CEBM018104

Shop Manual

KOMATSU®

WA500-6

WHEEL LOADER

SERIAL NUMBERS **WA500-6** **A92001 - A92999**

ENGINE **SAA6D140E-5**

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AA1ANX

Air Cleaner: Clogging

Action Code	Failure Code	Trouble	Air cleaner: Clogging (Machine monitor system)
E01	AA1ANX		
Contents of trouble	• The air cleaner clogging sensor circuit is OPEN (at engine running).		
Action of controller	• Turns the air cleaner clogging caution lamp ON. • If cause of failure disappears, system resets itself.		
Problem that appears on machine	• The engine does not start or pick up easily; its output is insufficient; and its exhaust gas color is black.		
Related information	• The input state (ON/OFF) from the air cleaner clogging sensor can be checked with the monitoring function (Code: 40902, D-IN-20). • Method of reproducing failure code: Start engine.		

	Cause		Standard value in normal state/Remarks on troubleshooting			
Possible causes and standard value in normal state	1	Clogged air cleaner	The air cleaner may be clogged. Check it directly.			
	2	Defective dust indicator (Internal short circuit)	★ Prepare with starting switch OFF, then start engine and carry out troubleshooting.			
			E15 (female)	Failure code AA1ANX	Dust indicator	
			Replace dust indicator.	If condition becomes normal, dust indicator is defective.		
	3	Defective dust indicator relay (L107) (Internal disconnection or short circuit)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.			
			L107 (male)	Resistance		
			Between (1) and (2)	200 – 400 Ω		
			★ Prepare with starting switch OFF, then start engine and carry out troubleshooting.			
			If dust indicator relay (L107) is replaced with a relay of the same type (5-pin type) and the condition becomes normal, the exchanged relay is defective.			
	4	Disconnection in wiring harness (Disconnection or defective contact of connector)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.			
			Wiring harness between L53 (female) (3) – L107 (female) (3)	Resistance	Max. 1 Ω	
			Wiring harness between L107 (female) (6) – chassis ground	Resistance	Max. 1 Ω	
	5	Grounding 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 L107 (female) (2) – E15 (female) (1) and chassis ground	Resistance	Min. 1 MΩ	
	6	Defective machine monitor	★ Prepare with starting switch OFF, then start engine and carry out troubleshooting.			
			L53	Dust indicator	Voltage	
			Between (3) – chassis ground	Normal (Air cleaner is normal.)	20 – 30 V	
				Defective (Air cleaner is clogged.)	Max. 1 V	

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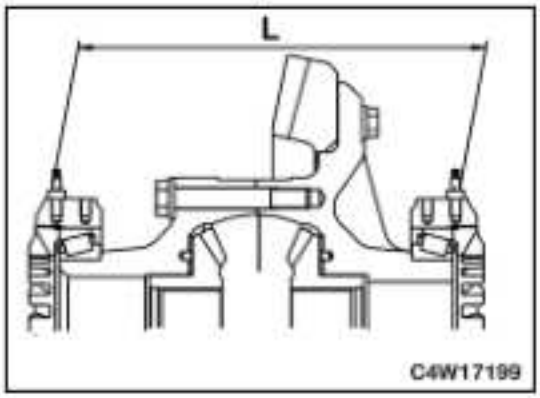
	Cause		Standard value in normal state/Remarks on troubleshooting		
Possible causes and standard value in normal state	5	Disconnection in wiring harness (Disconnection or defective contact in connector)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			Wiring harness between L22 (female) (3) – L21 (female) (5)	Resistance	Max. 1 Ω
			Wiring harness between L22 (female) (5) – C12 (female) (2)	Resistance	Max. 1 Ω
			Wiring harness between L22 (female) (7) – fuse No. 9 of fuse box B, – circuit branch end	Resistance	Max. 1 Ω
			Wiring harness between L22 (female) (4) – C12 (female) (1)	Resistance	Max. 1 Ω
			Wiring harness between C12 (female) (3) and chassis ground	Resistance	Max. 1 Ω
			Wiring harness between L21 (female) (1) and chassis ground	Resistance	Max. 1 Ω
	6	Ground fault in wiring harness (Short circuit with ground circuit)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			Wiring harness between L22 (female) (3) - L21 (female) (5) and chassis ground	Resistance	Min. 1 MΩ
			Wiring harness between L22 (female) (5) – C12 (female) (2) and chassis ground	Resistance	Min. 1 MΩ
			Wiring harness between L22 (female) (7) – fuse No. 9 of fuse box B, – circuit branch end and chassis ground	Resistance	Min. 1 MΩ
			Wiring harness between L22 (female) (4) – C12 (female) (1) and chassis ground	Resistance	Min. 1 MΩ

