SEBM010801

SHOP MANUAL

KOMATSU®

PC20R-8
PC25R-8
PC27R-8

MACHINE MODEL	SERIAL NUMBER
PC20R-8	**10001 and up**
PC25R-8	**10001 and up**
PC27R-8	**10001 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.

- PC20R-8 mount the 3D74E-3 engine.
  PC25R-8, PC27R-8 mount the 3D82AE-3 engine.
  For details of the engine, see the 74 Series Engine Shop Manual and 82 Series Engine Shop Manual.

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Machine model				PC25R-8	
				Canopy specification	Cab specification
Serial number				10001 and up	
Engine		Model		3D82AE-3E	
		Type		4-cycle, water cooled, in-line, direct injection	
		No. of cylinders - bore x stroke	mm	3 – 82 x 84	
		Piston displacement	ℓ {cc}	1.33 {1,330}	
	Performance	Flywheel horsepower	kW/rpm{HP/rpm}	17.7/2,400 {23.7/2,400}	
		Maximum torque	Nm/rpm{kgm/rpm}	83.4/1,600 {8.5/1,600}	
		High idling speed	rpm	2,530	
		Low idling speed	rpm	1,050	
		Min. fuel consumption ratio	g/kWh{g/HPh}	238 {174.5}	
	Starting motor			12V, 12 kW	
	Alternator			12V, 20 A	
	Battery			12V, 68 Ah	
	Radiator type			SF24–1	
Undercarriage	Carrier roller			1 on each side	
	Track roller			3 on each side	
	Track shoe			Rubber crawler [assembly type, double grouser, 40 each side]	
Hydraulic system	Hydraulic pump	Type x no.		Variable piston type x 1 + gear type x 1	
		Delivery	ℓ/min	28 + 3.44	
		Set pressure • Swing, travel, work-equipment	MPa{kg/cm²}	20.6 {210}	
		• PPC	MPa{kg/cm²}	3.9 {40}	
	Control valve	Type x no.		9–spool type x 1	
		Control method		Hydraulic assist type (boom, arm, bucket, swing) Direct control type (travel, brade, boom swing)	
	Hydraulic motor	Travel motor		Piston type (with counterbalance valve) x 2	
		Swing motor		Piston type (with brake valve, swing brake) x 1	
	Hydraulic cylinder			Reciprocating piston	
	Hydraulic tank			Box-shaped, close	
	Hydraulic oil filter			Tank return side	
	Hydraulic oil cooler			Air cooled	

