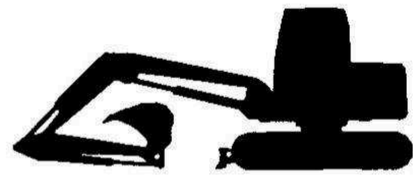
WEBM000200

Shop Manual



PC20R-8
PC27R-8

HYDRAULIC EXCAVATOR

SERIAL NUMBERS PC20R-8 - F30001 and up
PC27R-8 - F30001

KOMATSU®

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BLEEDING AIR FROM THE HYDRAULIC CIRCUITS

Sequence of operations or procedures for bleeding the air

	Procedures for bleeding air						
	1	2	3	4	5	6	7
	Bleeding air from pumps	Starting engine	Bleeding air from cylinders	Bleeding air from swing motor	Bleeding air from travel motor	Pressurising tank	Starting tasks
• Substitution of hydraulic oil • Cleaning tank filter	○ →	○ →	○ →	○ ★1 →	○ ★1 →	○ →	○
• Substitution filter		○ →				○ →	○
• Repair - substitution pump • Removal of suction tube	○ →	○ →	○ →			○ →	○
• Substitution - repair control valve		○ →	○ →			○ →	○
• Repair-Substitution cylinders • Removal of cylinders tube		○ →	○ →			○ →	○
• Repair - substitution swing motor • Removal of tubes from swing motor		○ →		○ →		○ →	○
• Repair - substitution travel motor - joint • Removal of tubes from travel motor - joint		○ →			○ →	○ →	○

★1: Only bleed air from the swing and travel motors if the engine oil (casing) is to be drained.

1. Bleeding air from the pump

1 - Loosen and remove the cap (1) from the pump body (2).

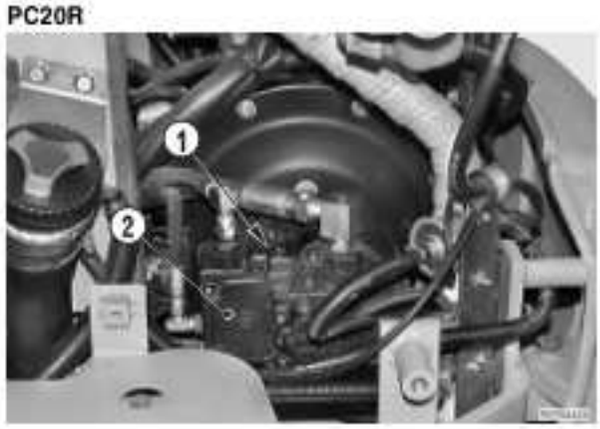
2 - Pour hydraulic oil through the hole until the entire casing is full.

3 - Replace the cap (1).

Cap: PC20R: 16.7±2.5 Nm
PC27R: 63.7±4.9 Nm

★ After filling the casing, start the engine and allow it to run at low idling for about 10 minutes before proceding to bleed the air from the circuits.

PC20R



PC27R



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REMOVAL OF THE COUNTERWEIGHT

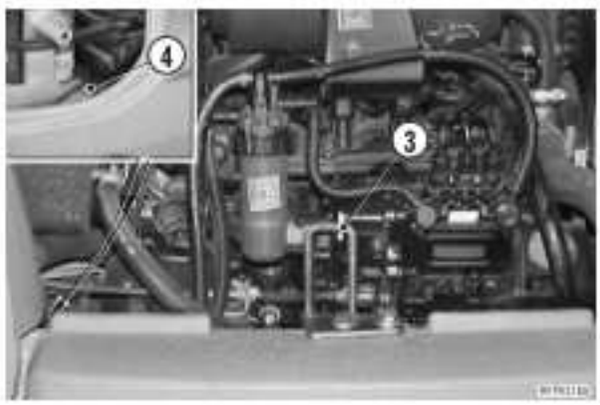
⚠ Completely lower the working equipment until it is resting on the ground and stop the engine.

1 - Remove the lateral counterweight (1) and (2). ※1

R.H. counterweight: 37 kg
L.H. counterweight: 29 kg



2 - Remove the hood fastener (3).



3 - Loosen the counterweight screws (4) to eliminate the tightening torque. ※2

4 - Attach the counterweight (5) to some hoisting tackle, remove the screws, and pull out the counterweight (5).



INSTALLATION OF THE COUNTERWEIGHT

- To install, reverse the removal procedure.

※1

Lateral counterweight screws:..... Nm

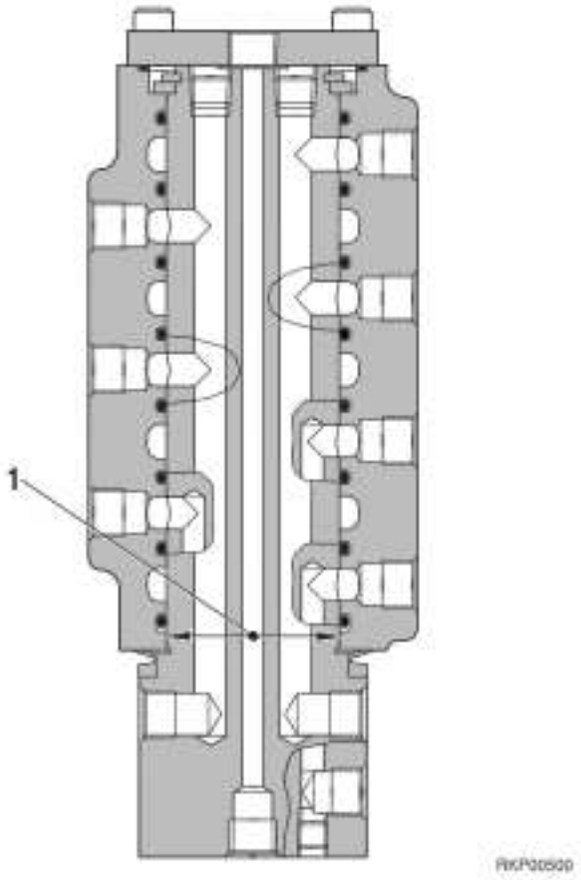
※2

Counterweight screws:.....

