SEN04884-01

Shop Manual

WHEEL LOADER

WA150-6

SERIAL NUMBERS 80001 and up

ecot3

KOMATSU®

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Composition of shop manual

The contents of this shop manual are shown together with Form No. in a list.

Note 1: Always keep the latest version of this manual in accordance with this list and utilize accordingly.
The marks shown to the right of Form No. denote the following:
○: New issue (to be filed additionally) ●: Revision (to be replaced for each Form No.)

Note 2: This shop manual can be supplied for each Form No.

Note 3: To file this shop manual in the special binder for management, handle it as follows:
- Place a divider on the top of each section in the file after matching the Tab No. with No. indicated next to each Section Name shown in the table below:
- File overview and other materials in sections in the order shown below and utilize them accordingly.

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100 Index	SEN04896-01	●
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100 Specification and technical data	SEN04898-00	
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300 Steering system	SEN04901-00	
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P: From brake and cooling fan pump
T: To hydraulic tank
A: To cooling fan motor
ACC1: To accumulator (rear side)
ACC2: To accumulator (front side)
S: Brake operation sensor port
G: Gauge port

1. Valve body
2. Inverse shuttle valve
3. Plunger
4. Unload relief valve
5. Unload valve
6. Relief valve

Unit: mm

No.	Check item	Criteria					Remedy
7	Clearance between inverse shuttle valve and body	Standard size	Tolerance		Standard clearance	Clearance limit	Replace
			Shaft	Hole			
		12	−0.006 −0.014	+0.011 0	0.006 – 0.025	0.029	
8	Clearance between plunger and body	8	−0.005 −0.012	+0.009 0	0.005 – 0.021	0.024	
9	Clearance between unload valve and body	18	−0.006 −0.017	+0.011 0	0.006 – 0.028	0.032	
10	Inverse shuttle valve return spring	Standard size			Repair limit		
		Free length	Installed length	Installed load	Free length	Installed load	
		21.6	18.3	9.8 N {1.0 kg}	—	8.3 N {0.85 kg}	
11	Unload relief valve return spring (inside)	35.9	30.0	188 N {19.2 kg}	—	160 N {16.3 kg}	
12	Unload relief valve return spring (outside)	39.8	27.5	137 N {14.0 kg}	—	116 N {11.8 kg}	
13	Unload valve return spring	51.6	45.0	49 N {5.0 kg}	—	42 N {4.3 kg}	
14	Check valve return spring	11.5	9.0	4.9 N {0.5 kg}	—	4.2 N {0.43 kg}	

Function

- The charge valve maintains the oil pressure from the pump to the set pressure and accumulates it in the accumulator.
- If the oil pressure from the pump goes beyond the relief valve set pressure, this valve releases the oil pressure to the drain circuit in order to reduce the load to the pump.

