

JUNJIN CONCRETE PUMP

SERVICE INFORMATION



JSI - EN - 05 - 2D - 001		Date	Feb 1st, 2005
Total Pages	4	Present Page	1
Written by	IL KYU, AN	Approved by	IN JAE, HWANG
Subject	Reduction gear for swing		

■ Reduction gear

JUNJIN uses the reduction gear for swing on M42, M43, M50 and M55. Boom pump supplies hyd. oil to the turning motor through the boom control valve. The oil flow opens the brake valve of reduction gear and the boom starts to slew with the pinion gear and the ring gear.

■ Spec. of the reduction gear

	Part #	Pinion gear	Gear body	Shaft(ϕ)	Ratio	Teeth(Z)	Ring gear
M40	MS023	RB9305	RB37180C	ϕ 85	81.9	19	RB829
	MS113	MS11314	MS1138	ϕ			
M42	RB371	RB37114	RB3718	ϕ 95	81.9	15	RB376
M43	RB371	RB37114	RB3718	ϕ 95	81.9	15	RB376
	RB37100C	RB37114C	RB37180C	ϕ 85	81.9	15	RB376
M48	RB475	RB47514	RB3718	ϕ 95	159.1	14	RB474
M50	RB475	RB47514	RB3718	ϕ 95	159.1	14	RB474
M52	MS114	MS11414	MS1148				
M55	RB795	RB47514	RB3718	ϕ 95	81.9	14	RB474
	MS08	MS080014	RB3718	ϕ 95	81.9	17	RB474
	MS143	MS11414	MS1138				

■ Hyd. turning motor

Model	M40	M42	M43	M48	M50	M55
Part #	RB566	RB387	RB387	RB481	RB481	RB566

■ Brake valve of reduction gear

	Torque	Brake valve	Gear body without brake valve
All models	24KG · M	RB3719	RB37185

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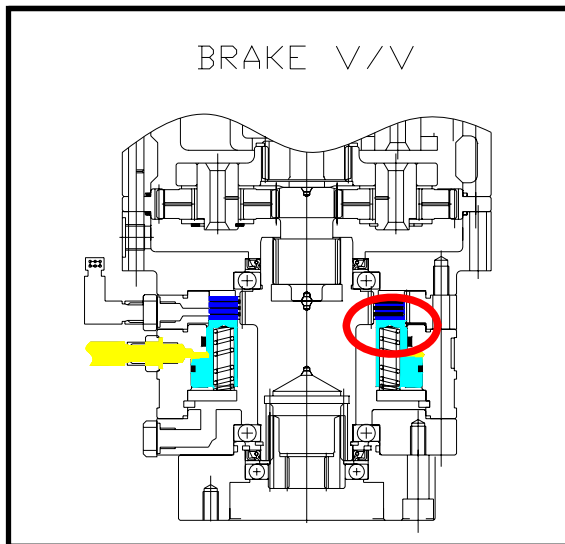
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■ Brake valve of reduction gear

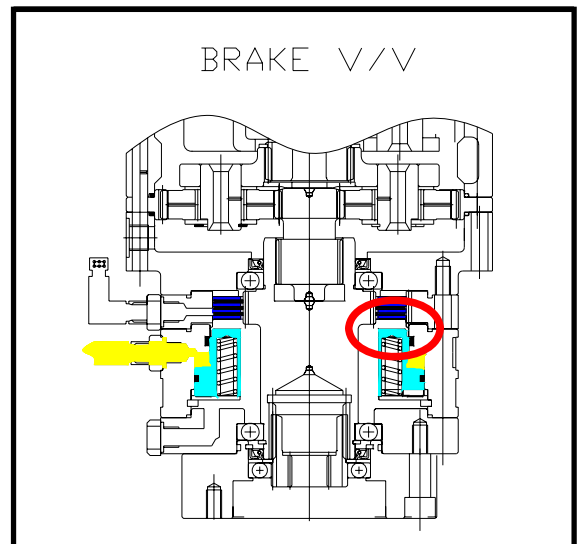
The swing brake is just a stack of small disk that bind against each other like a clutch. When the tension from a spring is released, the swing motor turns and sends oil to the hub which releases this tension and the disk will spin against each other. As soon as the swing motor is stopped, the spring should clamp down on the disk and they should grab again. It is the same principle as a multi plate clutch.

■ Brake valve operation

- As the oil flows to the brake valve, yellow area gets bigger.
(Brake released)
- Green piston moves by the oil flow.
- Blue-black brake disk is released.



Holding brake



Releasing brake

○ Blue-black = Disc

○ Yellow = Hyd. oil

○ Green = Brake piston

○ 2 of air breathers for piston and disc move

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■ Checking the torque of brake valve

○ Using the torque wrench

- Lift the main section vertically for safety after O/R set up.
- Relief the air pressure in system and take apart the brake valve from the reduction gear.
- Plug the hyd. line which is connected to the brake valve from the safety valve block.
- Check the torque using the torque wrench.
(An adapter which connect the coupling and torque wrench is necessary.)
- Recommended torque value = $24\text{KG} \cdot \text{M}$ ($\pm 3\text{KG} \cdot \text{M}$)

○ Visual check of the brake valve

- Remove the cover of pinion gear.
- Check the movement of pinion gear and ring gear when the boom stops right after the swing. If the gear movement keeps to turn even though the operator stop slewing.
- It is normal the gear moves within the backlash.

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■ Pictures of reduction gear



M40



M42, M43



M48, M50

55M

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Written by	HAN SEONG, SEOL	Approved by	IN JAE, HWANG
Subject	boom cycle		

■ Boom cycle

Unit : Sec

Model	1st		2nd		3rd		4th		5th		slewing	
	extend	fold	extend	fold	extend	fold	extend	fold	extend	fold	left	right
M20	45	45	50	50	38	38	X	X	X	X	125	125
M28	65	65	75	75	55	55	X	X	X	X	140	140
M33	70	70	85	85	65	65	45	45	X	X	130	130
M37	80	80	110	110	75	75	50	50	X	X	145	145
Z37	80	80	105	105	100	100	50	50	X	X	145	145
M40	90	90	120	120	80	80	55	55	X	X	160	160
M42	95	95	125	125	80	80	55	55	X	X	170	170
M43	100	100	125	125	80	80	55	55	X	X	165	165
M50	105	105	155	155	110	110	75	75	55	55	195	195
M55	120	120	175	175	135	135	120	120	65	65	220	220