

Last Modified: 6-2-2008	5.1 C	From: 200601
Model Year: 2007	Model: Camry	Doc ID: RM000000T8M01OX
Title: 2GR-FE ENGINE CONTROL SYSTEM: SFI SYSTEM: P0505: Idle Control System Malfunction (2007 Camry)		

DTC	P0505	Idle Control System Malfunction
------------	--------------	--

DESCRIPTION

The idle speed is controlled by the Electronic Throttle Control System (ETCS). The ETCS is comprised of: 1) one valve type throttle body; 2) the throttle actuator, which operates the throttle valve; 3) the throttle position sensor, which detects the opening angle of the throttle valve; 4) the accelerator pedal position sensor, which detects the accelerator pedal position; 5) the ECM, which controls the ETCS. Based on the target idle speed, the ECM controls the throttle actuator to provide the proper throttle valve opening angle.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
P0505	Idle speed continues to vary greatly from target speed (2 trip detection logic)	<ul style="list-style-type: none"> • ETCS • Air induction system • PCV hose connection • ECM

MONITOR DESCRIPTION

The ECM monitors the idling speed and idling air flow volume to conduct Idle Speed Control (ISC). The ECM determines that the ISC system is malfunctioning if the following conditions are met:

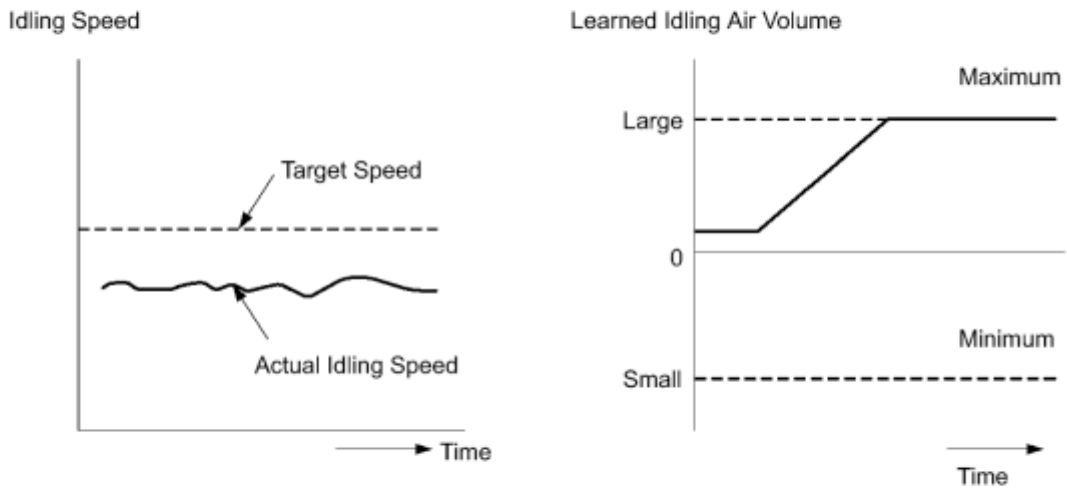
- The learned idling air flow volume remains at the maximum or minimum 5 times or more during a driving cycle
- While driving at 6 mph (10 km/h) or more, the actual engine idling speed varies from the target idling speed by between 100 rpm and 200 rpm, 5 times or more during a driving cycle.

Example:

If the actual idling speed varies from the target idling speed by more than 200 rpm* 5 times during a driving cycle, the ECM illuminates the MIL and sets the DTC.

***: Threshold idling speed varies with engine load.**

Example



y

MONITOR STRATEGY

Related DTCs	P0505: ISC function
Required Sensors/Components (Main)	ETCS
Required Sensors/Components (Sub)	Crankshaft position sensor, Engine coolant temperature sensor, and Vehicle speed sensor
Frequency of Operation	Continuous
Duration	10 minutes
MIL Operation	2 driving cycles
Sequence of Operation	None

TYPICAL ENABLING CONDITIONS

Functional check:

Monitor will run whenever these DTCs are not present	None
--	------

Engine	Running
--------	---------


TYPICAL MALFUNCTION THRESHOLDS

Functional check:

Either of the following conditions 1 or 2 is met:	-
1. Frequency that following conditions (a) and (b) are met:	5 time or more
(a) Engine RPM - target engine RPM	Below -100 rpm, or 200 rpm or more
(b) Vehicle condition	Stop after vehicle was driven by 6.25 mph (10 km/h) or more
2. Frequency that following conditions (a) and (b) are met:	Once
(a) Engine RPM - target engine RPM	Below -100 rpm, or 200 rpm or more
(b) ISC flow rate learning value	1.3 L/sec. or less. or 8.5 L/sec. or more

INSPECTION PROCEDURE

HINT:

- The following conditions may also cause DTC P0505 to be set:
 - a. The floor carpet overlapping onto the accelerator pedal, causing the accelerator pedal to be slightly depressed and therefore the throttle valve position to be slightly open.
 - b. The accelerator pedal being not fully released.
- Read freeze frame data using the intelligent tester. The ECM records vehicle and driving condition information as freeze frame data the moment a DTC is stored. When troubleshooting, freeze frame data can be helpful in determining whether the vehicle was running or stopped, whether the engine was warmed up or not, whether the air-fuel ratio was lean or rich, as well as other data recorded at the time of a malfunction .

PROCEDURE

1.	CHECK ANY OTHER DTCS OUTPUT (IN ADDITION TO DTC P0505)
-----------	---

- (a) Connect the intelligent tester to the DLC3.
- (b) Turn the ignition switch on (IG).

(c) Turn the tester on.

(d) Enter the following the menus: DIAGNOSIS / ENHANCED OBD II / DTC INFO / CURRENT CODES.

(e) Read the DTCs.

Result:

DISPLAY (DTC OUTPUT)	PROCEED TO
P0505	A
P0505 and other DTCs	B

If any DTCs other than P0505 are output, troubleshoot those DTCs first.

B  **GO TO DTC CHART**

A



2.	CHECK PCV HOSE (HOSE CONNECTIONS)
-----------	--

OK:

PCV hose is connected correctly and is not damaged.

NG  **REPAIR OR REPLACE PCV HOSE**

OK



3.	CHECK AIR INDUCTION SYSTEM
-----------	-----------------------------------

(a) Check the air induction system for vacuum leakage.

OK:

No leakage from air induction system.

NG  **REPAIR OR REPLACE AIR INDUCTION**

SYSTEM

OK



4.	CHECK THROTTLE BODY (VISUALLY CHECK THROTTLE VALVE)
-----------	--

(a) Check for contamination between the throttle valve and the housing. If necessary, clean the throttle body. And check that the throttle valve moves smoothly.

OK:

Throttle valve is not contaminated with foreign objects and moves smoothly.

NG  **REPLACE THROTTLE BODY**

OK  **REPLACE ECM**

