SEBM016807

SHOP MANUAL

KOMATSU®

PC27MRX-1 PC30MRX-1 PC35MRX-1 PC40MRX-1 PC45MRX-1

MACHINE MODEL	SERIAL NUMBER
PC27MRX-1	**11574 and up**
PC30MRX-1	**10001 and up**
PC35MRX-1	**3930 and up**
PC40MRX-1	**1001 and up**
PC45MRX-1	**1001 and up**

- This shop manual may contain attachments and optional equipment that are not available in your area. Please consult your local Komatsu distributor for those items you may require. Materials and specifications are subject to change without notice.
- PC27MRX-1 mount the 3D82AE-3 and PC30, 35MRX-1 mount the 3D84E-3 engine. For details of the engine, see the 68E-88E Series Engine Shop Manual.
- PC40MRX, PC45MRX-1 mount the 4D84E-3 and 4D88E-3 engine. For details of the engine, see the 68E-88E Series Engine Shop Manual.
- In some cases model name is written as PC27MR, PC30MR, PC35MR, PC40MR and PC45MR in the drawing. These names are same as PC27MRX, PC30MRX, PC35MRX, PC40MRX and PC45MRX.

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SPECIFICATIONS

Machine model				PC27MRX-1	
				Canopy specification	Cab specification
Serial number				11574 and up	
		Bucket capacity	m^3	0.08	0.08
		Operating weight	kg	3,005 (※3,110)	3,115 (※3,220)
Performance	Working ranges	Max. digging depth	mm	2,650	2,650
		Max. vertical wall depth	mm	2,130	2,130
		Max. digging reach	mm	4,600	4,600
		Max. reach at groung level	mm	4,450	4,450
		Max. digging height	mm	3,840	3,840
		Max. dump ing height	mm	2,620	2,620
		Bucket offset	mm	570 (L.H.), 710 (R.H.)	570 (L.H.), 710 (R.H.)
		Max. blade lifting height	mm	330	330
		Max. blade lowering depth	mm	250	250
		Max. digging force (bucket)	kN (kg)	21.9 (2,230)	21.9 (2,230)
		Swing speed	rpm	9.2	9.2
		Swing max. slope angle	°	20	20
		Travel speed	km/h	4.8 (Hi)/ 2.4 (Lo)	4.8 (Hi)/ 2.4 (Lo)
		Gradeability	°	30	30
		Ground pressure (at rubber shoe)	kPa (kg/cm²)	32.9 (0.34)	34.0 (0.35)
		Ground pressure (at steel shoe)	kPa (kg/cm²)	34.0 (0.35)	35.3 (0.36)
	Swing circle	Reduction ratio		89/11= 8.09	
		Grease		G2-LI (Albania EP-2)	
	Swing machinery	Reduction ratio		17.42	
		Swing reduction ratio		140.94	
		Swing speed	rpm	9.3	
		Lubrication oil		EO10-CD	
		Lubrication oil amount	ℓ	0.9	
Dimensions		Ovarall length (for transport)	mm	4,140	4,140
		Overall width	mm	1,550	1,550
		Overall width (crawler)	mm	1,550	1,550
		Overall height (for transport)	mm	2,460 (※2,455)	2,510 (※2,505)
		Ground clearance of conterweight	mm	560	560
		Min. ground clearance	mm	320	320
		Tail swing radius	mm	885	885

※ For steel shoe specification.

