SEN00769-03

Shop Manual

KOMATSU®

WA380-6

WHEEL LOADER

SERIAL NUMBERS WA380-6 65001 and up

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Testing and adjusting, Part 1

Tools for testing, adjusting, and troubleshooting

Testing and adjusting item	Symbol		Part No.	Part Name	Q'ty	Remarks
Measuring exhaust gas color	A	1	799-201-9001	Handy smoke checker	1	Bosch index: Level 0 – 9
		2	Commercially available	Smoke meter	1	
Adjusting valve clearance	B	1	795-799-1131	Gear	1	
		2	Commercially available	Clearance gauge	1	
Measuring compression pressure	C	1	795-799-6700	Puller	1	For 107E-1 engine
		2	795-502-1590	Gauge assembly	1	0 – 6.9 MPa {0 – 70 kg/cm^2}
		3	795-790-4410	Adapter	1	For 107E-1 engine
		4	6754-11-3130	Gasket	1	For 107E-1 engine
Measuring blow-by pressure	D		799-201-1504	Blow-by checker	1	0 – 5 kPa {0 – 500 mmH$_2$O}
Measuring engine oil pressure	E	1	799-101-5002	Hydraulic tester	1	Pressure gauge: 2.5, 5.9, 39.2, 58.8 MPa {25, 60, 400, 600 kg/cm^2}
			790-261-1204	Digital hydraulic tester	1	Pressure gauge: 58.8 MPa {600 kg/cm^2}
		2	799-401-2320	Hydraulic tester	1	Pressure gauge: 0.98 MPa {10 kg/cm^2}
		3	799-101-5230	Nipple	1	14 × 1.5 mm
			6215-81-9720	O-ring	1	
Measuring intake air (boost) pressure	F		799-201-2202	Boost gauge kit	1	–101 – 200 kPa {–760 – 1,500 mmHg}
Measuring fuel compression	G	1	799-101-5002	Hydraulic tester	1	Pressure gauge: 2.5, 5.9, 39.2, 58.8 MPa {25, 60, 400, 600 kg/cm^2}
			790-261-1204	Digital hydraulic tester	1	Pressure gauge: 58.8 MPa {600 kg/cm^2}
		2	6732-81-3170	Adapter	1	10 × 1.0 mm → R1/8
			6215-81-9710	O-ring	1	
		3	799-401-2320	Hydraulic tester	1	Pressure gauge: 0.98 MPa {10 kg/cm^2}
Measuring fuel return rate and leakage	H	1	795-790-4700	Tester kit	1	
		2	795-790-6700	Adapter	1	
		3	6754-71-5340	Connector	1	
		4	6754-71-5350	Washer	1	
		5	Commercially available	Measuring cylinder	1	
		6	Commercially available	Stopwatch	1	
Measuring directional lever	J		79A-264-0021	Push-pull scale	1	0 – 294 N {0 – 30 kg}
Testing power train oil pressure	K	1	799-101-5002	Hydraulic tester	1	Pressure gauge: 2.5, 5.9, 39.2, 58.8 MPa {25, 60, 400, 600 kg/cm^2}
			790-261-1204	Digital hydraulic tester	1	Pressure gauge: 58.8 MPa {600 kg/cm^2}
		2	799-101-5220	Nipple	1	10 × 1.25 mm
			07002-11023	O-ring	1	Pressure gauge: 0.98 MPa {10 kg/cm^2}
Method of moving machine when transmission valve is broken	L		794-423-1190	Plug	1	20 × 1.5 mm

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Failure code [CA1633] (KOMNET datalink timeout error)

