TOYOTA
Technical Service Bulletin

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	OFP	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.

NOTE

- **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.**

Repair Procedure

1. Using Techstream, check for stored DTC C1231. If DTC C1231 is not present, this bulletin does NOT apply.
2. Is Freeze Frame Data available for DTC C1231?
   - **YES —** Proceed to step 4.
   - **NO —** Proceed to step 3.
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.
4. 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)

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"*

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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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