CRAWLER EXCAVATOR

SERVICE MANUAL

HX60A

HYUNDAI

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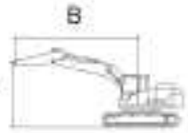
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Model	Type	Boom	Arm	Counterweight	Wheel	Dozer		Outrigger	
HX60A	MONO BOOM	Length [mm]	Length [mm	weight [kg]	width [mm]	Front	Rear	Front	Rear
		3000	1600	435	-	Down	-	-	-

· : 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	*1220			*1280	1240	4.26
(13.1 ft)	lb					*2690	*2690			*2820	2730	(14.0)
3.0 m	kg					*1270	*1270			*1240	1000	4.87
(9.8 ft)	lb					*2800	*2800			*2730	2200	(16.0)
2.0 m	kg			*1960	*1960	*1500	1320	*1320	950	*1250	900	5.18
(6.6 ft)	lb			*4320	*4320	*3310	2910	*2910	2090	*2760	1980	(17.0)
1.0 m	kg			*2600	1890	*1760	1270	*1410	930	*1330	860	5.24
(3.3 ft)	lb			*5730	4170	*3880	2800	*3110	2050	*2930	1900	(17.2)
0.0 m	kg			*2850	1840	*1920	1230	*1450	910	*1420	890	5.09
(0.0 ft)	lb			*6280	4060	*4230	2710	*3200	2010	*3130	1960	(16.7)
-1.0 m	kg	*3080	*3080	*2750	1830	*1890	1220			*1480	1000	4.67
(-3.3 ft)	lb	*6790	*6790	*6060	4030	*4170	2690			*3260	2200	(15.3)
-2.0 m	kg	*3610	3570	*2290	1850					*1530	1290	3.90
(-6.6 ft)	lb	*7960	7870	*5050	4080					*3370	2840	(12.8)

※ Note

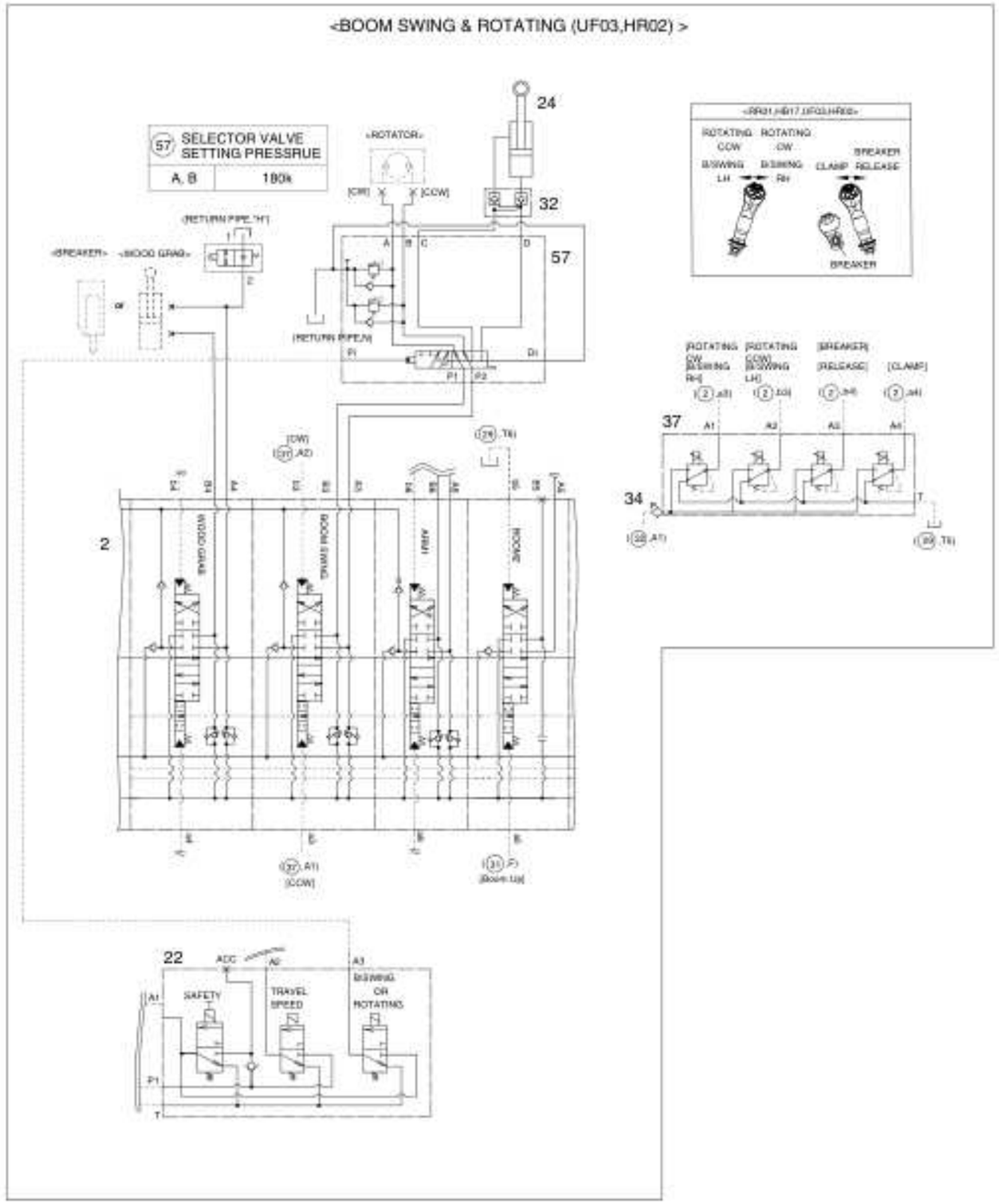
1. Lifting capacity are based on SAE J1097 and ISO 10567.
2. Lifting capacity of the HX series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.
3. The lift-point is bucket pivot mounting pin on the arm (without bucket mass).
4. *indicates load limited by hydraulic capacity.