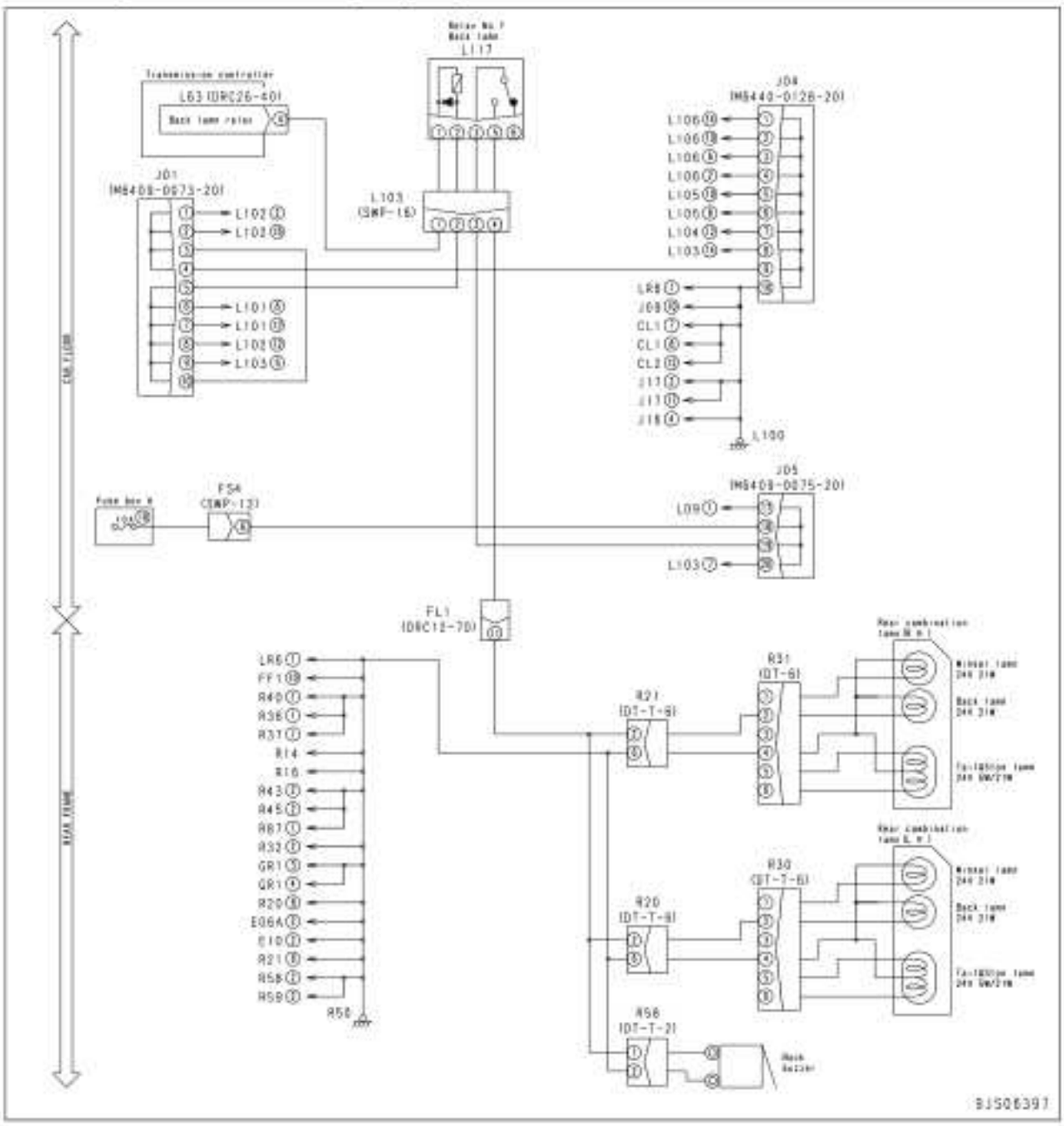
Action code	Failure code	Trouble	KOMNET datalink timeout error (Engine controller system)
E03	**CA1633**		
Contents of trouble	• Engine controller detected a communication error in the KOMNET communication circuit used for the communication between the pump controllers and machine monitor.		
Action of controller	• Continues the operation from the default mode. • Turns the centralized warning lamp and alarm buzzer ON. • If problem is removed, system is returned to normal operating state.		
Problem that appears on machine	• KOMNET communication information may not be transmitted correctly to cause incorrect operation of machine. (Problem depends on failure occurrence location.)		
Related information	• Method of reproducing failure code: Turn the starting switch ON.		

