



# Technical Service BULLETIN

April 18, 2007

Title:

## "IDLE HUNTING" IN SUB-FREEZING AMBIENT AIR TEMPERATURES

Models:

'03 – '04 Corolla & Matrix (MTM)

ENGINE  
EG022-07

**Introduction** Some 2003 – 2004 model year Corolla and Matrix vehicles may exhibit an "idle hunting" condition after the vehicle has been cold soaked in sub-freezing ambient air temperatures. During this condition the engine idle will "hunt" or fluctuate instead of maintaining a constant fast idle speed. The Engine Control Module (ECM) (SAE term: Powertrain Control Module/PCM) logic has been modified to correct this condition.

- Applicable Vehicles**
- 2003 – 2004 model year **Corolla** and **Matrix (2WD)** vehicles equipped with **manual transmission**.

### Parts Information

MODEL YEAR	PREVIOUS PART NUMBER	CURRENT PART NUMBER	PART NAME	QTY
–	N/A	00451-00001-LBL	Authorized Modification Labels	1
2003	89666-0213#	89666-02135	Computer, Engine Control (ECM/PCM)	1
2004	89661-0Z08#	89661-0Z082		1

**NOTE:**

- The ECM (PCM) should NOT be replaced as part of the repair procedure.
- 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.

### Warranty Information

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
EG7009	Recalibrate ECM (PCM) Engine	0.8	89661-##### 89666-#####	87	99




**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 correction of a problem based upon a customer's specific complaint.



Required SSTs

SPECIAL SERVICE TOOLS (SSTs)	PART NUMBER	QTY	DRW**
<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 14.1a Software (or later) is required.</li> </ul> 	TOY220036	1	9
<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
<p><b>GR8 Battery Diagnostic Station*</b></p> 	00002-MCGR8	1	-

\* Essential SSTs.

\*\* Drawer number in SST Storage System.

**NOTE:**

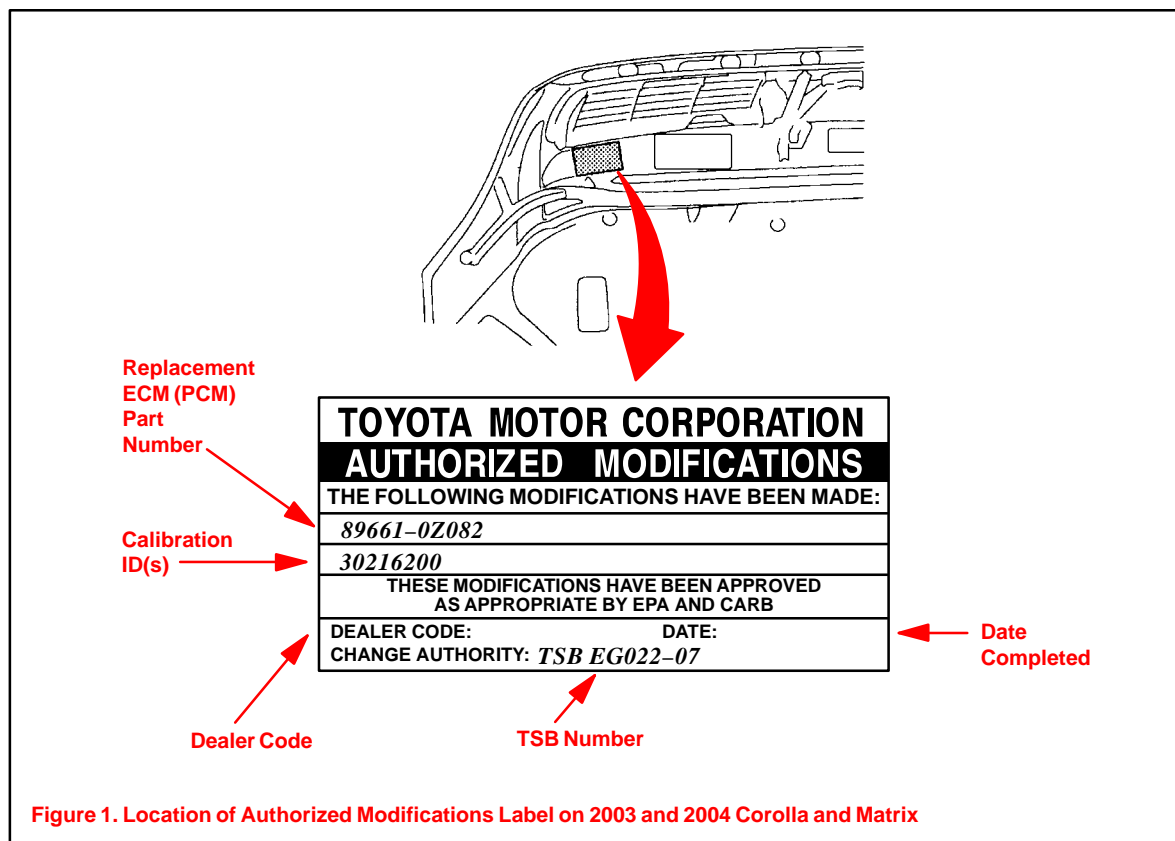
- The GR8 Battery Diagnostic Station (P/N 00002-MCGR8) supersedes the Automatic Trickle Charger (P/N 00002-YA122-01) and Fast Battery Chargers (Associated P/N ASE6003 and Christie P/N CAPPDQ). P/N 00002-YA122-01, ASE6003, and CAPPDQ are now obsolete.
- Additional SSTs may be ordered by calling SPX/OTC at 1-800-933-8335.

