

# MIL "ON" DTC P0500

**Service Category** Engine/Hybrid System

**Section** Engine Control

**Market** USA

Toyota Supports  
ASE Certification 

## Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2002 – 2003	Camry	Engine(s): 1MZ Transmission(s): 4AT, 5AT VDS(s): BF30K, BF32K

## Introduction

Some 2002 – 2003 model year Camry vehicles may exhibit a MIL "ON" condition with Diagnostic Trouble Code (DTC) P0500 — Vehicle Speed Sensor "A". The Engine Control Module/ECM (SAE term: Powertrain Control Module/PCM) logic has been modified to reduce the possibility of this condition occurring. Use the following repair procedure to address this condition.

## Warranty Information

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
EG9034	Recalibrate ECM (PCM) Engine & Transmission	0.6	89661-##### 89666-#####	8A	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 occurrence of the specified condition described in this bulletin.

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### Parts Information

MODEL	MODEL YEAR	TRANS	PRODUC-TION	PREVIOUS PART NUMBER	CURRENT PART NUMBER	PART NAME	QTY					
Camry	2002	4AT	NAP	89666-06520 89666-06250 89666-06251 89666-06252 89666-06253 89666-06254 89666-06255 89666-06256	89666-06257	Computer, Engine Control (ECM/PCM)	—					
				Japan	89661-3T660 89661-3T661 89661-3T662 89661-3T663 89661-3T664 89661-3T665 89661-3T666		89661-3T667	—				
					NAP		89666-06530 89666-06531 89666-06532	89666-06533	—			
							Japan	89666-33430 89666-33431 89666-33432	89666-33433	—		
	2003		NAP		89661-0X140 89666-06210 89666-06211 89666-06212 89666-06213 89666-06214			89666-06215	—			
				Japan	89661-06A10 89661-06A11 89666-33420 89666-33421 89666-33460 89666-33461 89666-33462 89666-33463 89666-33464		89666-33465	—				
			—		—		—	—	00451-00001-LBL	Same	Authorized Modification Labels	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 Orders.

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### Calibration Information

MODEL	TRANS	MODEL YEAR	ECU	PREVIOUS CALIBRATION ID	NEW CALIBRATION ID	VDS
Camry	4AT	2002	Main	33305000 33305100 33305200 33305300	<a href="#">33305400</a>	BF30K BF32K
			Sub	53310000 53310100 53310200 53310300	<a href="#">53310400</a>	
		2003	Main	33332000	<a href="#">33332100</a>	
			Sub	53325000 53325100 53325200	<a href="#">53325300</a>	
	5AT		Main	33343000 33343100 33343200 33343300	<a href="#">33343400</a>	
			Sub	53330000 53330100 53330200 53330300 53330400	<a href="#">53330500</a>	

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### Required Tools & Equipment

REQUIRED EQUIPMENT	SUPPLIER	PART NUMBER	QTY
TIS Techstream* NOTE: Software version 4.21.002 or later is required.	ADE	TSUNT	1

\* Essential SST.

#### NOTE

- Additional TIS Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.
- The Diagnostic Tester is NOT recommended for flash reprogramming with this calibration file. Please use TIS Techstream or an approved J2534 interface to perform this update. Visit [techinfo.toyota.com](http://techinfo.toyota.com) for more information regarding J2534 reprogramming.



SPECIAL SERVICE TOOLS (SST'S)	PART NUMBER	QTY
GR8 Battery Diagnostic Station*	<a href="#">00002-MCGR8</a>	1

\* Essential SST.

#### NOTE

Additional SSTs may be ordered by calling 1-800-933-8335.

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### Inspection Procedure

1. Inspect the Freeze Frame Data stored under "Engine and ECT" with the DTC P0500.  
(See Figure 1.)

Figure 1.

Parameter	-3	-2	-1	0	1	Unit
Vehicle Speed	3	2	2	2	2	MPH
Engine Speed	852	835	825	835	853	rpm
Calculate Load	25.8	26.2	26.6	27.0	27.4	%
Vehicle Load	13.7	14.1	15.6	15.2	14.9	%
MAF	2.82	2.81	3.10	3.07	3.06	gm/sec
Atmosphere Pressure	-0	-0	-0	-0	-0	psi(gauge)
Coolant Temp	196	196	196	196	196	F
Intake Air	99	99	99	99	99	F
Engine Run Time	1352	1353	1353	1354	1354	s
Initial Engine Coolant Temp	162.5	162.5	162.5	162.5	162.5	F
Initial Intake Air Temp	135.5	135.5	135.5	135.5	135.5	F
Battery Voltage	13.1	13.1	13.1	13.1	13.1	V
Accel Sens. No.1 Volt %	15.6	15.6	15.6	15.6	15.6	%
Accel Sens. No.2 Volt %	31.7	31.7	31.7	31.7	31.7	%
Throttle Sensor Volt %	16.0	16.0	16.4	16.4	16.4	%
Throttl Sensor #2 Volt %	48.2	47.8	48.2	48.2	48.2	%
Throttle Sensor Position	0.0	0.0	0.0	0.0	0.0	%

