SEN05632-08

Shop Manual

ARTICULATED
DUMP TRUCK

HM400-3

SERIAL NUMBERS 3001 and up

KOMATSU®

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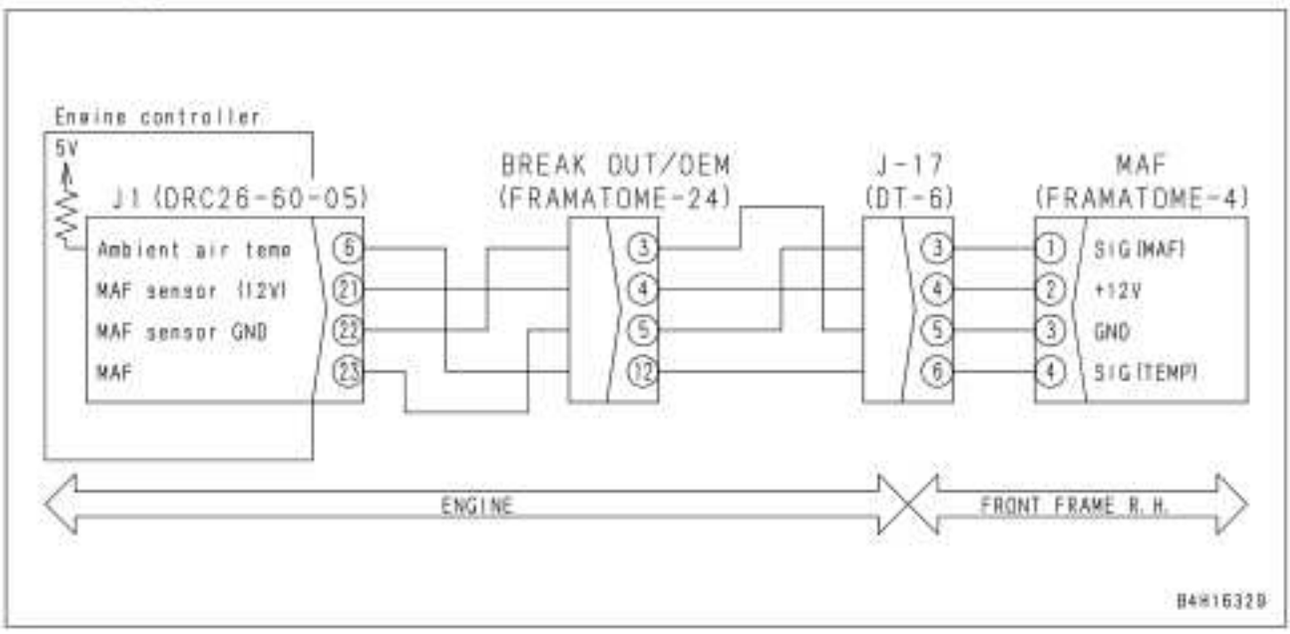
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No.	Cause	Procedure, measuring location, criteria and remarks		
7	Short circuit in wiring harness	1. Turn starting switch to OFF position. 2. Disconnect connectors J1 and MAF, and connect T-adapters to female side of connector J1. ★ Check by using multimeter in continuity mode.		
		Resis-tance	Between J1 (female) (23) and each of other pin	Min. 1 MΩ
8	Hot short circuit in wiring harness (contact with 24 V circuit)	1. Be ready with starting switch at OFF position. 2. Disconnect connector MAF and connect T-adapter to female side of connector. 3. Turn starting switch to ON position. ★ Ignore displayed failure codes.		
		Voltage	Between MAF (female) (1) and (3)	Max. 1 V
9	Defective engine controller	If no failure is found by above checks, engine controller is defective. (Since this is an internal defect, troubleshooting cannot be performed.)		

Circuit diagram related to mass air flow sensor



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Failure code [CA2878] Dosing Fuel Valve 2 Servo Error (HM400-CA2878-400-A-Z0-A)

