

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 |
|---------|----------|------------------------------|
| 2018 | Camry | WMI(s): 4T1 VDS(s): BZ1HK |

Introduction

Some 2018 model year Camry 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) 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

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

*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

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

*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 13.10.019 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.

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 |

*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.

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Repair Procedure

1. 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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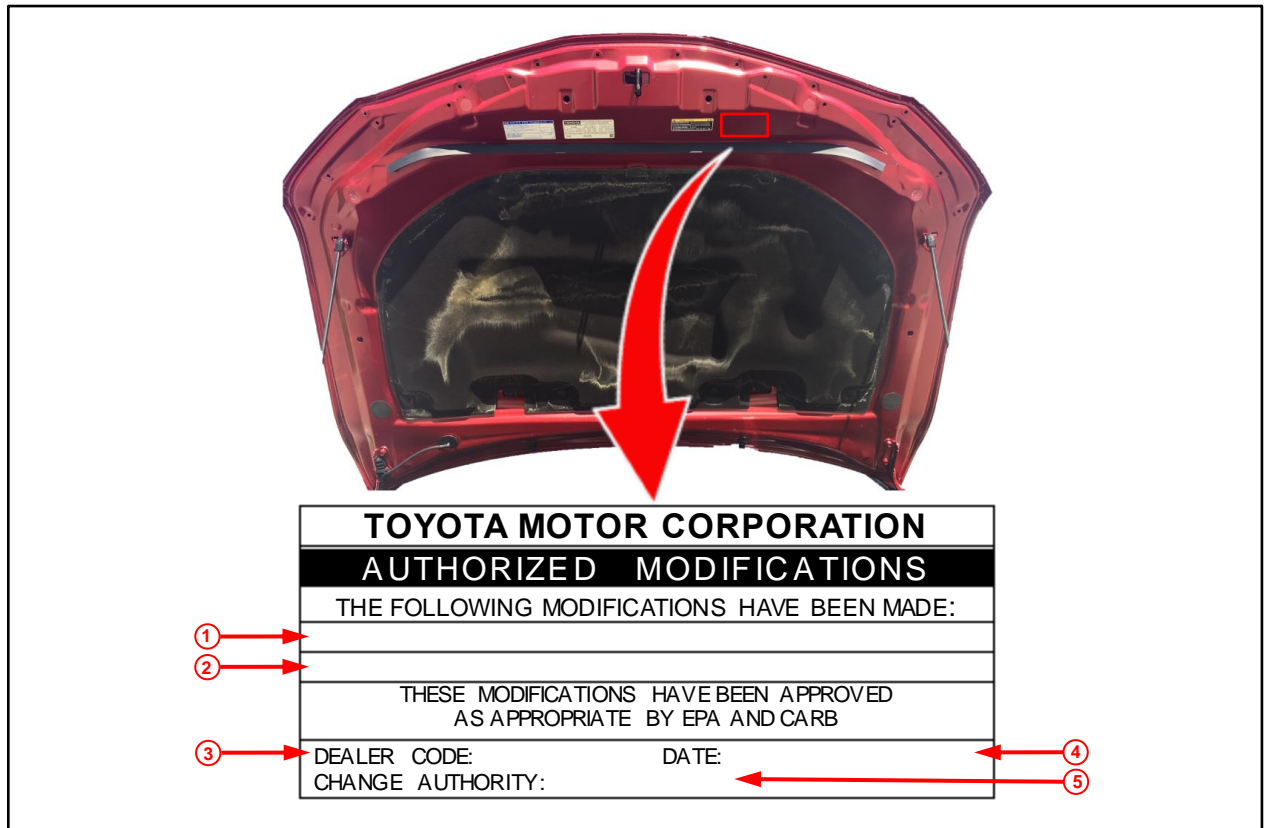
Repair Procedure (continued)

- 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



| | |
|----------|---|
| 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 vehicle operation.