

MIL "ON" DTC P0456

Service Category Engine/Hybrid System

Section Engine Control

Market USA

Toyota Supports
 ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2010	Corolla, Matrix	Drive Type(s): 2WD Engine(s): 2ZR Transmission(s): 4AT, 5MT VDS(s): BU4EE, KU4EE

Introduction

Some 2010 model year Corolla and Matrix vehicles may exhibit a MIL "ON" condition with Diagnostic Trouble Code (DTC) P0456 – Evaporative Emission Control System Leak Detected (Very Small Leak) with no physical leak. The Engine Control Module/ECM (SAE term: Powertrain Control Module/PCM) logic has been modified to reduce the possibility of this condition occurring. Use the following repair procedure to address this condition.

Warranty Information

OP CODE	DESCRIPTION	TIME	OPF	T1	T2
EG9018	Recalibrate ECM (PCM) Engine	0.6	89661-#####	8A	99

APPLICABLE WARRANTY

- This repair is covered under the Toyota Federal Emission Warranty. This warranty is in effect for 96 months or 80,000 miles, whichever occurs first, from the vehicle's in-service date.
- Warranty application is limited to occurrence of the specified condition described in this bulletin.

Calibration Information

MODEL	ENGINE	TRANSMISSION	PREVIOUS CALIBRATION ID	NEW CALIBRATION ID	VDS
Corolla	2ZR-FE	4AT	302G8000	302G8100	BU4EE
Matrix			302J5000	302J5100	KU4EE
Corolla, Matrix		5MT	302G9000	302G9100	BU4EE KU4EE

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Parts Information

MODEL	TRANSMISSION	PREVIOUS PART NUMBER	CURRENT PART NUMBER	PART NAME	QTY
Corolla	4AT	89661-02F50	89661-02F51	Computer, Engine Control (ECM/PCM)	-
Matrix		89661-02V30	89661-02V31		-
Corolla, Matrix	5MT	89661-02U70	89661-02U71		-
-	N/A	00451-00001-LBL	Same	Authorized Modification Labels	1

NOTE

- The ECM (PCM) should NOT be replaced as part of the repair procedure.
- Authorized Modification Labels may be ordered in packages of 25 from the Materials Distribution Center (MDC) through Dealer Daily – Dealer Support Materials Orders.

Required Tools & Equipment

REQUIRED EQUIPMENT	SUPPLIER	PART NUMBER	QTY
TIS Techstream* NOTE: Software version 4.12.001 or later is required.	ADE	TSUNT	1

* Essential SST.

NOTE

- Additional TIS Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.
- The Diagnostic Tester is NOT recommended for flash reprogramming with this calibration file. Please use TIS Techstream or an approved J2534 interface to perform this update. Visit techinfo.toyota.com for more information regarding J2534 reprogramming.



SPECIAL SERVICE TOOLS (SST'S)	PART NUMBER	QTY
GR8 Battery Diagnostic Station*	00002-MCGR8	1

* Essential SST.

