SEBM033208

SHOP MANUAL

KOMATSU®

WA250-5
WA250PT-5

Machine model	Serial number
WA250-5	**70001 and up**
WA250PT-5	**70001 and up**

- This shop manual may contain attachments and optional equipment that are not available in your area. Please consult your local Komatsu distributor for those items you may require. Materials and specifications are subject to change without notice.

- WA250-5 mounts the SAA6D102E-2-A engine.
  For details of the engine, see the 102 Series Engine Shop Manual.

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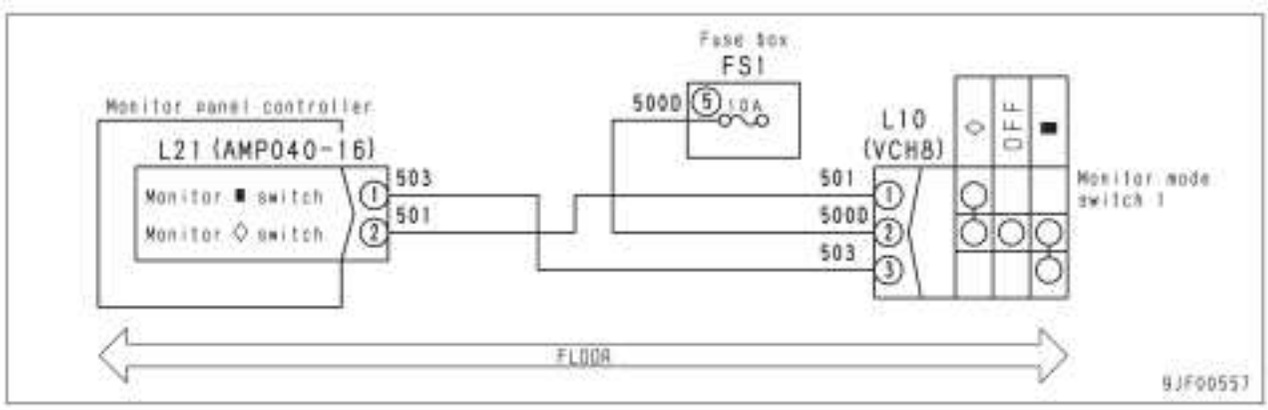
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Troubleshooting Code [MON-9] (Input failure in monitor panel mode selector switch 1 [■] (Panel switch 1))

Action Code	Error Code	Controller Code	Trouble	Input failure in monitor panel mode selector switch 1 [■] (Panel switch 1)
-	-	-		
Description of Trouble	• The monitor panel mode selector switch 1 [■] (Panel switch 1) input circuit is always in the OPEN state.			
Machine monitor or controller Reaction	• Activates an alarm.			
Effect on Machine	• The monitor does not work.			
Related Information	–			

	Causes		Standard Value in Normal State and Remarks on Troubleshooting			
Possible Causes and Standard Values	1	Defective monitor panel mode selector switch 1 [■]	1) Turn starting switch OFF. 2) Disconnect connector L10. 3) Connect T-adapter.			
			Between L10 (Female) (2) and (3)	When monitor panel mode selector switch 1 [■] is turned ON.	Resistance	Max. 1 Ω
				Other than above.	Resistance	Min. 1 MΩ
	2	Wiring harness discontinuity (Disconnection or defective contact)	1) Turn starting switch OFF. 2) Disconnect Connectors L21, L10, fuse FS1 (5). 3) Connect T-adapter.			
			Wiring harness between L21 (Female) (1) and L10 (Female) (3)		Resistance	Max. 1 Ω
			Wiring harness between L10 (Female) (2) and fuse FS1 (5)		Resistance	Max. 1 Ω
	3	Wiring harness ground fault	1) Turn starting switch OFF. 2) Disconnect Connectors L21, L10, fuse FS1 (5). 3) Connect T-adapter.			
			Wiring harness between L21 (Female) (1) and L10 (Female) (3)	Resistance between L21 (Female) (1), L10 (Female) (3) and chassis ground		Min. 1 MΩ
			Wiring harness between L10 (Female) (2) and fuse FS1 (5)	Resistance between L10 (Female) (2), fuse FS1 (5) and chassis ground		Min. 1 MΩ
			★ In the above case, the fuse is blown.			
	4	Defective machine monitor	1) Turn starting switch OFF. 2) Disconnect connector L21. 3) Insert T-adapter. 4) Connect connector. 5) Turn starting switch ON.			
			Between L21 (Female) (1) and chassis ground	When monitor panel mode selector switch 1 [■] is turned ON.	Voltage	20 - 30 V
				Other than above.	Voltage	Max. 1 V

