

# Random Misfire Under High Load

**Service****Category** Engine/Hybrid System**Section**

Engine Control

**Market** USAToyota Supports  
ASE Certification **Applicability**

| YEAR(S) | MODEL(S) | ADDITIONAL INFORMATION       |
|---------|----------|------------------------------|
| 2019    | Avalon   | WMI(s): 4T1<br>VDS(s): BZ1FB |
| 2018    | Camry    | WMI(s): 4T1<br>VDS(s): BZ1HK |

**REVISION NOTICE****December 11, 2020 Rev2:**

- The entire bulletin has been updated.

**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.

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### Introduction (continued)

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.

### Warranty Information

| MODEL  | OP CODE | DESCRIPTION         | TIMING                  | TIME | OFP         | T1 | T2 |
|--------|---------|---------------------|-------------------------|------|-------------|----|----|
| Camry  | 800269  | Reprogram ECM (PCM) | Before Hardware Change* | 0.7  | 89661-06Y20 | 8A | 99 |
|        |         |                     | After Hardware Change*  |      | 89661-0X170 |    |    |
| Avalon | 800269N |                     | —                       |      | 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.**

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### Parts Information

| MODEL  | JUDGEMENT<br>(B1 CLUTCH)   | PART NUMBER     |             | PART NAME                          | QTY |
|--------|----------------------------|-----------------|-------------|------------------------------------|-----|
|        |                            | PREVIOUS        | NEW         |                                    |     |
| Camry  | Before<br>Hardware Change* | 89661-06Y20     | 89661-06Y23 | Computer,<br>Engine Control (ECM)  | —   |
|        | After Hardware Change*     | 89661-0X170     | 89661-0X173 |                                    |     |
| Avalon | —                          | 89661-07661     | 89661-07664 |                                    |     |
| All    |                            | 00451-00001-LBL |             | Authorized<br>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

Authorized Modifications Labels may be ordered in packages of 25 from the Materials Distribution Center (MDC) through *Dealer Daily – Parts – Dealer Support Materials Orders*.

### Required Tools & Equipment

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

\*Essential SST.

#### NOTE

- Only ONE of the Techstream units listed above is required.
- Software version 15.30.027 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](http://techinfo.toyota.com) for more information regarding J2534 reprogramming.

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### Required Tools & Equipment (continued)

| SPECIAL SERVICE TOOLS (SST) | PART NUMBER                 | QTY |
|-----------------------------|-----------------------------|-----|
| Battery Diagnostic Tool*    | <a href="#">DCA-8000P T</a> | 1   |

\*Essential SST.

#### NOTE

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

### Calibration Information

| MODEL  | JUDGEMENT<br>(B1 CLUTCH) | ECU TYPE     | CALIBRATION ID                               |                                                               |
|--------|--------------------------|--------------|----------------------------------------------|---------------------------------------------------------------|
|        |                          |              | PREVIOUS                                     | NEW                                                           |
| Camry  | Before Hardware Change*  | Engine       | 8966306L5000                                 | 8966306L5100*                                                 |
|        |                          | Transmission | 896650644000                                 |                                                               |
|        | After Hardware Change*   | Engine       | 8966306L4000<br>8966306L5000<br>8966306L5100 | 8966306L4100*                                                 |
|        |                          | Transmission | 896650644000                                 | 896650654000*                                                 |
| Avalon | —                        | Engine       | 896630725100<br>896630725200<br>896630725300 | <a href="#">896630725400/</a><br><a href="#">896650701100</a> |
|        |                          | Transmission | 896650701000                                 |                                                               |

\*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*.

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### Repair Procedure

1. Confirm the condition exists.

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.

Does the vehicle exhibit a MIL ON condition with one or more of the above-mentioned DTCs?

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

2. Is the vehicle a Camry model?

- **YES** — Continue to step 3.
- **NO** — For Avalon model vehicles go to step 4.

3. For 2018 model year Camry vehicles follow the procedures outlined in Service Bulletin No. [T-SB-0010-18](#) *Transaxle Assembly and ECM (PCM) Software Confirmation* to confirm that the correct ECM (PCM) hardware and software are used based on the transaxle assembly part number and serial number.

