CEBM018601

Shop Manual

KOMATSU®

WA450-6
WA480-6

WHEEL LOADER

SERIAL NUMBERS **WA450-6 A44001 and up**
WA480-6 A38001 and up

ENGINE **6D125E-5**

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b@CENS Torque Converter Oil Overheating

Tools and Procedures	
	• Digital Volt Ohm Meter. T-adapter kit. • Do not mark on original page of service manual. Remove this page from the service manual and make a copy for recording information while performing these tests. • If you are unable to copy this page, record readings on a separate paper referring to the (**No.**) numbers listed on the right of the procedure. • Follow each step throughout this procedure, do not skip steps, jump ahead or stop when a fault is found. It is important to complete all steps and record information for final analyzing.

Contents Of Trouble	• The torque converter oil temperature is above 120°C (248°F).
Action Of Controller	• If cause of failure disappears, system resets itself (120°C (248°F) and below was detected continuously for one second).
Problem That Appears On Machine	• The torque converter oil temperature caution lamp is turned ON. (If the machine is used as it is, the torque converter may be broken.)
Pre-troubleshooting Procedures	• The input state (oil temperature) from the torque converter oil temperature sensor can be checked with the monitoring function (Code: 40100, TC OIL TEMP). (See section 20 REAL-TIME MONITORING CODE TABLES.) • The input state (voltage) from the torque converter oil temperature sensor can be checked with the monitoring function (Code: 40101, TC OIL TEMP). (See section 20 REAL-TIME MONITORING CODE TABLES.) • Method of reproducing failure code: Turn the starting switch ON. • Torque converter overheating may be due to torque converter stall etc. (See Troubleshooting of hydraulic and mechanical system H-mode.)

Circuit Troubleshooting Procedures			Specifications	No.	Readings
1. Temperature Sensor Unit • With starting switch in the "OFF" position. • Disconnect (TC.T) connector from sensor and isolate the sensor. • Zero meter leads for proper Ω readings.					
A. Sensor test	Resistance Ω	At sensor TC.T, between (1) and (2) converter oil temperature at (Normal) 25°C (77°F)	35 - 50 kΩ	1	
		At sensor TC.T, between (1) and (2) converter oil temperature at (High) 100°C (212°F)	3.1 - 4.5 kΩ	2	
2. Wiring Harness Assembly Test • With starting switch in the "OFF" position. • Disconnect (TC.T) connector from sensor. • Disconnect (L55) connector from machine monitor and install T-adapter on (L55) wiring harness connector only. • Zero meter leads for proper Ω readings.					
A. Open or high resistance	Resistance Ω	Between connectors TC.T, (1) and L55, (2)	Max. 1 Ω	3	
		Between connectors TC.T, (2) and chassis ground	Max. 1 Ω	4	
B. Short to chassis ground or within harness	Resistance Ω	At connector TC.T, between (1) and chassis ground	Min. 1 MΩ	5	
		At connector TC.T, between (1) and (2)	Min. 1 MΩ	6	

