

OBSOLETE

PLEASE SEE SSC 60I (superseding service campaign)



Technical Service BULLETIN

September 7, 2005

Title:

ECM CALIBRATION UPDATE: M.I.L. "ON" DTC P0420 AND/OR P0430

Models:

'01 – '03 Highlander (2AZ-FE)

ENGINE
EG041-05

TSB UPDATE NOTICE:

The information contained in this TSB supercedes TSB No. EG006-03. TSB No. EG006-03 is now obsolete and should be discarded.

Introduction Under certain driving conditions, some 2001– 2003 model year Highlander vehicles equipped with a 2AZ-FE engine may exhibit a M.I.L. "ON" with the following DTCs:

- P0420 (Catalyst System Efficiency Below Threshold [Bank 1])
- P0430 (Catalyst System Efficiency Below Threshold [Bank 2])

The Engine Control Module (ECM) (SAE term: Powertrain Control Module/PCM) logic has been modified to improve this condition.

NOTE:

- The calibration files in this TSB supercede the calibration used in Limited Service Campaign (LSC) 10B.
- Version 13.0a or later Diagnostic Tester software is required to perform this procedure.
- Before proceeding, verify the ECM (PCM) calibration has NOT been updated by checking for the Authorized Modifications Label (shown in step 2 of the Repair Procedure).

Applicable Vehicles

- 2001 – 2003 model year **Highlander** vehicles equipped with the **2AZ-FE engine**.

Warranty Information

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
EL1011	Recalibrate ECM (PCM) Engine	0.5	89661-48230 89661-48240 89661-48231 89661-48241 89661-48290 89661-48300 89661-48430 89661-48440	87	99

Applicable Warranty*:

This repair is covered under the Toyota Federal Emissions 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

PREVIOUS PART NUMBER	CURRENT PART NUMBER	PART NAME	QTY
N/A	00451-00001-LBL	Authorized Modifications Label	1

NOTE:

Authorized Modification Labels may be ordered in packages of 25 from the Materials Distribution Center (MDC) through Dealer Daily Dealer Support Materials System or by calling the MDC at 1-800-622-2033.

Required SSTs

ITEM NO.	SPECIAL SERVICE TOOLS (SSTs)	PART NUMBER	QTY	DRW**
1	<p>Toyota Diagnostic Tester Kit*</p> <p>NOTE:</p> <ul style="list-style-type: none"> All components from this kit/set are required 12 Megabyte Diagnostic Tester Program Card (P/N 01002593-005) with version 13.0a Software (or later) is required 	TOY220036	1	9



* Essential SSTs.

** Refers to drawer number in SST Storage System.

NOTE:

Additional Diagnostic Tester Kits, Program Cards, or other SSTs may be ordered by calling SPX/OTC at 1-800-933-8335.

Calibration Identification Chart

MODEL YEAR	ENGINE	DRIVETRAIN	PREVIOUS CALIBRATION ID	NEW CALIBRATION ID
2001 – 2003	2AZ-FE	2WD	34805000 34805100 34807000 34811000	34811100
		4WD	34806000 34806100 34808000 34812000	34812100

Repair Procedure

1. Check for the Authorized Modifications Label affixed to the vehicle in the location shown in Figure 1. Confirm if ECM (PCM) calibration has been updated. If NOT the latest ECM (PCM) calibration — go to step 2.

