SEN00238-15

Shop Manual

KOMATSU®

HM350-2

ARTICULATED DUMP TRUCK

SERIAL NUMBERS **HM350-2 2001 and up**

ENGINE **6D140E-5**

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ARTICULATED DUMP TRUCK

HM350-2

Machine model	Serial number
HM350-2	2001 and up

01 Specification

Specification and technical data

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Failure code [CA1117] Loss of partial data in engine controller

Action code	Failure code	Trouble	Loss of partial data in engine controller (Engine controller system)
E03	**CA1117**		
Contents of trouble	• Data in engine controller are lost partially.		
Action of controller	• None in particular.		
Problem that appears on machine			
Related information			

Possible causes and standard value in normal state	Cause	Standard value in normal state/Remarks on troubleshooting
	Carry out troubleshooting for failure code [**CA111**].	

Failure code [CA1228] Trouble in EGR valve servo 1

Action code	Failure code	Trouble	Trouble in EGR valve servo 1 (Engine controller system)
E03	**CA1228**		
Contents of trouble	• EGR valve servo has trouble (level 1) in it.		
Action of controller	• Performs open control.		
Problem that appears on machine			
Related information	• Operating condition of EGR valve can be checked with monitoring function. (Monitoring code: ENGINE - EGR VALVE POS - 18100)		

Possible causes and standard value in normal state		Cause	Standard value in normal state/Remarks on troubleshooting
	1	Defective related system	If another failure code is indicated, carry out troubleshooting for it first.
	2	Defective engine oil pressure system (main circuit)	★ For check of engine oil pressure, see TESTING AND ADJUSTING, Measuring engine oil pressure.
			Engine: Low idle — Engine oil pressure: 0.08 MPa {0.8 kg/cm²}
			Engine: High idle — Engine oil pressure: 0.21 MPa {2.1 kg/cm²}
			If engine oil pressure is abnormal, carry out troubleshooting for "S-12 Oil pressure lowers" in S mode.
	3	Defective oil pump for EGR valve	Pump and relief valve for EGR valve circuit may be defective. Check it directly.
	4	Defective oil feed piping for EGR valve	Oil feed piping for EGR valve circuit may be defective. Check it directly.
	5	Defective oil return piping for EGR valve	Oil return piping for EGR valve circuit may be defective. Check it directly.
	6	Defective EGR valve	Mechanical section of EGR valve may be defective. Check it directly.
	7	Defective engine controller	If causes 1 – 6 are not detected, engine controller may be defective. (Since trouble is in system, troubleshooting cannot be carried out.)

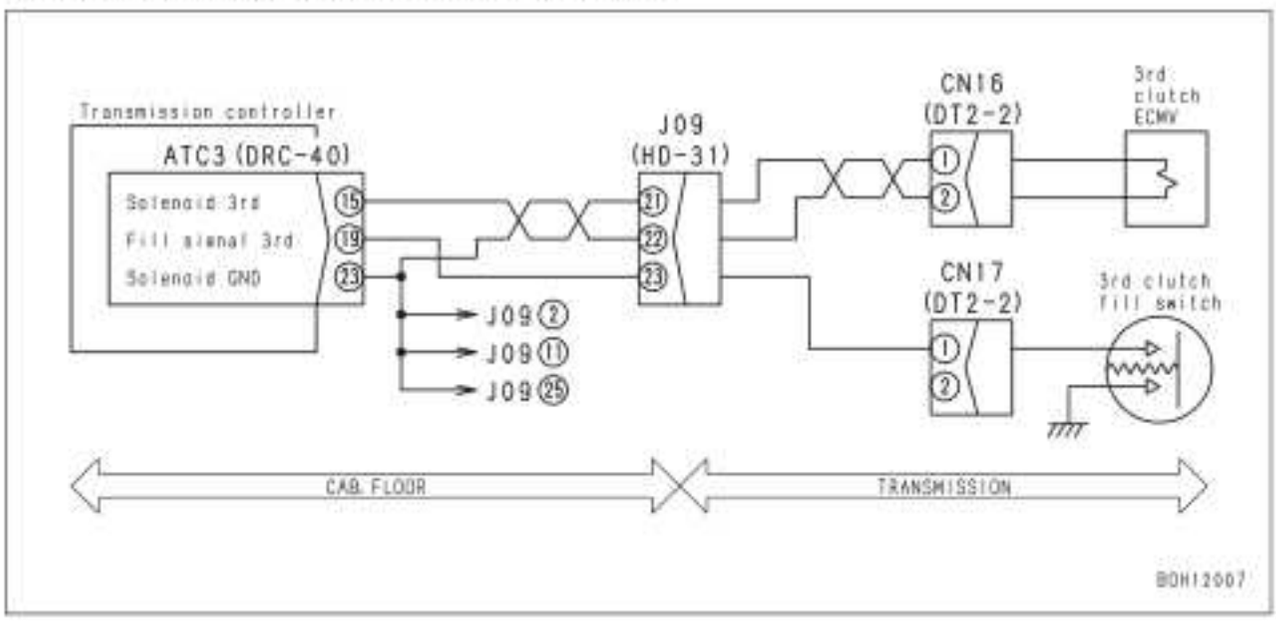
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Failure code [DDTMKA] Trouble in 3rd clutch flow sensor valve

Action code	Failure code	Trouble	Trouble in 3rd clutch flow sensor valve (Transmission controller system)
E03	DDTMKA		
Contents of trouble	• When output to 3rd clutch ECMV solenoid valve is turned ON, clutch is engaged but signal from fill switch is not turned ON.		
Action of controller	• Keeps current gear speed. • If gearshift lever is set in "N", gear speed is kept in neutral.		
Problem that appears on machine	• Gear cannot be shifted. • If gearshift lever is set in "N", machine cannot restart until it stops. • Machine can travel in gear speeds which use 3rd clutch.		
Related information	• Input of 3rd clutch ECMV fill signal can be checked with monitoring function. (Monitoring code: TRANSMISSION - D-IN--8——15 - 40906) • When machine is checked for cause 1, its travel speed at F5 gear speed reaches about 38 km/h. Take care of safety around machine extremely. • Method of reproducing failure code: Start engine + travel at F5.		