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ii. Using tool **H7-1**, measure dimension (L).

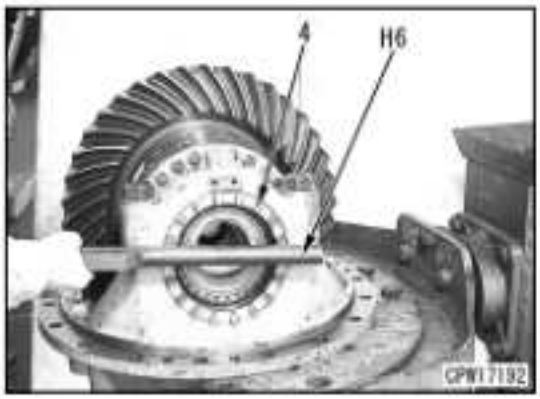
iii. Add 0.31 ±0.11 mm (0.012 ±0.004 in) to measured value (L) and set the scale of tool H7-1 to the obtained value.

★ The added dimension is the deflection of the case made by providing a preload.



iv. Using tool **H6**, tighten nut (4).

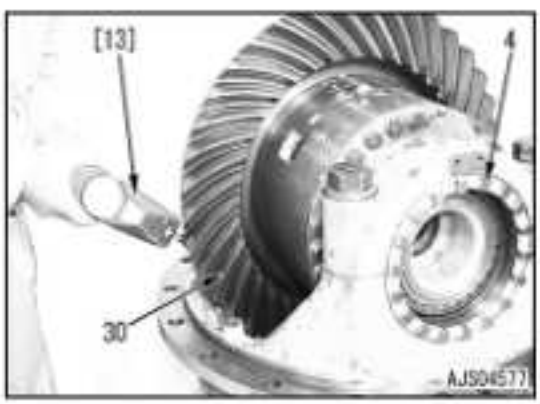
★ Using tool **H6**, tighten adjustment nut (4) so that the increase is 0.31 ±0.11 mm (0.012 ±0.004 in).



v. Put push-pull scale [13] to the tip of bevel gear (30) and measure the starting force.

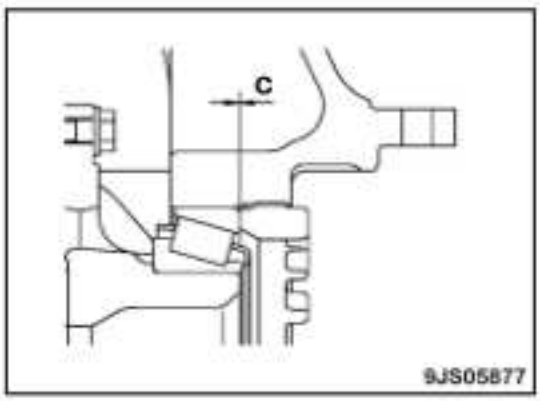
Starting force:..... 14.7 – 44.1 N (3.30 – 9.91 lbf)

★ If the starting force is out of the above range, repeat Step 11Eiii and adjust again.

