CRAWLER EXCAVATOR

SERVICE MANUAL

RD220LS

HYUNDAI

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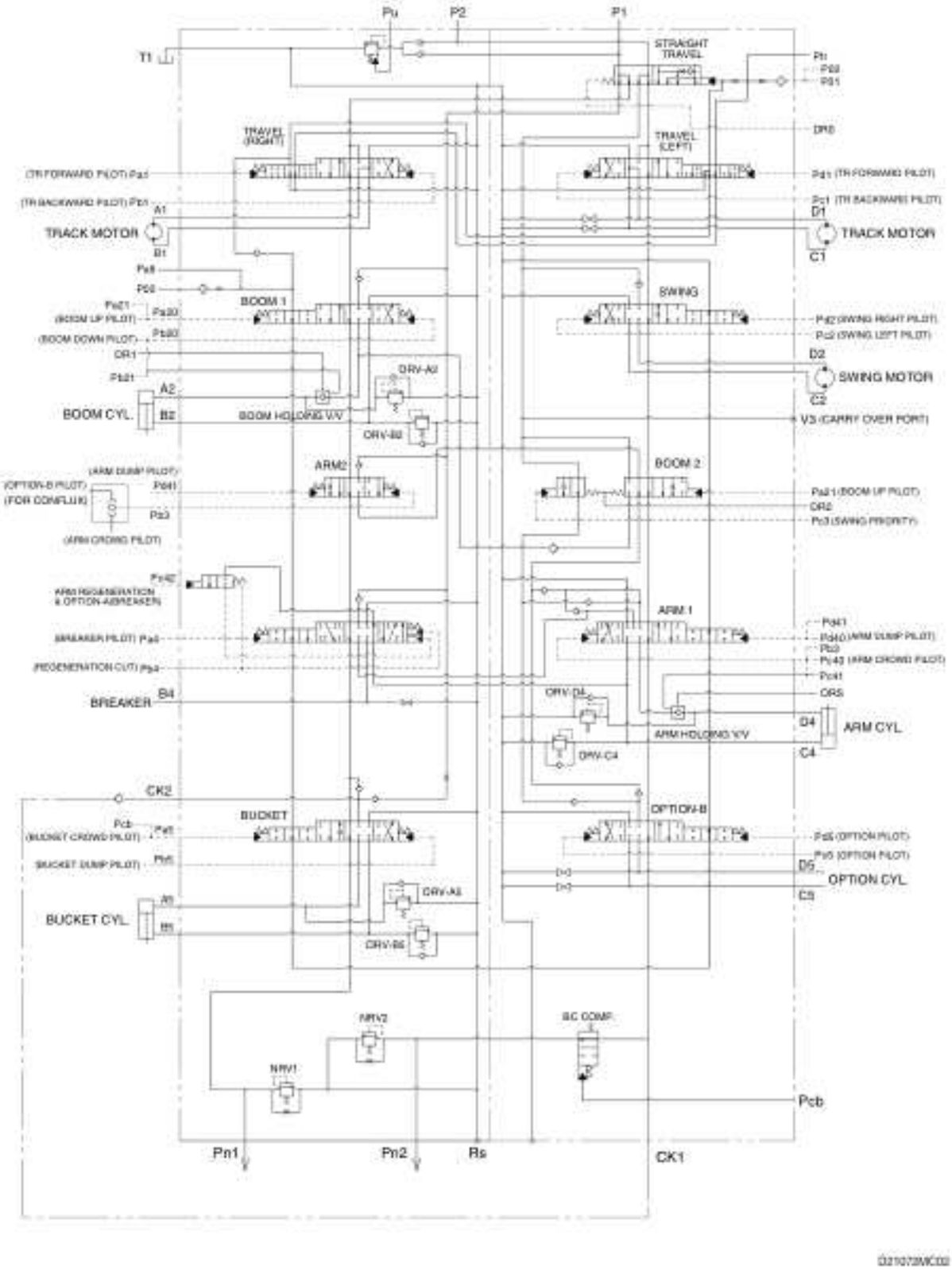
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4. WEIGHT

