

Extended Crank and/or MIL ON With DTC P0171, P0174, P0172, P0175, P1604 (Flex-Fuel)

Service Category Engine/Hybrid System

Section Starting

Market USA

Toyota Supports
ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2009 - 2018	Sequoia	VDS(s): BW5G1, BW64A, BW67A, BW68A, DW5G1, JW5G1
2009 - 2019	Tundra	VDS(s): AW5F1, BW541, BW581, BW5F1, CW541, CW5F1, DW541, DW581, DW5F1, EW5F1, FW5F1, GW5F1, HW5F1, HWSF1, KW521, KW5F1, MW521, MW5F1, NW5F1, PW5F1, RW5F1, SW5F1, TW5F1, UW5F1

SUPERSESION NOTICE

The information contained in this bulletin supersedes Service Bulletin No. T-SB-0058-13. Service Bulletin No. T-SB-0058-13 is obsolete and any printed versions should be discarded.

Introduction

Some 2009 – 2018 model year Sequoia and 2009 – 2019 model year Tundra vehicles equipped with a 3UR-FBE engine may exhibit a hard start and/or MIL ON condition with one or more of the following Diagnostic Trouble Codes (DTCs).

- DTC P0171 and/or P0174 (System Too Lean Bank 1/Bank 2)
- DTC P0172 and/or P0175 (System Too Rich Bank 1/Bank 2)
- DTC P1604 (Startability Malfunction)

Techstream Data List analysis may reveal negative fuel trims and an elevated alcohol density estimate relative to the vehicle's actual fuel alcohol content. Follow the Repair Procedure in this bulletin to address this condition.

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Warranty Information

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
EG1904	Reprogram Engine ECM (PCM), R & R Fuel Pump, Reset Fuel Alcohol Learn Value, and Add Fuel	2.2	89661-0C###	07	74

*A maximum of \$15.00 (3 gallons of fuel) will be allowed under sublet type "GA."

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

PART NUMBER		PART NAME	QTY
PREVIOUS	NEW		
77020-0C170		Tube Assy, Fuel Suction W/Pump and Gage	1
77020-0C090			1
77020-0C120			1
89661-#####		Computer, Engine Control	—
00451-00001-LBL		Authorized Modifications Labels	1

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 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 14.10.028 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	MODEL YEAR	ENGINE	DRIVETRAIN	TOW PACKAGE	FUEL TANK	CALIBRATION ID	
						PREVIOUS	NEW
Tundra	2019	3UR-FBE	4WD	Yes	Large	30CP8001	30CP8101
					Small	30CP7001	30CP7101
	2018				Large	30CN6001 30CN6101	30CN6201
					Small	30CN5001 30CN5101	30CN5201
	2016 – 2017		2WD		Large	30CM5000 30CM5100	30CM5200
					Small	30CM7000 30CM7100	30CM7200
			4WD		Large	30CM5001 30CM5101	30CM5201
					Small	30CM7001 30CM7101	30CM7201
	2014 – 2015		4WD		Small	30CL4000 30CL4100 30CL4200 30CL4300 30CL4400 50C84000	30CL4500 / 50C84100

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Calibration Information (continued)

MODEL	MODEL YEAR	ENGINE	DRIVETRAIN	TOW PACKAGE	FUEL TANK	CALIBRATION ID	
						PREVIOUS	NEW
Tundra	2012 – 2013	3UR-FBE	4WD	Yes	Small	30CK0000 30CK0100 30CK0200 30CK0300 30CK0400 30CK0500 30CK0600	30CK0700
				No		30CJ9000 30CJ9100 30CJ9200 30CJ9300 30CJ9400 30CJ9500 30CJ9600	30CJ9700
	Yes			30CG5000 30CG5100		30CG5200	
	No			30CG4000		30CG4100	
	Yes			30CD7000 30CD7100 30CD7200		30CD7300	
	No			30CD6000 30CD6100		30CD6200	
	Yes			30CA0000 30CA0100 30CA0200 50C31000		30CA0300 / 50C31100	
	No			30C89000 30C89100 30C89200 50C30000		30C89300 / 50C30100	
	2011						
	2010						
	2009						

