

ABS Brake Noise with DTC C1431

Service Category Brake

Section Brake System

Market USA

Toyota Supports
 ASE Certification 

Applicability

| YEAR(S) | MODEL(S) | ADDITIONAL INFORMATION |
|-------------|----------|------------------------|
| 2012 – 2013 | Camry | |

Introduction

Some 2012 – 2013 model year Camry vehicles may exhibit a condition where ABS brake actuator pump motor noise is heard from the engine compartment with Brake, ABS and/or TRAC warning lamp(s) illuminated and Diagnostic Trouble Code (DTC) C1431 stored. This condition may be caused by a poor ground on the left fender side panel bracket after a collision repair. This may occur during body shop repairs or other repairs where the left side fender bracket grounds were left loose, not properly attached using the correct bolts, or improperly painted.

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 8.30.023 or later is required.
- Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.

Warranty Information

| OP CODE | DESCRIPTION | TIME | ONP | T1 | T2 |
|---------|----------------------------|------|-----|----|----|
| N/A | Not Applicable to Warranty | – | – | – | – |

ABS Brake Noise with DTC C1431

Repair Procedure

1. Follow the Repair Manual procedure to diagnose DTC C1431.

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

- [2012](#) / [2013](#) Camry:
Brake – Brake Control/ Dynamic Control Systems – “Vehicle Stability Control System: C1430, C1431; Brake Pedal Load Sensing Switch OFF Stuck Malfunction”
2. If the brake pedal load sensing switch is judged OK, check the resistance at connector A40 Pin 1 to body ground. Is the resistance always below 1 ohm?
 - **YES** – Continue diagnosis using the Repair Manual.
 - **NO** – Proceed to step 3.
 3. With the battery connected, perform voltage drop test from the two left fender bracket ground wire eyelet tabs to body ground (see Figure 1).

NOTE

For detailed information on performing the voltage drop test, please refer to the guide [“QT611A: Body Electrical Diagnosis”](#) found on TIS, under *Technical Training – QTG – Skill Area: Electrical & A/C*.

CAUTION

At NO time should the battery be connected when any ground attachments (A1, A2, or apron mounting bolts) are loose.

- A. Use a left front strut tower mounting bolt as a good body ground (see Figure 2).

Figure 1.

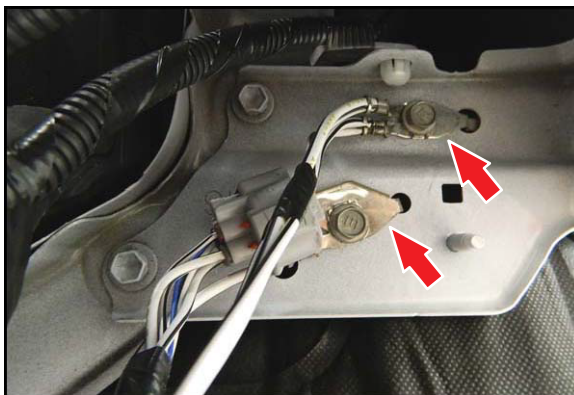
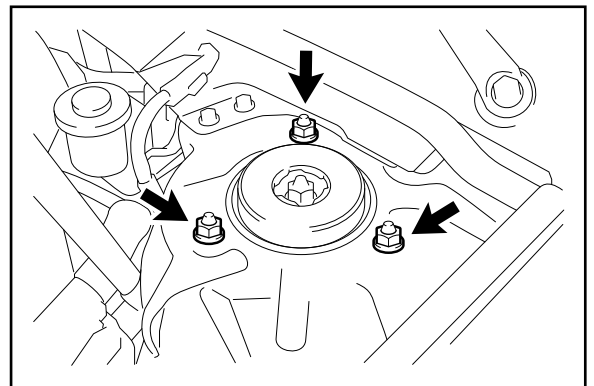


Figure 2.



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Repair Procedure (Continued)

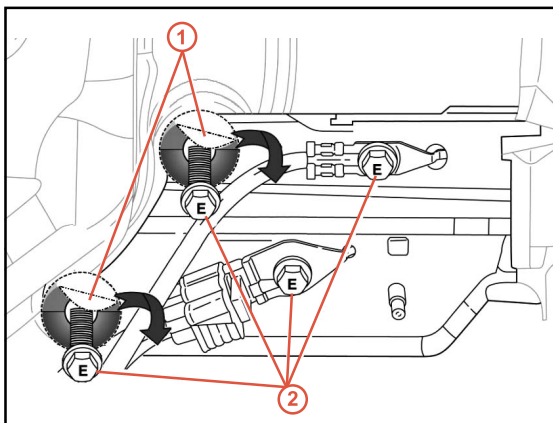
- B. To perform voltage drop test, connect the negative lead of the DVOM to the strut tower bolt, and the positive lead to the ground wire eyelet tab.

