SEN03813-05

Shop Manual

WHEEL LOADER

WA250 -6
WA250PZ-6

SERIAL NUMBERS WA250- 75001 and up
WA250PZ- 75001

ecot3

KOMATSU®

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Classification and procedures of troubleshooting

Classification of troubleshooting

Mode	Contents
Display of code	Troubleshooting by failure code (Display of code)
E-mode	Troubleshooting of electrical system
H-mode	Troubleshooting of hydraulic and mechanical system
S-mode	Troubleshooting of engine

Procedure for troubleshooting

If a phenomenon looking like a trouble occurs in the machine, select a proper troubleshooting No. according to the following procedure, and then go to the corresponding troubleshooting section.

1. **Procedure for troubleshooting to be taken when action code is displayed on machine monitor:**
   If an action code is displayed on the machine monitor, display the failure code in the failure code display mode (for the electrical system and the mechanical system) of the machine monitor (EMMS).
   Carry out troubleshooting in [Display of failure code] according to the displayed failure code.
   - ★ Each failure code "flashes" when the trouble corresponding to it is detected. Even if a failure code "lights up" when the starting switch is turned ON, the trouble corresponding to that failure code may not have been repaired (Some troubles can be detected by simply turning the starting switch ON).
   - ★ If a failure code is recorded, be sure to perform the operation for reproducing it to see if the trouble corresponding to it has been repaired (For the method of reproducing the failure code, see the troubleshooting in [Display of code]).

2. **Procedure for troubleshooting to be taken when failure code is recorded:**
   If an action code is not displayed on the machine monitor, check for a failure code in the failure code display mode (for the electrical system and the mechanical system) of the machine monitor (EMMS).
   If a failure code is recorded, carry out troubleshooting in [Display of code] according to that failure code.
   - ★ Each failure code "flashes" when the trouble corresponding to it is detected. Even if a failure code "lights up" when the starting switch is turned ON, the trouble corresponding to that failure code may not have been repaired (Some troubles can be detected by simply turning the starting switch ON).
   - ★ If a failure code is recorded, be sure to perform the operation for reproducing it to see if the trouble corresponding to it has been repaired (For the method of reproducing the failure code, see the troubleshooting in [Display of code]).

3. **Procedure of troubleshooting to be taken when action code is not displayed and failure code is not recorded:**
   If a failure code is not recorded in the machine monitor (EMMS), a trouble that the machine cannot find out by itself may have occurred in the electrical system or hydraulic and mechanical system.
   In this case, check the phenomenon looking like a trouble again and select the same phenomenon from the table of "Phenomena looking like troubles and troubleshooting Nos.", and then carry out troubleshooting related to that phenomenon in the "E-mode", "H-mode", or "S-mode".

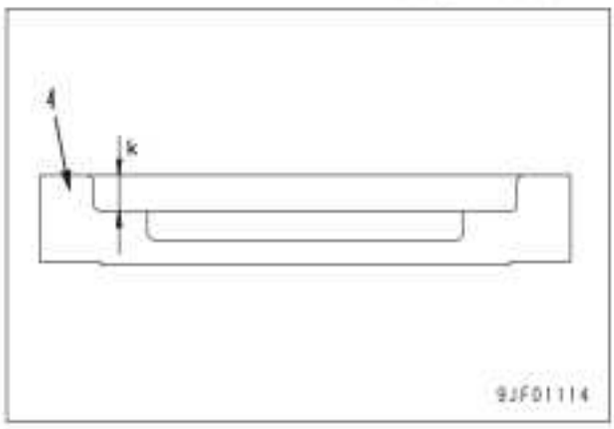
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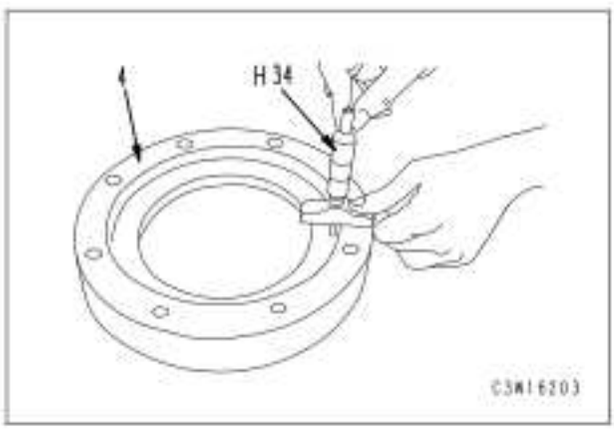
	Causes		Standard value in normal state/Remarks on troubleshooting		
Possible causes and standard value in normal state	6	Ground fault in wiring harness (Contact with ground circuit)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			Wiring harness between fuse No. 2 of fuse box (FS1) – L125 (female) (5) and ground	Resistance	Min. 1 MΩ
			Wiring harness between fuse No. 2 of fuse box (FS1) – L06 (female) (6) and ground	Resistance	Min. 1 MΩ
			Wiring harness between L125 (female) (1) – L06 (female) (1), (5) and ground	Resistance	Min. 1 MΩ
	7	Hot short in wiring harness (Contact with 24V circuit)	★ Prepare with starting switch OFF, then turn starting switch ON and carry out troubleshooting. • When hot short resulted on the wiring harnesses of the following two circuits		
			Wiring harness between L04 (female) (7) – R23 (female) (1), – FLC (female) (C), – circuit branch end and ground	Voltage	Max. 1 V
			Wiring harness between L04 (female) (8) – R22 (female) (1), – FLCL (female) (C), – circuit branch end and ground	Voltage	Max. 1 V
			Wiring harness between L124 (female) (5), L125 (female) (1) – L06 (female) (1), (5) and ground	Voltage	Max. 1 V