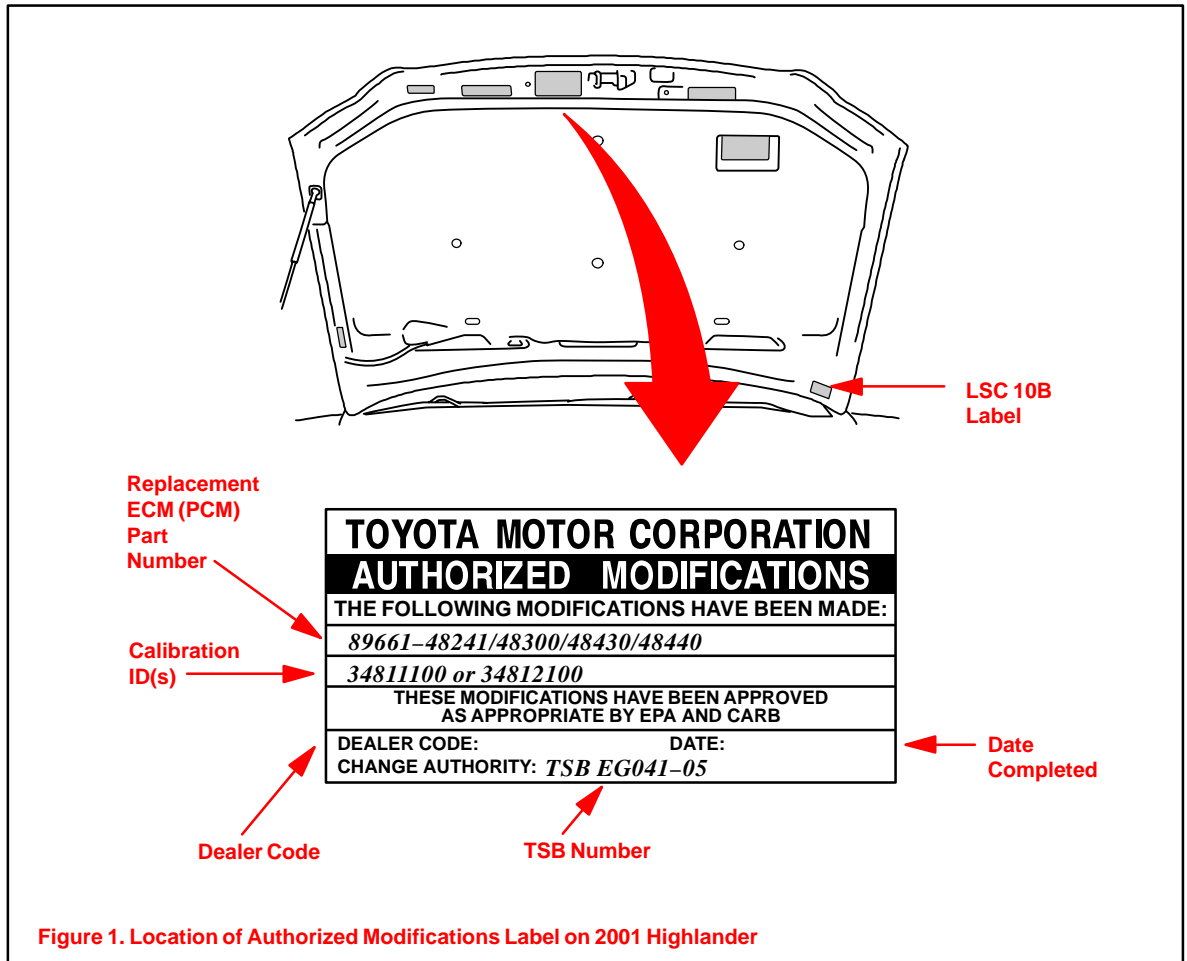
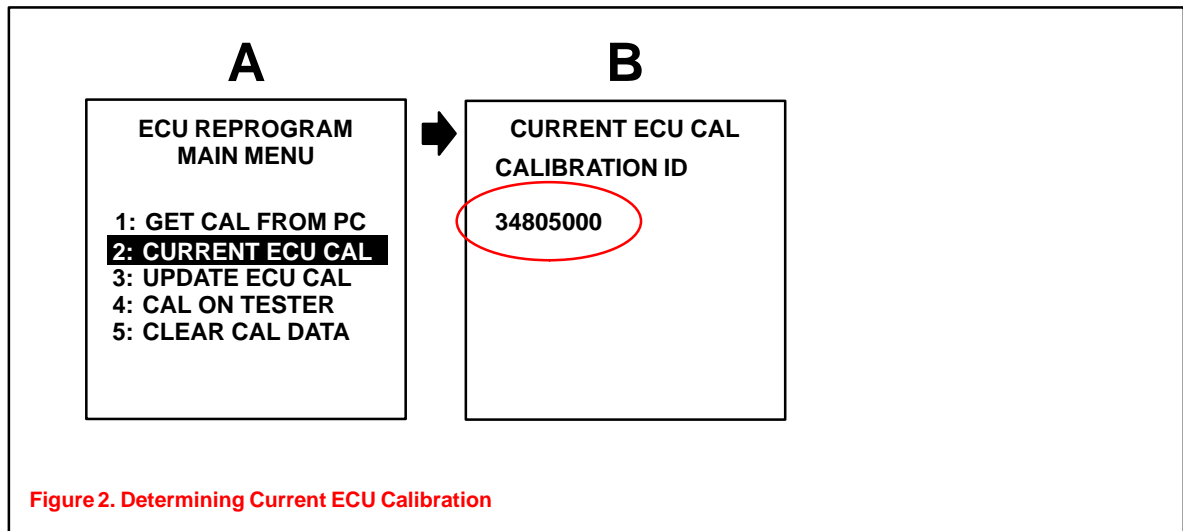


