



SIB 27 02 20

2024-05-02

**JERKING OR SHUDDERING FROM THE DRIVELINE (XDRIVE TRANSFER CASE ATX13-X)**

This Service Information Bulletin (Revision 1) replaces SI B27 02 20 **dated May, 2020**.

**What's New:**

- Correction added
- Procedure updated to clarify the minimum required driving mileage needed to fully saturate the clutch plates
- Claim Information section's format, process and procedures updated

**MODEL**

F90 (M5 Sedan)	F91 (M8 Convertible)	F92 (M8 Coupe)	F95 (X5 M Sports Activity Vehicle)
F96 (X6 M Sports Activity Coupe)	F97 (X3 M Sports Activity Vehicle)	F98 (X4 M Sports Activity Coupe)	G01 (X3 Sports Activity Vehicle)
G02 (X4 Sports Activity Coupe)	G05 (X5 Sports Activity Vehicle)	G06 (X6 Sports Activity Coupe)	G07 (X7 Sports Activity Vehicle)
G12 (7 Series Sedan)	G14 (8 Series Convertible)	G15 (8 Series Coupe)	G16 (8 Series Gran Coupe)
G20 (3 Series Sedan)	G30 (5 Series Sedan)	G32 (640i xDrive Gran Turismo)	

**SITUATION**

There is a jerking or shuddering during either or both of the following:

- Cornering or accelerating from low speeds
- Driving with low to medium loads

There are no warning lights or Check Control messages.

**CAUSE**

Unevenly worn or incorrect fitment tires are installed on the vehicle, or the factory-filled transfer case oil does not meet BMW specifications.

**CORRECTION**

Unevenly worn or incorrect fitment tires are installed on the vehicle, or the factory-filled transfer case oil does not meet BMW specifications.

**PROCEDURE****Prerequisite vehicle tire inspection-**

## 1. Check the tires:

- Check the size and brand for correct fitment to the vehicle (e.g., tire placard on driver's B-pillar for factory-fitted tire sizes)
- One or more tires with extreme tire wear will keep the xDrive engaged

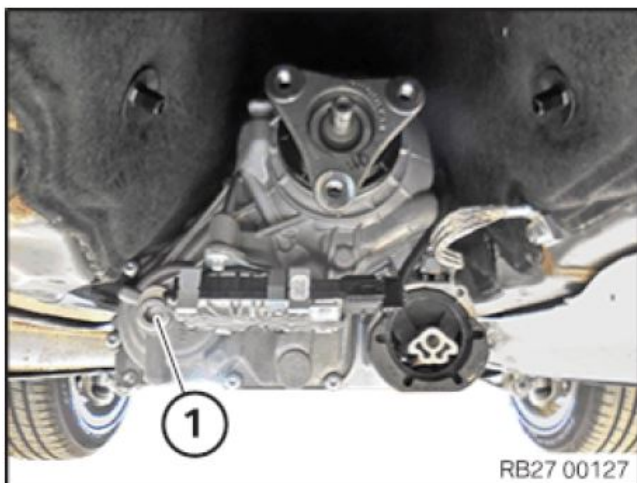
- If tires are brand new (just replaced), the issue could have happened with old tires
- If the vehicle was equipped with staggered sizes, check to make sure they are not mismatched to axle (front are now on rear)

**If no tire issues were found, or the SITUATION still exists after the tire issues are corrected-**

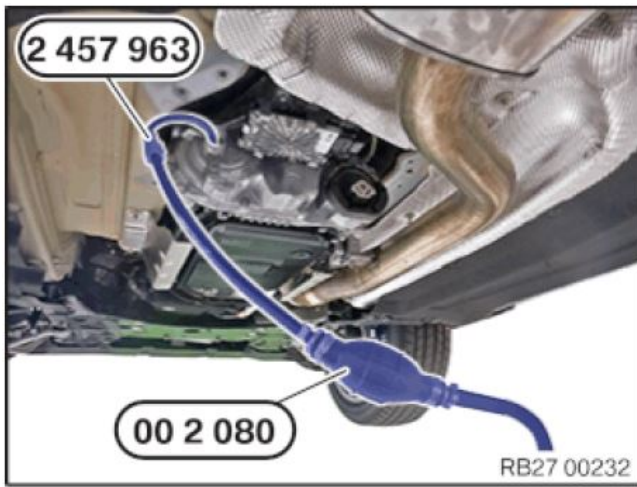
2. Check for and diagnose any faults in the powertrain control units.
3. Diagnose the transfer case:
  - It is no longer necessary (or approved) to unplug the transfer case (VTG) module on the models listed in this SIB to diagnose a transfer case related concern
  - The VTG can be disconnected through ISTA (G20 will not be available until June, 2020)
  - Follow path Vehicle Management/Troubleshooting/Function structure/Drive/Transfer box/[!] Current fault patterns/Temporary deactivation of all-wheel-drive system
  - Follow the instructions in the test plan and test drive the vehicle with the transfer case clutch deactivated to further diagnose the related complaint

