



**Technical Service  
BULLETIN**

October 5, 2005

Title:

**ECM CALIBRATION UPDATE:  
M.I.L. "ON" DTC P0136 AND/OR P0156**

Models:

'04 - '05 Land Cruiser

ENGINE  
EG046-05

**Introduction** Under certain driving conditions, some 2004 - 2005 model year Land Cruiser vehicles may exhibit a M.I.L. "ON" with one or both of the following DTCs:

- P0136 (Oxygen Sensor Circuit Malfunction [Bank 1, Sensor 2])
- P0156 (Oxygen Sensor Circuit Malfunction [Bank 2, Sensor 2])

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

**NOTE:**

- 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 1 of the Repair Procedure).

**Applicable Vehicles**

- 2004 - 2005 model year Land Cruiser vehicles.

**Warranty Information**

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
EL1011	Recalibrate ECM (PCM) Engine	0.5	89661-60A00 89661-60A01 89661-60C40	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><b>Toyota Diagnostic Tester Kit*</b></p> <p>NOTE:</p> <ul style="list-style-type: none"> <li>All components from this kit/set are required</li> <li>12 Megabyte Diagnostic Tester Program Card (P/N 01002593-005) with version 13.0a Software (or later) is required</li> </ul> 	TOY220036	1	9
2	<p><b>CAN Interface Module Kit*</b></p> <p>NOTE:</p> <ul style="list-style-type: none"> <li>All components from this kit/set are required</li> </ul> 	01002744	1	9

\* Essential SSTs.

\*\* Refers to drawer number in SST Storage System.

