SEN04063-07

Shop Manual

HYDRAULIC
EXCAVATOR

PC27MR-3
PC30MR-3
PC35MR-3

SERIAL NUMBERS PC27MR-20002
PC30MR-30001 and up
PC35MR-15001

KOMATSU®

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Composition of shop manual

The contents of this shop manual are shown together with Form No. in a list.

Note 1: Always keep the latest version of this manual in accordance with this list and utilize accordingly.
The marks shown to the right of Form No. denote the following:
○: New issue (to be filed additionally) ●: Revision (to be replaced for each Form No.)

Note 2: This shop manual can be supplied for each Form No.

Note 3: To file this shop manual in the special binder for management, handle it as follows:
- Place a divider on the top of each section in the file after matching the Tub No. with No. indicated next to each Section Name shown in the table below:
- File overview and other materials in sections in the order shown below and utilize them accordingly.

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100 Index	SEN04065-07	●
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410 Hydraulic system, Part 1	SEN04073-02	
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430 Hydraulic system, Part 3	SEN04075-02	
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100 Standard service value table	SEN04380-02	
30 Testing and adjusting	SEN04080-02	
100 Testing and adjusting	SEN04381-02	●
40 Troubleshooting	SEN04081-02	
010 Farilure code table and fure locations	SEN05815-00	○
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110 Troubleshooting by failure code	SEN05816-00	○
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50 Disassembly and assembly SEN04082-01
100 General information on disassembly and assembly SEN04386-00
200 Engine and cooling system SEN04387-00
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800 Electrical system SEN04393-01

90 Diagrams and drawings SEN04083-03
100 Hydraulic diagrams and drawings SEN04084-01
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Specifications

Machine model				PC27MR-3	
				Canopy specification	Cab specification
Serial number				20002 and up	
Bucket capacity			m³	0.08	0.08
Operating weight			kg	<2,930> [3,035]	<3,080> [3,185]
Performance	Working ranges	Max. digging depth	mm	2,550 <2,840>	2,550 <2,840>
		Max. vertical wall depth	mm	2,080 <2,370>	2,080 <2,370>
		Max. digging reach	mm	4,650 <4,930>	4,650 <4,930>
		Max. reach at ground level	mm	4,550 <4,840>	4,550 <4,840>
		Max. digging height	mm	4,480 <4,690>	4,480 <4,840>
		Max. dumping height	mm	3,190 <3,390>	3,190 <3,390>
		Bucket offset	mm	580 (L.H.), 845 (R.H.)	580 (L.H.), 845 (R.H.)
		Max. blade lifting height	mm	360	360
		Max. blade lowering depth	mm	315	315
	Max. digging force (bucket)		kN {kg}	21.9 {2,230}	21.9 {2,230}
	Continuous swing speed		rpm	9.2	9.2
	Swing max. slope angle		deg.	19.0	19.0
	Travel speed		km/h	2.6 (Lo) / 4.8 (Hi)	2.6 (Lo) / 4.8 (Hi)
	Gradeability		deg.	30	30
	Ground pressure		kPa {kg/cm²}	28.8 {0.29} [29.8 {0.30}]	30.3 {0.31} [31.3 {0.32}]
Dimensions	Overall length (for transport)		mm	4,240 <4,275>	4,240 <4,275>
	Overall width		mm	1,550	1,550
	Overall height (for transport)		mm	2,520	2,520
	Ground clearance of conterweight		mm	545	545
	Min. ground clearance		mm	320	320
	Tail swing radius		mm	855	885
	Min. swing radius of work equipment (at boom swing)		mm	1,980 (1,660)	1,980 (1,660)
	Height of work equipment at min. swing radius		mm	3,445	3,445
	Overall width of crawler		mm	1,550	1,550
	Overall length of crawler		mm	1,950	1,950
	Distance between tumbler centers		mm	1,485	1,485
	Track gauge		mm	1,250	1,250
	Machine cab height		mm	1,360	1,360
	Blade width x height		mm	1,550 × 325	1,550 × 325

★ Values are common to all specifications, unless otherwise specified. (The values of the rubber shoe specification are shown.)
★ Values in < > are for the long arm specifications.
★ Values in [ ] are for steel shoe specification.
★ Operating weight of machine with full tank of fuel and a 75 kg operator (ISO 6016).

