



SI B31 01 17
Front Axle

March 2018
Technical Service

TICKING NOISE FROM FRONT AXLE ON TURNS

This Service Information bulletin replaces SI B31 01 17 dated August 2017

What's New:

- The Situation has been updated
- The Correction section has been updated
- The Procedure section has been updated with more troubleshooting tips and a diagnostic video

MODEL

F85 (X5M)	F86 (X6M)		
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SITUATION

UPDATE! A hard mechanical clacking noise is heard when making turns coming from the front axle. The noise is heard when the wheels are turned and taking off from a stop with moderate to heavy acceleration

CAUSE

Premature wear on the constant velocity joints on the outer (wheel side) ends of the front output shafts.

CORRECTION

UPDATE! After verifying the noise, replace the affected front output shaft.

PROCEDURE

UPDATE! To verify the noise:

- Make low speed tight right hand and left hand turns from a stop with moderate to hard acceleration. Refer to video (<https://www.tinyurl.com/B310117>). Note: The video is referencing the noise under acceleration.
- Ticking noises that sound different (not as loud or not felt through driveline) or are duplicated under normal driving conditions (no load or harder acceleration or steering wheel in straight ahead position) are not caused by the front axle shafts (Do not replace the shafts).
- Remove both front wheels and rotate them on their hub one wheel bolt hole (wheel rotates, hub/rotor stays stationary) and torque the wheels.
- Test drive the vehicle again.
 - If the noise is no longer present: The cause could be from the wheel/rotor/hub mating surface. Refer to SI [B34 05 15](#) for further diagnosis/repairs.
- If the noise still persists replace the affected front axle half shaft.
 - Noise coming from the right front on right turns = right output shaft replacement.

- Noise coming from the left front on left turns = left output shaft replacement.



Follow Repair Instruction **31 60 004** “Removing and installing/replacing right output shaft;” and or Repair Instruction **31 60 003** “Removing and installing/replacing left output shaft” for replacing the affected axle shaft.

PARTS INFORMATION

Part Number	Description	Quantity
Refer to ETK	Output shaft(s)	Up to 2 as needed

WARRANTY INFORMATION

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

Defect Code:	3160052100	Constant velocity joint(s) on the outer (wheel side)
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Repairing One Side

Labor Operation:	Labor Allowance:	Description:
31 60 003	Refer to KSD2	Removing and installing or replacing output shaft, left (Main work)
Or:		
31 60 503		Removing and installing or replacing output shaft, left (Plus work)

If you are using a Main labor code for another repair, use the Plus code labor operation 31 60 503 instead of 31 60 003.

Or:

Labor Operation:	Labor Allowance:	Description:
31 60 004	Refer to KSD2	Removing and installing or replacing output shaft, right (Main work)
Or:		
31 60 504	Refer to KSD2	Removing and installing or replacing output shaft, right (Plus work)

If you are using a Main labor code for another repair, use the Plus code labor operation 31 60 504 instead of 31 60 004.

Or:

Repairing Both Sides

Labor Operation:	Labor Allowance:	Description:
		Removing and installing or replacing both output

31 60 005	Refer to KSD2	shafts (Main work)
Or:		
31 60 507	Refer to KSD2	Removing and installing or replacing both output shafts (Plus work)

If you are using a Main labor code for another repair, use the Plus code labor operation 31 60 507 instead of 31 60 005.

And, as needed:

UPDATE! **Diagnosis**

Labor Operation:	Labor Allowance:	Description:
31 99 000	Work time (WT)	UPDATE! Verifying the noise as described in this bulletin (Vehicle already in the workshop)

Work time labor operation code 31 99 000 is not considered a Main labor operation; however, it does require an individual punch time and an explanation on the repair order and in the claim comments section.

And, with the above:

Checking Wheel Alignment

Labor Operation:	Labor Allowance:	Description:
32 00 595	Refer to KSD2	Wheel alignment check KDS with ride-height measurement, without load

And, if and as necessary:

Adjusting

Labor Operation:	Labor Allowance:	Description:
32 00 601	Refer to KSD2	Adjusting toe-in on front axle
Or:		
32 00 620	Refer to KSD2	Adjusting rear axle
Or:		
32 00 630	Refer to KSD2	Adjusting rear axle and front axle

UPDATE! **Overlapping Labor Procedure – Other Repairs**

If invoicing the KSD2 flat rate labor operation codes for other repair work results in overlapping labor, for those flat rate labor operations that are affected, you can now:

- Replace the stated KSD2 “FRU allowance” with a “reduced FRU value” to eliminate the overlapping labor.

For help in identifying the overlapping labor, please refer to the AIR FRU Plausibility Check (Overlapping Labor

Tool) that is located in the AIR Client.

Eligible other repair work being claimed under a different defect code will require separate punch times.

On the repair order and in the claim comment section, please identify and itemize those labor operations being claimed with a “reduced FRU value.”

Posted: Monday, March 3, 2018

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