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Machine model				PC27MRX-1	
				Canopy specification	Cab specification
Serial number				11574 and up	
Dimensions	Min. swing radius of work equipment (at boom swing)		mm	2,285 (1,920)	2,285 (1,920)
	Min. swing radius of work equipment		mm	3,065	3,065
	Length of track on ground		mm	1,485 (※1,455)	1,485 (※1,455)
	Track gauge		mm	1,250	1,250
	Machine cab height		mm	1,440	1,440
	Blade width		mm	1,550	1,550
	Blade height		mm	325	325
Engine	Model			3D82AE-3H	
	Type			4-cycle, water cooled, in-line direct injection type	
	No. of cylinders – bore × stroke		mm	3 – 82 × 84	
	Piston displacement		ℓ (cc)	1.330 (1,330)	
	Performance	Fly wheel horsepower	kW/rpm (HP/rpm)	18.8/2,600 (25.2/2,600)	
		Maxium torque	Nm/rpm (kgm/rpm)	83.3/1,600 (8.5/1,600)	
		High idling speed	rpm	2,785	
		Low idling speed	rpm	1,050	
		Min. fuel consumption ratio	g/kWh (g/HPh)	237 (177)	
	Starting motor			12V, 1.2 kW	
	Alternator			12V, 40A	
	Battery			12V, 68Ah × 1 (FZG-D26L))	
	Radiator				
	• Core type			CF24-1	
	• Fin pitch		mm	3.0/ 2	
	• Heat dissipation area		m²	5.24	
	• Pressure valve cracking pressure		kPa {kg/cm²}	88.3 ± 14.7 {0.9 ± 0.15}	
	• Vacuum valve cracking pressure		kPa {kg/cm²}	4.9 {0.05}	
Under-carriage	Carrier roller			1 on each side	
	Track roller			4 on cach side	
	Track shoe (Rubber shoe)			Rubber pad shoe	
	Track shoe (Steel shoe)			Double grouser: 40 each side	
	Recoil spring				
	• Grease			KOMATSU genuine Hyper White grease	
	• Amount of grease		cc	—	

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Machine model				PC27MRX-1	
				Canopy specification	Cab specification
Serial number				11574 and up	
Hydraulic system	Hydraulic pump	Type × no.		LPV30 + SBR8 × 1	
		Delivery	ℓ/min	71.3 + 20.4	
		Set pressure			
		For travel, work equipment	MPa (kg/cm²)	21.6 {220}	
		For swing, blade	MPa (kg/cm²)	21.0 {215}	
	Control valve	Type × no.		9-spool type × 1	
		Control method		Hydraulic assist type (boom, arm bucket, swing) Direct control type (travel, brade, boom swing)	
	Hydraulic motor	Travel motor		Piston type with countervalance valve (PHV250) × 2	
		• Type		PHV-250	
		• Capacity	cc/ rev	12.2(Hi)/ 24.4(Lo)	
		• Speed switching pressure	MPa (kg/cm²)	1.47 {15}	
		• Reduction ratio		36.51	
		Swing motor		Piston type, brake valve, with swing shaft brake (LMF16) × 1	
		• Type		LMF16	
		• Theoretical displacement	cc/ rev	16.1	
		• Rated speed	rpm	1,266	
		• Rated flow	ℓ/ min	20.0	
		• Suction valve cracking pressure	MPa (kg/cm²)	Max. 0.04 {0.45}	
		• Safety valve set pressure	MPa (kg/cm²)	18.1 {185}	
	Hydraulic tank			Box-shaped, close	
		• Tank capacity	ℓ	47	
		• Amount of oil inside tank	ℓ	28.5	
		• Bypass valve set pressure	kPa (kg/cm²)	103 ± 19.6 (1.05 ± 0.2)	
		• Pressure valve cracking pressure	kPa (kg/cm²)	—	
		• Vacuum valve cracking pressure	kPa (kg/cm²)	—	
	Hydraulic oil filter			Tank return side	
	Hydraulic oil cooler			Air cooled	
		• Core type		Drawn-CUP	
		• Fin pitch	mm	4.0 /2	
		• Heat dissipation area	m²	2.06	