Item		
	kg	lb
Upperstructure assembly	8950	19730
Main frame weld assembly	1720	3790
Engine assembly	530	1170
Main pump assembly	120	265
Main control valve assembly	200	440
Swing motor assembly	190	420
Hydraulic oil tank assembly	240	530
Fuel tank assembly	195	430
Counterweight	4200	9262
Cab assembly	310	680
Lower chassis assembly	8700	19180
Track frame weld assembly	2720	6000
Swing bearing	260	570
Travel motor assembly	305	670
Turning joint	55	120
Track recoil spring	140	310
Idler	170	370
Carrier roller	20	45
Track roller	50	110
Track-chain assembly(600mm standard triple grouser shoe)	1400	3090
Front attachment assembly(5.68m boom, 2.4m arm, 1.05m³ SAE heaped bucket)	4025	8870
5.68m boom assembly	1530	3370
2.4m arm assembly	670	1480
1.05m³ SAE heaped bucket	810	1790
Boom cylinder assembly	180	400
Arm cylinder assembly	290	640
Bucket cylinder assembly	175	390
Bucket control link assembly	170	370

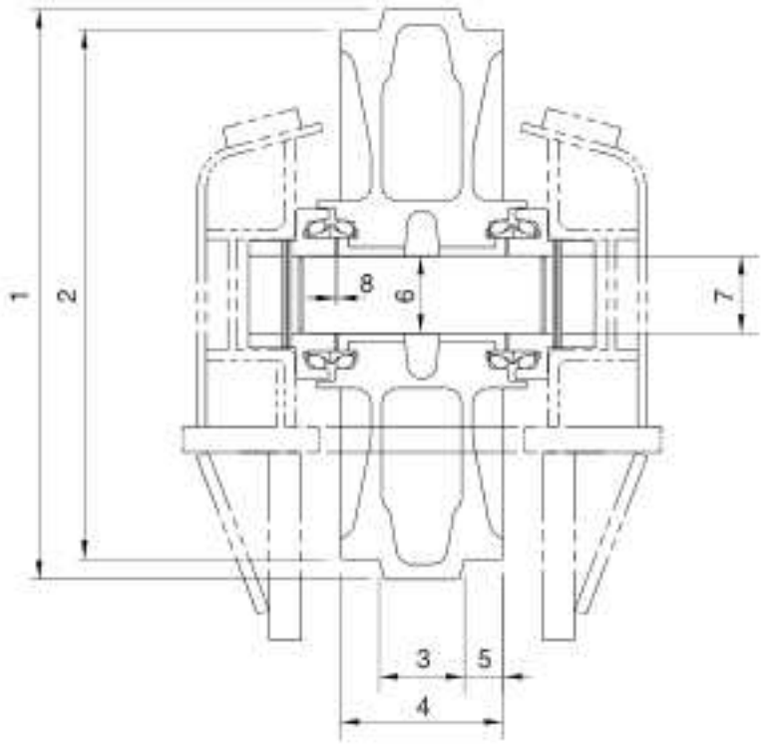
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2. HYDRAULIC CIRCUIT



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3) IDLER



21037M503

Unit : mm

No.	Check item	Criteria				Remedy
1	Outside diameter of protrusion	Standard size		Repair limit		Rebuild or replace
		ø560		-		
2	Outside diameter of tread	ø520		ø510		
3	Width of protrusion	84		-		
4	Total width	160		-		
5	Width of tread	38		43		
6	Clearance between shaft and bushing	Standard size & tolerance		Standard clearance	Clearance limit	Replace bushing
		Shaft	Hole			
		ø75 $^{0}_{-0.03}$	ø75.35 $^{+0.05}_{0}$	0.35 to 0.43	2.0	
7	Clearance between shaft and support	ø75 $^{0}_{-0.03}$	ø75 $^{+0.07}_{+0.03}$	0.03 to 0.1	1.2	Replace
8	Side clearance of idler (Both side)	Standard clearance		Clearance limit		Replace bushing
		0.25 to 1.2		2.0		

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3) ASSEMBLING PINION GEAR SUB ASSY

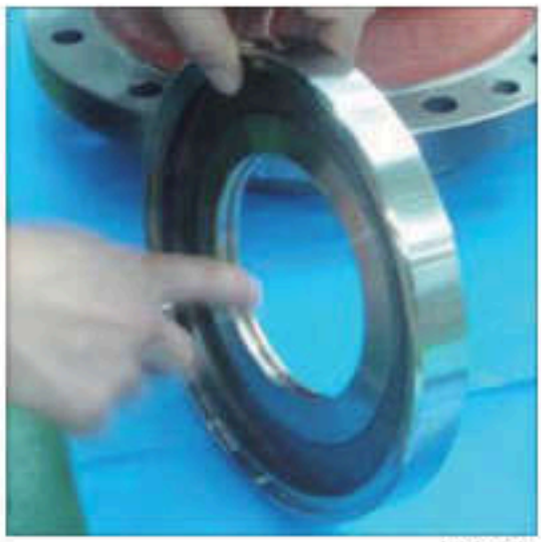
(1) Prepare drive shaft pinion gear vertical with ground.



