



**Technical Service  
BULLETIN**

May 27, 2004

Title:

**EXCESSIVE SULFUR DIOXIDE ODOR**

Models:

'03 – '04 4Runner (1GR-FE)

**ENGINE**  
**EG015-04**

**Introduction** Some customers may complain of excessive sulfur dioxide odor on 2003–2004 model year 4Runner (1GR-FE) vehicles under the following conditions:

- Stop and go driving.
- Heavy acceleration.

In order to reduce the sulfur dioxide odor, the Electronic Control Module (ECM) (SAE term: Powertrain Control Module/PCM) fuel cut control logic has been modified and a new catalyst is provided. Follow the repair procedure to reflash the ECM and replace the catalytic converter assembly.

**NOTE:**

For more complete understanding of the root cause, refer to TSB No. EG003–03 “Sulfur Odor From Exhaust,” dated February 24, 2003.

**Applicable Vehicles**

- **2003 – 2004** model year **4Runner** vehicles equipped with the **1GR-FE engine** produced **BEFORE** the Production Change Effective VINs shown below.

**Production Change Information**

MODEL	PLANT	ENGINE	DRIVETRAIN	PRODUCTION CHANGE EFFECTIVE VIN
4Runner	Tahara	V6	2WD	JTEZU##R#40026890
			4WD	JTEBU##R#40032900
	Hino		2WD	JTEZU##R#48015332
			4WD	JTEBU##R#48019048

**Warranty Information**

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
EG4004	Recalibrate ECM (PCM) Engine	0.8	17410–31380	60	99
Combo A	R & R Catalytic Converter Assembly #1 & #2	0.4	17450–31010		

**Applicable Warranty\*:**

This repair is covered under the Toyota Specified Major Emission Control Component 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**



ORIGINAL PART NUMBER*	REPAIR PART NUMBER*	PART NAME	QTY
17410-31380	17410-31480	Pipe Assembly, Exhaust Front	1
17450-31010	17450-31050	Pipe Assembly, Exhaust Front #2	1

\* The original parts (17410-31380 and 17450-31010) are currently used in vehicle production and are still available as service parts. The repair parts (17410-31480 and 17450-31050) should be used when the customer complains of sulfur dioxide odor.

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**

SPECIAL SERVICE TOOLS (SSTs)	PART NUMBER	QUANTITY
Toyota Diagnostic Tester Kit* 	01001271	1
12 Megabyte Diagnostic Tester Program Card with version 10.2a Software (or later)* 	01002593-005	1

\* Essential SSTs.

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

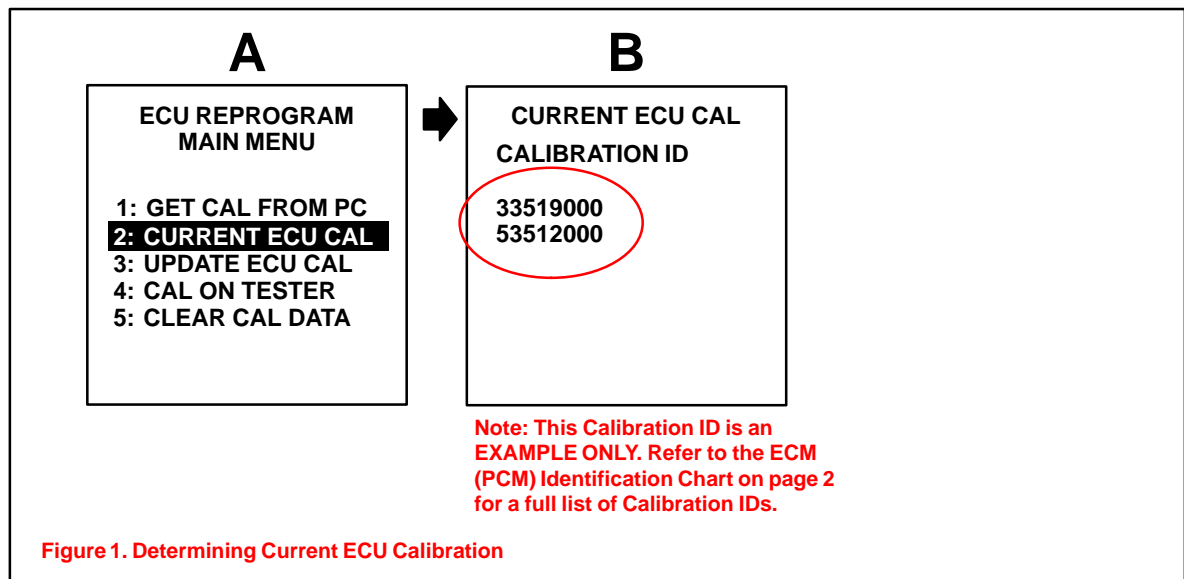
**ECM (PCM) Identification Chart**

MODEL YEAR	PREVIOUS CALIBRATION ID NUMBERS		NEW CALIBRATION ID NUMBER
2003 2WD	Main	33519000 33529100	33529200
	Sub	53505000	53512000
2003 4WD	Main	33520000 33530100	33530200
	Sub	53506000	53513000
2004 2WD	Main	33529000 33529100	33529200
2004 4WD	Main	33530000 33530100	33530200

**NOTE:**  
**2003 model year 4Runner vehicles, which have been flash reprogrammed using the procedures in this TSB, will contain upgraded 2004 model year OBD II logic. Refer to the 2004 model year 4Runner Repair Manual information on the Technical Information System (TIS) when checking Powertrain Diagnostic Trouble Codes (DTCs) on 2003 model year vehicles that have been reprogrammed.**

**ECM  
Reprogram  
Procedure**

1. Check for the Authorized Modification Label affixed to the vehicle in the location shown in Figure 2 on page 4. If there is no label present, proceed to step 2.
2. Connect the Diagnostic Tester to the vehicle and select “CURRENT ECU CAL” from the “ECU REPROGRAM MAIN MENU.” To determine the vehicle’s current ECM (PCM) calibration, see Figure 1 shown below.