Related circuit diagram



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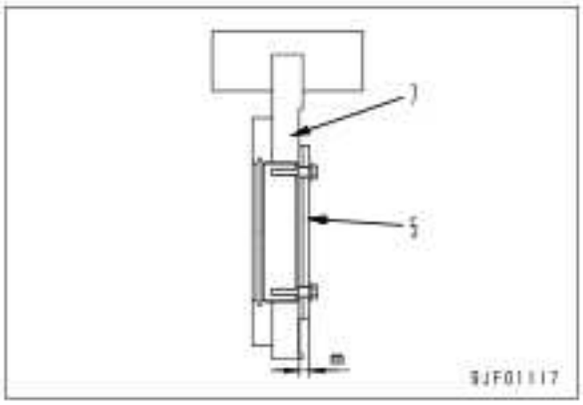
Troubleshooting Code [E-10] (The window washer does not function)

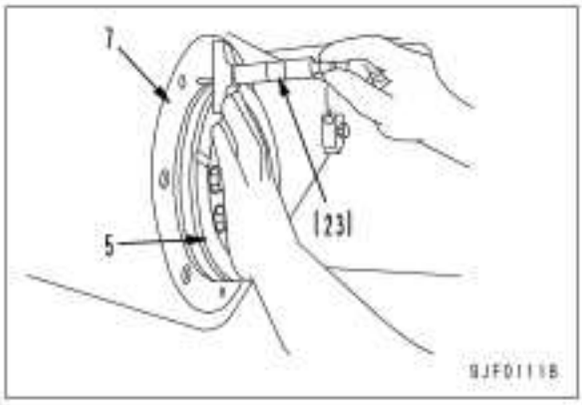
Action Code	Error Code	Controller Code	Trouble	The window washer does not function
-	-	-		
Description of Trouble	• The window washer does not function due defective window washer motor, switch, timer (Front only) or wiring harness.			
Machine monitor or controller Reaction	• No reaction.			
Effect on Machine	• The window washer does not function.			
Related Information	–			

	Causes		Standard Value in Normal State and Remarks on Troubleshooting			
Possible Causes and Standard Values	1	Defective window washer motor	1) Turn starting switch OFF. 2) Disconnect connector B07, B06. 3) Insert T-adapter. 4) Connect connector. 5) Turn starting switch ON.			
			• Front washer motor			
			Between B07 (1) and chassis ground		Voltage	20 - 30 V
			• Rear washer motor			
			Between B06 (1) and chassis ground		Voltage	20 - 30 V
	2	Defective wiper switch	1) Turn starting switch OFF. 2) Disconnect connector L05. 3) Insert T-adapter. 4) Connect connector. 5) Turn starting switch ON.			
			• Common to front switch and rear switch.			
			Between L05 (Male) (7) and chassis ground		Voltage	20 - 30 V
			1) Turn starting switch OFF. 2) Disconnect connector L05. 3) Connect T-adapter.			
			• Front switch			
			Between L05 (Male) (7) and (6)	Turn washer switch ON.	Resistance	Max. 1 Ω
				Turn washer switch OFF.	Resistance	Min. 1 MΩ
			• Rear switch			
			Between L05 (Male) (7) and (10)	Turn washer switch ON.	Resistance	Max. 1 Ω
				Turn washer switch OFF.	Resistance	Min. 1 MΩ
			Between L05 (Male) (7) and (9), (10)	Turn washer and wiper low switch ON.	Resistance	Max. 1 Ω
	3	Defective wiper timer (Relay)	1) Turn starting switch OFF. 2) Disconnect connector L48. 3) Insert T-adapter. 4) Connect connector. 5) Turn starting switch ON.			
			Wiring harness between L48 (3) and chassis ground		Voltage	20 - 30 V
			Wiring harness between L48 (2) and chassis ground	Turn washer switch ON.	Voltage	20 - 30 V
			Wiring harness between L48 (5) and chassis ground (0.2 to 0.8 sec. after the washer switch was turned ON)		Voltage	20 - 30 V

