SEN03537-03

Shop Manual

HYDRAULIC
EXCAVATOR

PC300 -7E0
PC300LC-7E0
PC350 -7E0
PC350LC-7E0

SERIAL NUMBERS

PC300,300LC- 50001-50216
PC300,300LC- 55001 and up
PC350,350LC- 30001-30093
PC350,350LC- 55001 and up

ecot3

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Failure code [CA234] Eng Overspeed

Action code	Failure code	Trouble	Engine overspeed (Engine controller system)
—	**CA234**		
Contents of trouble	• Engine speed exceeded control upper speed limit.		
Action of controller	• Stops injection until engine speed lowers to normal level.		
Problem that appears on machine	• Engine speed fluctuates.		
Related information	• Method of reproducing failure code: Run engine at high idle.		

Possible causes and standard value in normal state		Cause	Standard value in normal state/Remarks on troubleshooting
	1	Use of improper fuel	Fuel used may be improper. Check it directly.
	2	Improper use	Machine may be used improperly. Teach operator proper using method.
	3	Defective engine controller	If cause 1 is not detected, engine controller may be defective. (Since trouble is in system, troubleshooting cannot be carried out.)

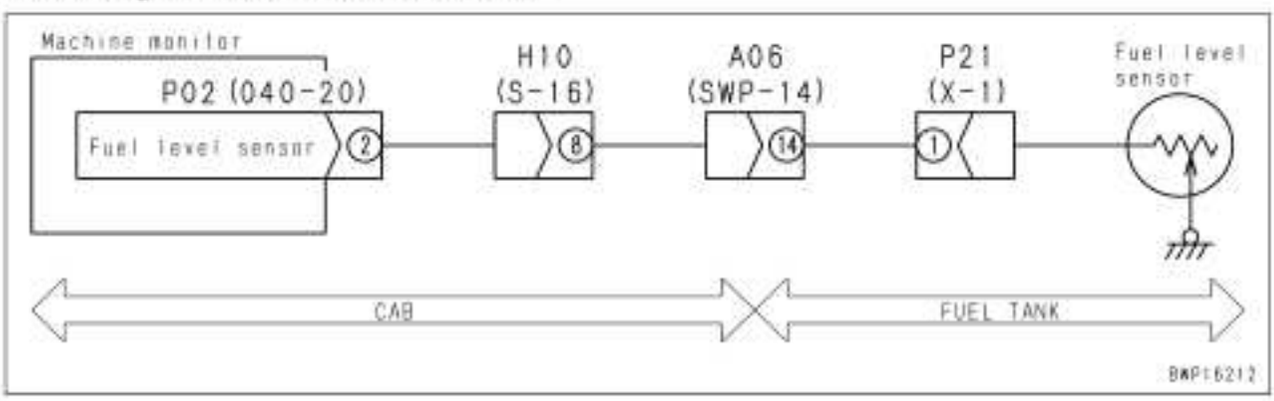
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E-13 Fuel level gauge does not indicate normally

Trouble	• While fuel is added, fuel level gauge does not rise from red range (E). • While fuel level is low, fuel level gauge does not lower from green range (F)
Related information	• Input signal (voltage) from the fuel level sensor can be checked with monitoring function. (Code 04200: Fuel level sensor voltage)

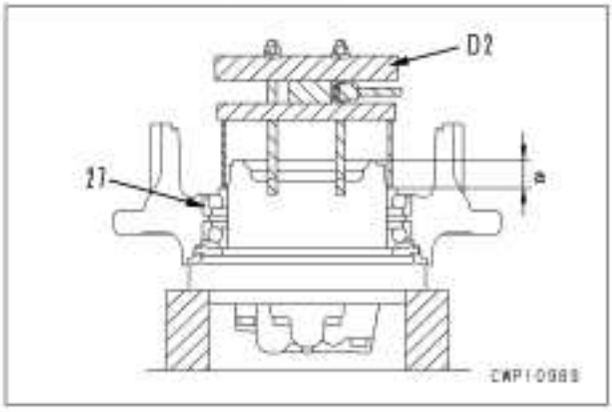
	Cause		Standard value in normal state/Remarks on troubleshooting			
Possible causes and standard value in normal state	1	Defective fuel level sensor (Internal disconnection or short circuit)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.			
			P21 (male)	Fuel level	Resistance	
			Between (1) – chassis ground	FULL (Upper limit)	Approx. 12 Ω	
				EMPTY (Lower limit)	85 – 110 Ω	
	2	Disconnection in wiring harness (Disconnection in wiring or defective contact in connector)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.			
			Wiring harness between P02 (female) (2) – P21 (female) (1)		Resistance	Max. 1 Ω
	3	Ground fault in wiring harness (Short circuit with GND circuit)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.			
			Wiring harness between P02 (female) (2) – P21 (female) (1) and chassis ground		Resistance	Min. 1 MΩ
	4	Hot short (Short circuit with 24V circuit) in wiring harness	★ Prepare with starting switch OFF, then turn starting switch ON and carry out troubleshooting.			
			Wiring harness between P02 (female) (2) – P21 (female) (1) and chassis ground		Voltage	Max. 1 V
	5	Defective machine monitor	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.			
			P02	Fuel level	Resistance	
			Between (2) – chassis ground	FULL (Upper limit)	Approx. 12 Ω	
				EMPTY (Lower limit)	85 – 110 Ω	

