



SI B31 03 18
Front Axle

March 2018
Technical Service

CRACKING NOISE FROM FRONT OF VEHICLE WHILE TURNING OR PARKING

MODEL

F80 (M3 Sedan)	F82 (M4 Coupe)	F83 (M4 Convertible)	F87 (M2 Coupe)
----------------	----------------	----------------------	----------------

SITUATION

Cracking noises heard from the area of the front axle when rotating the steering while stationary or at low speed. Refer to the linked video <https://tinyurl.com/y9lddolz>

CAUSE

Loose connections securing front axle and/or front end components.

CORRECTION

Tighten loose components or lubricate bearing surfaces.

PROCEDURE

For conditions that are similar to the situation described:

Perform the Front Axle Steering Noise Elimination Procedure described in the attachment.

PARTS INFORMATION

Part Number	Description	Quantity
83 23 2 179 708	Repair kit	2
34 11 1 123 072	Inner hex bolt, brake disc	4
Refer to ETK	Wheel bearing bolts	8
33 32 6 768 354	Hex screw with collar (stiffening plate)	8
07 11 9 905 418	Hex bolt with washer	2
33 32 6 768 884	Hexagon nut with collar	2

WARRANTY INFORMATION

Covered under the terms of the BMW New Vehicle Limited Warranty for Passenger Cars and Light Trucks.

Procedures (detailed in the attachment):

- Procedure I: Check Spring Strut Shock Absorber
- Procedure II: Check Stiffening Plate Screws
- Procedure III: Check Front Axle Supports

- Procedure IV: Lubricate Wheel Bearing Surface

Only one of the labor operation codes listed below (Main or Plus that applies to the work performed) may be submitted.

Defect Code:	3131903900	
---------------------	-------------------	--

Performing Procedure I Only

Labor Operation:	Labor Allowance:	Description:
00 65 307	6 FRU	Procedure I: Check Spring Strut Shock Absorber (Main work)
Or:		
00 65 984	4 FRU	Procedure I: Check Spring Strut Shock Absorber (Plus work)

If you are using a Main labor code for another repair, use the Plus code labor operation 00 65 984 instead of 00 65 307.

Or:

Performing Procedures I and II

Labor Operation:	Labor Allowance:	Description:
00 65 308	12 FRU	Procedure I: Check Spring Strut Shock Absorber and Procedure II: Check Stiffening Plate Screws (Main work)
Or:		
00 65 985	10 FRU	Procedure I: Check Spring Strut Shock Absorber and Procedure II: Check Stiffening Plate Screws (Plus work)

If you are using a Main labor code for another repair, use the Plus code labor operation 00 65 985 instead of 00 65 308.

Or:

Performing Procedures I, II and III

Labor Operation:	Labor Allowance:	Description:
00 65 309	30 FRU (F80, F82 and F83); 28 FRU (F87)	Procedure I: Check Spring Strut Shock Absorber; Procedure II: Check Stiffening Plate Screws and Procedure III: Check Front Axle Supports (Main work)
Or:		
		Procedure I: Check Spring Strut Shock Absorber;

00 65 986	28 FRU (F80, F82 and F83); 27 FRU (F87)	Procedure II: Check Stiffening Plate Screws and Procedure III: Check Front Axle Supports (Plus work)
-----------	---	---

If you are using a Main labor code for another repair, use the Plus code labor operation 00 65 986 instead of 00 65 309.

Or:

Performing All Four Procedures

Labor Operation:	Labor Allowance:	Description:
00 65 310	42 FRU (F80, F82 and F83); 41 FRU (F87)	Procedure I: Check Spring Strut Shock Absorber; Procedure II: Check Stiffening Plate Screws; Procedure III: Check Front Axle Supports and Procedure IV: Lubricate Wheel Bearing Surface (Main work)
Or:		
00 65 987	40 FRU (F80, F82 and F83); 39 FRU (F87)	Procedure I: Check Spring Strut Shock Absorber; Procedure II: Check Stiffening Plate Screws; Procedure III: Check Front Axle Supports and Procedure IV: Lubricate Wheel Bearing Surface (Plus work)

If you are using a Main labor code for another repair, use the Plus code labor operation 00 65 987 instead of 00 65 310.