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Calibration Information (continued)

MODEL	MODEL YEAR	ENGINE	DRIVETRAIN	TOW PACKAGE	FUEL TANK	CALIBRATION ID	
						PREVIOUS	NEW
Sequoia	2018	3UR-FBE	4WD	Yes	Small	30CP0000 30CP0100	30CP0200
	2016 – 2017					30CM4000 30CM4100	30CM4200
	2014 – 2015					30CM0000 30CM0100 30CM0200 30CM0300 30CM0400 50CA2000	30CM0500 / 50CA2100
	2012 – 2013					30CK6000 30CK6100 30CK6200 30CK6300 30CK6400 30CK6500 30CK6600	30CK6700
	2011					30CJ2000	30CJ2100
	2010					30CE2000 30CE2100	30CE2200
	2009					30CA2000 30CA2100 30CA2200 50C33000	30CA2300 / 50C33100

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Repair Procedure

1. Confirm the condition exists.

Is a hard start condition and/or ANY of the DTCs described in the Introduction present?

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

2. Using Techstream Data List (*Engine and ECT – Data List*), locate the fuel trim and alcohol density estimate parameters.

- The fuel trim values are $\leq -10\%$.
- For vehicles fueled with E0 – E10, the alcohol density estimate is $\geq 15\%$.

NOTE

Actual fuel alcohol density can be measured.

Refer to TIS, applicable model and model year Repair Manual:

- [2012](#) / [2013](#) / [2014](#) / [2015](#) / [2016 – 2019](#) Tundra:
Engine/Hybrid System – Fuel System – “3UR-FBE Fuel: Fuel System: On-Vehicle Inspection”
- [2012](#) / [2013](#) / [2014](#) / [2015](#) / [2016 – 2018](#) Sequoia:
Engine/Hybrid System – Fuel System – “3UR-FBE Fuel: Fuel System: On-Vehicle Inspection”

Is AT LEAST one of the statements above true?

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

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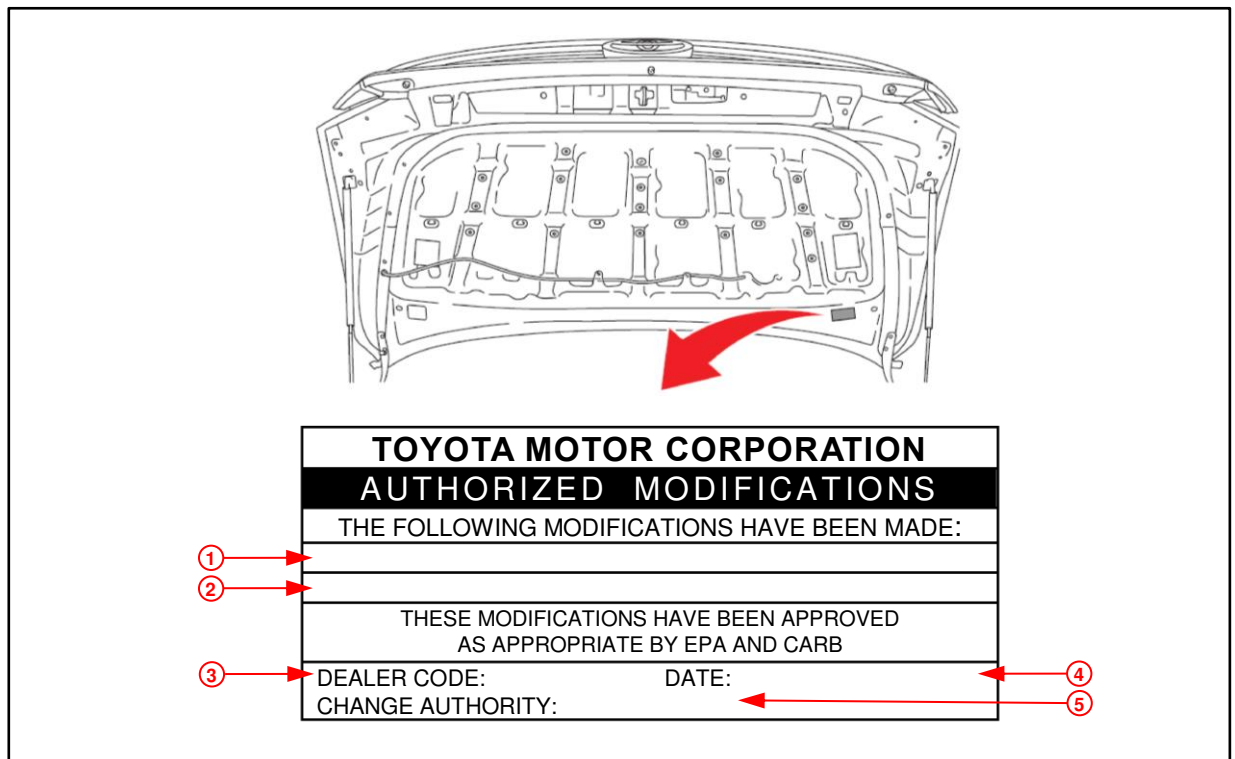
Repair Procedure (continued)