Figure 1. Location of Authorized Modifications Label on 2001 Highlander

Repair Procedure
(Continued)

2. Connect the Diagnostic Tester to the vehicle and select CURRENT ECU CAL from the ECU REPROGRAM MAIN MENU. Determine the vehicle's current ECU calibration (see Figure 2).
 - The sample screen prints seen below are the 13.0a software version and may differ from subsequent software versions.



NOTE:

- If Calibration ID matches "Previous Calibration ID" as shown in Calibration Identification Chart on page 2, proceed with flash reprogramming.
- If Calibration ID matches "New Calibration ID" as shown in Calibration Identification Chart, this vehicle has already been programmed. Refer to the Technical Information System (TIS) for diagnostic procedures applicable to any stored DTCs.

3. If the ECU calibration ID is NOT the same as the "New Calibration ID" listed previously, proceed to Flash Reprogram ECM (PCM).

Flash Reprogram ECM (PCM)

NOTE:

A battery charger **MUST** be connected to the battery during the Flash Reprogram procedure in order to maintain proper battery voltage and prevent damage to the ECM (PCM).

1. Follow the procedures outlined in TSB No. SS002-01, "ECU Flash Reprogramming Process," and flash the ECM (PCM) with the new calibration file update.
2. Enter the required information on the Authorized Modifications Label and affix it to the vehicle at the location shown in Figure 1 (page 3). The Authorized Modifications Label is available through the MDC, P/N 00451–00001–LBL.

**Repair
Procedure**
(Continued)

3. Perform the following steps to confirm that the vehicle is repaired.
 - A. Reset the Readiness test by using the "Clear DTC" function on the Diagnostic Tester.
 - To clear DTCs, refer to TIS, 2001–2003 model year Highlander Repair Manual: *Diagnostics: SFI System (2AZ-FE): Pre-Check*.
 - B. Perform Readiness Monitor Drive Patterns for Catalyst Monitor O2S type and AF Sensor type. Refer to TIS, TSB No. EG003–02: "Readiness Monitor Drive Patterns," procedures: *Catalyst Monitor (O2S Type)*, and *Catalyst Monitor (AF Sensor Type)*.
 - C. If a DTC is set during the above drive patterns, refer to the Diagnostic Trouble Code Chart in TIS, 2001–2003 model year Highlander Repair Manual: *Diagnostics: SFI System (2AZ-FE): Diagnostic Trouble Code Chart*. Test drive the vehicle to confirm normal operation.
4. If NO DTCs (pending or current) are stored, the repair is complete.