

<b>Last Modified:</b> 6-2-2008	5.1 C	<b>From:</b> 200601
<b>Model Year:</b> 2007	<b>Model:</b> Camry	<b>Doc ID:</b> RM000000TB300KX
<b>Title:</b> 2GR-FE ENGINE CONTROL SYSTEM: SFI SYSTEM: P0128: Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature) (2007 Camry)		

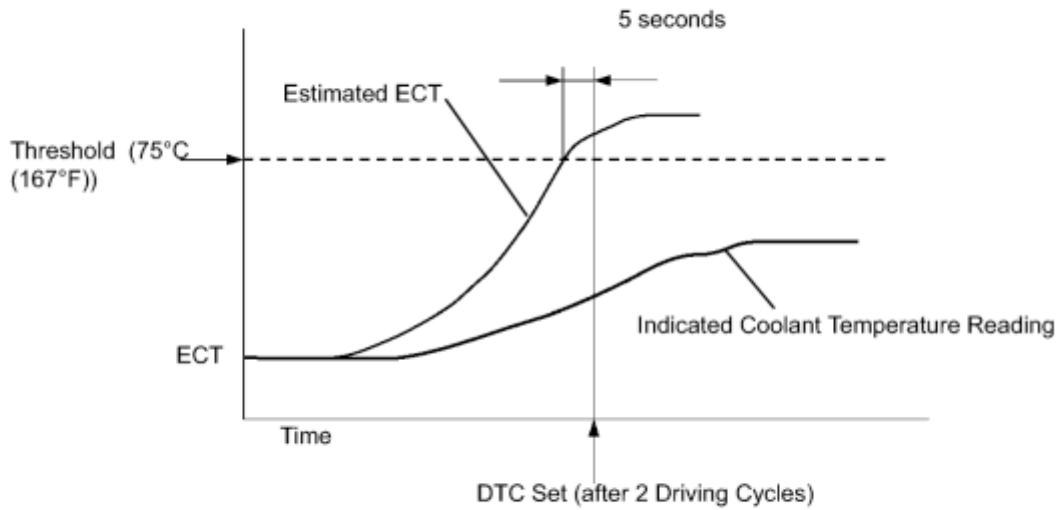
<b>DTC</b>	<b>P0128</b>	<b>Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)</b>
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## DESCRIPTION

This DTC is set when the Engine Coolant Temperature (ECT) does not reach 75°C (167°F) despite sufficient engine warm-up time.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
P0128	<ul style="list-style-type: none"> <li>• Conditions (a), (b) and (c) are met for 5 seconds (2 rip detection logic):</li> <li>• (a) Cold start</li> <li>• (b) Engine warmed up</li> <li>• (c) ECT less than 75°C (167°F)</li> </ul>	<ul style="list-style-type: none"> <li>• Thermostat</li> <li>• Cooling system</li> <li>• ECT sensor</li> <li>• ECM</li> </ul>

## MONITOR DESCRIPTION



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The ECM estimates the ECT based on the starting temperature, engine loads, and engine speeds. The ECM then compares the estimated temperature with the actual ECT. When the estimated ECT reaches 75°C (167°F), the ECM checks the actual ECT. If the actual ECT is less than 75°C (167°F), the ECM interprets this as a malfunction in the thermostat or the engine cooling system and sets the DTC.

## **MONITOR STRATEGY**

Related DTCs	P0128: Coolant Thermostat
Required Sensors/Components (Main)	Thermostat
Required Sensors/Components (Sub)	Engine Coolant Temperature (ECT) sensor, Intake Air Temperature (IAT) sensor, Vehicle speed sensor
Frequency of Operation	Once per driving cycle
Duration	900 seconds
MIL Operation	2 driving cycles
Sequence of Operation	None

## **TYPICAL ENABLING CONDITIONS**

Monitor will run whenever this DTC is not present	P0010, P0020 (VVT OCV Bank 1, 2) P0011 (VVT System 1 - Advance) P0012 (VVT System 1 - Retard) P0021 (VVT System 2 - Advance) P0022 (VVT System 2 - Retard) P0031, P0032, P0051, P0052 (A/F sensor heater - Sensor 1) P0100 - P0103 (MAF meter) P0110 - P0113 (IAT sensor) P0115 - P0118 (ECT sensor) P0125 (Insufficient ECT for Closed Loop) P0171, P0172 (Fuel system) P0300 - P0308 (Misfire) P0335 (CKP sensor) P0340, P0341 (CMP sensor) P0351 - P0356 (Ignitor) P0500 (VSS) P2196, P2198 (A/F sensor - rationality) P2A00, P2A03 (A/F sensor - slow response)
Battery voltage	11 V or more
Either of following conditions 1 or 2 is met:	-
1. All of following conditions are met:	-
<ul style="list-style-type: none"> <li>ECT at engine start - IAT at engine start</li> </ul>	-15 to 7°C (-27 to 12.6°F)
<ul style="list-style-type: none"> <li>ECT at engine start</li> </ul>	-10 to 56°C (14 to 133°F)
<ul style="list-style-type: none"> <li>IAT at engine start</li> </ul>	-10 to 56°C (14 to 133°F)
2. All of following conditions are met:	-
<ul style="list-style-type: none"> <li>ECT at engine start - IAT at engine start</li> </ul>	More than 7°C (12.6°F)
<ul style="list-style-type: none"> <li>ECT at engine start</li> </ul>	56°C (132.8°F) or less
<ul style="list-style-type: none"> <li>IAT at engine start</li> </ul>	-10°C (14°F) or more
Accumulated time with 80 mph (128 km/h) or more of vehicle speed	Less than 20 seconds