(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.



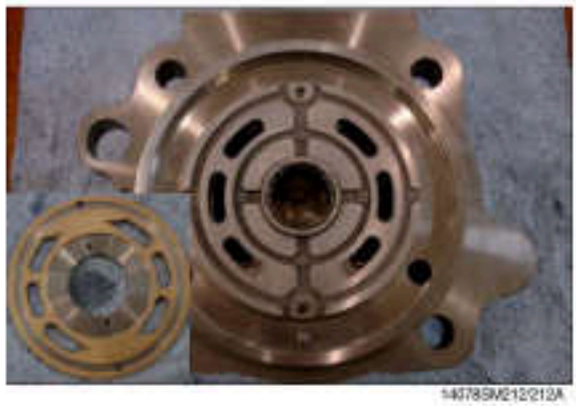
(4) Assemble taper bearing and sleeve into drive shaft using press jig.
Use special jig for pressing. Leave no space between sleeve and taper bearing.



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(3) Disassemble rear cover assy sub

① Disassemble pin(8, 23), valve plate(24) from rear cover(21).



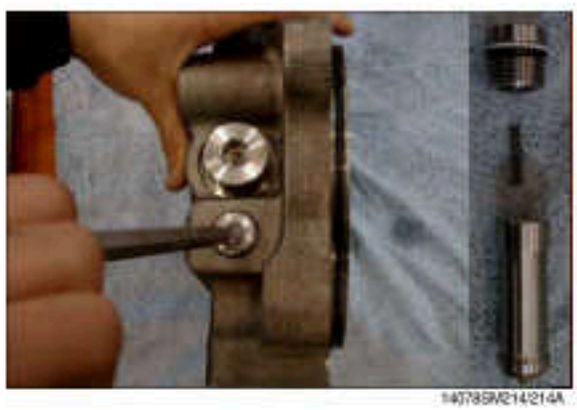
1407SM212/212A

② Using a torque wrench, disassemble relief valve assy(33) 2 set from rear cover(21).



1407SM213/213A

③ After disassembling plug with a L-wrench from rear cover(21), disassemble respectively back up ring, O-ring, O-ring, spring, anti-inversion valve assy(34)



1407SM214/214A

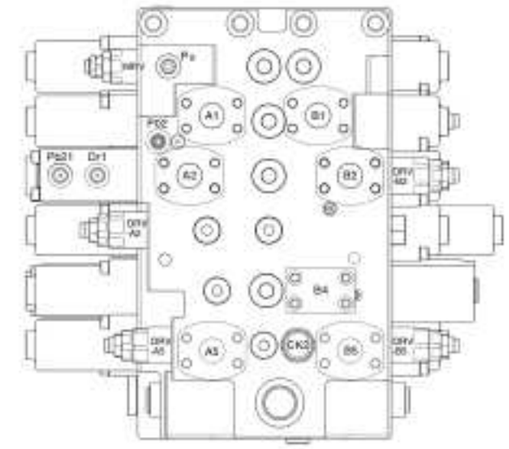
④ Disassemble make up check valve assy with a torque wrench from rear cover(21).



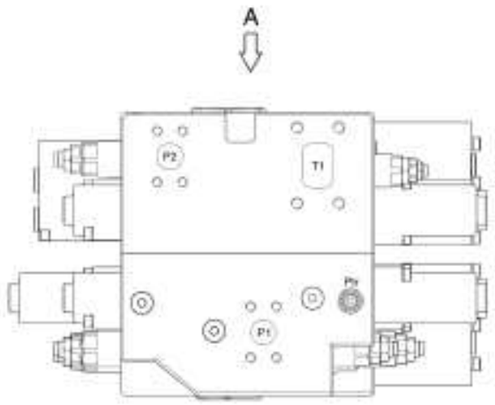
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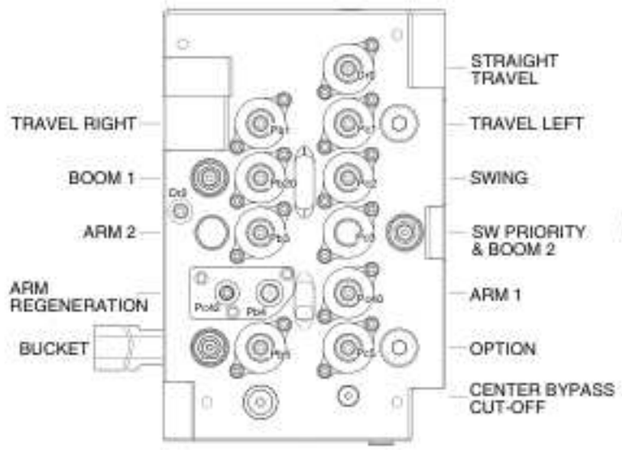
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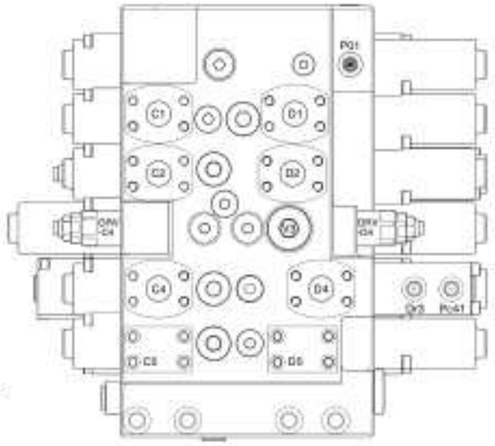
1. STRUCTURE