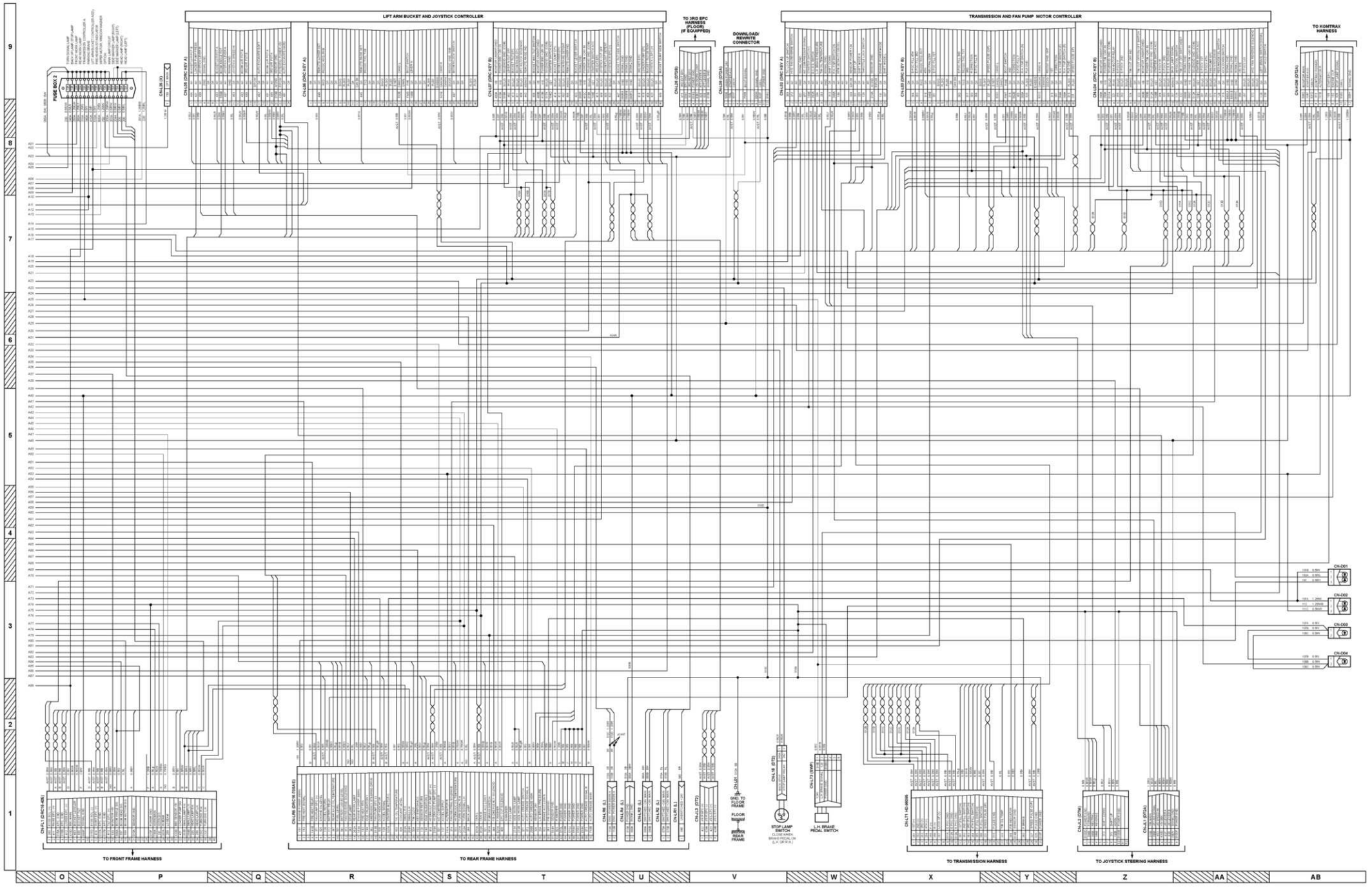


★ Precautions for adjusting starting torque

- If the nut is tightened too much for starting force adjustment or the starting force is adjusted defectively, return the nut to the condition before the adjustment.
- At this time, hit the cap and the bevel gear lightly with a plastic hammer while rotating the bevel gear.
- At this time, check that there is no clearance in part (c) and adjust the preload again.



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