	Causes		Standard value in normal state/Remarks on troubleshooting		
Possible causes and standard value in normal state	1	Defective CAN end point resistance	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			CAN1 (male)	Resistance	
			Between (A) and (B)	110 – 140 Ω	
			★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			CAN2 (male)	Resistance	
			Between (A) and (B)	110 – 140 Ω	
	2	Disconnection in wiring harness (Disconnection or defective contact in connector)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			Wiring harness between EC2 (female) (46), (47) – L62 (female) (22), (32)	Resistance	Max. 1 Ω
			Wiring harness between EC2 (female) (46), (47) – L56 (female) (3), (8)	Resistance	Max. 1 Ω
			Wiring harness between EC2 (female) (46), (47) – L72 (female) (22), (32)	Resistance	Max. 1 Ω
			Wiring harness between EC2 (female) (46), (47) – L80 (female) (7), (8)	Resistance	Max. 1 Ω
			Wiring harness between EC2 (female) (46), (47) – CAN1 (female) (A), (B)	Resistance	Max. 1 Ω
			Wiring harness between EC2 (female) (46), (47) – CAN2 (female) (A), (B)	Resistance	Max. 1 Ω

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Possible causes and standard value in normal state	Causes		Standard value in normal state/Remarks on troubleshooting		
	6	Hot short in wiring harness (Contact with 24V circuit)	★ Prepare with starting switch OFF, then turn starting switch ON and carry out troubleshooting.		
			Wiring harness between L117 (female) (5) – R30 (female) (2), – R31 (female) (2), – circuit branch end and chassis ground	Voltage	Max. 1 V

Circuit diagram related to backup lamp relay

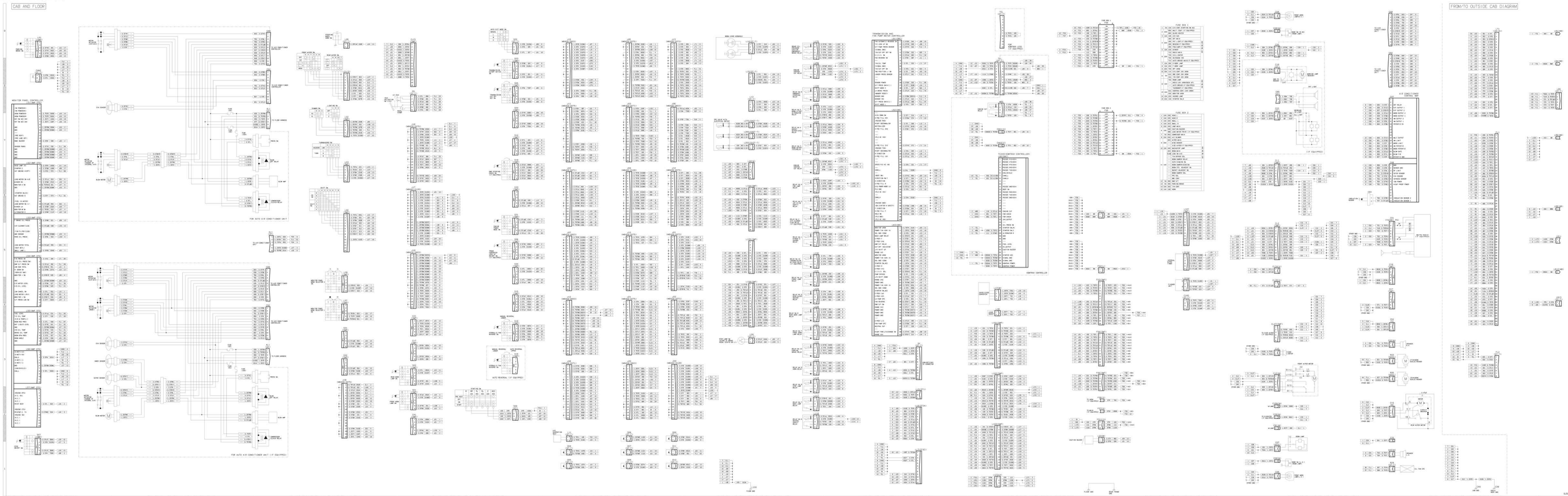


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Electrical diagrams and drawings
Electrical circuit diagram (1/2)

CAB AND FLOOR

FROM/TO OUTSIDE CAB DIAGRAM



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