

T-SB-0086-13

July 16, 2013

ABS & TRAC Warning Light "ON" DTC C1231

Service Category Brake

Section Brake Control/Dynamic Control System **Market** USA

Toyota Supports ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2009 – 2011	Camry	

Introduction

Some 2009 – 2011 model year North American production (NAP) vehicles equipped with BOSCH® made ABS/VSC systems may exhibit a repeated ABS and TRAC Warning Light "ON" with Diagnostic Trouble Code (DTC) C1231 present. The ABS ECU logic has been modified to address this condition.

Parts Information

PART NUMBER		PART NAME	QTY
PREVIOUS	NEW		
44050-06130	44050-06131	Actuator Assy, Brake	1
	89245-06040	Sensor, Steering w/ VSC	1

Warranty Information

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
BR1300	R & R ABS Actuator	1.4	44050-06130	8A	99
BR1301	R & R Steering Angle Sensor and ABS Actuator	1.9	44050-06130 89245-06040		

APPLICABLE WARRANTY

- This repair is covered under the Toyota Basic Warranty. This warranty is in effect for 36 months or 36,000 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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Required Tools & Equipment

REQUIRED EQUIPMENT	SUPPLIER	PART NUMBER	QTY
Techstream 2.0*	ADE	TS2UNIT	1
TIS Techstream		TSPKG1	
Techstream Lite		TSLITEDLR01	

* Essential SST.

<p>NOTE</p> <ul style="list-style-type: none"> • Only ONE of the Techstream units listed above is required. • Software version 8.10.021 or later is required. • Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.
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Repair Procedure

- Using Techstream, check for stored DTC C1231. If DTC C1231 is not present, this bulletin does NOT apply.
- Is Freeze Frame Data available for DTC C1231?
 - **YES** — Proceed to step 4.
 - **NO** — Proceed to step 3.
- Complete the idle check procedure below:
 - Vehicle in Park position
 - Engine idling
 - Steering wheel in the straight ahead position

Using Techstream, confirm the steering angle sensor values.

- Using either the Freeze Frame Data or the Steering Angle Sensor values from the idle check, follow the chart below.

Table 1. Steering Angle Sensor Parameters

DATA LIST ITEM	RANGE OF VALUES DISPLAYED	DIRECTION
Steering Angle Sensor	3276.7° to 15°	Replace ABS actuator — Go to step 5.
	-14° to 14°	Replace steering angle sensor and ABS actuator — Go to step 6.
	-3276.8° to -15°	Replace ABS actuator — Go to step 5.

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Repair Procedure (Continued)

- *Brake – Brake Control/Dynamic Control System – “Brake Control: Brake Actuator (for BOSCH Made): Removal / Installation”*

2010 Camry:

- *Brake – Brake Control/Dynamic Control System – “Brake Control: Steering Angle Sensor (w/ VSC): Removal / Installation”*
- *Brake – Brake Control/Dynamic Control System – “Brake Control: Brake Actuator (for BOSCH Made): Removal / Installation”*

2011 Camry:

- *Brake – Brake Control/Dynamic Control System – “Brake Control: Steering Angle Sensor (w/ VSC): Removal / Installation”*
- *Brake – Brake Control/Dynamic Control System – “Brake Control: Brake Actuator (for BOSCH Made): Removal / Installation”*

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Repair Procedure (Continued)

Figure 1. Example of Freeze Frame Data

Info Code / Freeze Frame Data	Parameter	-3	-2	-1	0	1	
	Elapsed Time after Freeze Trigger	0	0	230			msec
	Number of IG ON	4	4	4			
	Buzzer	OFF	OFF	OFF			
	Stop Light SW	OFF	OFF	OFF			
	Parking Brake SW	OFF	OFF	OFF			
	Gear Position	4th	4th	4th			
	Shift Lever Position	D/M	D/M	D/M			
	Operated System	Non	Non	Non			
	Master Cylinder Sensor	0.29	0.29	0.29			V
	M/C Sensor Grade	-1	-1	-1			MPa/s
	Yaw Rate Sensor	0	0	0			°/s
	Lateral G	0.19	0.00	0.00			m/s2
	FR Wheel Speed	30	32	32			MPH
	FL Wheel Speed	30	32	32			MPH
	RR Wheel Speed	30	30	32			MPH
	RL Wheel Speed	30	30	32			MPH
	Vehicle Speed	30	32	32			MPH
	Vehicle Speed Grade	0.78	0.78	0.78			m/s2
	Real Engine Torque	195.0	200.0	204.0			Nm
	Inspection Mode	Other	Other	Other			
	Steering Angle Sensor	-18.0	-16.5	-16.5			°
	TRAC/VSC Off Mode	Normal	Normal	Normal			

5. Replace the ABS actuator. Then test drive and confirm the repair.

Refer to the Technical Information System (TIS), applicable model and model year Repair Manual:

- 2009 Camry:
Brake – Brake Control/Dynamic Control System – “Brake Control: Brake Actuator (for BOSCH Made): Removal / Installation”
- 2010 Camry:
Brake – Brake Control/Dynamic Control System – “Brake Control: Brake Actuator (for BOSCH Made): Removal / Installation”
- 2011 Camry:
Brake – Brake Control/Dynamic Control System – “Brake Control: Brake Actuator (for BOSCH Made): Removal / Installation”

6. Replace the steering angle sensor and ABS actuator. Then test drive and confirm the repair.

Refer to TIS, applicable model and model year Repair Manual:

2009 Camry:

- *Brake – Brake Control/Dynamic Control System – “Brake Control: Steering Angle Sensor (w/ VSC): Removal / Installation”*