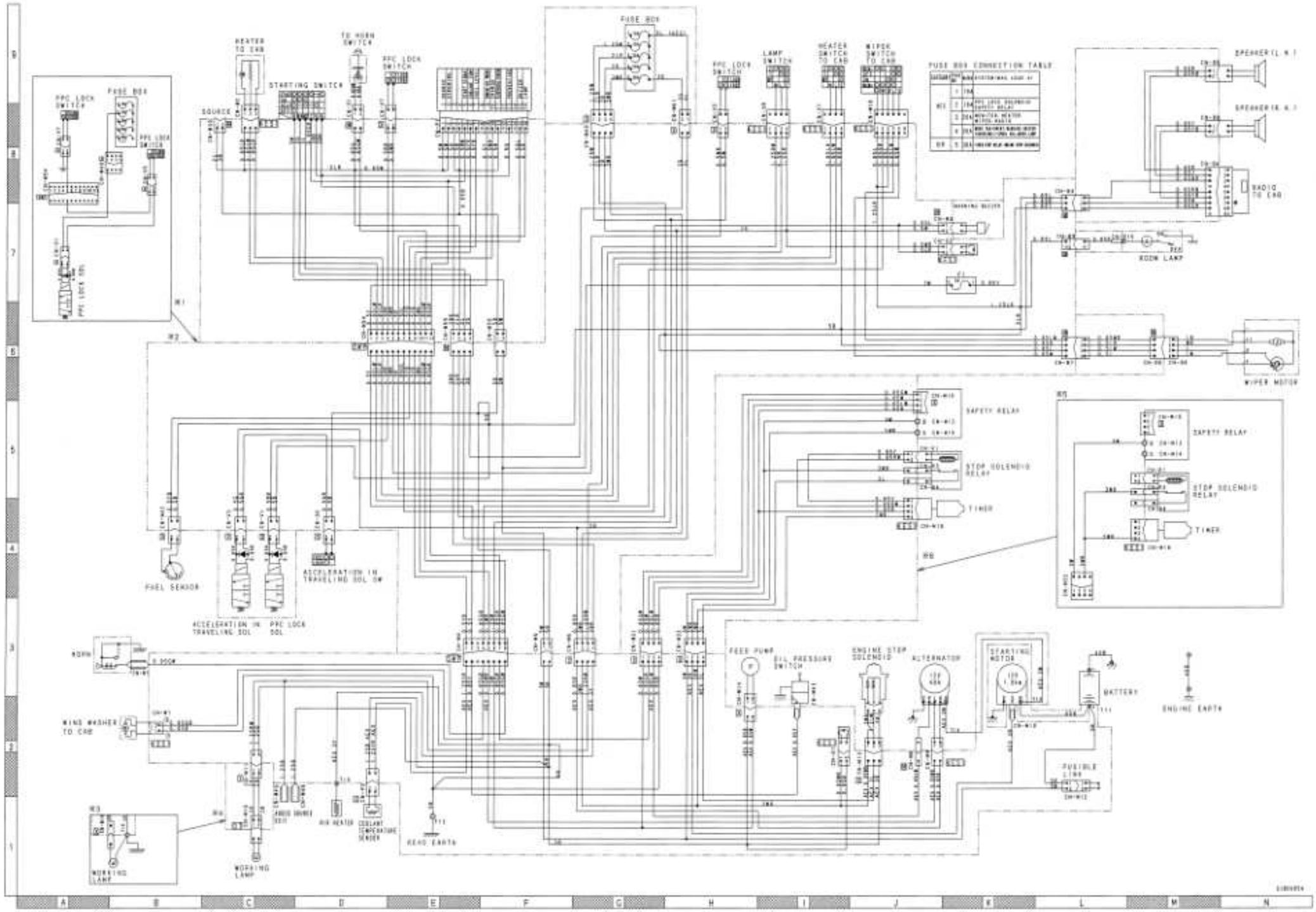
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ELECTRICAL CIRCUIT DIAGRAM

CAB SPECIFICATION

PC40MRX-1 Serial No.: 1001 – 5500
PC45MRX-1 Serial No.: 1001 – 3000

※1. PC40MRX-1 Serial No.: 1001 – 3213
PC45MRX-1 Serial No.: 1001 – 1821
※2. PC40MRX-1 Serial No.: 3214 – 5500
PC45MRX-1 Serial No.: 1822 – 3000
※3. PC40MRX-1 Serial No.: 1001 – 4267
PC45MRX-1 Serial No.: 1001 – 2239
※4. PC40MRX-1 Serial No.: 4268 – 5500
PC45MRX-1 Serial No.: 2240 – 3000
※5. PC40MRX-1 Serial No.: 1001 – 4186
PC45MRX-1 Serial No.: 1001 – 2173
※6. PC40MRX-1 Serial No.: 4187 – 5500
PC45MRX-1 Serial No.: 2174 – 3000



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