**Calibration Identification Chart**

MODEL	MODEL YEAR	ECM (PCM)	PREVIOUS CALIBRATION ID	NEW CALIBRATION ID
Corolla & Matrix	2003	Main	30201000 30201100 30201200 30201300 30201400	30201500
	2004		30216000 30216100	30216200

**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 the calibration listed is 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 calibrations (see Figure 2).
  - The sample screen prints seen below are the 14.1a software version and may differ from subsequent software versions.

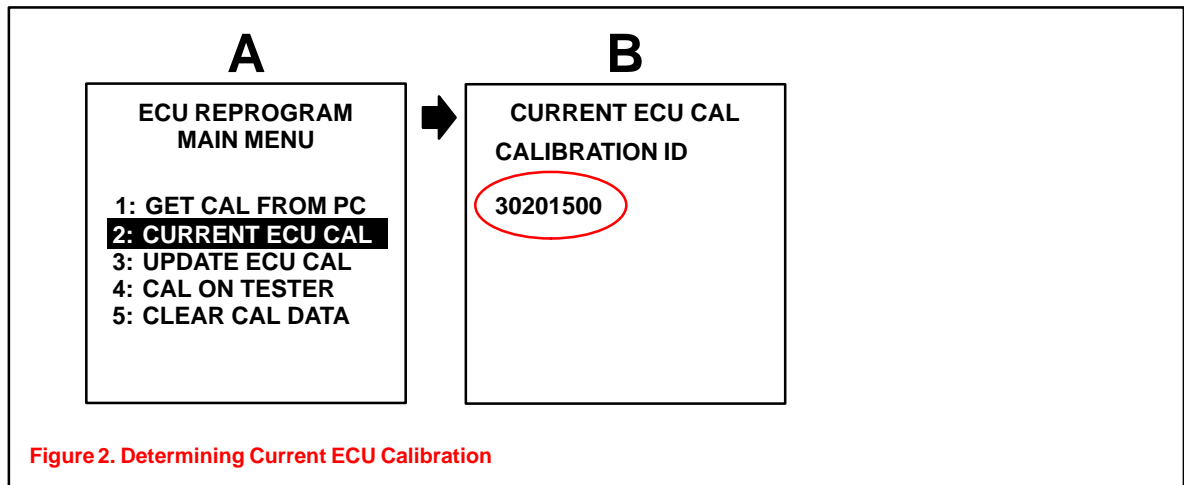


Figure 2. Determining Current ECU Calibration

**NOTE:**

- If the Calibration ID matches the “Previous Calibration ID” as shown in the Calibration Identification Chart in this TSB, 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 the 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:**

- The GR8 Battery charger **MUST** be used in Power Supply Mode to maintain battery voltage at 13.5 volts while flash reprogramming the vehicle.
- For details on how to use the GR8 Battery charger please refer to the GR8 Instructions Manual, located on TIS, *Diagnostics – Battery*.

Follow the procedures outlined in TSB No. SS002-01, “ECU Flash Reprogramming Process,” and flash the ECM (PCM) with the NEW calibration file update.

**NOTE:**

If the “Check Engine” light is ON when the ignition is turned back ON to begin the reprogramming process, a scan tool cable problem exists. Refer to TSB No. SS004-01, “ECU Flash Reprogramming Error Message.”

**Repair  
Procedure**  
(Continued)

5. 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 **CURRENT PART NUMBER**]*
    - Calibration ID(s): *[Refer to the **Calibration Identification Chart** for the **NEW CALIBRATION ID**]*
    - Dealer Code
    - Repair Date
    - Change Authority (this TSB number): *EG022-07*
  - B. Affix the Authorized Modifications Label to the vehicle at the location shown in Figure 1. The Authorized Modifications Label is available through the MDC, P/N 00451-00001-LBL.
6. Start the engine and warm it up to normal operating temperature before test-driving.
7. Test-drive vehicle to confirm proper vehicle operation.
8. Calibration update is complete.