[ ] : Steel shoe specification

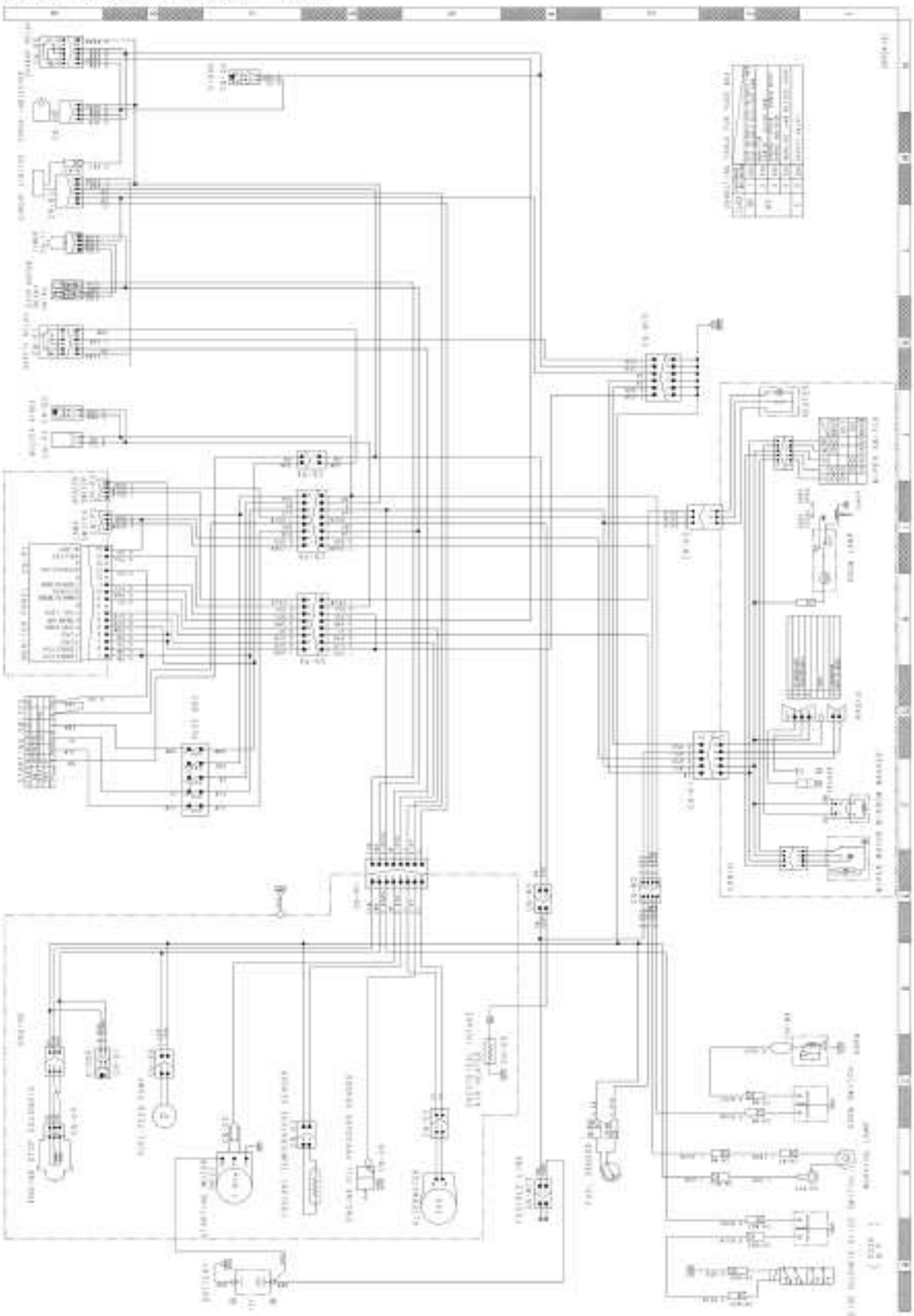
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ELECTRIC CIRCUIT DIAGRAM

PC20R, 25R, 27R-8

★ For details of this page, see 90-17 page.



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M-3 When starting switch is turned ON, some self check lamps do not light up for 3 seconds

a) No gauge lamps light up (fuel, coolant temperature)

Cause	Remedy
Defective monitor panel	Replace

b) Caution lamps (engine oil pressure, battery charge), pilot lamp (preheating) do not light up

1 Is there disconnection in lamp which does not light up?
- Check visually for blown bulb.

YES
NO

Cause	Remedy
Blown bulb	Replace
Defective monitor panel	Replace

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M-4 During self check (all lamps light up for 3 seconds), even if starting switch is turned to START, self check is not completed in 3 seconds

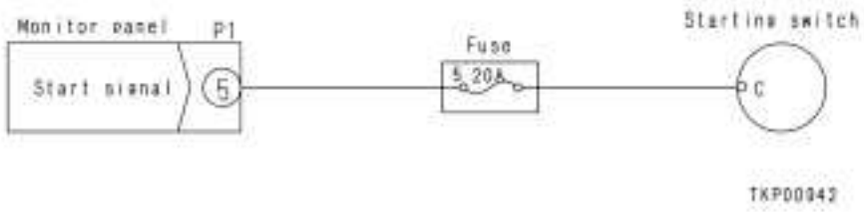
★ Check that fuse 5 is normal (if it is blown, check for a short circuit with the ground in the circuits related to fuse 5).
★ Before carrying out troubleshooting, check that all the related connectors are properly inserted.
★ Always connect any disconnected connectors before going on the next step.