Action level	Failure code	Failure	Dosing Fuel Valve 2 Servo Error (Engine controller system)
L03	CA2878		
Detail of failure	• When fuel pressure is checked immediately after engine startup, the ON/OFF command of dosing fuel solenoid valve 2 (SOV2 drain valve) does not match with the expected value of fuel pressure detected by dosing fuel pressure sensor. 1. When Open SOV1 Valve and Close SOV2 Valve commands are given, the dosing fuel pressure detected by dosing fuel pressure sensor does not increase sufficiently. 2. When Close SOV1 Valve and Open SOV2 Valve commands are given, the dosing fuel pressure detected by dosing fuel pressure sensor does not decrease sufficiently.		
Action of controller	• Stops KDPF regeneration control.		
Problem on machine	• Automatic regeneration is disabled. • Manual stationary regeneration is disabled.		
Related information	⚠ **Since exhaust connector and KDPF are heated to 500°C or above, take care not to get burn injury.** • Signal voltage from dosing fuel pressure sensor can be checked with monitoring function. (Code: 47601 (V)) • Pressure detected by dosing fuel pressure sensor can be checked with monitoring function. (Code: 47600 (kPa)) • Ambient pressure sensed by ambient pressure sensor can be checked with monitoring function. (Code: 37400 (kPa)) • Method of reproducing failure code: Start the engine (observe for 3 minutes). <How to clear failure code> Turn starting switch ON from OFF position to start engine. If failure code is disappeared after running engine at low idol for approximately 3 minutes, repair is completed.		

No.	Cause	Procedure, measuring location, criteria and remarks		
1	Defective harness connector	1. See descriptions of wiring harness and connectors in "c: Electrical equipment" in "Checks before troubleshooting" of "General information on troubleshooting", and check it. 2. Turn starting switch to ON position.		
		If this failure code disappears, harness connector is defective. ★ If this failure code appears, perform following checks.		
2	Defective fuel system	For above check, see Testing and adjusting, "Measuring fuel pressure".		
3	Defective dosing fuel solenoid valve 1 (shut-off valve)	If failure code [CA1923], [CA1924] or [CA1925] is also displayed, perform troubleshooting for [CA1923], [CA1924] or [CA1925] first.		
4	Defective dosing fuel solenoid valve 2 (drain valve)	If failure code [CA2732] or [CA2733] is also displayed, perform troubleshooting for [CA2732] or [CA2733] first.		
5	Defective dosing fuel pressure sensor	If failure code [CA1927] or [CA1928] is also displayed, perform troubleshooting for [CA1927] or [CA1928] first.		
6	Hot short circuit in wiring harness	1. Turn starting switch to OFF position. 2. Disconnect connector SOV2, and connect T-adapter to female side of connector. 3. Turn starting switch to ON position.		
		Voltage	Between SOV2 (female) (1) and (2)	Max. 4.7 V

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H-18 Dump body does not move (HM400_3-D41-400-A-Z0-A)

Failure	Dump body does not move.
Related information	• Check that oil level in hydraulic tank is normal. • If any failure code is displayed, perform troubleshooting for that failure code first. • Flow amplifier valve relief pressure (steering pressure) can be checked with monitoring function. (Monitoring code: 95302) • Check that hoist lever moves smoothly.

No.	Cause	Procedure, measuring location, criteria and remarks			
1	Defective PTO	If dump body does not move either, PTO may be defective.			
2	Air sucked in on suction side of work equipment and steering pump	Check suction piping for cracks, looseness, etc.			
3	Defective strainer of work equipment and steering pump	Check strainer for clogging.			
4	Defective relief valve of flow amplifier valve	★ Be ready with engine stopped, then perform troubleshooting with engine running at full speed.			
		Steering relief pressure	Steering cylinder: At stroke end	Set pump swash plate angle to maximum using monitor panel.	20.59 ± 0.98 MPa {210 ± 10 kg/cm²}
5	Defective self-pressure reducing valve	★ Be ready with engine stopped, then perform troubleshooting with engine at 2,000 rpm.			
		Control pressure of self-pressure reducing valve (Hoist pilot pressure)	Hoist lever: Neutral	Engine at 2,000 rpm	3.4 ± 0.49 MPa {35 ± 5 kg/cm²}
				Engine at low idle (Reference)	2.6 ± 0.49 MPa {27 ± 5 kg/cm²}
6	Malfunction of hoist EPC valve	If measured pressure is normal in check on cause 5, flow amplifier EPC valve may malfunction.			
7	Defective pilot pump for hoist EPC valve	If measured pressure is normal in check on cause 5, pilot pump in hoist EPC valve circuit may be defective. Check strainer on inlet side of self-pressure reducing valve for metal particles.			
8	Defective relief valve of hoist valve	★ Be ready with engine stopped, then perform troubleshooting with engine running at full speed (1,800 rpm).			
		Hoist Relief Pressure	Hoist cylinder: At stroke end	Set pump swash plate angle to maximum using monitor panel.	28.4 ± 0.98 MPa {290 ± 10 kg/cm²}
9	Malfunction of hoist valve main spool	If measured pressure is abnormally low in check on cause 8, main spool of hoist valve malfunctions.			
10	Defective hoist cylinder	★ Be ready with engine stopped, then perform troubleshooting with engine running at full speed (1,800 rpm).			
		Hoist relief pressure	Hoist cylinder: At stroke end	Set pump swash plate angle to maximum using monitor panel.	28.4 ± 0.98 MPa {290 ± 10 kg/cm²}
		If measured relief pressure is low, disconnect hydraulic hose at hoist cylinder head end. If oil flows out from cylinder when cylinder is stalled at its stroke end, cylinder piston ring is defective.			