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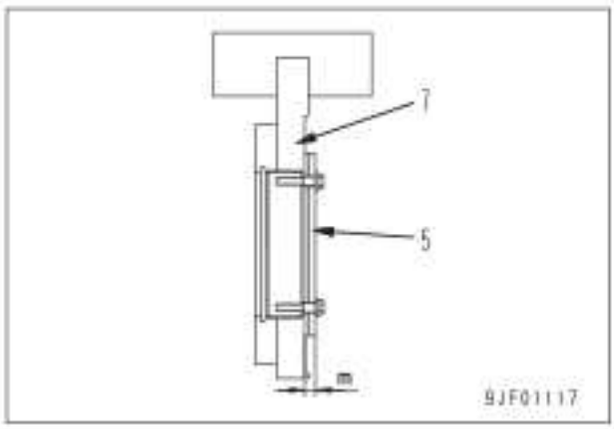
20. Adjust the shim of cover (trunnion cap) (4).

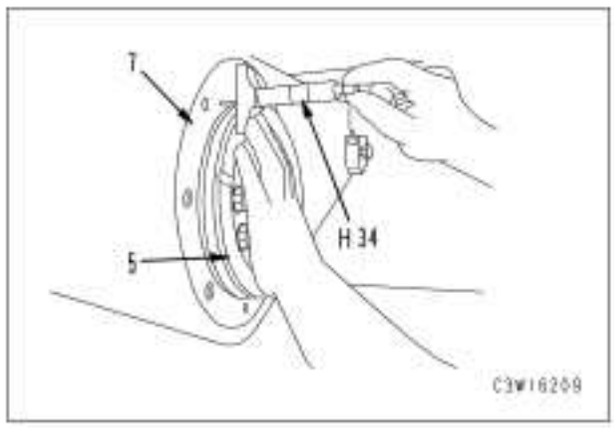
1) Measure dimension (k) of cover (4) with tool **H34** at 4 places on the diagonal lines and obtain the average.
   - ★ Clean the contact face of the depth micrometer thoroughly.
   - • Standard average value (k): **19.85 – 20.00 mm**





2) Measure dimension (m) between rear axle support (7) and thrust washer (5) with tool **H34** at 4 places on the diagonal lines and obtain the average.
   - ★ Clean the contact face of the tool **H34** (depth micrometer) thoroughly.
   - • Standard average value (m) (Reference): **19.65 – 20.00 mm**

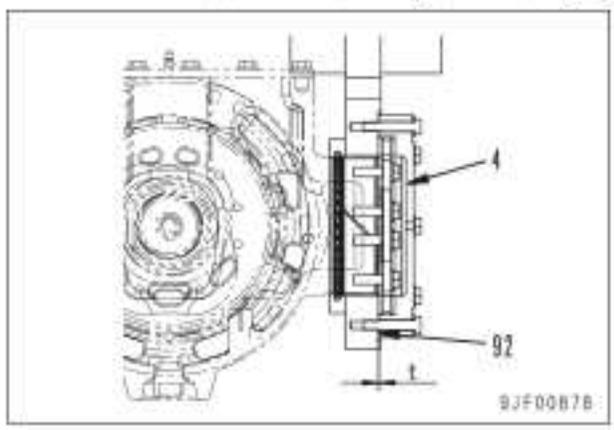




3) Calculate shim thickness (t).
   - • Shim thickness (t) = (m) – (k)
   - ★ Decide the number of the shims by the calculated shim thickness and the following table.
   - • Shim thickness (1 piece): 0.2 mm