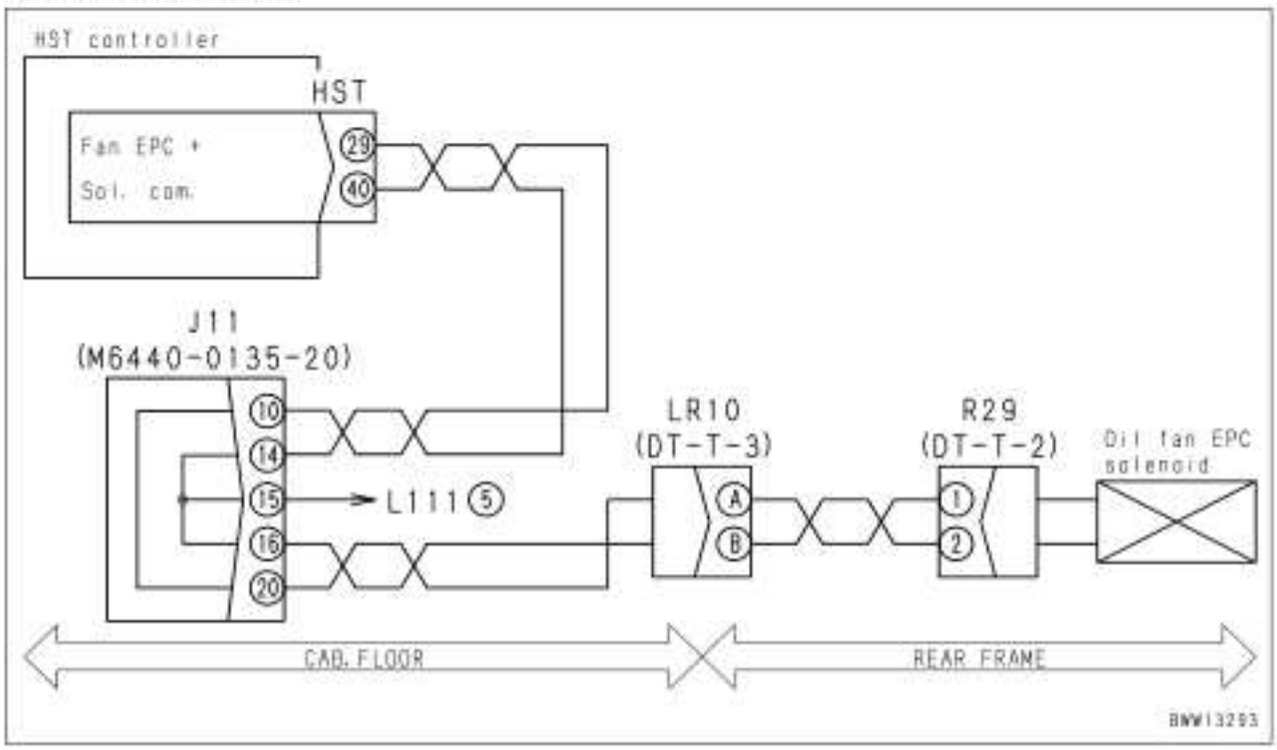
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Failure code [DX16KA] Fan EPC solenoid: Disconnection

Action code	Failure code	Trouble	Fan EPC solenoid: Disconnection (HST controller system)
E01	DX16KA		
Contents of trouble	• Since the fan EPC solenoid system is disconnected, no current flows when the fan EPC solenoid output is ON.		
Action of controller	• Even if cause of failure disappears, system does not reset itself until starting switch is turned OFF.		
Problem that appears on machine	• The fan speed is set to the maximum.		
Related information	• If [DX16KY] is displayed, carry out troubleshooting for it first. • The output state (current) to the fan EPC solenoid can be checked with the monitoring function (Code: HST – 41400 – FAN EPC DIR). • 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 fan EPC solenoid (Internal disconnection)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			R29 (male)	Resistance	
			Between (1) – (2)	5 – 10 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 HST (female) (40) – R29 (female) (2)	Resistance	Max. 1 Ω
			Wiring harness between HST (female) (29) – R29 (female) (1)	Resistance	Max. 1 Ω
	3	Defective HST controller	• If causes 1 – 2 are not detected, HST controller may be defective. (Since trouble is in system, troubleshooting cannot be carried out.)		