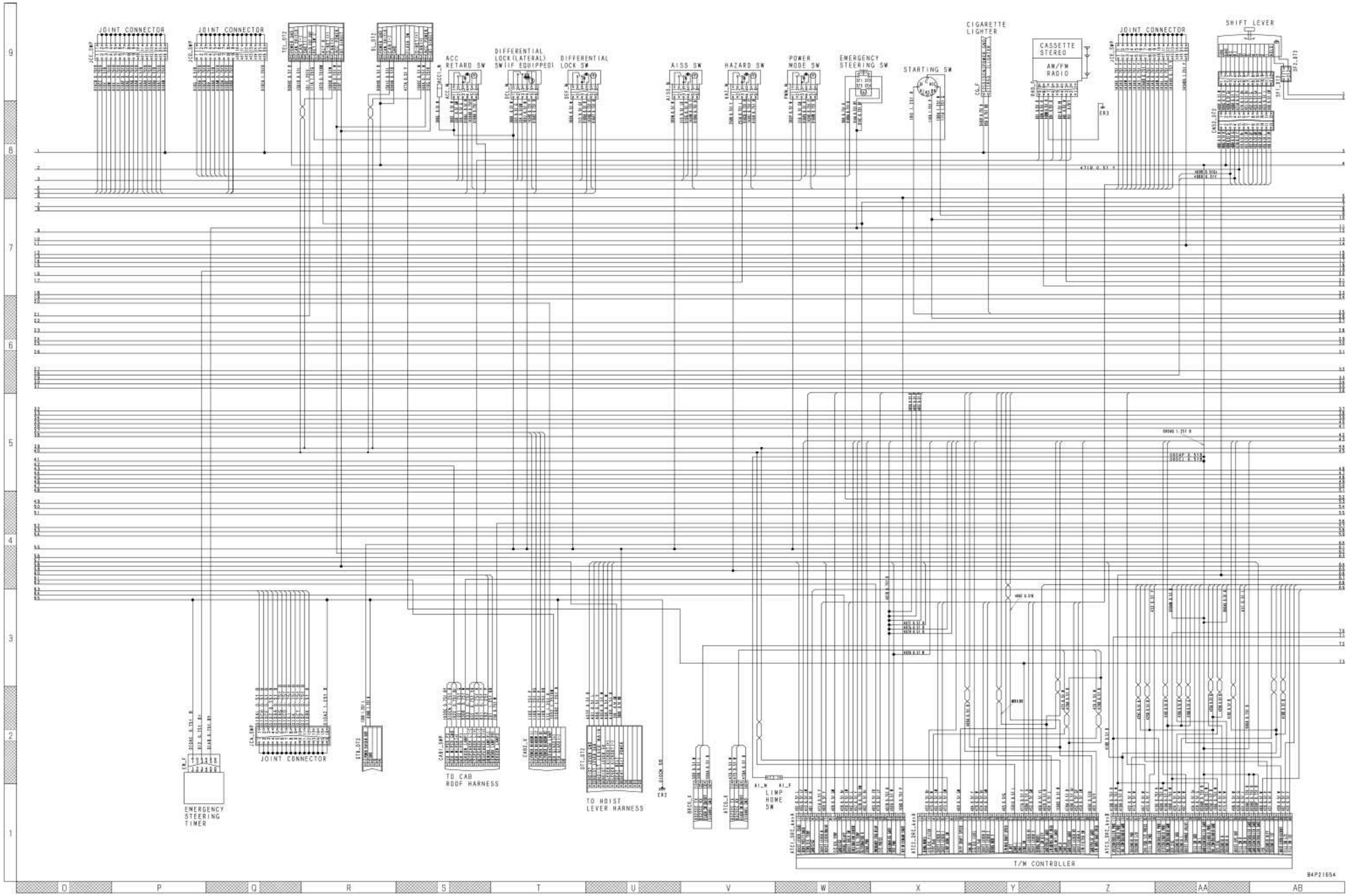
	Cause		Standard value in normal state/Remarks on troubleshooting			
Possible causes and standard value in normal state	1	Defective 3rd clutch ECMV fill switch (Internal defect)	★ Prepare with starting switch OFF, then start engine and carry out troubleshooting.			
			CN17 (male)	Gear speed	Resistance	
			Between (1) – chassis ground	N	Min. 1 MΩ	
				F5	Max. 1 Ω	
	2	Disconnection in wiring harness (Disconnection in wiring or defective contact in connector)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.			
			Wiring harness between ATC3 (female) (19) – CN15 (female) (1)		Resistance	Max. 1 Ω
	3	Defective transmission controller	★ Prepare with starting switch OFF, then start engine and carry out troubleshooting.			
			ATC3 (female)	Gear speed	Voltage	
			Between (19) – chassis ground	N	20 – 30 V	
				F5	Max. 1 V	

Circuit diagram related to 3rd clutch ECMV fill switch



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Electrical circuit diagram for inside cab (2/4) Serial No.: 2093 and up
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