

**FAILURE CODE [CA3725]**

Action level	Failure code	Failure	Turbo Outlet NOx Sensor Unstable Error (Engine controller system)
L01	CA3725		
Detail of fail- ure	The turbocharger NOx sensor does not become measurable state.		
Action of controller	<ul style="list-style-type: none"><li>• Operates the engine by referring to the model NOx value.</li><li>• Activates Inducement strategy (EU specification).</li></ul>		
Phenomenon on machine	<ul style="list-style-type: none"><li>• AdBlue/DEF injection becomes inappropriate and the NOx emission may increase, or ammonia may be discharged.</li><li>• Engine output is reduced based on Inducement strategy (EU specification).</li></ul>		
Related information	<p><b>⚠ KDPF, sensor fitting piping, and sensor probe are heated to 500 °C and above. Be careful not to get burn injury.</b></p> <p><b>⚠ SCR assembly, sensor fitting piping, and sensor probe are heated to 400 °C and above. Be careful not to get burn injury.</b></p> <p><b>⚠ As for the sensor probe, be careful not to get burn injury even if the surroundings is not hot, because sensor itself is heated.</b></p> <ul style="list-style-type: none"><li>• If failure code [CA3232] is displayed, CAN communication system is defective. Perform troubleshooting for it first.</li><li>• If failure code [CA1879] or [CA1881] or [CA1883] is displayed, KDPF differential pressure sensor system is defective. Perform troubleshooting for these first.</li><li>• If failure code [CA3133] or [CA3134] or [CA3135] is displayed, KDPF outlet pressure sensor system is defective. Perform troubleshooting for these first.</li><li>• If failure code [CA1885] or [CA3649] or [CA3682] or [CA3718] is displayed, turbo outlet NOx sensor system is defective. Perform troubleshooting for these first.</li></ul>		

Related information	<ul style="list-style-type: none"> <li>The turbocharger outlet NOx sensor operates when 47300 “KDOC Inlet Temperature 1” is 150 °C or more (19203 “turbocharger outlet NOx sensor measurement state” is “1”).</li> <li>Turbo outlet NOx sensor is smart sensor which communicates with engine controller with other sensors through CAN communication.</li> <li>The turbocharger outlet NOx sensor does not operate when KDOC inlet temperature is 150 °C and below, and correct value is not displayed (the sensor does not operate by simply turning the starting switch to ON even when it is normal).</li> <li>The engine controller refers to the fluctuation of KDPF differential pressure sensor and KDPF outlet pressure sensor to judge the error of this failure code only when the exhaust gas pressure is stable.</li> <li>KDPF differential pressure sensor and KDPF outlet pressure sensor are provided as a unit.</li> <li>If failure code is cleared immediately after displayed, it is suspected that detection of turbocharger outlet NOx sensor has been unstable temporarily due to exhaust gas condition (when load is applied at low idle for a long time repeatedly, for example).</li> </ul> <p><b>REMARK</b></p> <p>Turbocharger outlet NOx sensor is not defective, therefore it has no problems if this failure code does not appear repeatedly or continuously.</p> <ul style="list-style-type: none"> <li>On “Pre-defined Monitoring” screen, items related to basic machine operation and SCR sensor are used. (The numbers below denote monitoring codes).</li> <li>Basic machine operation related           <ul style="list-style-type: none"> <li>01002 Engine Speed</li> <li>18600 Inject Fueling Command</li> <li>19200 Exhaust Gas Flow Rate</li> <li>47300 KDOC 1 Inlet Temperature</li> <li>19300 SCR Temperature</li> <li>19302 SCR Outlet Temperature</li> </ul> </li> <li>SCR sensor related           <ul style="list-style-type: none"> <li>19120 AdBlue/DEF Injection Quantity</li> <li>19205 SCR NH3 Concentration Corrected</li> <li>19202 Turbo Outlet NOx Corrected</li> <li>19209 SCR Outlet NOx Corrected</li> <li>19203 Turbo Outlet NOx Sensor State</li> <li>19210 SCR Outlet NOx Sensor State</li> </ul> </li> </ul> <p><b>NOTICE</b></p> <p><b>This failure code requires “Loaded Diagnostics Operation To Confirm Failure Correction”. After investigating the cause of the problem and completing the repair, perform “Loaded Diagnostics Operation To Confirm Failure Correction” to make sure the failure code is cleared. (Even if this failure code is not displayed with starting switch in ON position, completion of repair cannot be determined unless exhaust temperature becomes high.)</b></p>
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No.	Cause	Procedure, measuring location, criteria and remarks
1	Freeze of KDPF differential pressure and KDPF outlet sensor	Confirm if failure code [DHAAMA] or [DHACMA] is displayed. If failure codes displayed, perform loaded diagnostics operation to confirm failure correction of [CA3725] after clearing failure codes [DHAAMA] and [DHACMA].
2	Defective installation of turbocharger outlet NOx sensor	Check if the turbocharger outlet NOx sensor is not loosely installed.