NOTE

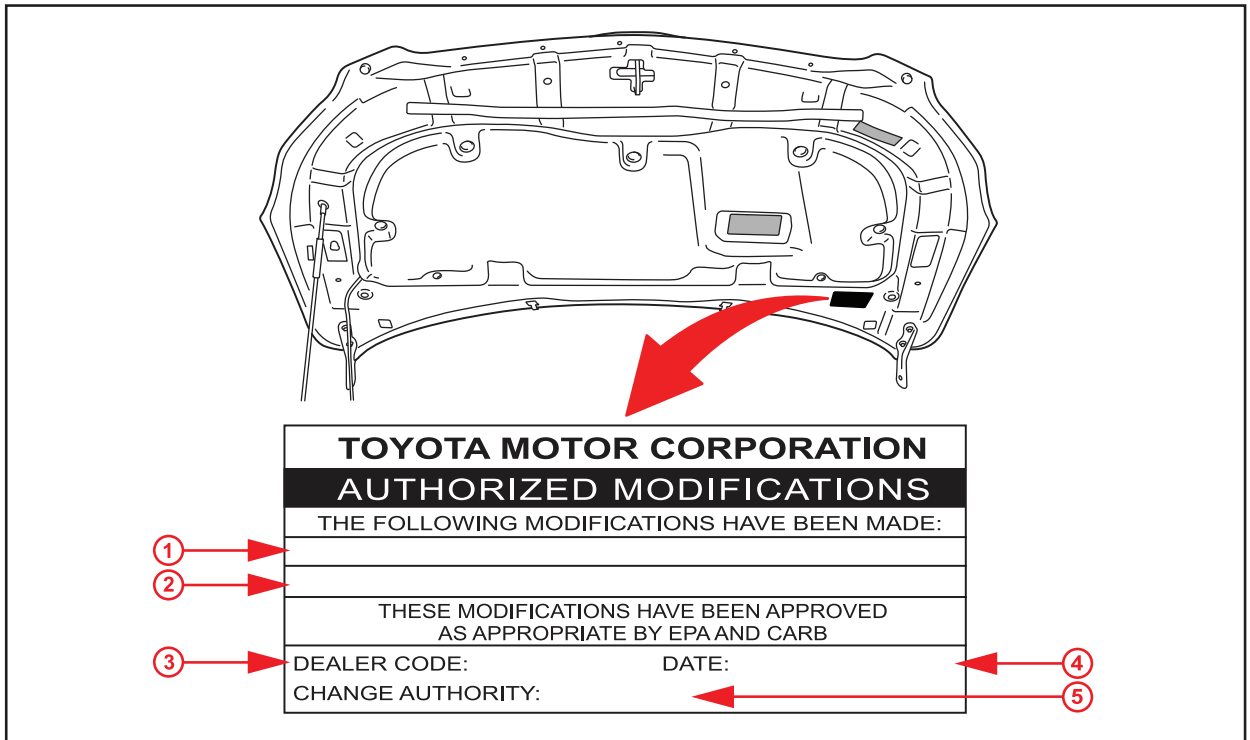
Additional SSTs may be ordered by calling 1-800-933-8335.

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Repair Procedure

1. Using TIS Techstream, check for stored DTCs. If only DTC P0456 is present, proceed to step 2.
2. Clear DTCs.
3. Confirm that the fuel cap is tight. If it is loose, tighten the cap (this will complete the repair). If the cap is already tight, proceed to step 4.
4. Check for the Authorized Modifications Label affixed to the vehicle in the location shown in Figure 1. Confirm if the ECM (PCM) calibration has been updated. If the calibration ID listed is NOT the latest ECM (PCM) calibration — go to step 5.

Figure 1. Location of Authorized Modifications Label on 2010 Corolla and Matrix



1	Replacement ECM (PCM) Part Number (i.e., 89661-02F51)
2	New Calibration ID(s) (i.e., 302G8100)
3	Dealer Code

4	Date Completed
5	This TSB Number

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Repair Procedure (Continued)

- Flash reprogram the ECM (PCM).

NOTE

- The GR8 Battery Diagnostic Station **MUST** be used in Power Supply Mode to maintain battery voltage at 13.5 volts while flash reprogramming the vehicle.
- For details on how to use the GR8 Battery Diagnostic Station, refer to the [GR8 Instruction Manual](#) located on the Technical Information System (TIS), *Diagnostics – Battery*.

Follow the procedures outlined in TSB No. [SS002-07](#), "Techstream ECU Flash Reprogramming Procedure", and flash the ECM (PCM) with the NEW calibration file update.

- Install the Authorized Modifications Label.
 - Using a permanent marker, enter the following information on the label:
 - ECM part number [Refer to the **Parts Information** section for the **CURRENT PART NUMBER**]
 - Calibration ID(s) [Refer to the **Calibration Identification Chart** for the **NEW CALIBRATION ID**]
 - Dealer Code
 - Repair Date
 - Change Authority [**This TSB number**]
 - Affix the Authorized Modifications Label to the vehicle at the location shown in Figure 1. The Authorized Modifications Label is available through the MDC, P/N 00451-00001-LBL.
- Using Techstream, run the Automatic EVAP System check.

System Select > Engine and ECT > Utility > EVAP System

 - PASS** — Repair is complete.
 - FAIL** — Refer to the Repair Manual for EVAP system diagnosis.

Refer to the Technical Information System (TIS), 2010 model year Corolla or Matrix Repair Manual:

2010 [Corolla](#) / [Matrix](#), *Engine/Hybrid System – Engine Control – "2ZR-FE Engine Control: SFI System: EVAP System"*
- Test drive the vehicle to confirm proper vehicle operation.