3. 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 4.

Figure 1. Location of Authorized Modifications Label on 2009 – 2018 Sequoia



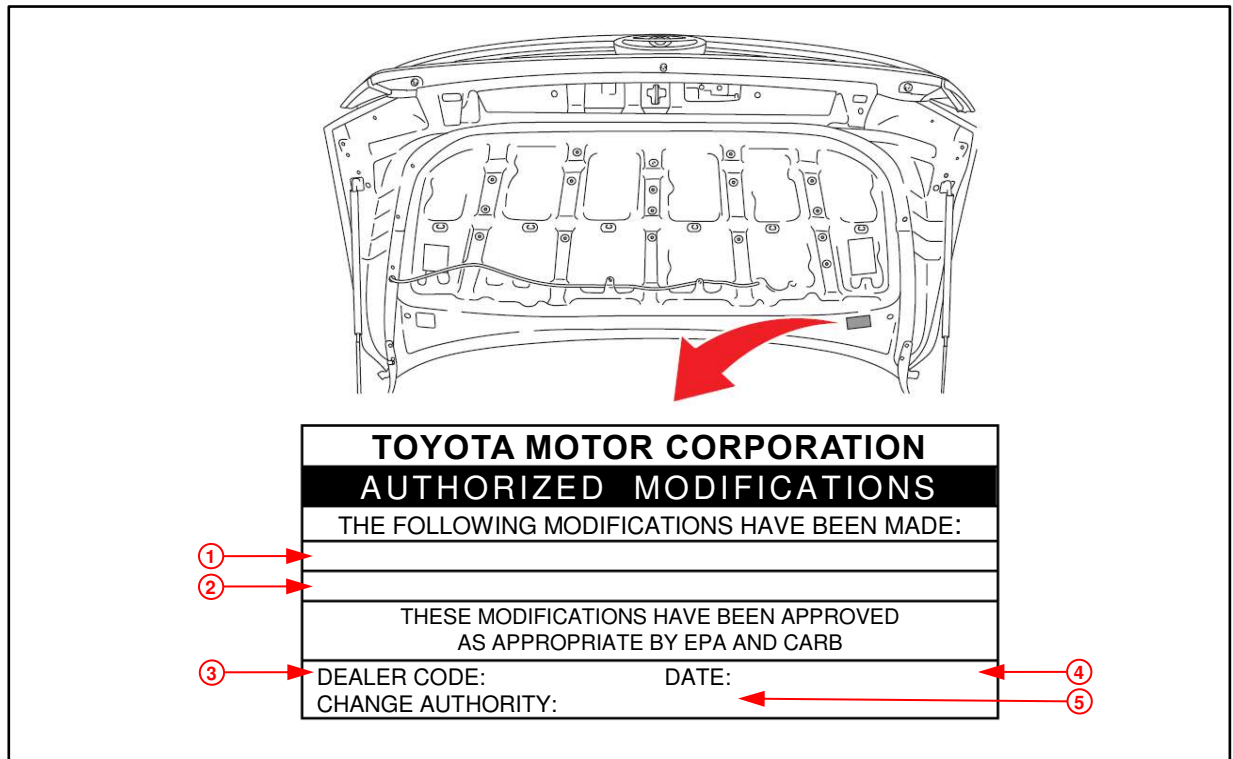
1	Replacement ECM (PCM) Part Number (e.g., 89661-0CS12)
2	New Calibration ID (e.g., 30CP0200)
3	Dealer Code