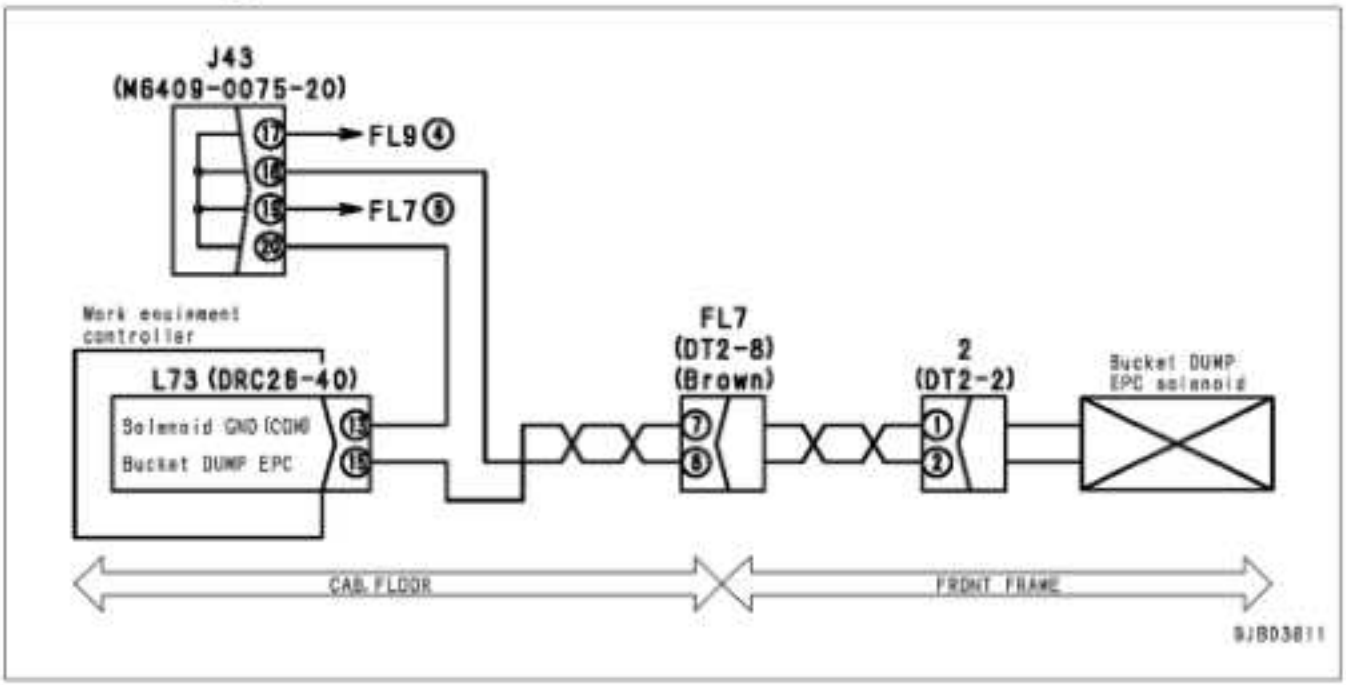
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B. Short to chassis ground or within harness	Voltage	✱ At connector L73, between (15) and chassis ground	Max. 1 V	5	
	Resistance Ω	At connector 2, between (1) and chassis ground	Min. 1 MΩ	6	
		At connector 2, between (2) and chassis ground (all connectors in circuit disconnected)	Min. 1 MΩ	7	
		At connector 2, between (1) and (2)	Min. 1 MΩ	8	
3. Work Equipment Controller • With starting switch in the "OFF" position. • Disconnect (L73) connector from work equipment controller and install T-adapter between (L73) connector and work equipment controller.					
A. Work equipment controller	Resistance Ω	At L73, between (15) and (13)	5 - 15 Ω	9	
4. Work Equipment Controller • No testing procedure for the work equipment controller					

Remark

If all test results fall within the specifications listed above in the testing procedures, the error may be in your Work Equipment Controller Unit. Be sure all steps are completed correctly before faulting the controller unit.

Related circuit diagram



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H-27 The Bucket Operates Slowly in The Midst of Tilting Back

Checks before troubleshooting

- Deformation of bucket cylinder appearance

Cause

- Expansion of bucket cylinder tube or damage inside

  For other abnormal phenomena during bucket operation, see "H-26 Bucket Speed is Low or Tilting Back Force is Insufficient."

H-28 The Bucket Cylinder Cannot Hold Down the Bucket

See "H-26 The bucket moves slowly or the tilting back force is insufficient."

Checks before troubleshooting

- Is the stroke of the bucket control lever appropriate?

Cause

- Defective seat of suction safety valve on the bucket cylinder head side of work equipment valve
- Oil leak from bucket cylinder piston seal
- Defective stroke of bucket EPC lever (if equipped)

H-29 Hydraulic Drift of The Bucket is Large

Ask the operator about the following:

- Have hydraulic drifts become large suddenly? → **Wastes pinched in valve or damage of parts**
- Have hydraulic drifts become large gradually? → **Wear of parts**

Checks before troubleshooting

- Is the bucket spool at the neutral position? → **The spool detent is defective**

Check of abnormality

- Refer to the standard value table and check if the hydraulic drift of the bucket occurs often practically

Cause

- Oil leak in bucket cylinder
- Improper adhesion of suction safety valve on the bottom side
- Improper oil tight of bucket spool

H-30 Bucket Wobbles During Travel Loaded (Work Equipment Valve is Set at "Hold")

Checks before troubleshooting

- Pin of work equipment linkage and "play of bushing." (Is any abnormal noise heard?)

Cause

- Defective seal of bucket cylinder piston
- Defective operation of suction safety valve on bucket cylinder head side. For other abnormal phenomena, refer to diagnosis for relevant abnormal phenomena.

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SWITCH AND CONTROLER HARNESS (VIEW 9 OF 47)



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