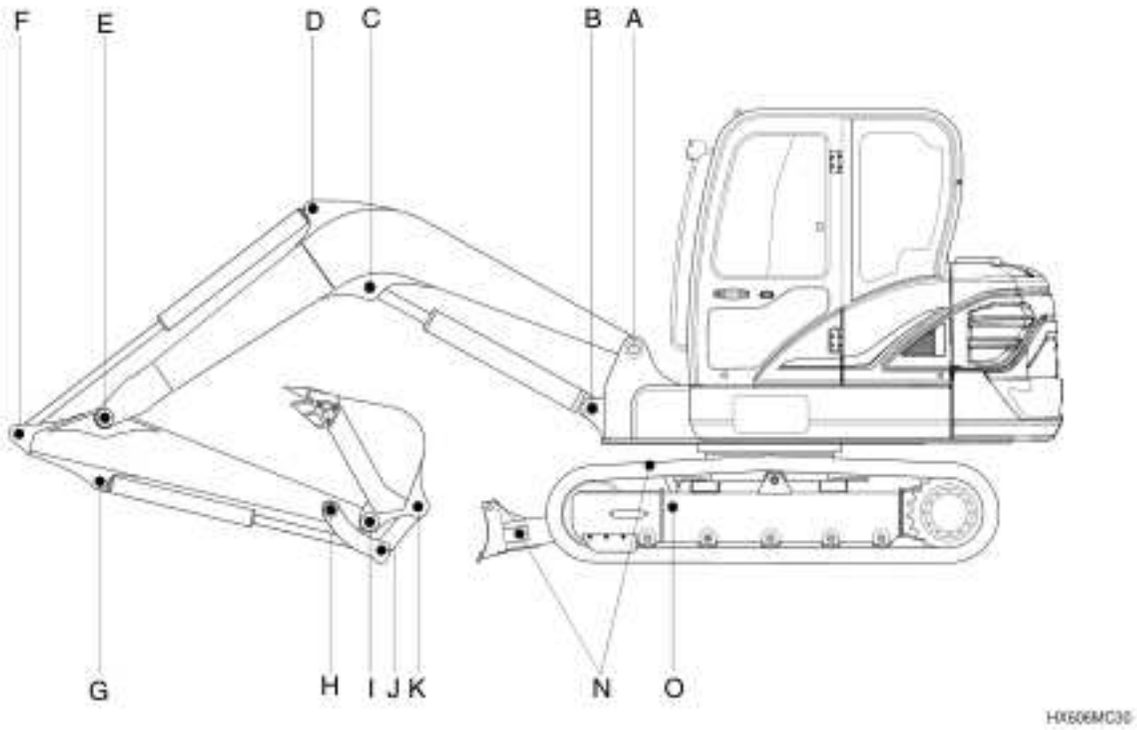
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The pumps receive oil from the hydraulic tank through a suction filter. The discharged oil from the pump flows into the control valve and goes out the tank ports.
The oil discharged from the main pump flows to the actuators through the control valve.
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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6. WORK EQUIPMENT



HX606MC30

Unit : mm

Mark	Measuring point (pin and bushing)	Normal value	Pin		Bushing		Remedy & Remark
			Recomm. service limit	Limit of use	Recomm. service limit	Limit of use	
A	Boom Rear	50	49	48.5	50.5	51	Replace
B	Boom Cylinder Head	60	59	58.5	60.5	61	"
C	Boom Cylinder Rod	60	59	58.5	60.5	61	"
D	Arm Cylinder Head	50	49	48.5	50.5	51	"
E	Boom Front	50	49	48.5	50.5	51	"
F	Arm Cylinder Rod	50	49	48.5	50.5	51	"
G	Bucket Cylinder Head	45	44	43.5	45.5	46	"
H	Arm Link	45	44	43.5	45.5	46	"
I	Bucket and Arm Link	45	44	43.5	45.5	46	"
J	Bucket Cylinder Rod	45	44	43.5	45.5	46	"
K	Bucket Link	45	44	43.5	45.5	46	"
N	Blade cylinder	55	54	53.5	55.5	56	"
O	Blade and frame link	35	34	33.5	35.5	36	"

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(8) The following operations should be carried out if necessary.

① Loosen the ROH plug (302) and remove the restrictor (310).

※ If there is no problem with the 1st / 2nd speed switching, no special disassembly is required.



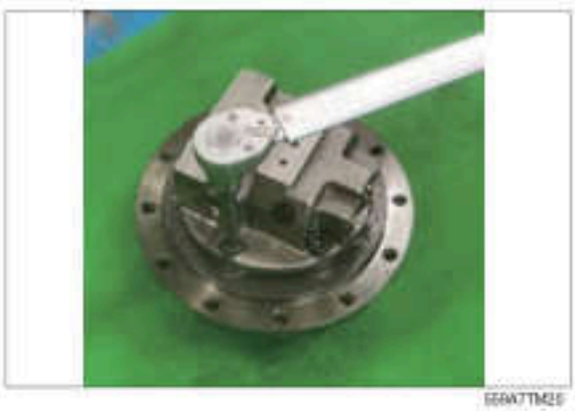
② Release ROH plug (302) and disassemble in the following order: Seat casing (433) → steel ball (503) → seat (432).