3. Proceed to Flash Reprogram the ECM (PCM) by following the procedures in TSB No. SS002–01 titled “ECU Flash Reprogramming Process,” for 2001 and later applicable models.

**NOTE:**

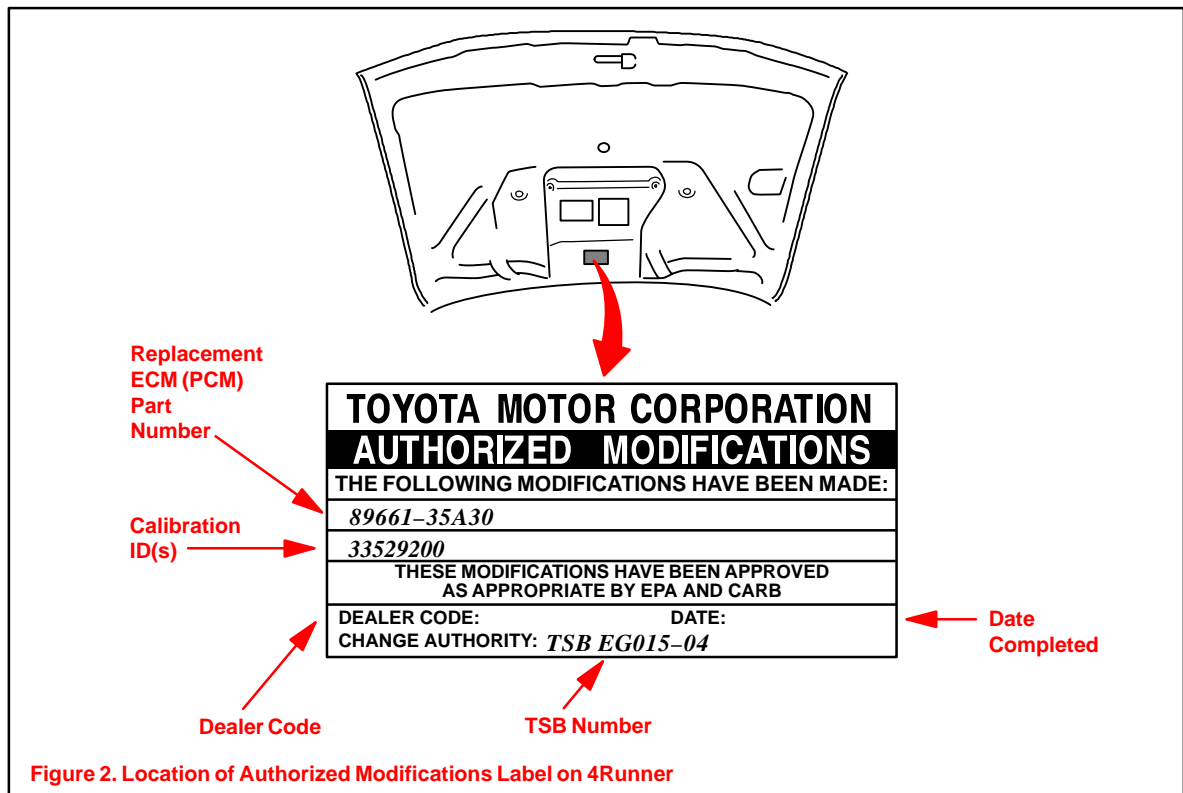
Errors during the flash reprogramming process can **PERMANENTLY DAMAGE** the vehicle’s ECM (PCM). In order to minimize this risk follow the steps below:

- Make sure that the current battery voltage is no less than 11.4 volts.
- Install a battery charger and set on a low setting to assure that the battery voltage **DOES NOT FALL BELOW 11.4 VOLTS** during the reprogramming.
- If battery’s state of charge is in question, test with SST No. 00002–MP815–T, “Midtronics Battery Tester.”
- Confirm that the engine hood is up, parking brake is set and all accessories are OFF (i.e., audio system, A/C, interior lights, headlights, etc).
- **DO NOT** perform the reprogramming process until the engine room temperature is 158°F (70°C) or less.
- Confirm cable connections between the vehicle and the Diagnostic Tester are secured.
- In case of Error Message “Cannot Go To Reprogram Mode,” refer to TSB No. SS004–01 “ECU Flash Reprogramming Error Message.”
- Do not interrupt the vehicle during the reprogramming process, keep all doors closed.

4. Select the proper ECM (PCM) calibration file for the model year vehicle and reprogram the ECM (PCM).
5. After completing the ECM (PCM) reprogram, the zero point calibration must be performed. Refer to TSB No. BR001–04 “Zero Point Calibration.”

**ECM  
Reprogram  
Procedure**  
(Continued)

6. Start the engine and warm up the vehicle to normal operating temperatures before test-driving.
7. Test drive vehicle to confirm proper operation and to readjust the ECM (PCM) "Learned Values."
  - Drive the vehicle using light to moderate acceleration in mostly stop and go type driving.
  - Allow the vehicle to shift fully through all gears and at various shifter positions (D, 3, 2, L).
8. Enter the following information on the Authorized Modification Label shown below in Figure 2 using a permanent marker.
  - ECM (PCM) part number.
  - New ECM (PCM) calibration number.
  - Your dealer code.
  - Reprogramming date.
  - This TSB number.



### Catalytic Converter Replacement Procedure

Refer to the Technical Information System (TIS) 2003 or 2004 model year 4Runner Repair Manual: *Exhaust Pipe Assy (1GR-FE)*.