SHOP MANUAL

WEBM000802

PW110R-1

HYDRAULIC EXCAVATOR

SERIAL NUMBER

PW110R-1 2260010001 and up

KOMATSU®

Utility

Order the manual at mid-west-tech.com >

10 STRUCTURE AND FUNCTION

P.T.O. 2
Power train 3
Front axle 4
Transmission 8
Rear axle 10
Steering system 15
Steering unit 19
Swing circle 20
Swing machinery 21
Hydraulic diagram standard 23
Hydraulic circuit (work equipment) 25
Hydraulic pump 26
Priority valve 52
Control valve 54
Swing motor 82
Swivel joint 88
Travel motor 89
Displacement automatic control high pressure related 90
Travel motor brake valves 91
Cylinders 92
Axle locking cylinder 94
Servocontrol feed unit 96
Accumulator 101
Shuttle valve 102
PPC valves 104
Brake pump 114
Boom and arm safety valve 115
Blade or outriggers safety valve 116
Overload sensor switch 117
Solenoid valves 118
Air-conditioning unit 124
Electrical diagram (1/8) 127
Electrical diagram (2/8) 129
Electrical diagram (3/8) 131
Electrical diagram (4/8) 133
Electrical diagram (5/8) 135
Electrical diagram (6/8) 137
Electrical diagram (7/8) 139
Electrical diagram (8/8) 141
Control unit fuses - relais (1/2) 143
Control unit fuses - relais (2/2) 145

MidWestTech | Komatsu PW110R-1 Mobile Excavator Service Manual | Publication W... Order the manual at mid-west-tech.com >

NORMAL OR STANDARD TECHNICAL DATA

FOR ENGINE

Machine model			PW110R-1	
Engine			S4D106-1FB	
Check item	Test Conditions	Unit	Standard value	Permissible value
Engine speed	High idling Low idling Set speed	rpm rpm rpm	2200±50 1050±50 2000	2200±50 1050±50 –
Exhaust gas colour	Sudden acceleration At high idling speed	Bosch index Bosch index	0.9 0.5	Max. 1.5 Max. 1.0
Valve clearance	Intake valve (20°C) Exhaust valve (20°C)	mm mm	0.30±0.05 0.30±0.05	Max. 0.35 Max. 0.35
Compression pressure (SAE30 oil)	Oil temperature 69–72°C (Engine speed)	bar rpm	34.3±1 250	27.5±1 250
Blow-by pressure (SAE30 oil)	Water temperature in operating range At high idling speed	mm H_2O mm H_2O	– –	– –
Engine oil pressure	Max. idling (in cold state) High idling At low idling	bar bar bar	Max. 5.9 3.92–4.90 Min. 1.0	Max. 5.9 – –
Oil temperature	Entire speed range	°C	120	Max. 120
Fuel injection timing	B.T.D.C.	degrees	11	1045–5512
Fan-belt tension	Deflection when pressed with finger force of approx. 10 kg	mm	Max. 10	10–15

MidWestTech | Komatsu PW110R-1 Mobile Excavator Service Manual | Publication W... Order the manual at mid-west-tech.com >

REMOVAL OF BRAKE PUMP

⚠ Lower the work equipment completely until it rests it on the ground and stop the engine.

⚠ Release all residual pressures from all circuits, and in particular from the brake line. (See «20. TESTING AND ADJUSTMENTS»).

1 - Disconnect the seven hoses (1) from the brake pump and plug them. 1

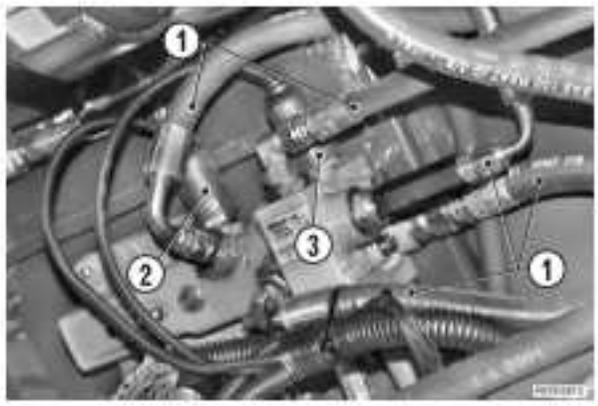
★ Make an identifying mark on the hoses to avoid mixing them up during installation.