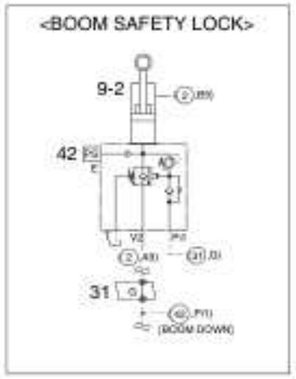
※ Lifting capacities are based upon a standard machine conditions.
Lifting capacities will vary with different work tools, ground conditions and attachments.
The difference between the weight of a work tool attachment must be subtracted.
Consult with your local HD Hyundai Construction Equipment dealer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

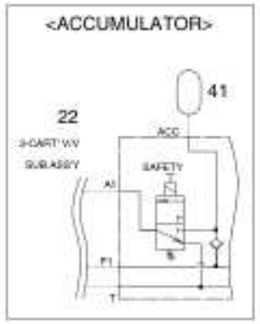
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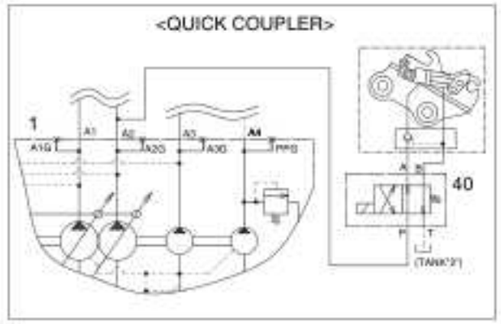
2. HYDRAULIC CIRCUIT (2/3)

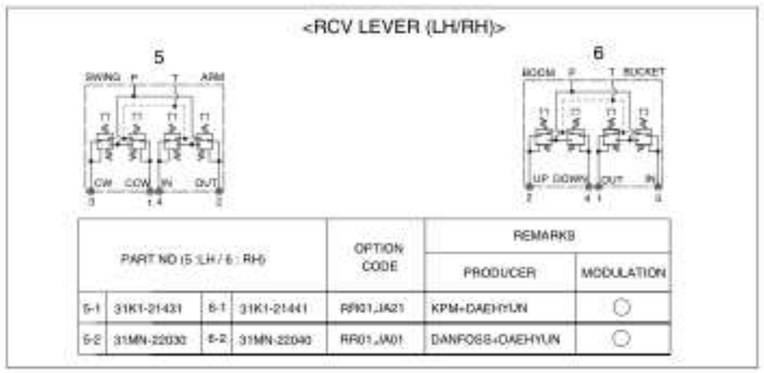












PART NO (5 :LH / 6 : RH)				OPTION CODE	REMARKS	
					PRODUCER	MODULATION
5-1	31K1-21431	6-1	31K1-21441	RR01,JA21	KPM+DAEHYUN	○
5-2	31MN-22030	6-2	31MN-22040	RR01,JA01	DANFOSS+DAEHYUN	○

32 DPC valve
5-2 RCV lever (LH, modula)
6-2 RCV lever (RH, modula)
9-2 Boom cylinder with Safety lock valve
10-2 Arm cylinder with Safety lock valve
40 Solenoid valve
41 Accumulator
42 Pressure sensor
57 Selector valve

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2) WEAK AIR FLOW FROM FAN MOTOR

Cause	Check	Remedy
Clogged evaporator or obstacles around air inlet	Check if evaporator is contaminated	Clean
Leakage of air flow	Check HVAC case assembly	Adjust
Duct sensor failure	Check if evaporator is frozen	Replace

3) ABNORMAL OPERATION OF FAN MOTOR

Cause	Check	Remedy
Abnormal operation of each step of control	4 step only operate	Replace resistor
	1 or 2 step does not operate	Replace control
	3 or 4 step does not operate	Replace relay