Related circuit diagram



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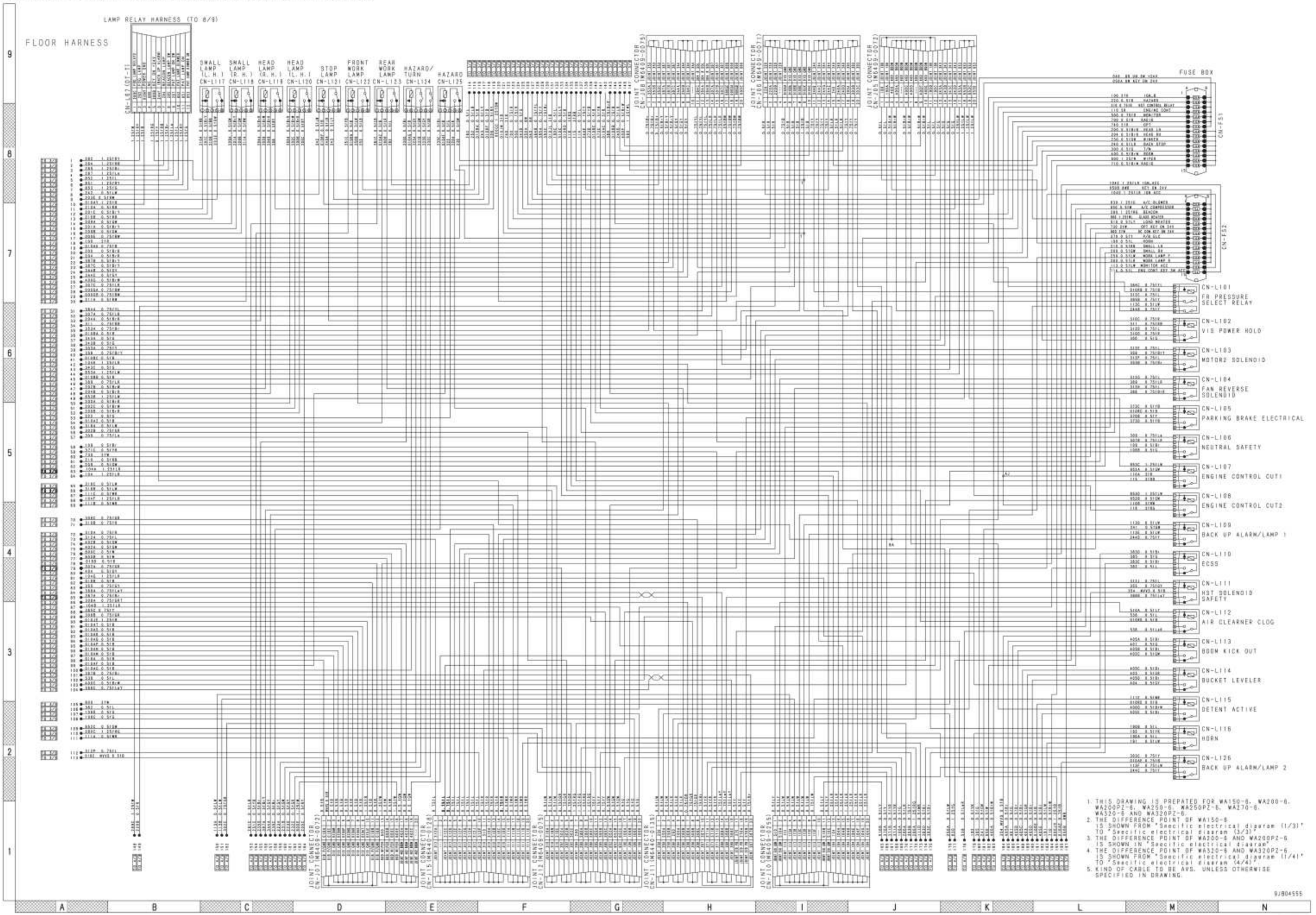
	Causes		Standard value in normal state/Remarks on troubleshooting		
Possible causes and standard value in normal state	4	Defective bucket positioner proximity switch (Internal defect)	★ Prepare with starting switch OFF. ★ Interchange bucket positioner proximity switch (F03) with lift arm positioner proximity switch (F04). ★ Operate bucket positioner with engine started.		
			Bucket positioner function is normal.	Defective bucket positioner proximity switch F03	
			Bucket positioner does not function.	Bucket positioner proximity switch F03 is normal.	
	5	Wiring harness discontinuity (Disconnection or defective contact)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			Wiring harness between F03 (female) (A) and fuse FS1 (13)	Resis-tance	Max. 1 Ω
			Wiring harness between F03 (female) (B) and L114 (female) (2)	Resis-tance	Max. 1 Ω
			Wiring harness between F03 (female) (C) and ground	Resis-tance	Max. 1 Ω
			Wiring harness between L114 (female) (1) (3), and L115 (female) (5)	Resis-tance	Max. 1 Ω
			Wiring harness between L115 (female) (3) and fuse FS1 (13)	Resis-tance	Max. 1 Ω
			Wiring harness between L114 (female) (5) and L37 (female) (1)	Resis-tance	Max. 1 Ω
			Wiring harness between L37 (female) (2) and ground	Resis-tance	Max. 1 Ω
			Wiring harness between E02 (female) (1) – L115 (female) (1)	Resis-tance	Max. 1 Ω
			Wiring harness between L115 (female) (2) – ground	Resis-tance	Max. 1 Ω
			★ With all the above items, the bucket positioner does not function		

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Common electrical circuit diagram (1/9)

WA150-6, WA200-6, WA200PZ-6, WA250-6, WA250PZ-6, WA320-6, WA320PZ-6

★ This figure covers the equipment and devices that are unavailable as optional items in some areas.



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