※ If there is no problem with the 1st / 2nd speed switching, no special disassembly is required. Please be careful about the loss of the steel ball. Please be careful not to damage the inner diameter of the seat casing and seat.



(9) Loosen socket bolt (301) and remove valve casing (201) from casing (202).

※ (Due to the force of the brake spring E (117), when the socket bolt (301) is unscrewed, the valve casing (201) is raised from the casing (202). Further, remove the valve plate (108) from the valve casing (201).



Carefully work so that the valve plate does not fall off the valve casing.

※ In some cases, the valve plate is attached to the cylinder block.
Be careful not to scratch the sliding surface and mating surface when you disassemble the mating surface with a screwdriver or the like.



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(5) Assembling the shaft

① Fit the shaft into the bearing (with the bearing in the bottom) by using the press machine and jig. If the press is not available, use the jig in the similar manner and drive the shaft into the bearing by knocking with a plastic hammer.



② Install the C-type stop ring to fix the bearing.



③ Assembling the shaft.
Assemble the shaft into the housing.
Knock the spline end lightly with a plastic hammer and fix the bearing outer ring firmly into the housing hole.

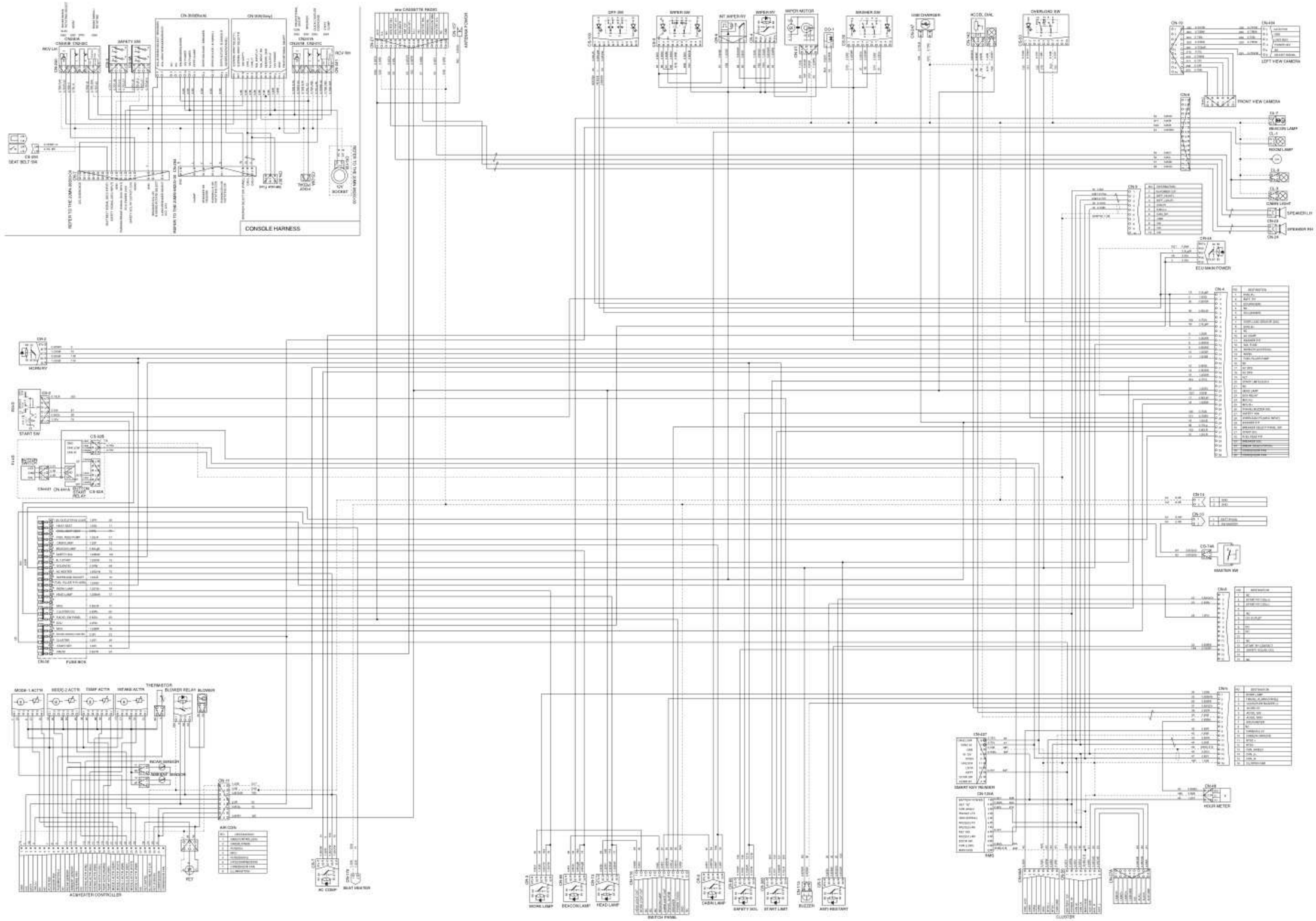


(6) Apply grease to the O-ring for assembling.



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· ELECTRICAL CIRCUIT (2/2)



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