



**Technical Service  
BULLETIN**

July 6, 2006

Title:

**1ZZ-FE ENGINE "EXTENDED  
CRANK" CONDITION**

Models:

'05 – '06 Corolla & Matrix (2WD)

ENGINE  
EG044-06

**TSB UPDATE NOTICE:**

The information contained in this TSB supercedes TSB No. EG042-05.  
TSB No. EG042-05 is now obsolete and should be discarded.

**Introduction** Some 2005 – 2006 model year Corolla and Matrix (2WD) vehicles equipped with a 1ZZ-FE engine may exhibit an intermittent extended crank condition after a hot soak. The engine control module logic has been modified to improve this condition.

**NOTE:**

- Version 13.3a or later Diagnostic Tester software is required to perform this procedure.
- Before proceeding, verify the ECM (Engine Control Module) (SAE term: Powertrain Control Module/PCM) calibration has NOT been updated by checking for the Authorized Modifications Label (shown in step 1 of the Repair Procedure).

**Applicable Vehicles**

- 2005 – 2006 model year **Corolla** and **Matrix (2WD)** vehicles equipped with the 1ZZ-FE engine.

**Warranty Information**

OP CODE	DESCRIPTION	TIME	MODEL YEAR	OFP	T1	T2
EG5020	Recalibrate ECM (PCM) Engine	0.5	2005	89661-02C0# 89661-02C1# 89661-0112# 89661-0113# 89661-0Z04#	87	99
			2006	89661-02C9# 89661-02D0# 89661-02D1# 89661-02D4# 89661-02D5#		

**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 Modification Labels	1

**NOTE:**

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

Required  
SSTs

ITEM NO.	SPECIAL SERVICE TOOLS (SSTs)	PART NUMBER	QTY	DRW**
1	<b>Toyota Diagnostic Tester Kit*</b> NOTE: <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 13.3a Software (or later) is required.</li> </ul> 	TOY220036	1	9
2	<b>CAN Interface Module Kit*</b> NOTE: <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:**

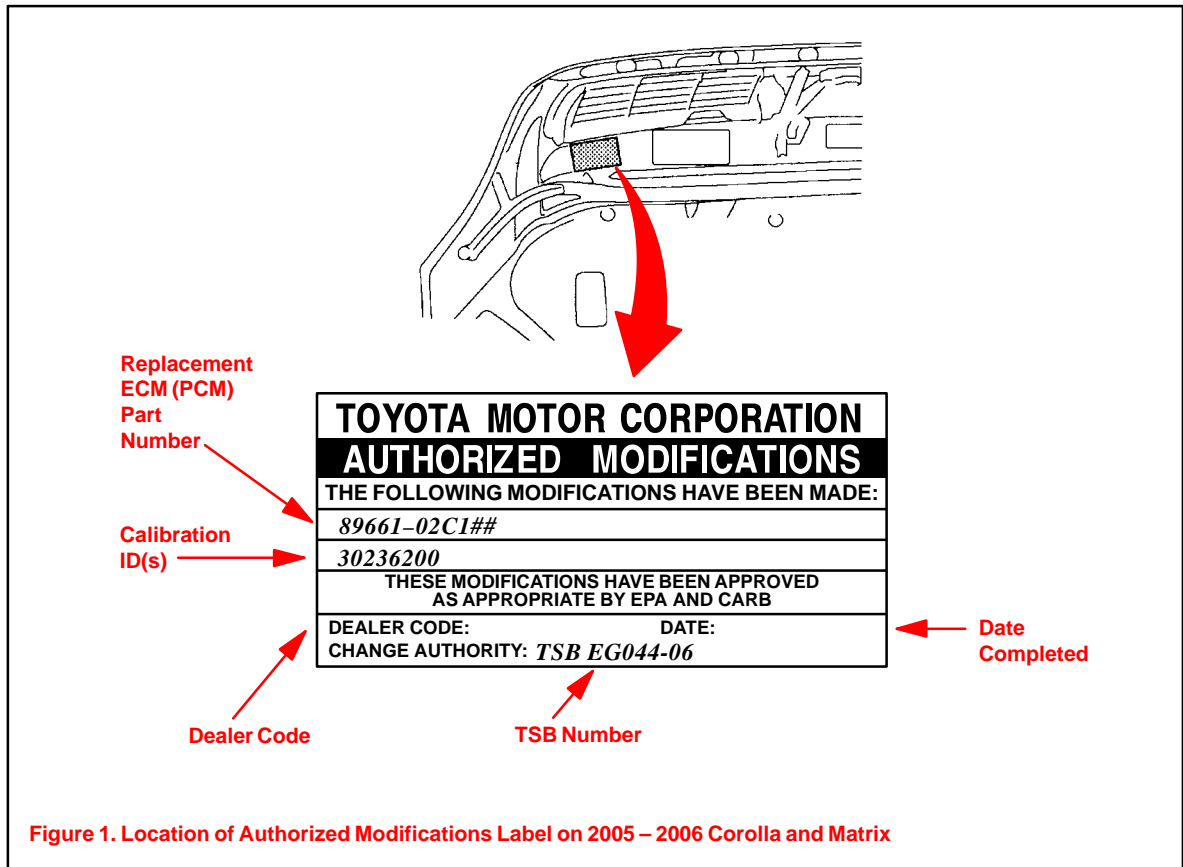
Additional Diagnostic Tester Kits, CAN Interface Modules, Program Cards, or other SSTs may be ordered by calling SPX/OTC at 1-800-933-8335.

