

Random Misfire Under High Load

Service Category Engine/Hybrid System

Section Engine Control

Market USA

Toyota Supports
 ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2019	Avalon	WMI(s): 4T1 VDS(s): BZ1FB
2018	Camry	WMI(s): 4T1 VDS(s): BZ1HK

REVISION NOTICE

February 7, 2018 Rev1:

- **Applicability has been updated to include 2019 model year Avalon vehicles.**
- **The entire bulletin has been updated.**

Any previous printed versions of this bulletin should be discarded.

Introduction

Some 2018 model year Camry and 2019 model year Avalon vehicles equipped with 2GR-FKS (V6) engines may exhibit a MIL ON condition with one or more of the following Diagnostic Trouble Codes (DTCs).

- P030000 (Random/Multiple Cylinder Misfire Detected)
- P030027 (Random/Multiple Cylinder Misfire Detected [Emission] Signal Rate of Change Above Threshold)
- P030085 (Random/Multiple Cylinder Misfire Detected [Over Temperature] Signal Above Allowable Range)
- P030500 (Cylinder 5 Misfire Detected)
- P030600 (Cylinder 6 Misfire Detected)
- P160500 (Rough Idling)

Common characteristics when the misfire occurs are:

- High engine speed (5000 – 6500 rpm)
- High engine load (100%+)
- Accelerator pedal position at 100%

The Engine Control Module (ECM) (SAE term: Powertrain Control Module [PCM]) logic has been modified to reduce the possibility of this condition. Follow the Repair Procedure in this bulletin to address this condition.

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Warranty Information

MODEL	OP CODE	DESCRIPTION	TIMING	TIME	OFF	T1	T2
Camry	EG1805	Reprogram ECM (PCM)	Before Hardware Change*	0.4	89661-06Y20	8A	99
			After Hardware Change*		89661-0X170		
Avalon			–		89661-07661		

*For Camry vehicles ONLY:

To determine whether the vehicle is before or after hardware change, reference [T-SB-0010-18](#), *Transaxle Assembly and ECM (PCM) Software Confirmation*.

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.

Parts Information

MODEL	TIMING	PART NUMBER		PART NAME	QTY
		PREVIOUS	NEW		
Camry	Before Hardware Change*	89661-06Y20	89661-06Y21	Computer, Engine Control (ECM)	–
	After Hardware Change*	89661-0X170	89661-0X171		
Avalon		89661-07661	89661-07662		
All	–	00451-00001-LBL		Authorized Modifications Labels	1

*For Camry vehicles ONLY:

To determine whether the vehicle is before or after hardware change, reference [T-SB-0010-18](#), *Transaxle Assembly and ECM (PCM) Software Confirmation*.

NOTE

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

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Required Tools & Equipment

REQUIRED EQUIPMENT	SUPPLIER	PART NUMBER	QTY
Techstream 2.0*	ADE	TS2UNIT	1
Techstream Lite		TSLITEPDLR01	
Techstream Lite (Green Cable)		TSLP2DLR01	

*Essential SST.

NOTE

- Only ONE of the Techstream units listed above is required.
- Software version 13.30.018 or later is required.
- Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.
- Use Techstream or an approved J2534 interface to perform flash reprogramming updates. Visit techinfo.toyota.com for more information regarding J2534 reprogramming.

SPECIAL SERVICE TOOLS (SST)	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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Calibration Information

MODEL	TIMING	ECU TYPE	CALIBRATION ID	
			PREVIOUS	NEW
Camry	Before Hardware Change*	Main	8966306L5000	8966306L5100
		Sub	896650644000	
	After Hardware Change*	Main	8966306L4000 8966306L5000 8966306L5100	8966306L4100
		Sub	896650644000	896650654000
Avalon	–	–	896630725000 896630725100 896630725200	896630725300

*For Camry vehicles ONLY:

To determine whether the vehicle is before or after hardware change, reference [T-SB-0010-18](#), *Transaxle Assembly and ECM (PCM) Software Confirmation*.

NOTE

Use the NEW calibration ID that corresponds to the PREVIOUS calibration ID currently installed in the vehicle.

Repair Procedure

- Using Techstream, check for the following stored DTCs:
 - P030000 (Random/Multiple Cylinder Misfire Detected)
 - P030027 (Random/Multiple Cylinder Misfire Detected [Emission] Signal Rate of Change Above Threshold)
 - P030085 (Random/Multiple Cylinder Misfire Detected [Over Temperature] Signal Above Allowable Range)
 - P030500 (Cylinder 5 Misfire Detected)
 - P030600 (Cylinder 6 Misfire Detected)
 - P160500 (Rough Idling)

Are ANY of the DTCs present?