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2) Measure dimension (m) between rear axle support (7) and thrust washer (5) with depth micrometer [23] at 4 places on the diagonal lines and obtain the average.
   - ★ Clean the contact face of the depth micrometer thoroughly.
   - Standard average value (m) (Reference): **19.65 - 20.0 mm**





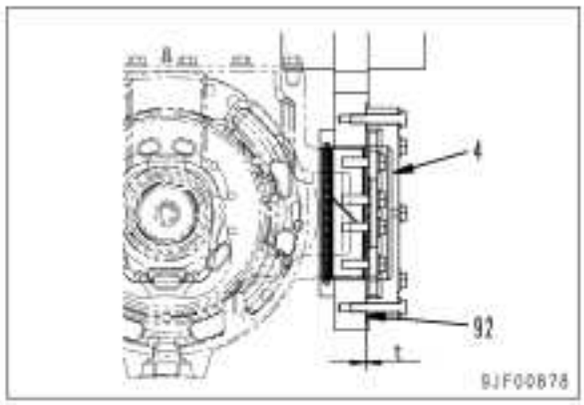
3) Calculate shim thickness (t).
   - Shim thickness (t) = (m) - (k)
   - ★ Decide the number of the shims by the calculated shim thickness and the following table.
   - Shim thickness (1 piece): 0.2 mm

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

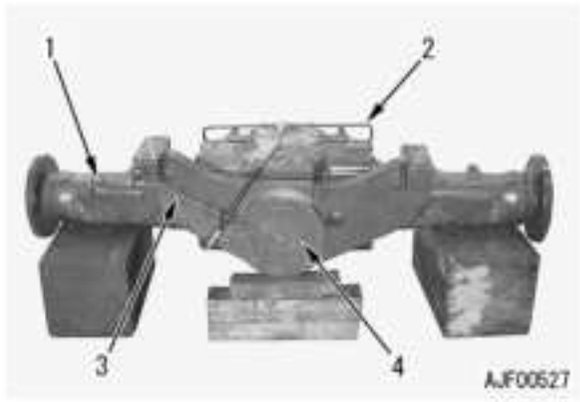
4) Install selected shim (92), and then install cover (4) again.

Cover: **Grease (G2-LI)**

Mounting bolt:
93.1 - 122.5 Nm {9.5 - 12.5 kgm}



21. Grease tube and brake piping
    1) Install grease tube (3).
    2) Install brake tube and hose assembly (2).
22. Axle housing
    1) Install both axle housings (1). For details, see DISASSEMBLY, ASSEMBLY OF AXLE HOUSING ASSEMBLY.



- **Refilling with oil (Axle housing)**
  Tighten the drain plug and add oil through the oil filler to the specified level.

