SHOP MANUAL

KOMATSU®

CD110R-2

MACHINE MODEL	SERIAL NUMBER
CD110R-2	**1501 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.

- CD110R-2 mount the KOMATSU SAA6D114E-2 engine.
  For details of the engine, see the 114 Series Engine Shop Manual.

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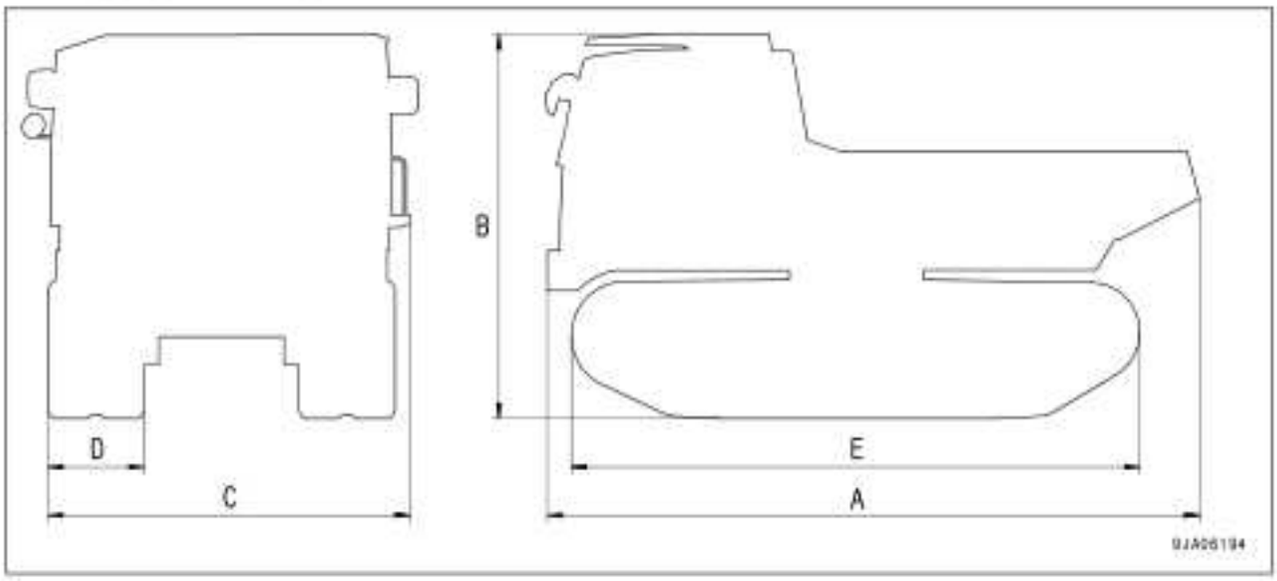
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SPECIFICATION DRAWING

DIMENSIONS DRAWING



DIMENSIONS

	Item		Unit	CD110R-2
	Weight		kg	15,600
	Type of engine		—	Komatsu SAA6D114E-2 diesel engine
	Rated engine output		kW {HP}/rpm	190 {255}/1,900
A	Overall length	In operation	mm	5,405
		In transportation	mm	5,680
B	Overall height		mm	3,185
C	Overall width	In operation	mm	3,005
		In transportation	mm	3,050
D	Shoe width		mm	800
E	Overall track length		mm	4,720
	Minimum ground clearance		mm	685
	Hauling capacity (Struck/Heaped)		m^3	3.8/6.1
	Travel speed (Low/High)		km/h	4.6/10.0
	Continuous swing speed		rpm	4.0

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Error code in electrical system [E213] (Disconnection in swing parking brake solenoid)

User Code	Error Code	Failure Code	Failure phenomenon	Disconnection in swing parking brake solenoid (in governor and pump controller system)
E03	E213	—		
Failure content	• No current flows to the swing parking brake solenoid circuit, when power is supplied to the circuit.			
Response from controller	• None in particular (The solenoid does not function as there is no current flowing to it) • When the failure cause disappears of itself, the machine operation returns to normalcy.			
Phenomenon occurring on machine	• The machine's upper structure does not swing. (The swing parking brake cannot be released.)			
Relative information	• Operation of the swing parking brake solenoid (ON or OFF) can be checked in the monitoring function. (Code No.: 023 Solenoid 3) • If there is abnormality neither with the solenoid nor with wiring harnesses, the upper structure can swing by moving the swing parking brake release switch to the RELEASE position. (In this case, however, the parking brake does not work, when stopping the machine) • While in troubleshooting, hold both the swing lock switch and the swing parking brake release switch in the OFF position. • The controller detects disconnection, when solenoid power is ON. Hence be sure to check it with power ON after the repairs. (For how to turn power ON or OFF, refer to the troubleshooting under Error Code [**E203**].)			