Shim thickness	Number of shims
0 – 0.07 mm	1
0.08 – 0.27 mm	2
0.28 – 0.47 mm	3

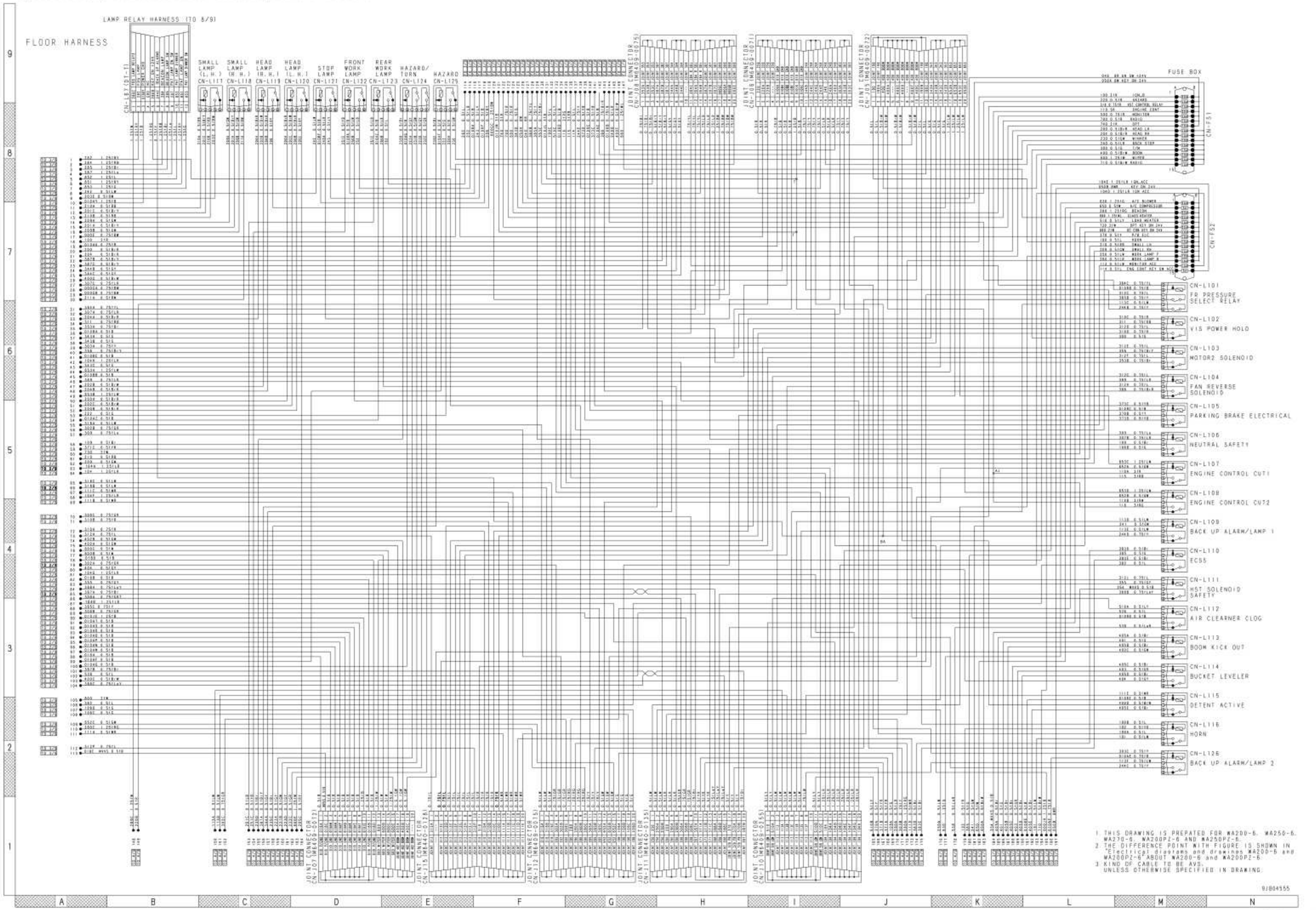
4) Install selected shim (92), and then install cover (4) again.
   - Cover: **Grease (G2-LI)**
   - Mounting bolt: **93.1 – 122.5 Nm {9.5 – 12.5 kgm}**



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Electrical circuit diagram (1/9)

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



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