4) COMPRESSOR DOES NOT ROTATE OR HARDLY ROTATE

Cause	Check	Remedy
Loose belt	Belt shaking is severe	Adjust tension
Failure of compressor itself	Belt slip	Repair or Replace
Low voltage of battery	Slip when rotate	Charge battery
Fieldcoil short	Slip when rotate	Replace magnetic clutch
Oily clutch face	Contamination around clutch	Replace magnetic clutch, clean
Fieldcoil is broken	Magnetic clutch does not operate or "∞" resistance	Replace compressor
Leakage of refrigerant or oil inside	Check if wet with oil	Replace compressor Charge refrigerant

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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.



R55NM7HP53

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



R55NM7HP54

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.



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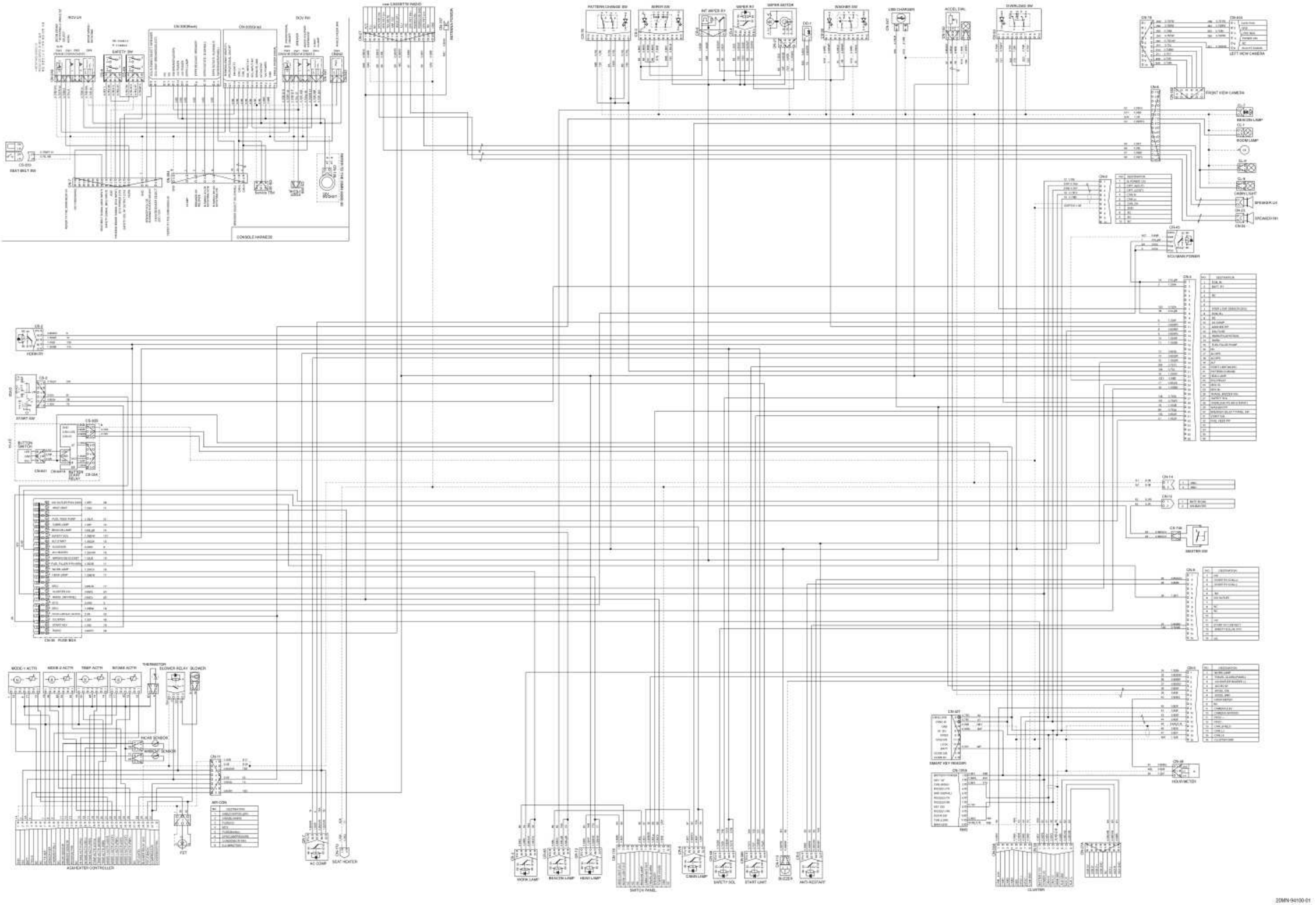
(6) Apply grease to the O-ring for assembling.



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· ELECTRICAL CIRCUIT (2/2)



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