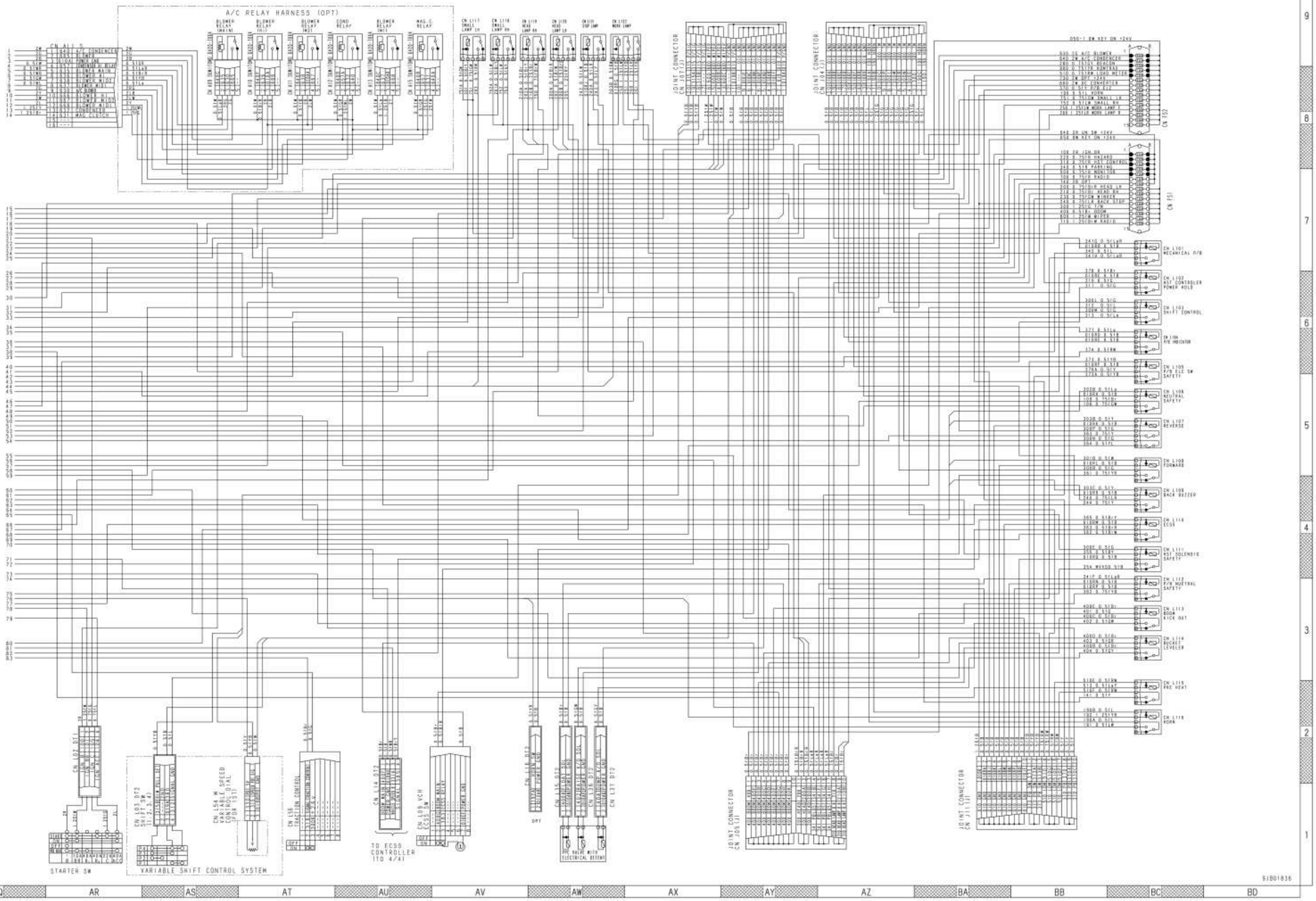
Drain plug:
127.4 - 176.4 Nm {13 - 18 kgm}

Oil filler plug:
93.1 - 122.5 Nm {9.5 - 12.5 kgm}

Axle oil: AXO 80
(Each of front and rear): **18 ℓ**

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ELECTRICAL CIRCUIT DIAGRAM 1/4 (4/4)
(Machines equipped with ROPS cab)



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