



SIB 27 02 20

2020-05-20

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

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.

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

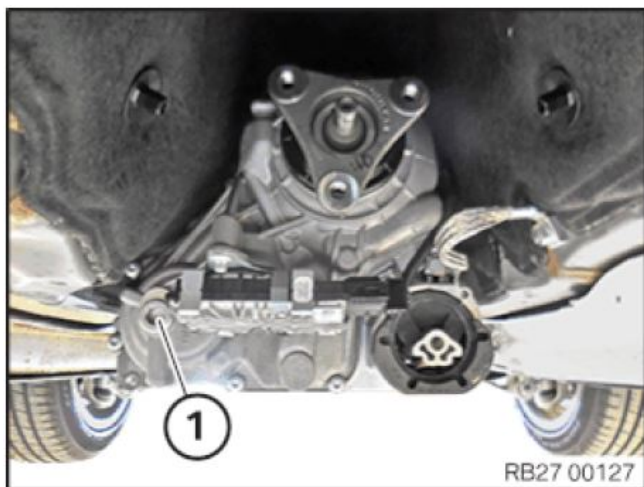
to diagnose a transfer case related concern

- 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.

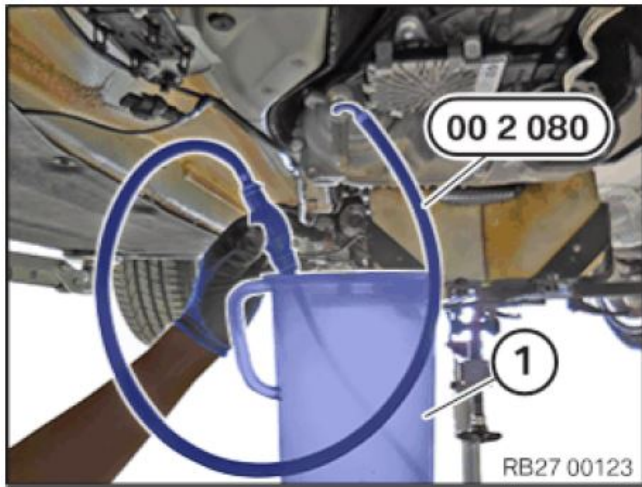
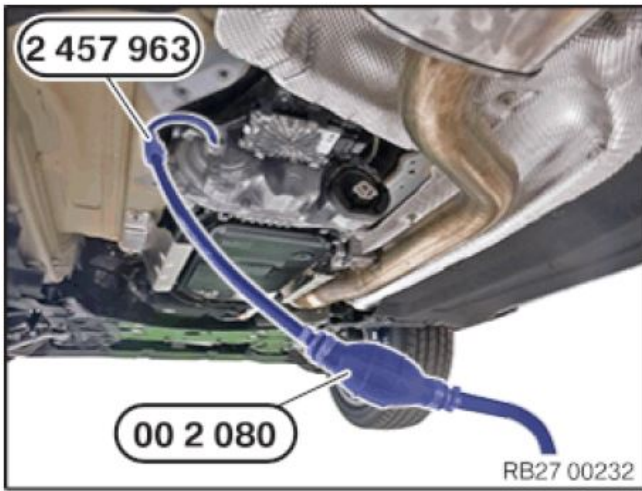
4. If the complaint was eliminated with the transfer case disconnected:

- 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)

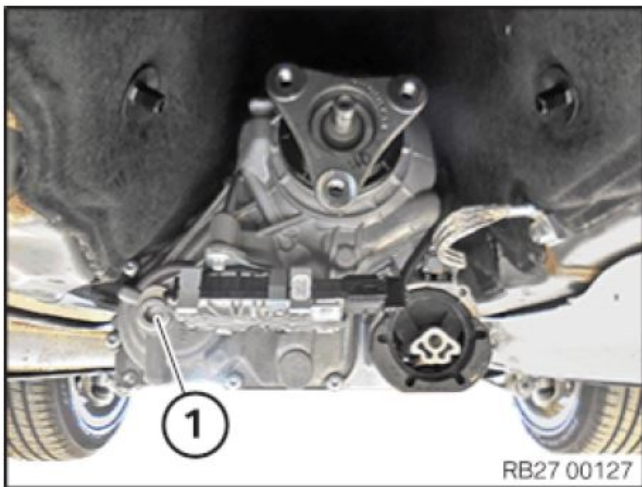


Open the oil filler plug (1).

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**

125 miles). 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.

Part Number	Description	Quantity
83 22 2 409 710	DTF-1 Transfer case oil (1000ml/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.

WARRANTY INFORMATION

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

Defect Code:	2710003800	Transfer box, complete jerking
Labor Operation	Description	Labor Allowance
00 00 006	Performing vehicle test (with vehicle diagnosis system – checking faults) (Main work)	Refer to AIR
Or:		
00 00 556	Performing vehicle test (with vehicle diagnosis system – checking faults) (Plus work)	Refer to AIR
And:		
61 21 528	Connect an approved battery charger/power supply (indicated in AIR as Charging battery)	Refer to AIR
And:		
27 00 000	Disconnecting the transfer case (VTG) with ISTA and test-driving vehicle for diagnosis.	6 FRU
And:		
27 00 770	Oil change in transfer box	Refer to AIR
And:		
27 00 000	Recalibrating the VTG after oil change	4 FRU

And, additionally for the:

e-Vehicles

Labor Operation	Description	Labor Allowance
61 25 910	Recharging high-voltage battery unit (to high voltage charging socket)	Refer to AIR

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.

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. Also, since the work time FRU allowance to be claimed is specified, a separate punch time is not required. However; it still requires an explanation on the repair order and in the claim comments section.

And, as needed:

Sublet – Bulk Materials (RO and Claim Comments Required)

Sublet Code 4	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.