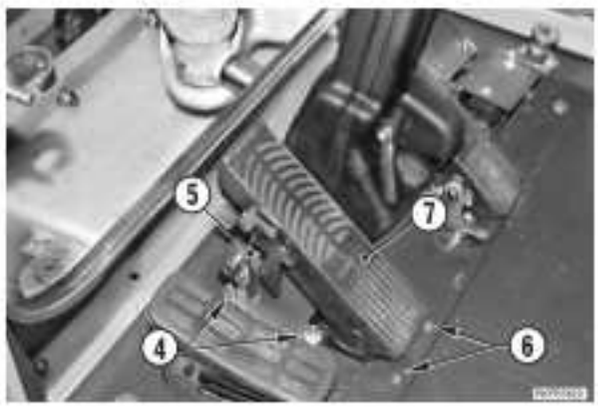
2 - Disconnect the terminals of pressure switches (2) and (3). 2

★ Make an identifying mark on the cables to avoid mixing them up during installation.

3 - Remove the screws (4) locking support sensor (5) and move away it.

4 - Remove the brake pump (7) and loosen three screws (6).





INSTALLATION OF THE“BRAKE PUMP

- To install, reverse the removal procedure.

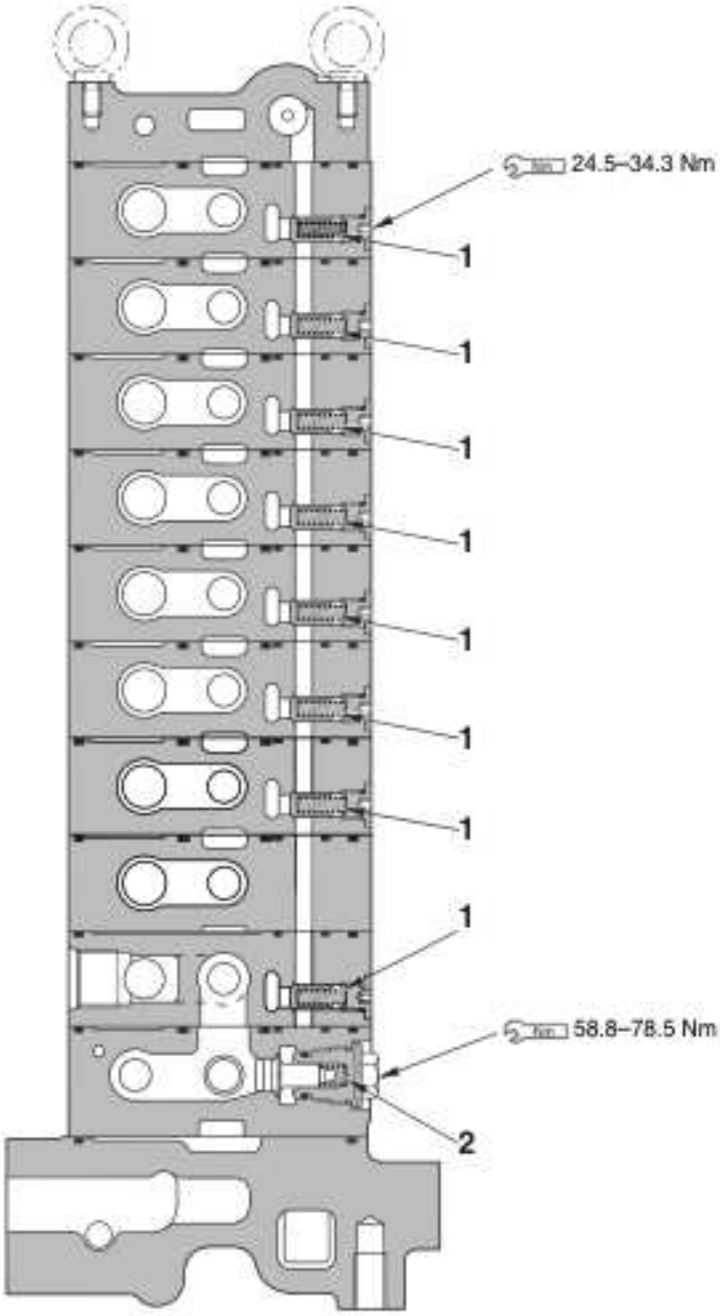
1

★ Start the engine and bleed air from the brake lines. (See «20. TESTING AND ADJUSTMENTS»).

2

★ After re-connection, make sure that the protective sleeves are positioned correctly and firmly.