ATTACHMENTS

View PDF attachment [SI B31 03 18 Attachment](#).

[Copyright ©2018 BMW of North America, Inc.]

FRONT AXLE STEERING NOISE ELIMINATION

Introduction or Preparatory Items:

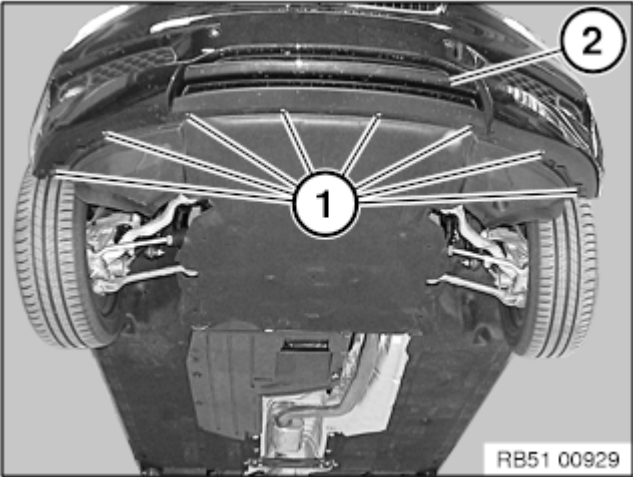
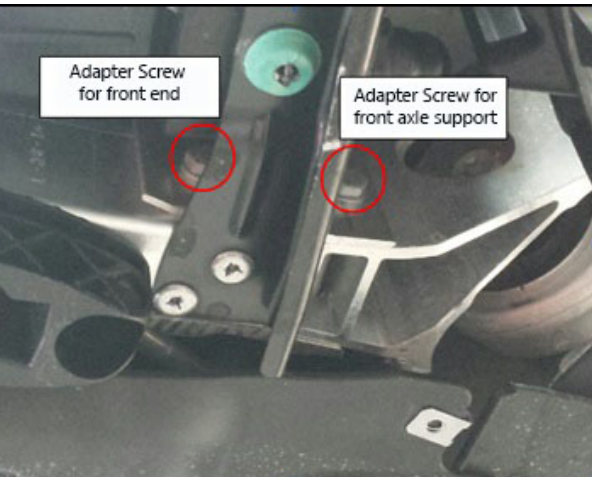
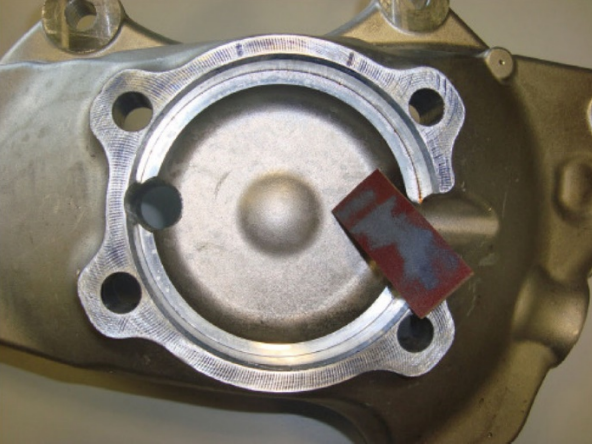