- YES** — Continue to step 2.
- NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

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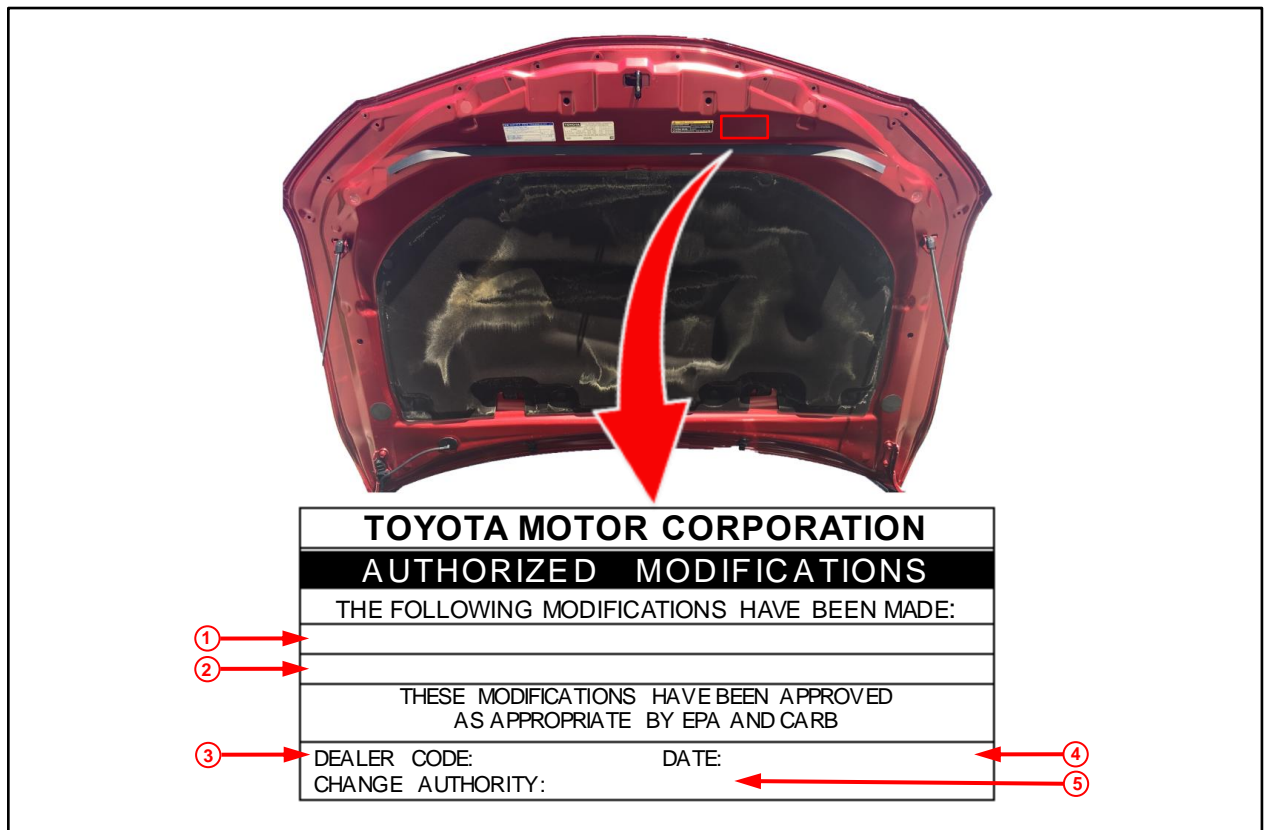
Repair Procedure (continued)

- Check for the Authorized Modifications Label affixed to the vehicle in the locations shown below. Confirm if the ECM (PCM) calibration has been updated.

Is the calibration ID listed the latest ECM (PCM) calibration?

- YES** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
- NO** — Continue to step 3.

Figure 1. Location of Authorized Modifications Label on 2018 Camry and 2019 Avalon



1	Replacement ECM (PCM) Part Number (e.g., 89661-06Y21)
2	New Calibration ID (e.g., 8966306L5100)
3	Dealer Code

4	Date Completed
5	This SB Number

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Repair Procedure (continued)

3. Flash reprogram the ECM (PCM).

NOTE

- The GR8 battery diagnostic station **MUST** be used in Power Supply Mode to maintain battery voltage at 13.5V while flash reprogramming the vehicle.
- For details on how to use the GR8 battery diagnostic station, refer to the [GR8 Instruction Manual](#) located at TIS – *Diagnostics – Tools & Equipment – Battery Diagnostics*.

Follow the procedures outlined in Service Bulletin [T-SB-0134-16](#), *Techstream ECU Flash Reprogramming Procedure*, and flash the ECM (PCM) with the NEW calibration file update.

4. Prepare and install the Authorized Modifications Label.

A. Using a permanent marker, enter the following information on the label:

- ECM (PCM) part number [*Refer to the **Parts Information** section for the **NEW PART NUMBER***]
- Calibration ID(s) [*Refer to the **Calibration Information** section for the **NEW CALIBRATION ID***]
- Dealer Code
- Repair Date
- Change Authority [***This bulletin number***]

B. Install the Authorized Modifications Label onto the vehicle at the location shown in Figure 1. The Authorized Modifications Label is available through the MDC, P/N 00451-00001-LBL.

5. Test-drive the vehicle to confirm proper operation.