**Calibration  
Identification  
Chart**

ENGINE	MODEL	DRIVETRAIN	PREVIOUS CALIBRATION ID	NEW CALIBRATION ID
1ZZ-FE	Corolla	ATM	30228000 30228100 30228200 30228300 30236000 30236100	30236200
		ATM w/VSC	30234000 30234100 30234200 30234300 30235000 30235100	30235200
	Matrix	ATM	30102000 30102100 30102200 30102300 30241000 30241100	30241200
		ATM w/VSC	30106000 30106100 30106200 30106300 30240000 30240100	30240200
	Corolla & Matrix	MTM	30230000 30230100 30230200 30230300 30237000 30237100	30237200

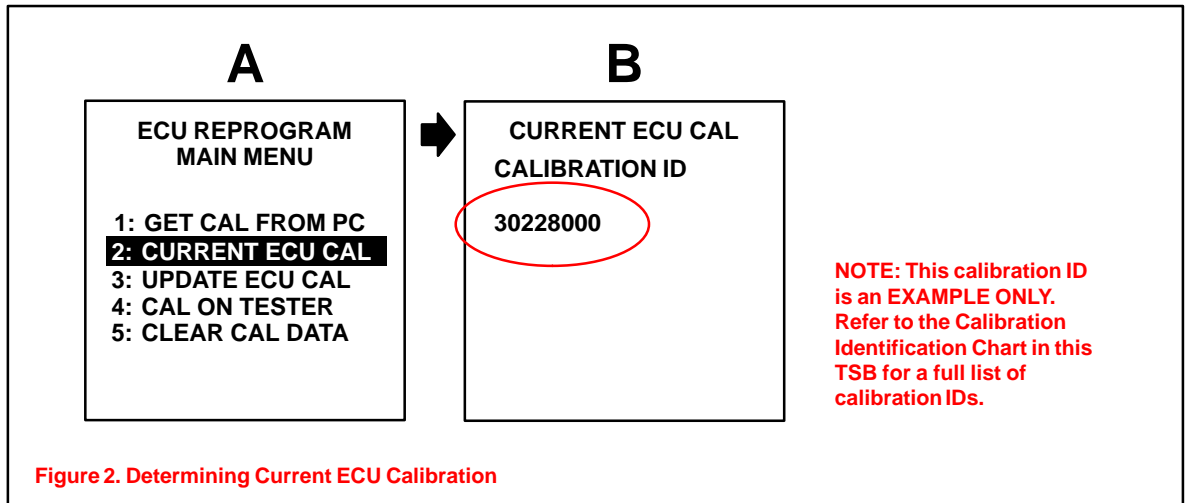
**Repair Procedure**

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.



**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 13.3a software version and may differ from subsequent software versions.



**NOTE:**

- If the Calibration ID matches the "Previous Calibration ID" as shown in the Calibration Identification Chart on page 3, proceed with flash reprogramming.
- If the Calibration ID matches the "New Calibration ID" as shown in the 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 ECU calibration ID is NOT the same as the "New Calibration ID" listed previously, proceed to Flash Reprogram ECM (PCM).

**4. Flash Reprogram ECM (PCM)**

**NOTE:**

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

- A. Follow the procedures outlined in TSB No. SS002-01, "ECU Flash Reprogramming Process," and flash the ECM (PCM) with the NEW calibration file update.
  - B. Enter the required information on the Authorized Modifications Label and affix it to the vehicle at the location shown in Figure 1 (page 4). The Authorized Modifications Label is available through the MDC, P/N 00451-00001-LBL.
5. Follow the procedures outlined in TSB No. EG045-04, "Entering VIN During ECM (PCM) Replacement and/or DTC P0630," and write the VIN to the ECM (PCM).
  6. The repair is complete. Test drive the vehicle to confirm normal operation.