Circuit diagram related to fuel level sensor

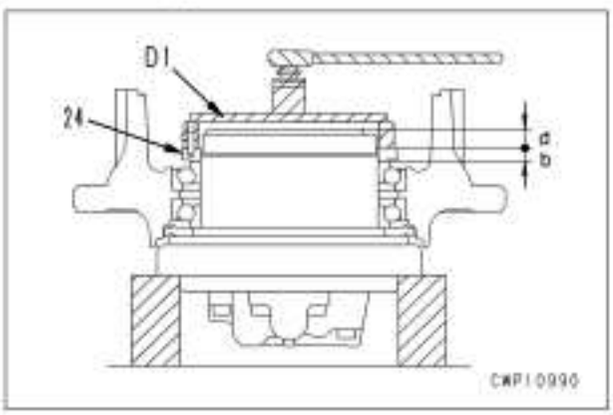


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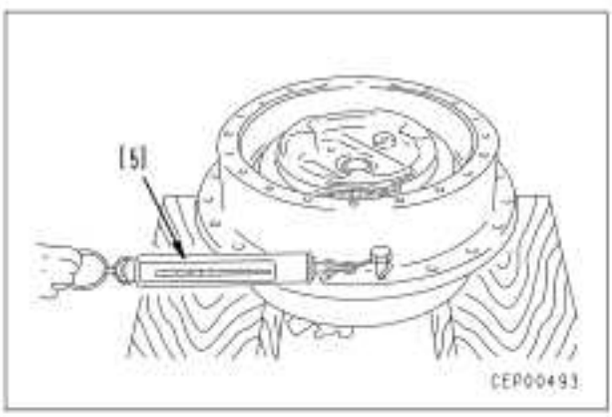
2] Under the above condition, measure dimension (a).



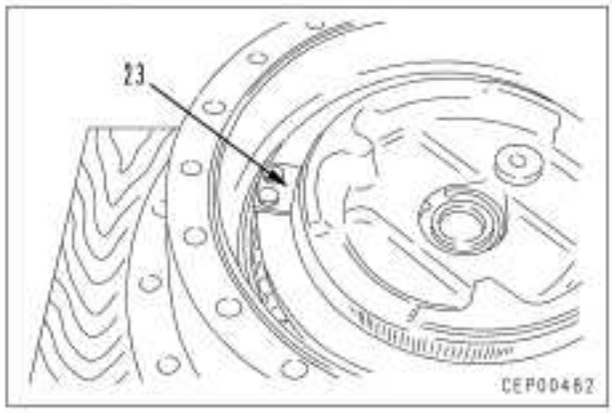
3] Measure thickness (b) off the independent nut (24).
4] Determine **Calculate a – b = c**
5] Using tool **D1**, tighten nut (24) until dimension (d) becomes the value of (c) calculated above.



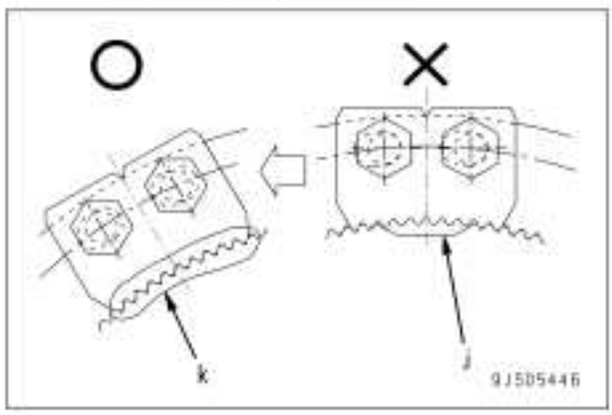
6] Using push-pull scale [5], measure tangential force of the hub to the motor case in the rotation direction.
★ Tangential force:
Max. 490 N {50 kg}
★ The tangential force denotes the maximum force at start of the rotation.



7] Install lockplate (23).