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Failure code [D1E0KB] Motor power supply relay error (Ground fault)

User code	Failure code	Trouble	Motor power supply relay error (Ground fault)
E610	D1E0KB		
Contents of trouble	• When output to motor power supply relay was turned OFF, ground fault was detected in motor power supply relay coil circuit.		
Action of controller	• Stops outputting to motor power supply relay. • Even if trouble disappears, system does not reset itself until starting switch is turned OFF.		
Problem that appears on machine	• Engine speed cannot be changed.		
Related information	• Method of reproducing failure code: Turn starting switch ON.		

	Cause		Standard value in normal state/Remarks on troubleshooting			
Possible causes and standard value in normal state	1	Defective motor power supply relay	★ Be ready with starting switch OFF, then perform troubleshooting without turning starting switch ON.			
			R11 (male)	Resistance		
			Between (1) – (2)	80 ± 8 Ω		
			Between (3) – (6)	Max. 1 Ω		
			Between (3) – (5)	Min. 1 MΩ		
	2	Ground fault of wiring harness (Contact with ground circuit)	★ Be ready with starting switch OFF, then perform troubleshooting without turning starting switch ON.			
			Between ground and wiring harness D2 (female) (85) and R11 (female) (1)	Resistance	Min. 1 MΩ	
	3	Defective attachment switch controller	If causes 1 - 2 are not detected, attachment switch controller may be defective. (Since trouble is in system, troubleshooting cannot be carried out.)			

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Serial No.: PC30MR-3 33501 - , PC35MR-3 18001 -

1) The pointer of the gauge does not move from C on the panel

Failure information	• When the starting switch is turned ON, the pointer of the gauge does not move from C on the panel.
Relative information	• Check that the coolant temperature is normal. • While the starting switch is in OFF, the pointer does not move from C. This is not abnormal. • Refer to troubleshooting E-3, too.

