CEBM017403

Shop Manual

KOMATSU®

WA380-6

WHEEL LOADER

SERIAL NUMBERS WA380-6 A53001 and up

ENGINE 6D107E-1

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Testing and Adjusting Item	Symbol		Part No.	Part Name	Qty	Remarks
Bleeding air from hydraulic drive fan circuit	Q	1	799-101-5002	Hydraulic tester	1	Pressure gauge: 2.5, 6.0, 40, 60 MPa {25, 60, 400, 600 kg/cm^2} (362.6, 870.2, 5801.5, 8702.3 psi)
			790-261-1204	Digital hydraulic tester	1	Pressure gauge: 60 MPa {600 kg/cm^2} (8702.3 psi)
		2	790-261-1130	Coupling	1	
Testing and adjusting accumulator charge pressure	R		799-101-5002	Hydraulic tester	1	Pressure gauge: 2.5, 6.0, 40, 60 MPa {25, 60, 400, 600 kg/cm^2} (362.6, 870.2, 5801.5, 8702.3 psi)
			790-261-1204	Digital hydraulic tester	1	Pressure gauge: 60 MPa {600 kg/cm^2} (8702.3 psi)
Testing wheel brake oil pressure	S	1	793-605-1001	Brake test kit	1	
		2	790-101-1430	Coupler	1	
		3	790-101-1102	Pump	1	
		4	790-301-1720	Adapter	1	20 × 1.5 mm → R1/8
		5	799-101-5160	Nipple	1	
		6	799-401-2220	Hose	1	Length: 5 m (16 ft)
		7	790-261-1130	Coupling	1	
Testing wear of wheel brake disc	T		Commercially available	Vernier calipers	1	
Testing parking brake oil pressure	U	1	799-101-5002	Hydraulic tester	1	Pressure gauge: 2.5, 6.0, 40, 60 MPa {25, 60, 400, 600 kg/cm^2} (362.6, 870.2, 5801.5, 8702.3 psi)
			790-261-1204	Digital hydraulic tester	1	Pressure gauge: 60 MPa {600 kg/cm^2} (8702.3 psi)
		2	799-101-5220	Nipple	1	10 × 1.25 mm (0.39 x 0.05 in)
			07002-11023	O-ring	1	
Testing wear of parking brake disc	V		Commercially available	Vernier calipers	1	
Testing and adjusting work equipment control lever	W	1	79A-264-0021	Push-pull scale	1	
		2	Commercially available	Scale	1	
Testing and adjusting work equipment PPC oil pressure	X	1	799-101-5002	Analog hydraulic tester	1	Pressure gauge: 2.5, 6.0, 40, 60 MPa {25, 60, 400, 600 kg/cm^2} (362.6, 870.2, 5801.5, 8702.3 psi)
			790-261-1204	Digital hydraulic tester	1	Pressure gauge: 60 MPa {600 kg/cm^2} (8702.3 psi)
		2	799-101-5220	Nipple	1	10 × 1.25 mm (0.39 x 0.05 in)
			07002-11023	O-ring	1	

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POINTS TO REMEMBER WHEN TROUBLESHOOTING

WARNING! Stop the machine in a level place, and check that the safety pin, blocks, and parking brake are securely fitted.

WARNING! When carrying out the operation with two or more workers, keep strictly to the agreed signals. Do not allow any unauthorized person to come near the machine.

WARNING! If the radiator cap is removed when the engine is hot, hot coolant may spurt out and cause burns. Wait for the engine to cool down before starting to troubleshoot.

WARNING! Be extremely careful not to touch any hot parts or to get caught in any rotating parts

WARNING! When disconnecting wiring, always disconnect the negative (-) terminal of the battery first.

WARNING! When removing the plug or cap from a location which is under pressure from oil, coolant, or air, always release the internal pressure first. When installing measuring equipment, be sure to connect it properly.

The purpose of troubleshooting is to pinpoint the basic cause of the failure, to carry out repairs swiftly, and to prevent reoccurrence of the failure.
When carrying out troubleshooting, an important point is to understand the structure and function of the machine. However, a short cut to effective troubleshooting is to ask the operator various questions to form some idea of possible causes of the failure that would produce the reported symptoms.

1. When carrying out troubleshooting, do not hurry to disassemble the components. If components are disassembled immediately after a failure occurs:
   - Parts that have no connection with the failure or other unnecessary parts will be disassembled.
   - It will become impossible to find the cause of the failure.
   - It will waste man hours, parts, or oil and grease.
   - It can also result in a loss of confidence by the user or operator.

   For this reason, when carrying out troubleshooting, it is necessary to do a thorough investigation first and to carry out troubleshooting in accordance with the fixed procedure.

