Moon Roof Assembly Structure Noise

Service Category  Vehicle Exterior
Section  Exterior Panels/Trim  Market  USA

Applicability

<table>
<thead>
<tr>
<th>YEAR(S)</th>
<th>MODEL(S)</th>
<th>ADDITIONAL INFORMATION</th>
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<tbody>
<tr>
<td>2007 – 2011</td>
<td>Camry, Camry HV</td>
<td>WMI(s): 4T1, 4T4</td>
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SUPERSESSION NOTICE

The information contained in this bulletin supersedes SB No. T-SB-0089-08.

- Applicability has been updated to include 2010 – 2011 model year vehicles.
- Repair Procedure has been updated.

Service Bulletin No. T-SB-0089-08 is Obsolete and any printed versions should be discarded. Be sure to review the entire content of this service bulletin before proceeding.

Introduction

Some 2007 – 2011 North American produced (NAP) Camry and Camry HV vehicles may exhibit a knocking, popping, ticking, or snapping noise from the moon roof area while driving. The repair procedures below have been developed to address this condition.

NOTE

- Repair Procedure 2 should not be completed unless Repair Procedure 1 does not correct the condition.
- Repair Procedure 2 requires felt to be placed between the sheet-metal panels in the roof, NOT between the moon roof assembly and the roof.
- In order to properly perform this bulletin, the moon roof assembly MUST be COMPLETELY REMOVED from the roof.
- Do NOT place the felt on any part of the moon roof assembly.

- Repair Procedure 1: page 2
- Repair Procedure 2: page 8
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Parts Information

<table>
<thead>
<tr>
<th>PREVIOUS PART NUMBER</th>
<th>CURRENT PART NUMBER</th>
<th>PART NAME</th>
<th>QTY</th>
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<tr>
<td>08231-00801</td>
<td>Same</td>
<td>Interior Noise Kit</td>
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Warranty Information

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<th>OFP</th>
<th>T1</th>
<th>T2</th>
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<tr>
<td>NV1201</td>
<td>Headliner Removal &amp; Moon Roof Assembly Adjustment: Repair Procedure 1</td>
<td>1.6</td>
<td>63203-06030</td>
<td>91</td>
<td>57</td>
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<tr>
<td>NV1202</td>
<td>Remove Moon Roof Assembly &amp; Insulate Roof Structure: Repair Procedure 2</td>
<td>1.3</td>
<td>63142-06040</td>
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**APPLICABLE WARRANTY**

- This repair is covered under the Toyota Comprehensive 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.

Repair Procedure 1

1. Confirm that the noise is coming from the moon roof area.

2. Record the radio station presets.

3. Remove the headliner assembly. Refer to the Technical Information System (TIS), applicable model and model year Repair Manual:
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Repair Procedure 1 (Continued)

4. Loosen the 8 nuts and 16 bolts retaining the moon roof housing sub-assembly.

**NOTE**

Do NOT remove the 8 nuts and 16 bolts.

*Figure 1. Fastener Locations*
Moon Roof Assembly Structure Noise

Repair Procedure 1 (Continued)

5. Tighten the rear most LH and RH nuts (as indicated in Figure 2).
   Torque: 5.5 N*m (56 kgf*cm, 49 in*lbf)

**NOTE**
LH & RH rear nuts must be tightened before any other moon roof assembly fasteners are tightened.

Figure 2.
Moon Roof Assembly Structure Noise

Repair Procedure 1 (Continued)

6. Tighten remaining 6 nuts (as indicated in Figure 3).
   Torque: 5.5 N*m (56 kgf*cm, 49 in*lbf)

Figure 3.
Moon Roof Assembly Structure Noise

Repair Procedure 1 (Continued)

7. Tighten the 8 moon roof reinforcement to body structure bolts (as indicated in Figure 4).
   
   A. Position each reinforcement bracket to sit squarely against both the body structure surface and the moon roof housing surface.
   
   B. Tighten each bolt.
   
   Torque: 5.5 N\*m (56 kgf*cm, 49 in*lbf)

Figure 4.
Moon Roof Assembly Structure Noise

Repair Procedure 1 (Continued)

8. Tighten the 8 moon roof reinforcement to moon roof housing bolts (Figure 5).
   Torque: 5.5 N*m (56 kgf*cm, 49 in*lbf)

   Figure 5.

9. Secure any loose components and test drive vehicle to verify repair.
   A. If noise is corrected, proceed to step 10 for reassembly of vehicle. Do NOT proceed to Repair Procedure 2.
   B. If noise in not corrected, skip steps 10 and 11, proceed directly to Repair Procedure 2

10. Reinstall the headliner assembly. Refer to TIS, applicable model and model year Repair Manual:

11. Reset the radio presets and clock.
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Repair Procedure 2

NOTE

• Repair Procedure 2 should NOT be completed unless Repair Procedure 1 does not correct the condition.

• This procedure requires felt to be placed between the sheet-metal panels in the roof, NOT between the moon roof assembly and the roof.