**NOTE: There will be a warning in the control display for the xDrive system that for this procedure is to be ignored. Cycling the ignition will re-activate the VTG.**

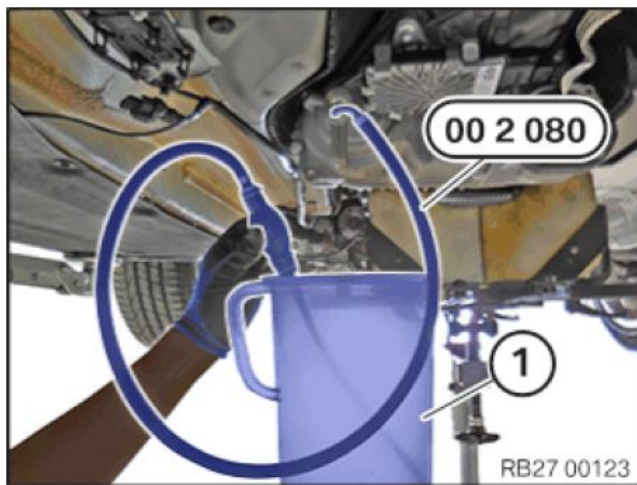
4. If the complaint was eliminated with the transfer case disconnected:
  - Change the oil in the transfer case. Follow Repair Instruction **27 00 270 Oil change in transfer box including used oil disposal**
  - If the repair instruction is not listed for a specified vehicle in ISTA follow this repair procedure
  - Connect the vehicle to ISTA. Follow path Service functions/Drive/Transfer box VTG/Oil change and follow the steps in the test plan.
  - Remove the transmission cross-member following Repair Instruction **22 32 050 Replacing the cross member for the transmission bearing** (included in 27 00 270/770)



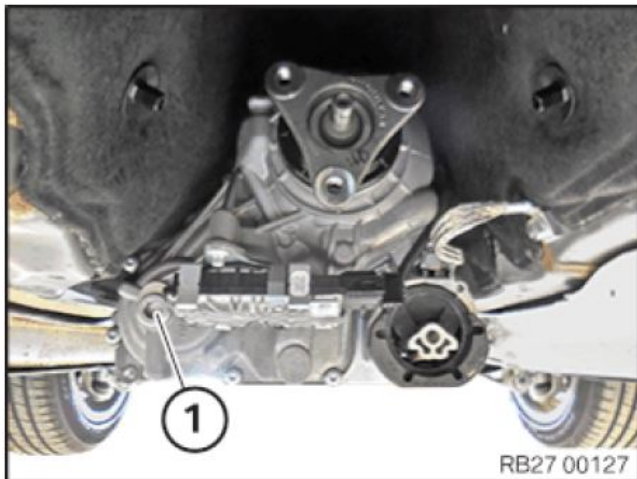
Open the oil filler plug (1).



Extract the transmission oil from the transfer case (VTG) using special tool 0 493 337 (00 2 080) and special tool 2 457 963.



Top up transmission oil up to the lower edge of the opening for the oil filler plug using special tool 0 493 337 (00 2 080). Use DTF-1 P/N 83 22 2 409 710 (@.7 liter)



Replace the oil filler plug (1).  
P/N 33 11 7 525 064

Tighten the oil filler plug to 60 Nm.