Counterweight screws:..... Nm

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SWIVEL JOINT



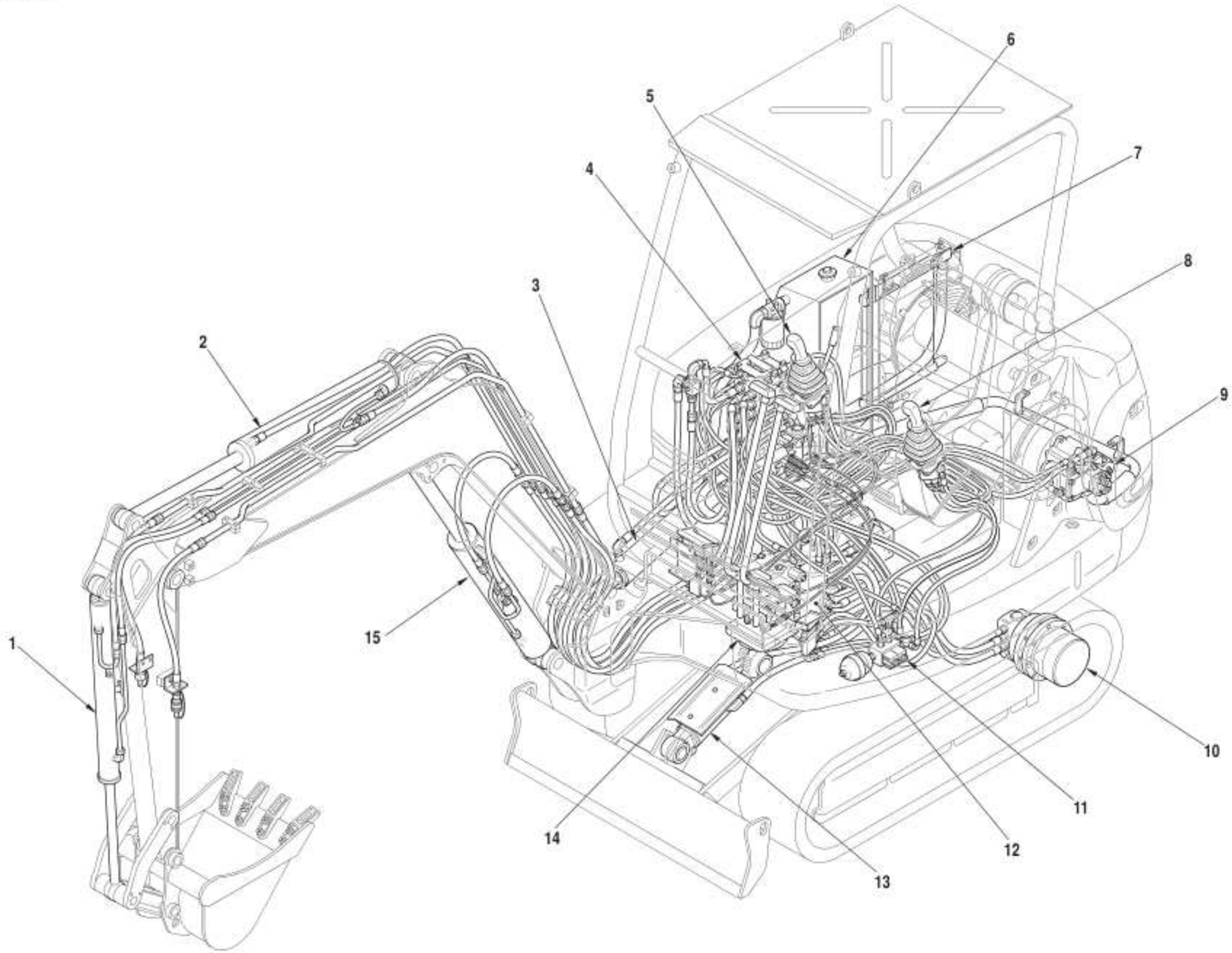
Unit: mm

No.	Check item	Criteria			Remedy
1	Clearance between rotor and shaft	Standard size	Standard clearance	Clearance limit	Replace
		45	0.055 – 0.085	0.090	

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HYDRAULIC SYSTEM

PC20R



1. Bucket cylinder
2. Arm cylinder
3. Boom swing cylinder
4. Control valve
5. R.H. PPC valve
6. Hydraulic tank
7. Hydraulic oil cooler
8. L.H. PPC valve
9. Hydraulic pump
10. Final drive
11. Servocontrol feed unit
12. Swivel joint
13. Blade cylinder
14. Swing motor
15. Boom cylinder

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