• In order to properly perform this procedure, the moon roof assembly MUST be COMPLETELY REMOVED from the roof.

• Do NOT place felt on any part of the moon roof assembly.

Figure 6. Artwork in Progress

<table>
<thead>
<tr>
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<th>Areas to Insulate</th>
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<tbody>
<tr>
<td>1</td>
<td>Front</td>
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</table>

1. Disengage the 2 claws and remove the front side rail spacer LH.

2. Disengage the 2 claws and remove the front side rail spacer RH.

3. Remove LH & RH curtain shield airbag assembly. Refer to TIS, applicable model and model year Repair Manual:


4. Disconnect the 4 moon roof drain hoses.
Repair Procedure 2 (Continued)

5. Loosen the 8 moon roof reinforcement to moon roof housing bolts (as indicated in Figure 7).

Figure 7. Bracket Housing
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Repair Procedure 2 (Continued)

6. Remove the 8 moon roof reinforcement to body structure bolts (as indicated in Figure 8).

Figure 8. Bracket Body

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Repair Procedure 2 (Continued)

7. Remove the 8 nuts and the moon roof housing sub-assembly. (as indicated in Figure 9).

Figure 9. 8 Nuts
Repair Procedure 2 (Continued)

8. Temporarily peel back the backing paper at both ends and make a cut, in the backing paper ONLY, 2 inches (50.8 mm) away from the ends. Place the backing paper back on the felt.

**NOTE**
Do NOT cut the felt, ONLY the backing paper.

Figure 10.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Cut Backing Here Before Installing on Roof</td>
</tr>
<tr>
<td>2</td>
<td>12.0 in. (300 mm)</td>
</tr>
<tr>
<td>3</td>
<td>2.0 in. (50.8 mm)</td>
</tr>
</tbody>
</table>
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Repair Procedure 2 (Continued)

9. Place the felt strips on both corners of the roof structure, between the roof panel and the moon roof mounting structure panel as shown in Figure 11 (Figure shows the roof structure looking up over the driver’s head).

**NOTE**
Pull down on the moon roof mounting structure in the area of the front mounting stud to make space for the felt to slide into place.

**HINT**
The felt strips should be placed at approximately a 30° angle from the front edge of the moon roof opening.

Once the felt is placed as close to the inner edge as possible, peel off the backing paper at the ends of the felt strip and stick the felt to the roof panel.

**NOTE**
The backing paper in the middle of the felt strip will NOT be removed.

10. Perform the felt repair on both front corners of the moon roof structure.
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Repair Procedure 2 (Continued)

11. Reinstall moon roof assembly and tighten the rear most LH and RH nuts (as indicated in Figure 13).

Torque: 5.5 N·m (56 kgf·cm, 49 in·lbf)

**NOTE**
LH & RH rear nuts must be tightened before any other moon roof assembly fasteners are tightened.

Figure 13.
Moon Roof Assembly Structure Noise

Repair Procedure 2 (Continued)

12. Tighten remaining 6 nuts (as indicated in Figure 14).
   Torque: 5.5 N\(\cdot\)m (56 kgf\(\cdot\)cm, 49 in\(\cdot\)lbf)

Figure 14.
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Repair Procedure 2 (Continued)

13. Tighten the 8 moon roof reinforcement to body structure bolts (as indicated in Figure 15).
   
   A. Position each reinforcement bracket to sit squarely against both the body structure surface and the moon roof housing surface.
   
   B. Tighten each bolt.

   **Torque: 5.5 N*m (56 kgf*cm, 49 in*lbf)**

   **Figure 15. Bracket Body**
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Repair Procedure 2 (Continued)

14. Tighten the 8 moon roof reinforcement to moon roof housing bolts (as indicated in Figure 16).
   Torque: 5.5 N*m (56 kgf*cm, 49 in*lbf)

   Figure 16. Bracket Housing

15. Install the 4 moon roof drain hoses.

   A. Slide the clip 30 mm (1.18 in.) or more from the end of the sliding roof drain hose.

   Figure 17.

   30 mm (1.18 in.) or more
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Repair Procedure 2 (Continued)

B. Push the sliding roof drain hose all the way onto the sliding roof housing.

![Figure 18. Push All the Way](image)

C. Slide the clip to the position shown in the illustration.

**HINT**
Use the same procedure to install the other 3 sliding roof drain hoses.

![Figure 19. 7.0 mm (0.28 in.)](image)
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Repair Procedure 2 (Continued)

D. Confirm that all the 4 sliding roof drain hoses are pushed all the way onto the sliding roof housing and that the 4 clips are installed as shown in the illustration.

NOTICE
The clip must face toward the outside of the vehicle and also be above the lower surface of the sliding roof housing when installing the drain hoses or damage to the headliner may occur.

16. Install roof headlining assembly. Refer to TIS, applicable model and model year Repair Manual:


17. Reset the radio presets and clock.

18. Test drive the vehicle to verify repair.