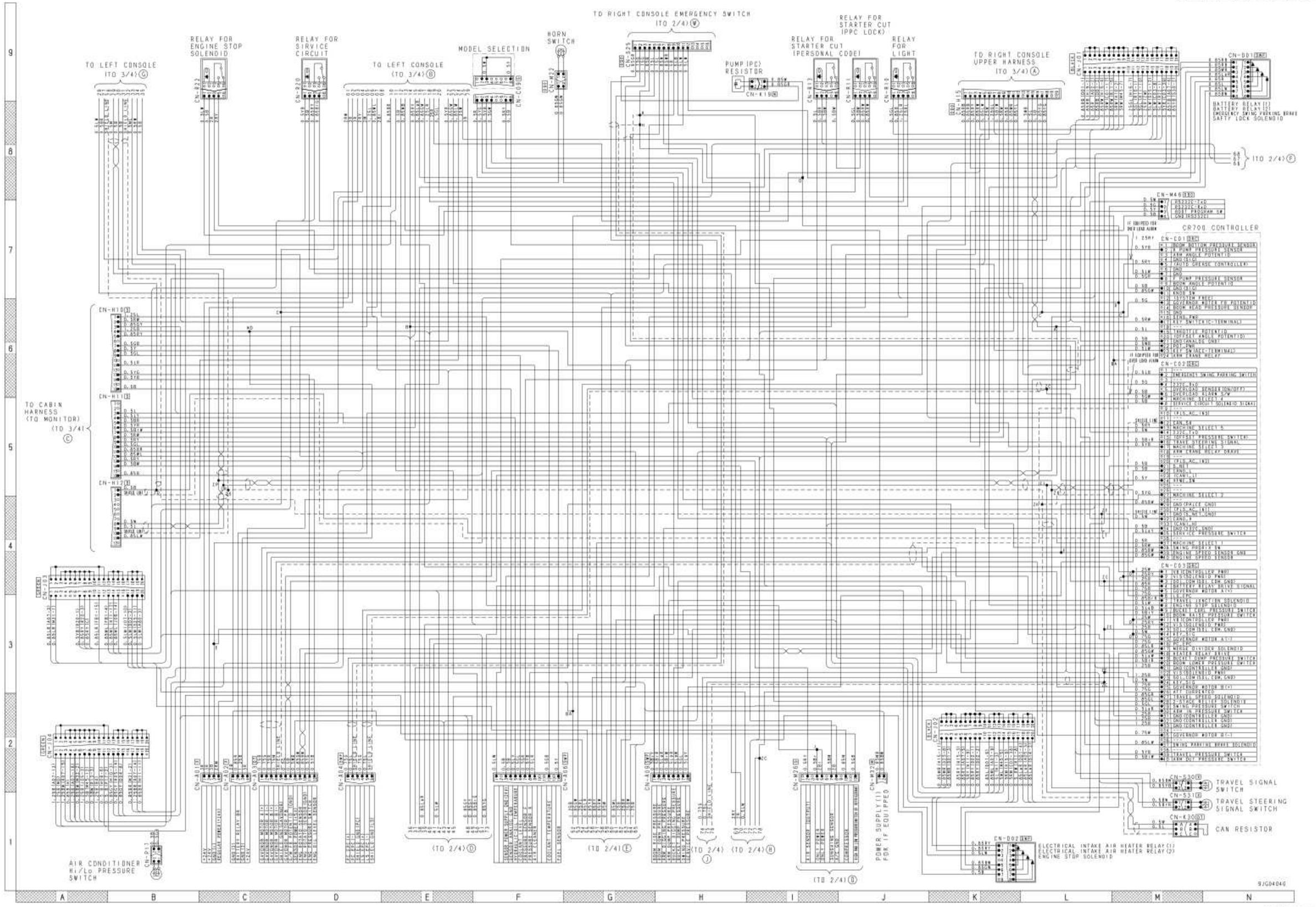
★ When installing the lockplate, avoid notch (j) of the travel motor and fit it to the spline totally (under the condition of (k))
Thread of mounting bolt:
Adhesive (LT-2)
Mounting bolt:
49 – 74 Nm {6 – 7.5 kgm}
★ Do not apply the adhesive (LT-2) to the tapped portion of the nut.



3. No.2 carrier assembly
1) Assemble No. 2 carrier assembly as follows.
★ Replace thrust washers (19) and (22) as well as pin (16) with new ones.
★ There are traces of expansion on the end surface of carrier side hole (e) which were originally caused when the pin was inserted. Make such the end surfaces are smooth enough before reassembly.
1] Assemble bearing (21) to gear (20), fit top and bottom thrust washers (19) and (22) and then set the gear assembly on carrier (18).

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Electrical circuit diagram (1/4)



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