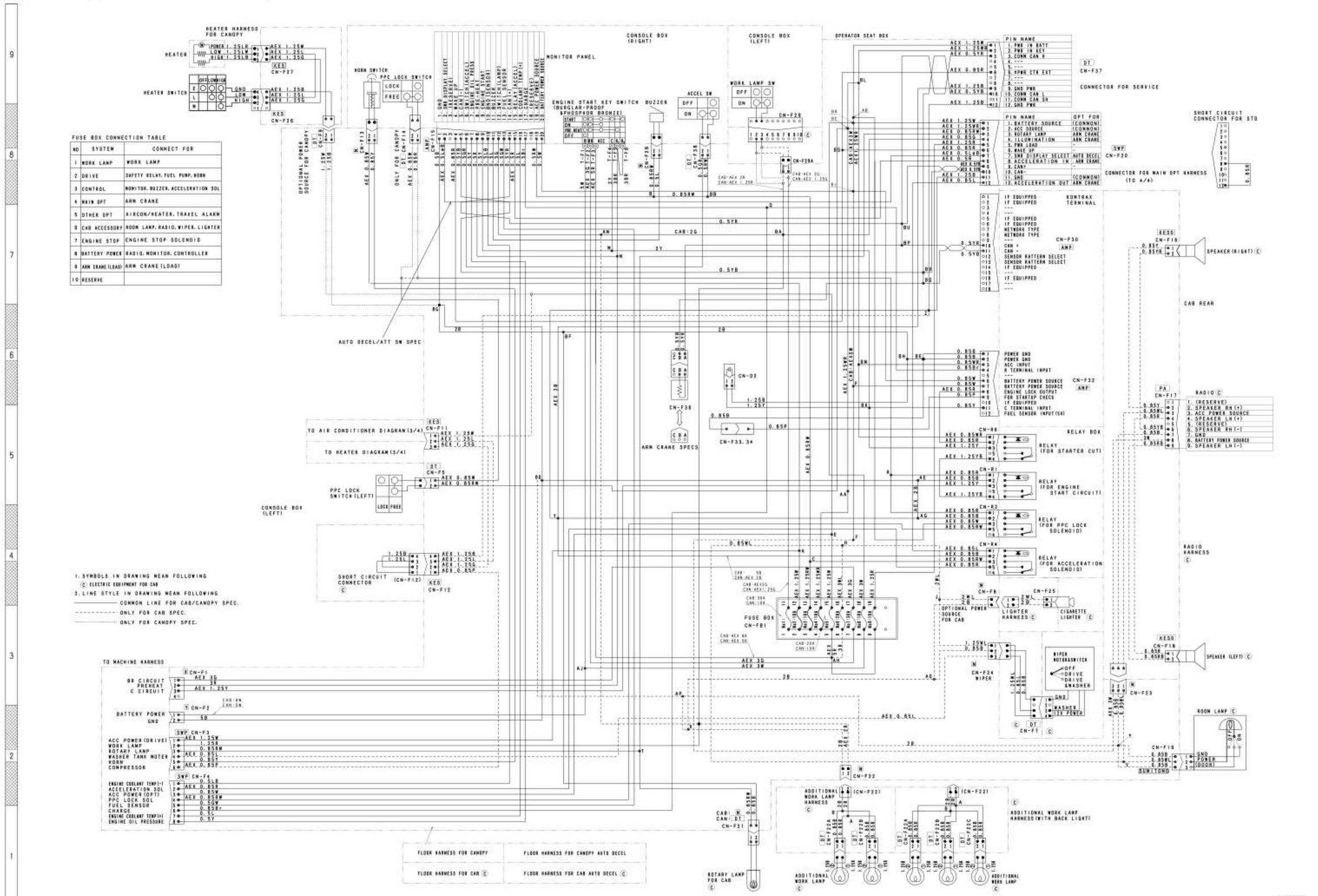
<table>
<tr><th colspan="2" rowspan="2">Causes</th><th colspan="4">Standard value in normalcy and references for troubleshooting</th></tr>
<tr><td colspan="4"></td></tr>
<tr><td rowspan="11">Presumed cause and standard value in normalcy</td><td rowspan="3">1</td><td rowspan="3">Disconnection in wiring harness (Disconnection in wiring harness or defective contact in connector)</td><td colspan="4">1) Turn starting switch OFF.
2) Disconnect connectors M8 and F15.
3) Connect T-adapter to M8 (female) and F15 (female).</td></tr>
<tr><td colspan="2">Wiring harness between F15 (female) (10), F4 (1) and M8 (female) (2)</td><td>Resistance</td><td>Max. 1 Ω</td></tr>
<tr><td colspan="2">Wiring harness between F15 (female) (16), F4 (7) and M8 (female) (1)</td><td>Resistance</td><td>Max. 1 Ω</td></tr>
<tr><td rowspan="8">2</td><td rowspan="8">Defective coolant temperature sensor</td><td colspan="4">1) Turn starting switch OFF.
2) Disconnect connector M8.
3) Connect T-adapter to M8 (male).</td></tr>
<tr><td>M8 (male)</td><td colspan="2">Temperature</td><td>Resistance</td></tr>
<tr><td rowspan="7">Between (1) and (2)</td><td colspan="2">25°C</td><td>38.18 – 47.77 kΩ</td></tr>
<tr><td colspan="2">30°C</td><td>31.59 – 39.07 kΩ</td></tr>
<tr><td colspan="2">80°C</td><td>6.199 – 6.935 kΩ</td></tr>
<tr><td colspan="2">85°C</td><td>5.386 – 5.975 kΩ</td></tr>
<tr><td colspan="2">90°C</td><td>4.695 – 5.166 kΩ</td></tr>
<tr><td colspan="2">95°C</td><td>4.107 – 4.483 kΩ</td></tr>
<tr><td colspan="2">100°C</td><td>3.604 – 3.903 kΩ</td></tr>
<tr><td>3</td><td>Defective monitor panel</td><td colspan="4">If the wiring harness and coolant temperature sensor are normal, the monitor panel is defective.</td></tr>
</table>

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Electrical circuit diagram (1/4) Serial No.: PC27MR-3 20002 and up, PC30MR-3 30001 - 33500, PC35MR-3 15001 - 18000

PC27MR-3, PC30MR-3, PC35MR-3

★ This figure covers the equipment and devices that are unavailable as optional items in some areas.



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