2. Points to ask the user or operator.

   A. Have any other problems occurred other than the problem that has been reported?

   B. Was there anything strange about the machine before the failure occurred?

   C. Did the failure occur suddenly, or were there problems with the machine before this?

   D. Under what conditions did the failure occur?

   E. Had any repairs been carried out before the failure? When were these repairs carried out?

   F. Has the same kind of failure occurred before?

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CA187

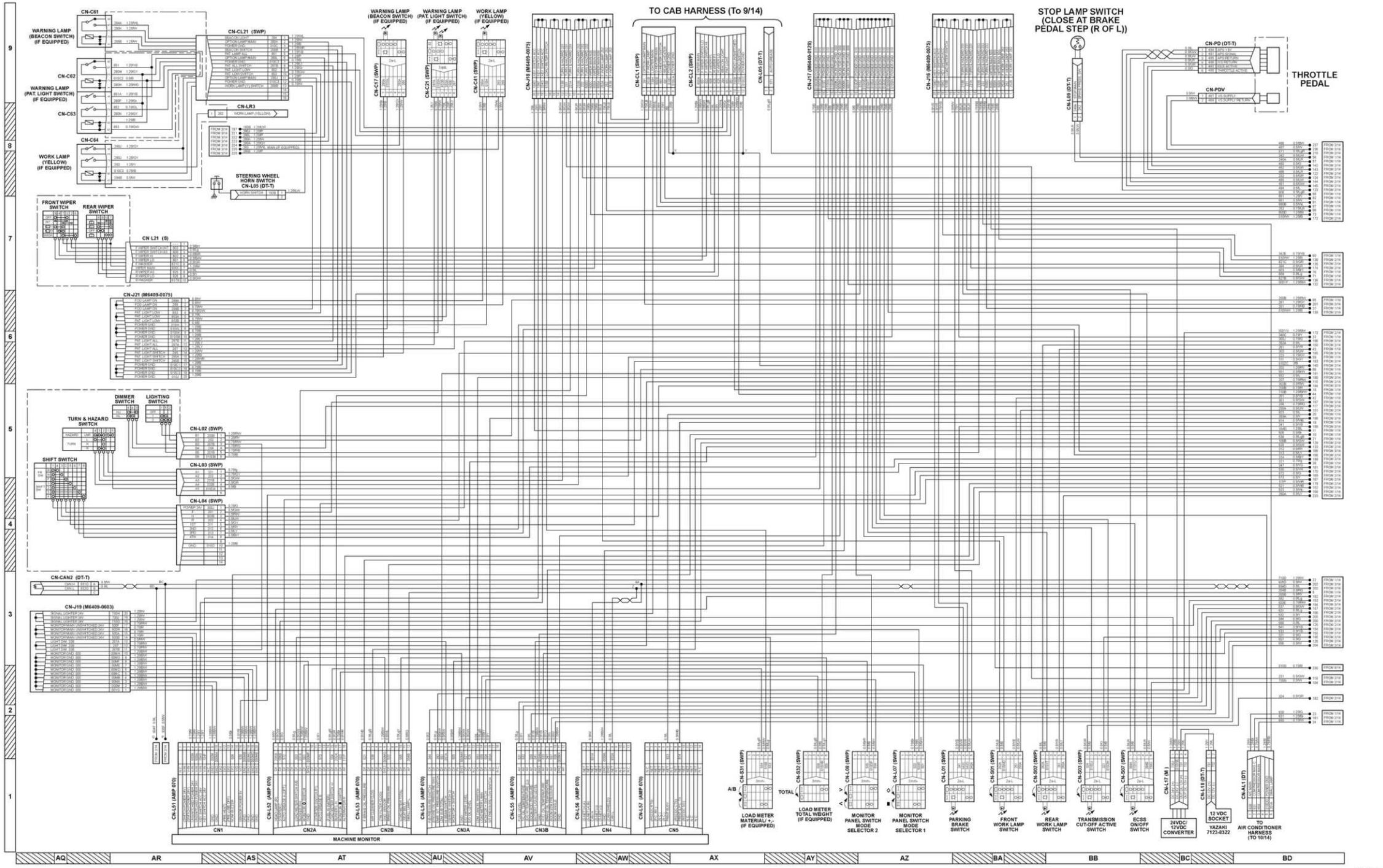
Sensor Power Supply 2 Low Error

Action code	Failure code	Trouble	Sensor power supply 2 low error (Engine controller system)
E03	CA187		
Contents of trouble	• Low voltage is detected in sensor power supply 2 circuit.		
Action of controller	• Fixes boost pressure and continues operation. • Fixes charge temperature and continues operation. • Limits output and continues operation. • Turns the centralized warning lamp and alarm buzzer ON.		
Problem that appears on machine	• Engine output drops.		
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			★ Disconnect connector with starting switch OFF, then turn starting switch ON and carry out troubleshooting.		
	1	Defective sensor or wiring harness	Disconnect devices at right in order. If mark E of failure code disappears after reproduction operation is conducted, that device or wiring harness has a defect in it.	Boost pressure, temperature sensor	BOOST PRESS & IMT
				Common rail pressure sensor	FUEL RAIL PRESS
				Bkup sensor	CAM SENSOR
				Engine wiring harness	ENGINE MODULE
	2	Defective wiring harness connector	Connecting parts among each sensor, engine wiring harness, and engine controller are suspected. Inspect them directly. • Loose connector, broken lock, broken seal • Corroded, bent, broken, forced-in, or extended pin • Humidity in connector, entry of dirt or dust, poor insulation		
	3	Defective engine controller	If causes 1 – 2 are not detected, engine controller may be defective. (Since problem is in system, troubleshooting cannot be carried out.)		

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Electrical Circuit Diagram (4/14)



CVSM0415

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