**NOTE:**

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

**Calibration Identification Chart**

MODEL YEAR	PREVIOUS CALIBRATION ID	NEW CALIBRATION ID
2004	36042000 36042100	36042200
2005	36062000	36062100

**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.

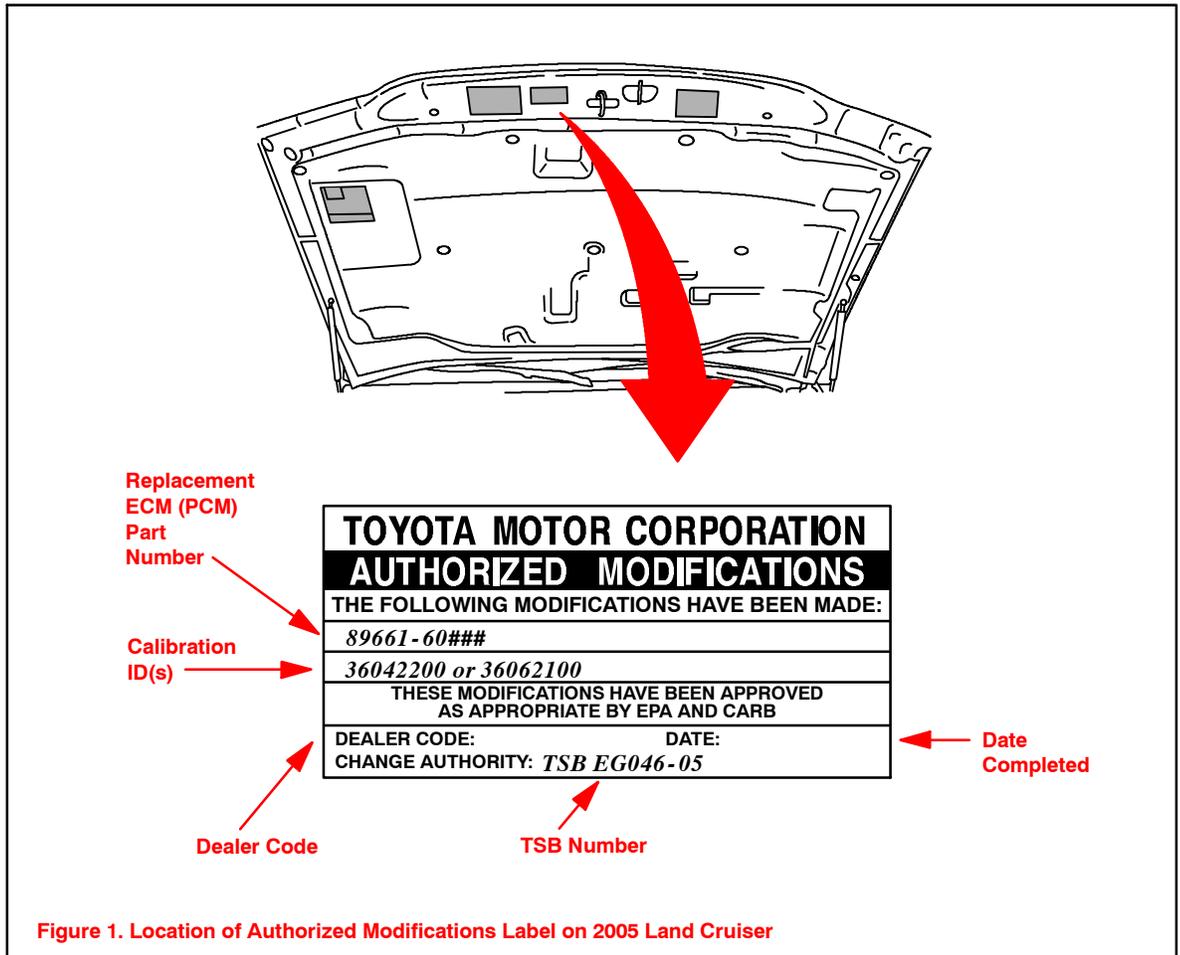
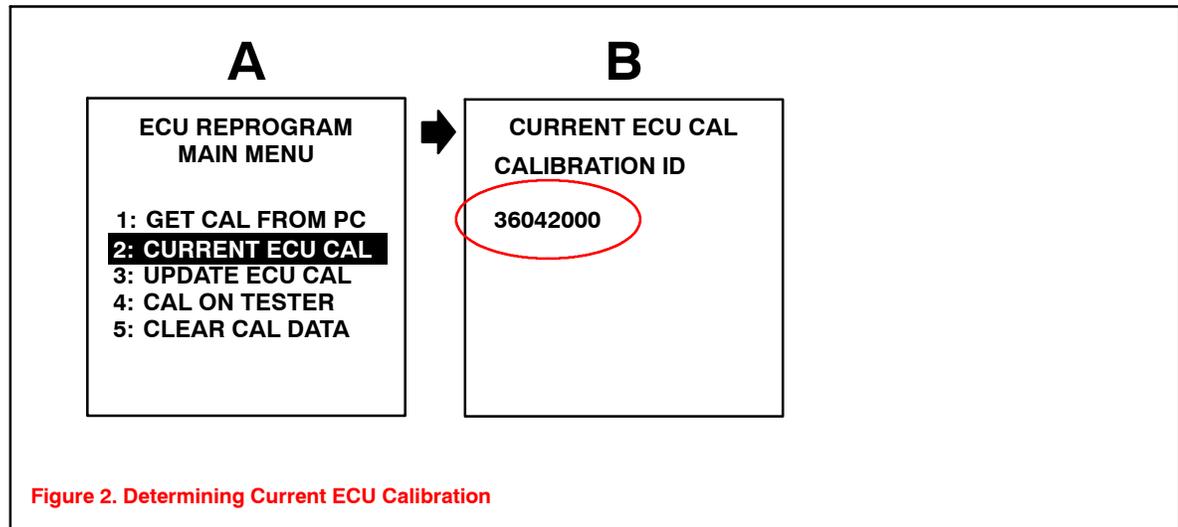


Figure 1. Location of Authorized Modifications Label on 2005 Land Cruiser

**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 and set at a medium charge setting 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, 2004 - 2005 model year Land Cruiser Repair Manual: *Diagnostics: Engine: Pre-Check*.
  - B. Perform Readiness Monitor Drive Patterns for Oxygen Sensor. Refer to TIS, TSB No. EG003-02: "Readiness Monitor Drive Patterns," procedures: *Oxygen Sensor Monitor (Front and Rear O2S System)* and *Oxygen/AF Sensor Monitor (Front AF Sensor & Rear O2S System)*.
  - C. If a DTC is set during the above drive patterns, refer to the Diagnostic Trouble Code Chart in TIS, 2004 - 2005 model year Land Cruiser Repair Manual: *Diagnostics: Engine: 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.