- Reinstall the transmission cross-member following Repair Instruction **22 32 050 Replacing the cross member for the transmission bearing**

5. Re-calibrate the VTG using ISTA path: Service functions/Drive/Transfer box VTG/Transfer box (VTG): Calibration

- **The new transfer case oil will still need to fully saturate the clutch plates inside the transfer case (up to**

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**125 miles). The shuddering should diminish during this run-in period before completely smoothing out.**

**The new transfer case's oil still needs to be fully saturated into the clutch plates inside the transfer case; a minimum of 125 miles of driving is required for this to occur.**

**The shuddering should diminish during this run-in period before completely smoothing out.**

## **PARTS INFORMATION**

Obtain and confirm the part numbers for your specific vehicle by entering the chassis number in either ETK or AIR which takes into account specific equipment and/or options.

<b>Part Number</b>	<b>Description</b>	<b>Quantity</b>
83 22 2 409 710	DTF-1 Transfer case oil (1000 ml/1 liter)	Sublet as needed
33 11 7 525 064	Screw plug with O-ring (M22x1,5-ZNS3)	1

Refer to the ETK and the applicable repair instructions for one-time use fasteners and/or component information regarding additional or replacement screws, gaskets, and seals that need to be installed and claimed.

## **CLAIM INFORMATION**

Procedure Steps 2 to 5 are covered under the terms of the BMW New Vehicle Limited Warranty for Passenger Cars and Light Trucks.

<b>Repair Code:</b>	<b>2710003800</b>	<b>Transfer box, complete jerking</b>
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Obtain the flat rate unit (FRU) allowances for the following that applies.

<b>Labor Operation</b>	<b>Description</b>	<b>Labor Allowance</b>
00 00 006	Carrying out vehicle test ( <b>Main work</b> )	As applicable
Or:		
00 00 556	Carrying out vehicle test ( <b>Plusposition work</b> )	As applicable
And:		
61 21 528	Supporting voltage of the vehicle electrical system / recharging vehicle battery	As applicable
And:		
27 00 000**	Disconnecting the transfer case (VTG) with ISTA and test-driving vehicle for diagnosis.	6 FRU WT
And:		
27 00 770	Oil change in transfer box	As applicable
And:		
27 00 000**	Recalibrating the VTG after oil change	4 FRU WT

If you are using a Main labor code for another repair, use the Plus code labor operation 00 00 556 instead of 00 00 006, or exclude them (including 61 21 528) when the Vehicle Test is included in another repair.

**Note: Claim work time labor operation code 27 00 000 only one time for a total of 10 FRU.**

Work time labor operation code 27 00 000 is not considered a Main labor operation.

(\*\*) Based on how the diagnosis above is claimed above for all centers, the "Diagnosis Worktime Flat Rate" code "00 58 500" does not apply to this repair.

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And, as needed:

**Sublet – Bulk Materials (RO and Claim Comments Required)**

<b>Sublet Code 4</b>	See the sublet reimbursement calculations below	Reimbursement for the repair-related bulk materials (Do not use the BMW part number for claim submission)
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Sublet reimbursement calculation for claiming the applicable repair-related bulk materials (BMW part number) is at the dealer net price amount for the quantity used plus your center’s handling.

Enter this material cost in sublet and itemize the amount on the repair order and in claim comment section.

(\* ) Based on which one applies to your center, please refer to **SI B01 01 20** or **B01 07 20** for the applicable procedure for documenting, claiming, and explaining, on the RO and in the claim comments, job/repair work time (WT), and the vehicle repairs your center performed, unless otherwise required by State law.

**BMW Group’s AIR Application Resource for Flat Rate Labor Operation Codes**

To obtain the corresponding flat rate unit (FRU) allowance information from the BMW Group AIR application resource, start by entering the Chassis Number (the last seven (7) characters of the VIN, select the applicable Model if two or more vehicle choices show), or enter the full VIN (17 characters), click on the “Search” button. Next, click on the “Flat Rate Units” button and enter the flat rate labor operation code in the field to the right, click “Search” to display the Flat Rate Unit Group detail choices.

**FEEDBACK REGARDING THIS BULLETIN**

Technical Feedback	To submit feedback for the technical topic of this bulletin: Submit your feedback in the rating box at the top of this bulletin
Warranty Feedback	To submit feedback for the CLAIMS section of this bulletin: Submit an IDS ticket to the Warranty Department, or use the chat available in the Warranty Documentation Portal
Parts Feedback	To submit feedback for the PARTS section of this bulletin: Submit an IDS ticket to the Parts Department

