

CA2554 - Exh Manifold Press Sens In Range Error

Action level		Failure code	Failure	Exhaust manifold pressure sensor in-range error (Engine controller system)
L03		CA2554		
Details of failure		Exhaust manifold pressure sensor output value displayed is out of normal range.		
Action of controller		<ul style="list-style-type: none">• Runs engine by setting exhaust manifold pressure to calculated value.• Closes EGR valve.• Restricts engine output and allows engine to run.• Stops KDPF regeneration control.		
Problem on machine		Engine output lowers.		
Related information		<ul style="list-style-type: none">• Signal voltage from the exhaust manifold pressure sensor can be checked with monitoring function. (Code: 48301 (V))• Pressure sensed by the exhaust manifold pressure sensor can be checked with monitoring function. (Code: 48300 (MPa))• Method of reproducing failure code: Starting switch: ON		
No.	Cause		Procedure, measuring location, criteria and remarks	
1	Blocked exhaust manifold pressure sensor pipe		Exhaust manifold pressure sensor pipe may be blocked. Perform troubleshooting for blockage.	
2	Defective exhaust manifold pressure sensor		Exhaust manifold pressure sensor system may be defective. Carry out troubleshooting for failure codes [CA2373] and [CA2374].	

CA2555 - Grid Htr Relay Open Circuit Error

Action level		Failure code	Failure	Intake air heater relay open circuit (Engine controller system)	
L01		CA2555			
Details of failure		Open circuit is detected in drive circuit (primary circuit) of pre-heat relay.			
Action of controller		None in particular			
Problem on machine		Intake air heater does not work in auto pre-heating (degraded starting performance at low temperature and emission of white smoke)			
Related information		<ul style="list-style-type: none">• Temperature sensed by engine coolant temperature sensor can be checked by using monitoring function. (Code: 04107 (°C))• Method of reproducing failure code: Turn starting switch to ON position (Coolant temperature: Max. -5 °C [23 °F])• Troubleshooting of this failure code covers circuits from engine controller to primary (coil) circuit of preheating relay PHR.• For troubleshooting related to heater relay and secondary side of preheater relay R18, see E-2 in E-mode.			
No.	Cause		Procedure, measuring location, criteria and remarks		
1	Defective wiring harness connector		1. See descriptions of wirings harness and connectors in "c: Electrical equipment" in "Checks before troubleshooting" of "General information on troubleshooting", and check them. 2. Starting switch: ON		
			If this failure code does not appear, the wiring harness connector is defective. ★ If this failure code appears, perform the following.		
2	Defective pre-heater relay PHR		1. Starting switch: OFF 2. Disconnect relay R18, and connect T-adaptor to male side.		
			Resistance	Between R18 (male) (1) and (2)	200 - 400 Ω
			1. Starting switch: OFF 2. Replace relay R18 with another one. 3. Starting switch: ON		
			If this failure code disappears, original pre-heater relay R18 is defective.		
3	Open or short circuit in wiring harness		1. Starting switch: OFF 2. Disconnect connector CE03, and connect T-adaptor to female side.		
			Resistance	Between CE03 (female) (4) and (13) ★ Pre-heater relay R18 coil resistance	200 - 400 Ω
4	Open circuit in wiring harness		★ If no failure is found by check on cause 3, this check is not required. 1. Starting switch: OFF 2. Disconnect connector CE03 and relay R18, and connect T-adapters to each female side.		
			Resistance	Between CE03 (female) (4) and R18 (female) (1)	10 Ω Max.
				Between R18 (female) (2) and CE03 (13)	10 Ω Max.
5	Defective engine controller		If no failure is found by above checks, engine controller is defective. (Since this is an internal defect, troubleshooting cannot be performed.)		