NOTE

Poor contact at the ground at the left fender side panel bracket may be an intermittent condition.

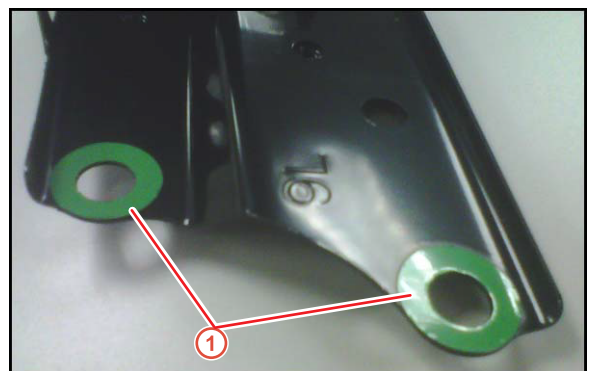
4. Is voltage drop from each ground location less than 0.2 volts?
 - **YES** – Continue diagnosis using the applicable Repair Manual.
 - **NO** – A voltage drop of 0.2 volts or more from either of the ground locations may indicate poor continuity in the ground circuit. Proceed to step 5.
5. With the battery disconnected, remove the left hand fender bracket from the apron for inspection.
6. Inspect the grounds on the left hand fender bracket. Confirm the following:
 - Ground bolts are “E” bolts (see Figures 3 and 5).
 - Apron bolts should be “E” bolts if left hand fender bracket has been replaced (see Figures 3 and 5).
 - The area around the bracket to apron mounting bolt holes (see Figure 4) is free of paint.
 - The area around the apron mounting bolt holes do not show masking tape or painted masking tape (see Figures 3 and 4).

Figure 3.



| | |
|----------|--|
| 1 | Confirm Green Masking Tape Is Removed |
| 2 | Confirm “E” Bolts Are Installed |

Figure 4.



| | |
|----------|--|
| 1 | Masking Tape — REMOVE After Painting, NO Paint in This Area |
|----------|--|

If ALL conditions above are met, continue with diagnosis using the applicable Repair Manual.

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Repair Procedure (Continued)

If ANY of the conditions above are NOT met, continue to step 7.

NOTICE

- Do NOT drive the vehicle or hook up the battery without proper "E" bolts in all 4 locations at apron and both grounds. The fender bracket must have a good ground path to prevent Engine Room Junction Block damage.
- Do NOT remove the fender bracket or grounds without first disconnecting the negative (-) battery cable.

NOTE

- It is important that the bracket to apron mounting bolts/washers are free of paint on the front portion of the bracket.
- The new part number bracket comes with instructions that should be followed carefully when replacing.
- The new bracket also comes with green tape around the apron mounting bolts to protect it during the painting phase (see Figures 3 and 4). *This green masking tape MUST be removed in order for the bracket to be properly installed on the vehicle.*
- The new bracket includes new apron "E" mounting bolts. It is important that the new "E" bolts are used and are torqued properly. See Figure 5 on how to identify new bolts.

Torque: Ground Bolts:
6.9 – 9.8 N*m (70 – 100 kgf*cm,
5.1 – 7.2 ft*lbf)

Torque: Bracket to Apron Bolts:
3.9 – 8.8 N*m (40 – 90 kgf*cm,
2.8 – 6.5 ft*lbf)

Figure 5.



| | |
|---|---|
| 1 | Old Bolt: DO NOT USE or Reuse These Bolts |
| 2 | NEW "E" Bolt |

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Repair Procedure (Continued)

7. Is there masking tape or painted masking tape or paint around the apron bolt holes?

- **NO** — Replace the left hand fender bracket.
- **YES** — Remove the tape or paint and continue to step 8.

NOTE

Apply cavity wax to apron bolts and area surrounding washers once bracket is completely installed.

8. Once areas are repaired and secured with new “E” bolts, replace the Engine Room Junction Block Assembly.
9. Confirm there is no damage to the Engine Room Junction Block Assembly.
10. With the battery reconnected, perform another voltage drop test from both ground wire tabs to a strut tower bolt and verify the voltage drop is less than 0.2 volts.

Is voltage drop less than 0.2 volts?
 - **YES** – Continue to step 11.
 - **NO** – Go back to step 6.
11. Perform another resistance check at connector A40 Pin 1 to body ground to confirm that resistance is always below 1 ohm.