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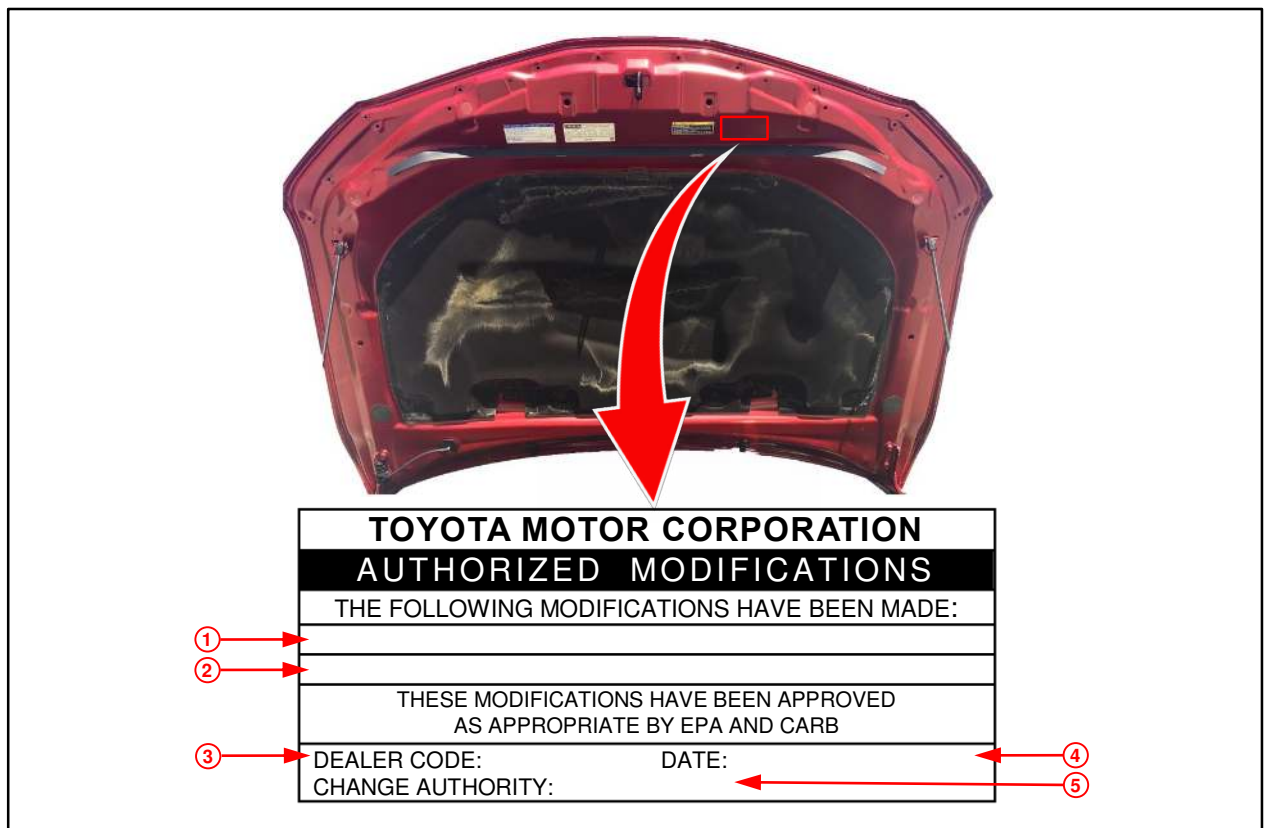
### Repair Procedure (continued)

4. Use Techstream to confirm if the ECM (PCM) calibration has been updated and check for the Authorized Modifications Label affixed to the vehicle in the location shown below.

Is the calibration ID listed in Techstream and on the label the latest ECM (PCM) calibration?

- **YES** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
- **NO** — Continue to step 5.

**Figure 1. Location of Authorized Modifications Label on 2019 Avalon**



|   |                                                          |
|---|----------------------------------------------------------|
| 1 | Replacement ECM (PCM) Part Number<br>(e.g., 89661-07664) |
| 2 | New Calibration ID (e.g., 896630725400)                  |
| 3 | Dealer Code                                              |

|   |                |
|---|----------------|
| 4 | Date Completed |
| 5 | This SB Number |

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### Repair Procedure (continued)

5. Flash reprogram the ECM (PCM).

#### NOTE

- The battery diagnostic tool **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 battery diagnostic station, refer to the [DCA-8000 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.

6. 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.
7. Test-drive the vehicle to confirm proper operation.