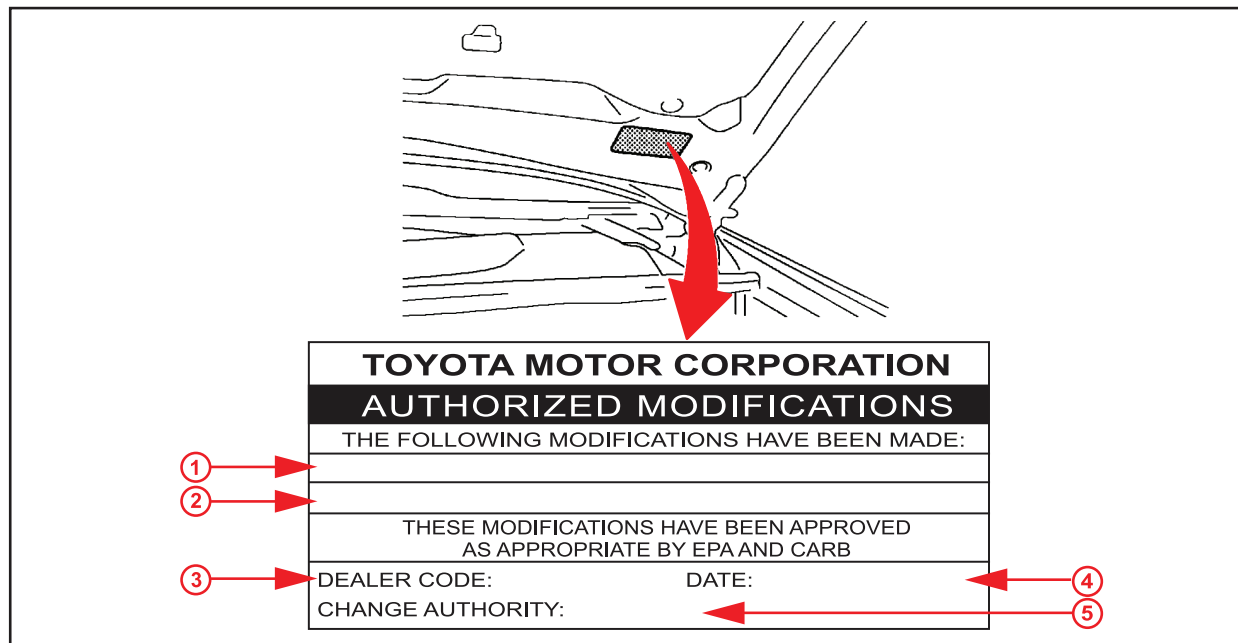
2. Is the stored vehicle speed less than 5 mph (8 km/h)?
  - **YES** — Proceed to the Repair Procedure and flash reprogram the ECM.
  - **NO** — STOP — This TSB may not apply. Proceed with normal Repair Manual diagnostic procedures. If no fault can be found, then proceed to the Repair Procedure and flash reprogram the ECM.

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### Repair Procedure

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

**Figure 2. Location of Authorized Modifications Label on 2002 – 2003 Camry**



<b>1</b>	Replacement ECM (PCM) Part Number (i.e., 89666-06257)
<b>2</b>	New Calibration ID(s) (i.e., 53310400)
<b>3</b>	Dealer Code

<b>4</b>	Date Completed
<b>5</b>	This TSB Number

2. Flash reprogram the ECM (PCM).

#### NOTE

- The GR8 Battery Diagnostic Station **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 Diagnostic Station, refer to the [GR8 Instruction Manual](#) located on the Technical Information System (TIS), *Diagnostics – Tools & Equipment – Battery Diagnostics*.

Follow the procedures outlined in TSB No. [T-SB-0064-10](#), “Techstream ECU Flash Reprogramming Procedure”, and flash the ECM (PCM) with the NEW calibration file update.

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### Repair Procedure (Continued)

3. Start the engine and warm it up to normal operating temperature before test driving.
4. Test drive the vehicle to confirm proper vehicle operation and ECM (PCM) learning.

Refer to TIS, applicable model year Camry Repair Manual:

- 2002 Camry:  
[Drivetrain – Automatic Transmission/Transaxle – “Electronic Controlled Automatic Transaxle \[ECT\]: Pre-Check”](#)
- 2003 Camry:  
[Drivetrain – Automatic Transmission/Transaxle – “Electronic Controlled Automatic Transaxle \[ECT\]: Pre-Check”](#)  
[Drivetrain – Automatic Transmission/Transaxle – “Electronic Controlled Automatic Transaxle \[ECT\] \(U151E\): Pre-Check”](#)

5. Install the Authorized Modifications Label.

A. Using a permanent marker, enter the following information on the label:

- ECM 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**]

B. Affix the Authorized Modifications Label to the vehicle at the location shown in Figure 2. The Authorized Modifications Label is available through the MDC, P/N 00451-00001-LBL.