Presumed cause and standard value in normalcy

	Cause	Standard value in normalcy and references for troubleshooting			
1	Swing parking brake solenoid defective (Internal disconnection)	★ Turn the engine starting switch OFF for the preparations, and hold it in the OFF position during the troubleshooting.			
		V05 (male)	Resistance value		
		Between (2) and (1)	20 – 60 Ω		
2	Swing lock switch defective (Internal disconnection)	★ Turn the engine starting switch OFF for the preparations, and hold it in the OFF position during the troubleshooting.			
		X05 (female)	Swing lock switch	Resistance value	
		Between (3) and (4)	OFF	Max. 1 Ω	
			ON	Min. 1 MΩ	
3	Assembled-type diode D01 defective (Internal disconnection)	★ Turn the engine starting switch OFF for the preparations, and hold it in the OFF position during the troubleshooting.			
		D01 (male)	Digital type circuit tester	Continuity	
		Between (7) and (3)	Diode mode	Continued	
4	Disconnection of wiring harness (Disconnection or defective contact with connector)	★ Turn the engine starting switch OFF for the preparations, and hold it in the OFF position during the troubleshooting.			
		Wiring harness between C03 (female) (37) and D01 (female) (7)		Resistance value	Max. 1 Ω
		Wiring harness from D01 (female) (3) – J02 – X05 (male) (3)		Resistance value	Max. 1 Ω
		Wiring harness from X05 (male) (4) – V05 (female) (2)		Resistance value	Max. 1 Ω
		Wiring harness between V05 (female) (1) and grounding		Resistance value	Max. 1 Ω
5	Short-circuiting of Wiring harness (Contact with 24V circuit)	★ Turn the engine starting switch OFF for the preparations, and hold it in the ON position during the troubleshooting.			
		Between wiring harness between C03 (female) (37) and D01 (female) (7) and grounding		Voltage	Max. 1 V
6	Governor and pump controller defective	★ Turn the engine starting switch OFF for the preparations, and hold it in the OFF position during the troubleshooting.			
		C03 (female)	Disconnect D01 and connect pins (3) and (7) of the female side.	Resistance value	
		Between (37) and grounding		20 – 60 Ω	

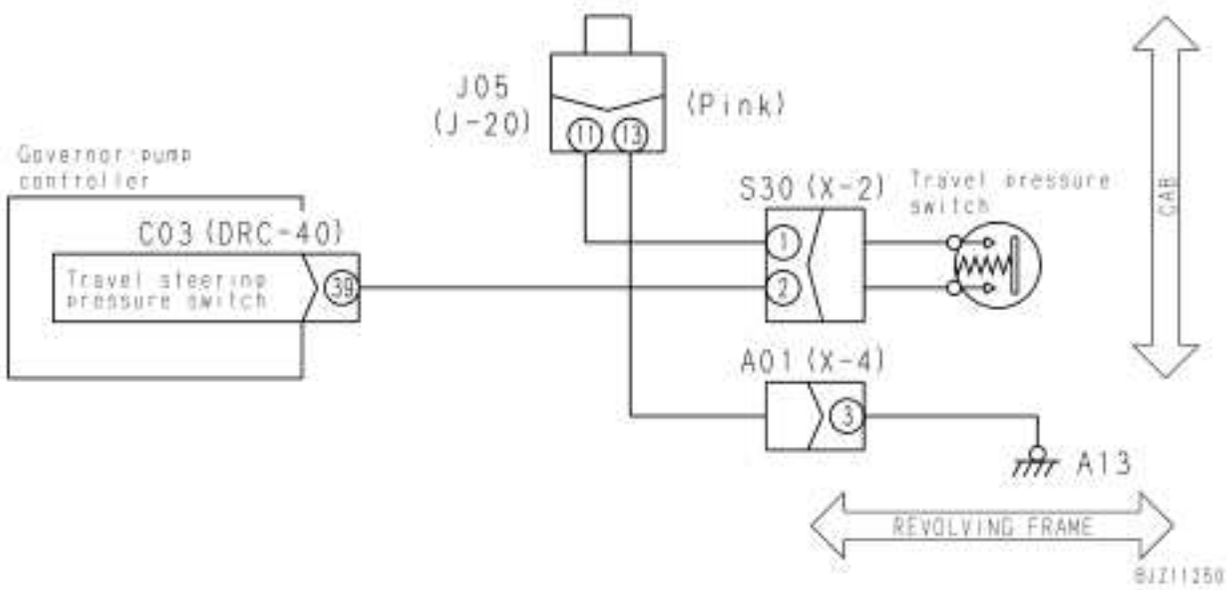
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E-20 "TRAVEL" is not correctly displayed in monitor function

Failure information	• "TRAVEL" is not correctly displayed in the monitor function (special function) on the monitor panel.
Relative information	—