MidWestTech | Komatsu PW110R-1 Mobile Excavator Service Manual | Publication W... Order the manual at mid-west-tech.com >



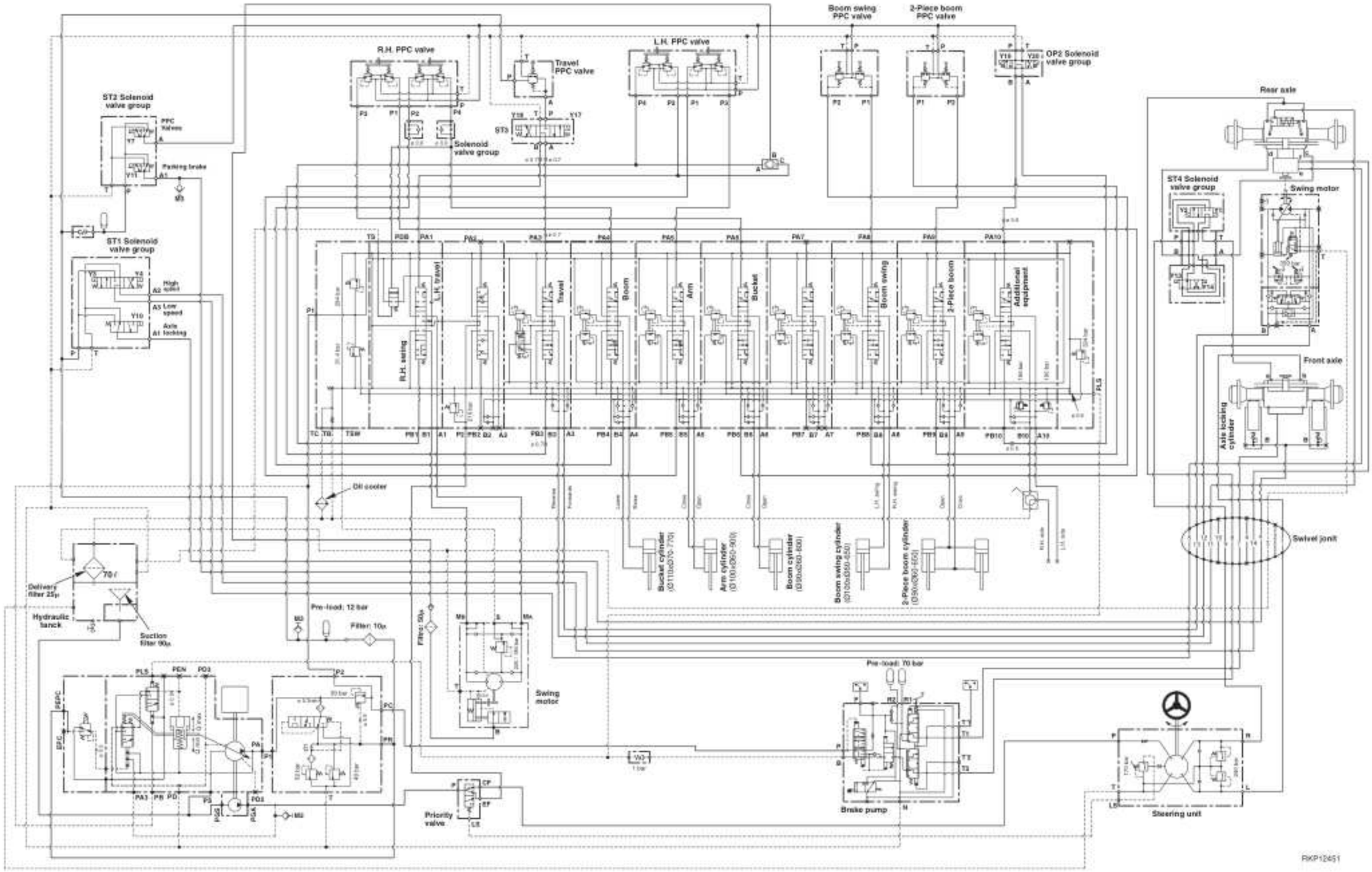
Section D - D RKP03311

Unit: mm

No.	Check item	Criteria					Remedy
		Standard size			Repair limit		
1	Check valve spring	Free length x O.D.	Installed length	Installed load	Free length x O.D.	Installed load	Replace
		–	22	3.92 N	–	–	
2	Check valve spring (Swing)	–	11.5	13.7 N	–	–	

MidWestTech | Komatsu PW110R-1 Mobile Excavator Service Manual | Publication W... Order the manual at mid-west-tech.com >

HYDRAULIC DIAGRAM STANDARD



MidWestTech | Komatsu PW110R-1 Mobile Excavator Service Manual | Publication WEBM000802 Order the manual at mid-west-tech.com >