4	Date Completed
5	This SB Number

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Repair Procedure (continued)

Figure 2. Location of Authorized Modifications Label on 2009 – 2019 Tundra



1	Replacement ECM (PCM) Part Number (e.g., 89661-0CS12)
2	New Calibration ID (e.g., 30CP0200)
3	Dealer Code

4	Date Completed
5	This SB Number

4. 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.

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Repair Procedure (continued)

5. 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 Figures 1 and 2. The Authorized Modifications Label is available through the MDC, P/N 00451-00001-LBL.

6. Replace the fuel pump.
 - A. Remove the fuel pump.
Refer to TIS, applicable model and model year Repair Manual:
 - [2009](#) / [2010](#) / [2011](#) / [2012](#) / [2013](#) / [2014](#) / [2015](#) / [2016](#) / [2017](#) / [2018](#) Sequoia: *Engine/Hybrid System – 3UR-FBE Fuel – “3UR-FBE Fuel: Fuel Pump: Removal”*
 - [2009](#) / [2010](#) / [2011](#) / [2012](#) / [2013](#) / [2014](#) / [2015](#) / [2016](#) / [2017](#) / [2018](#) / [2019](#) Tundra: *Engine/Hybrid System – 3UR-FBE Fuel – “3UR-FBE Fuel: Fuel Pump: Removal”*
 - B. Install the NEW fuel pump.
Refer to TIS, applicable model and model year Repair Manual:
 - [2009](#) / [2010](#) / [2011](#) / [2012](#) / [2013](#) / [2014](#) / [2015](#) / [2016](#) / [2017](#) / [2018](#) Sequoia: *Engine/Hybrid System – 3UR-FBE Fuel – “3UR-FBE Fuel: Fuel Pump: Installation”*
 - [2009](#) / [2010](#) / [2011](#) / [2012](#) / [2013](#) / [2014](#) / [2015](#) / [2016](#) / [2017](#) / [2018](#) / [2019](#) Tundra: *Engine/Hybrid System – 3UR-FBE Fuel – “3UR-FBE Fuel: Fuel Pump: Installation”*

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Repair Procedure (continued)

7. Using Techstream Utility, perform the learning value reset.

NOTICE

Engine learned values **CANNOT** be reset by disconnecting the battery negative (–) battery terminal or removing the EFI No. 1 and ETCS fuses.

- A. Turn the ignition switch ON.
 - B. Navigate to the utility: *Powertrain – Engine and ECT – Utility – Learning Value Reset*
 - C. Ensure the following conditions are met:
 - Ignition switch: ON
 - Engine: 0 RPM
 - Battery voltage: $\geq 9.0V$
 - D. Click Next.
Initialization will begin.
 - E. Click Exit.
8. Using Techstream Data List (*Engine and ECT – Data List*), confirm the fuel trim values are 0%.
9. Using Techstream Utility, perform the fuel density learning value reset.
 - A. Turn the ignition switch ON.
 - B. Navigate to the utility:
Powertrain – Engine and ECT – Utility – Fuel Density Learning Value Reset
 - C. Ensure the following conditions are met:
 - Ignition switch: ON
 - Engine: 0 RPM
 - Battery voltage: $\geq 9.0V$
 - D. Click Next.
Initialization will begin.
 - E. Click Exit.
10. Turn the ignition switch OFF.

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Repair Procedure (continued)

11. Add 3 gallons of fuel to the vehicle.
12. Turn the ignition switch ON.
13. Using Techstream Data List (*Engine and ECT – Data List*), confirm the alcohol density learning parameter shows INCOMPLETE.
14. Test-drive the vehicle.