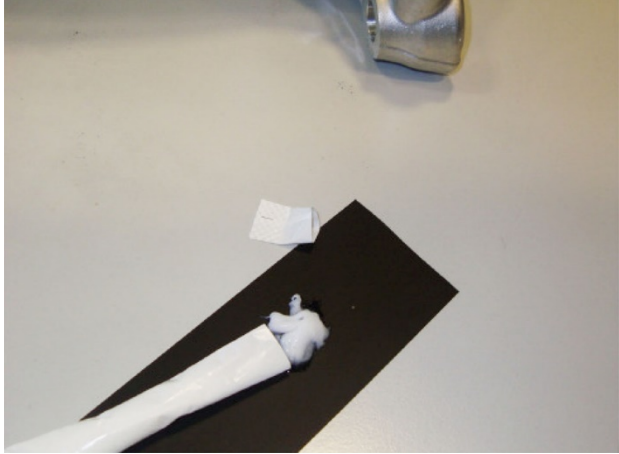
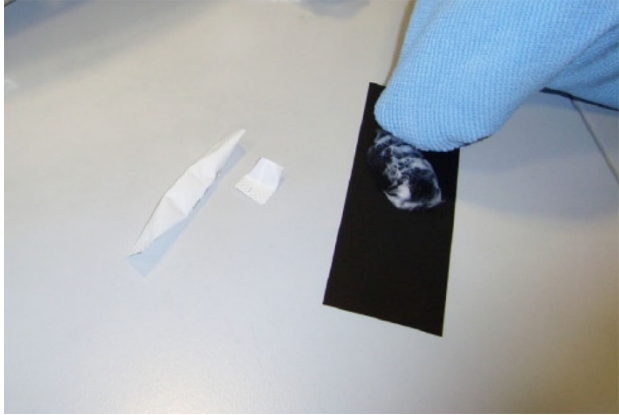


Note: This repair must be performed while the weight of the vehicle is supported on the tires - vehicle on four-column lift (alignment rack) or over service pit.



Procedure:

The following procedures should be attempted in order to complete the repair with the minimum effort necessary.

	<p>I. Check Spring Strut Shock Absorber</p> <p>A. Remove screw connections of spring strut shock absorber on swivel bearing.</p> <p>B. Replace screw connection (1) to specified torque: Torque: 56Nm</p> <p>C. Reassess the noise.</p> <p>Has the disturbing steering noise been eliminated?</p> <p>YES- the repair is complete.</p> <p>NO – go to next procedure.</p>
	<p>II. Check Stiffening Plate Screws</p> <p>A. Remove the stiffening plate screw connections (1).</p> <p>B. Clean the contact surfaces of stiffening plate.</p> <p>C. Replace the bolts to the specified torque: Jointing torque 56 Nm + 90° angle of rotation</p> <p>D. Reassess the noise.</p> <p>Has the disturbing steering noise been eliminated?</p> <p>YES- the repair is complete.</p> <p>NO – go to next procedure.</p>

	<p>III. Check Front Axle Supports</p> <p>A. Remove front bumper under body panels on left and right side</p>
	<p>B. Release adapter screw connections on front axle supports where shown.</p> <p>C. Retighten screw connection to specified torque: Torque: 19 Nm</p> <p>D. Reinstall front bumper panels on left and right.</p> <p>E. Reassess the noise.</p> <p>Has the disturbing steering noise been eliminated?</p> <p>YES- the repair is complete.</p> <p>NO – go to next procedure.</p>
	<p>IV. Lubricate Wheel Bearing Surface</p> <p>A. Install wheel bearing surface repair kit (part number 83 19 2 298 825).</p> <ol style="list-style-type: none"> 1. Disassemble the wheel bearing according to repair instructions REP 31 21 180. 2. Using the sandpaper, carefully sand the wheel bearing contact face until the surface is evenly roughened while maintaining a flat, planar surface.

	 <p>Note: Retain sandpaper for later use in this procedure.</p>
	<p>3. Squeeze the components of the provided lubricant onto a mixing surface and thoroughly blend together.</p>
	<p>4. Rub all of the lubricant mixture into the tip of a folded cloth.</p>
	<p>5. Using the part of the cloth containing the lubricant, rub the wheel bearing contact face, thoroughly working the lubricant into the fine scorings created during sanding.</p> <p>When completed, the surface must be sticky to the touch.</p>  <p>Note: There must not be any excess lubricant remaining on the edges.</p>

	<p>B. Remount the wheel bearings.</p> <p>C. Using the sandpaper, roughen the inside of the brake disc chamber/wheel bearing contact face, particularly any shiny patches.</p> <p> Note: There must not be any lubricant applied to the wheel bearing/brake disc contact surface.</p> <p>D. Remove any dust from the brake disc chamber with a dry cloth.</p> <p>E. Reassemble all components without any further cleaning.</p>