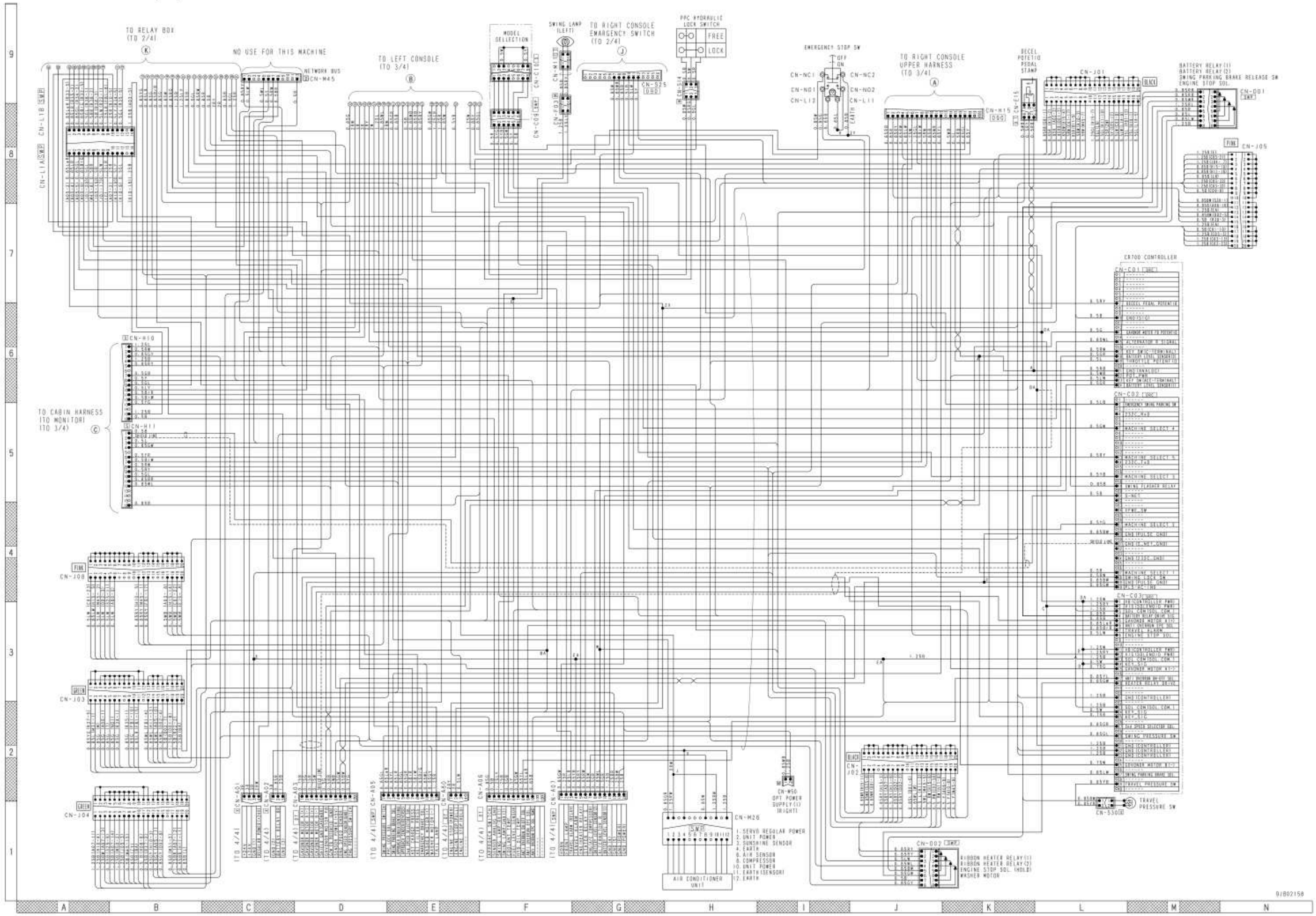
Presumed cause and standard value in normalcy		Cause	Standard value in normalcy and references for troubleshooting			
	1	Travel PPC hydraulic switch fault (Internal disconnection or short-circuiting)	★ Turn the engine starting switch OFF for the preparations, and keep the engine running during the troubleshooting.			
			S30 (male)	Travel control lever	Resistance value	
			Between (1) and (2)	NEUTRAL	Min. 1 MΩ	
				Forward or reverse	Max. 1 Ω	
	2	Disconnection of wiring harness (Disconnection or defective contact with connector)	★ Turn the engine starting switch OFF for the preparations, and hold it in the OFF position during the troubleshooting.			
			Wiring harness from C03 (female) (39) – S30 (female) (2)		Resistance value	Max. 1 Ω
			Wiring harness from S30 (female) (1) – J05 – grounding		Resistance value	Max. 1 Ω
	3	Grounding fault of wiring harness (Contact with grounding (GND) circuit)	★ Turn the engine starting switch OFF for the preparations, and hold it in the OFF position during the troubleshooting.			
			Wiring harness from C03 (female) (39) – S30 (female) (2) and grounding		Resistance value	Min. 1 MΩ
	4	Short-circuiting of wiring harness (Contact with 24 V circuit)	★ Turn the engine starting switch OFF for the preparations, and hold it in the ON position during the troubleshooting.			
			Wiring harness from C03 (female) (39) – S30 (female) (2) and grounding		Voltage	Max. 1 V
	5	Governor and pump controller defective	★ Turn the engine starting switch OFF for the preparations, and keep the engine running during the troubleshooting.			
			C03	Travel control lever	Voltage	
			Between (39) and grounding	NEUTRAL	20 – 30 V	
				Forward or backward	Max. 1 V	

Electrical circuit diagram for travel PPC hydraulic switch



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ELECTRICAL CIRCUIT DIAGRAM (1/4)



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