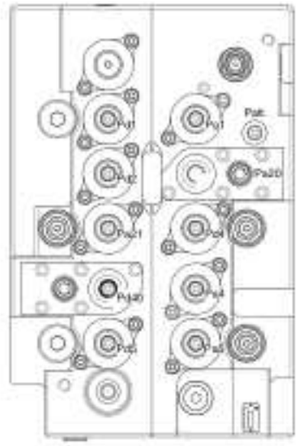


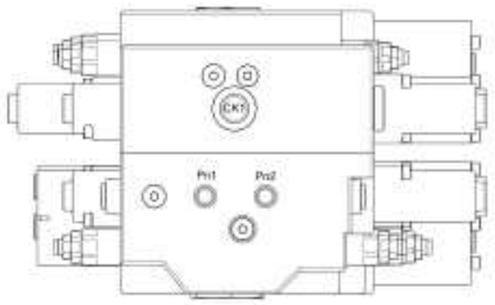
VIEW A











2107V2MC01

Mark	Port name	Port size	Tightening torque
Rs	Make up for swing motor	G1	20–25 kgf · m (145–180 lbf · ft)
Patt Pb21 Pcb P01 P02 Pc41 Pc42 Ptr Pu Dr1 Dr2	Auto idle signal-attachment Lock valve pilot port (boom) Bucket in confluence pilot port Pilot signal port Pilot signal port Unlock signal Arm in regen-cut signal selector port Auto idle signal-travel Power boost Drain port Drain port	G1/4	3.5–3.9 kgf · m (25.3–28.2 lbf · ft)
Ck1 Ck2	Bucket confluence Bucket confluence	G3/4	17–19 kgf · m (123–137.4 lbf · ft)
Pa1 Pb1 Pc1 Pd1 Pa20 Pa21 Pb20 Pc2 Pd2 Pb3 Pc3 Pa4 Pb4 Pc40 Pd40 Pd41 Pa5 Pb5 Pc5 Pd5 Dr0 Pn1 Pn2	Travel pilot port-RH (FW) Travel pilot port-RH (BW) Travel pilot port-LH (BW) Travel pilot port-LH (FW) Boom up pilot port Boom up confluence pilot port Boom down pilot port Swing pilot port (LH) Swing pilot port (RH) Arm in confluence pilot port Swing priority pilot port Option A pilot port (breaker) Arm in regeneration cut port Arm in pilot port Arm out pilot port Arm out confluence pilot port Bucket in pilot port Bucket out pilot port Option B pilot port Option B pilot port Drain port Negative control signal port (A2 port side) Negative control signal port (A1 port side)	G3/8	7–8 kgf · m (50.6–57.8 lbf · ft)
A1 B1 C1 D1 A2 B2 C2 D2 B4 C4 D4 A5 B5 C5 D5 P1 P2	Travel motor port-LH (FW) Travel motor port-LH (BW) Travel motor port-RH (BW) Travel motor port-RH (FW) Boom up port Boom down port Swing motor port (LH) Swing motor port (RH) Option A port (breaker) Arm in port Arm out port Bucket in port Bucket out port Option B port Option B port Pump port (A2 side) Pump port (A1 side)	SAE 5000 psi 1"	7.5–9.2 kgf · m (54.2–66.5 lbf · ft)
Dr5	Drain port	G1/8	1.5–1.9 kgf · m (10.8–13.7 lbf · ft)
T1	Return port	SAE 3000 psi 2" (M12)	6.4–8.6 kgf · m (46.2–62.2 lbf · ft)

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