1 Is voltage between P1 (5) and chassis ground normal?
- Turn starting switch to START.
- 10 – 14 V

YES
NO

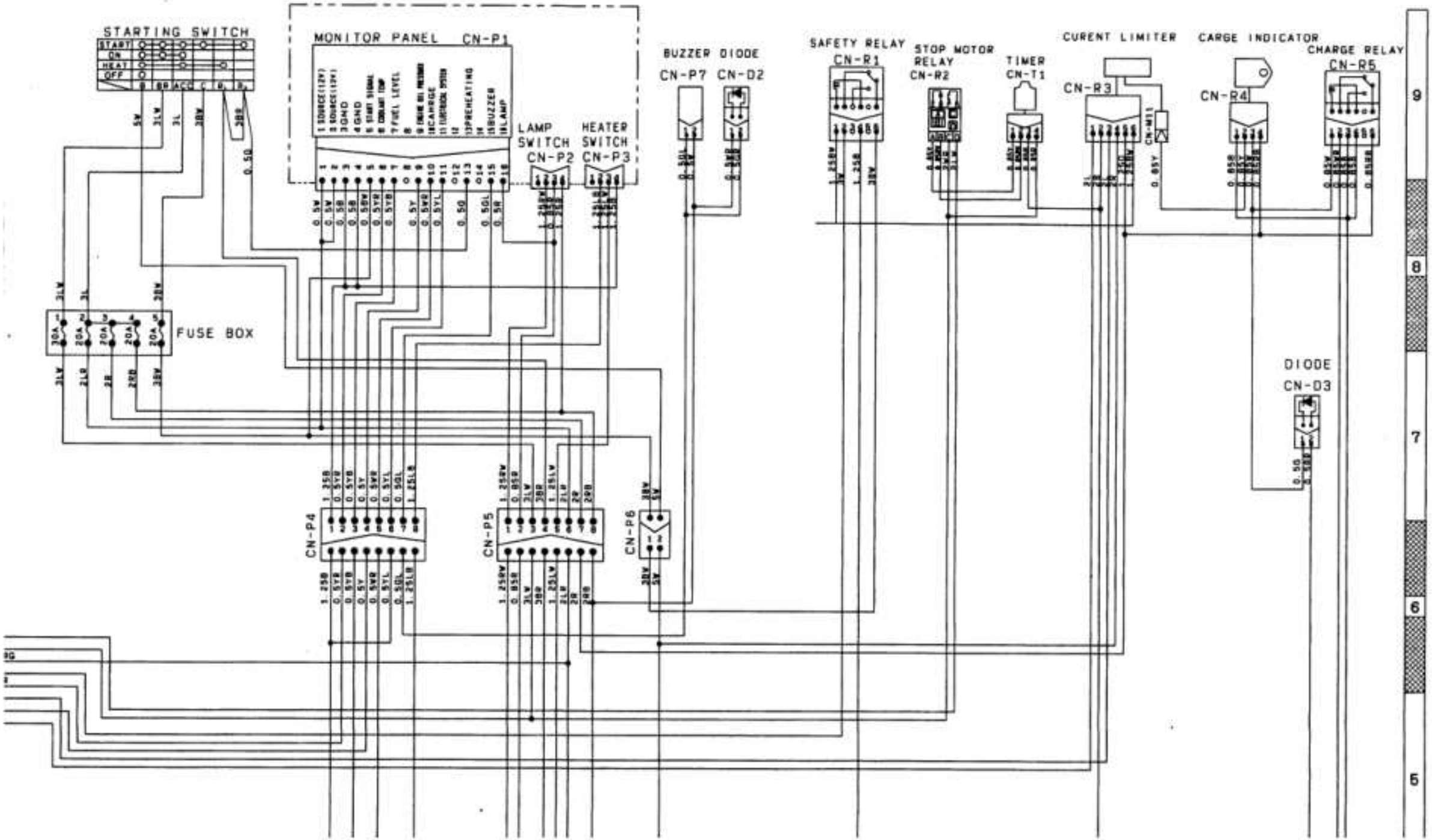
Cause	Remedy
Defective monitor panel	Replace
Defective contact or disconnection in wiring harness between starting switch terminal C – fuse 5 – P1 (female) (5)	Repair or replace

M-4 Related electrical circuit diagram



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