

M.I.L. "ON" DTC P0171, P0441, and/or P0455

Service Category Engine/Hybrid System

Section Engine Control

Market USA

Toyota Supports
 ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2009	Corolla	Engine(s): 2ZR Transmission(s): 5MT, 4AT VDS(s): BL40E, BU40E
2009	Matrix	Drive Type(s): 2WD Engine(s): 2ZR Transmission(s): 4AT, 5MT VDS(s): KU40E

Introduction

Some 2009 model year Corolla and Matrix vehicles equipped with a 2ZR-FE engine may exhibit a M.I.L. "ON" condition with one or more of the Diagnostic Trouble Codes (DTCs) P0171, P0441, or P0455 stored in the Engine Control Module or ECM (SAE term: Powertrain Control Module/PCM). Please use the following procedure to repair the vehicle.

Production Change Information

This TSB applies to vehicles produced **BEFORE** the Production Change Effective VINs shown below.

MODEL	PLANT	PRODUCTION CHANGE EFFECTIVE VIN
Corolla	Kanto	JTDBL40E*99080061
	Takaoka	JTDBL40E*9J044772
	NUMMI	1NXBU40E*9Z064231
	TMMC	
Matrix		2T1KU40E*9C063138

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Warranty Information

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
EG8052	R & R Engine Control Computer (ECM/PCM)	0.5	89661-02###	01	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 correction of a problem based upon a customer's specific complaint.

Parts Information

MODEL	DRIVETRAIN	PREVIOUS PART NUMBER	CURRENT PART NUMBER	PART NAME	QTY
Corolla	4AT	89661-02M90	89661-02M92	Computer, Engine Control (ECM/PCM)	1
		89661-02M91			
Matrix		89661-02L70	89661-02L72		1
		89661-02L71			
Corolla & Matrix	5MT	89661-02L80	89661-02L82		1
		89661-02L81			

Required Tools & Equipment

REQUIRED EQUIPMENT	SUPPLIER	PART NUMBER	QTY
TIS Techstream* NOTE: Software version 4.00.017 or later is required.	ADE	TSPKG1	1
Digital Battery System Analyzer* NOTE: All components from this kit/set are required.	SPX/OTC	00002-V8150-KIT	1

* Essential SST.

NOTE

- Additional TIS Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.
- Additional SSTs may be ordered by calling SPX/OTC at 1-800-933-8335.

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Inspection Procedure

Some 2009 model year Corolla and Matrix vehicles will set a M.I.L. "ON" DTC P0171, P0441, and/or P0455 as a result of the Purge VSV being continuously grounded by the ECM (PCM) instead of the normal duty cycled ground.

1. Confirm normal operation of the Purge VSV.

Refer to the Technical Information System (TIS), 2009 model year Corolla/Matrix Repair Manual:

- [Corolla](#) / [Matrix](#): *Engine/Hybrid System – Engine Control – “2ZR-FE Engine Control: SFI System: EVAP System”*

2. If the Purge VSV operates correctly per the Repair Manual diagnostics, replace the ECM (PCM).
3. If the Purge VSV does NOT operate correctly, follow the diagnostic procedures in the Repair Manual to repair.

Repair Procedure

1. Replace the ECM (PCM).

Refer to TIS, 2009 model year Corolla/Matrix Repair Manual:

- [Corolla](#) / [Matrix](#): *Engine/Hybrid System – Engine Control – “2ZR-FE Engine Control: ECM: Removal”*
- [Corolla](#) / [Matrix](#): *Engine/Hybrid System – Engine Control – “2ZR-FE Engine Control: ECM: Installation”*

2. Register the VIN into the replacement ECM (PCM).

Refer to TIS, 2009 model year Corolla/Matrix Repair Manual:

- [Corolla](#) / [Matrix](#): *Engine/Hybrid System – Engine Control – “2ZR-FE Engine Control: SFI System: Registration”*

3. Perform the Automatic EVAP System Check and verify that NO pending DTCs set.