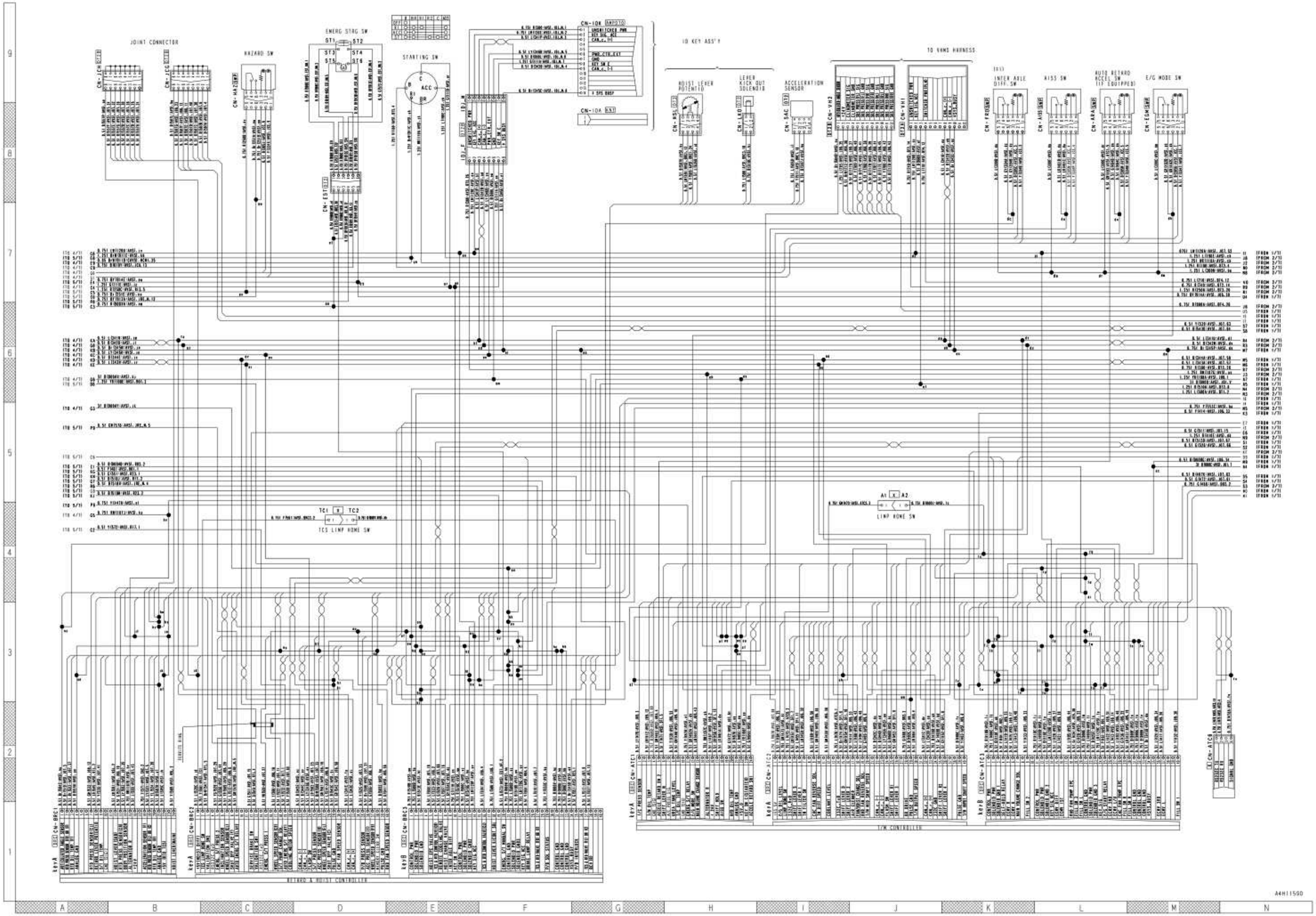
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Inside cab electric circuit diagram (3/7)

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★ This diagram covers optional components that are unavailable in some areas.

*1: Serial number 3375 and up



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