



## TECHNICAL SERVICE BULLETIN

### Vehicles Equipped With A 2.0L (Panther) Engine – Rattle Type Noise From The Transmission Area At Light Accelerator Input

23-2263

19  
September  
2023

This bulletin supersedes 23-2211. Reason for update: Incorrect Procedure

#### Model:

Ford 2018-2022 Everest/Endeavour	Engine: 2.0L PANTHER
2018-2022 Ranger	Engine: 2.0L PANTHER

**Issue:** Some 2018-2022 Ranger and Everest/Endeavour vehicles equipped with a 2.0L (Panther) engine may present with concerns of a rattle type noise from the transmission during light to medium accelerator input.

**Action:** Should a vehicle present with this concern, technicians are advised to refer to the Service Procedure below.

#### Parts

Service Part Number	Quantity	Description
XT-12-QULV	10	TRANSMISSION FLUID WSS-M2C949-A MERCON® ULV
EB3G 10R80 K1TA	1	EVEREST 4X4 10R80 KIT - AUS/NZ
EB3G 10R80 K1TB	1	EVEREST 4X2 10R80 KIT - AUS/NZ
JB3G 10R80 K1TA	1	RANGER 4X4 10R80 KIT - AUS/NZ
JB3G 10R80 K1TB	1	RANGER 4X2 10R80 KIT - AUS/NZ
JB3G 10R80 K1TC	1	RAPTOR 10R80 KIT - AUS/NZ
EB3G10R80K1TL	1	EVEREST 4X4 Bi -Turbo 10R80 KIT - THAILAND/MALAYSIA
EB3G10R80K1TM	1	EVEREST 4X2 Single Turbo 10R80 KIT - THAILAND/MALAYSIA
EB3G10R80K1TN	1	RANGER 4X4 Bi -Turbo 10R80 KIT - THAILAND/MALAYSIA
EB3G10R80K1TP	1	RANGER 4X4 Single Turbo 10R80 KIT - THAILAND/MALAYSIA
EB3G10R80K1TQ	1	RANGER 4X2 Single Turbo 10R80 KIT - THAILAND/MALAYSIA
EB3G10R80K1TR	1	RAPTOR 10R80 KIT - THAILAND/MALAYSIA
JB3G10R80K1TG	1	RANGER 4X4 Bi -Turbo 10R80 KIT - VIETNAM/PHILIPPINES
JB3G10R80K1TH	1	RANGER 4X2 Single Turbo 10R80 KIT - VIETNAM/PHILIPPINES
JB3G10R80K1TJ	1	RAPTOR 10R80 KIT - VIETNAM/PHILIPPINES
EB3G10R80K1TE	1	EVEREST 4X4 Bi -Turbo 10R80 KIT - VIETNAM/PHILIPPINES
EB3G10R80K1TF	1	EVEREST 4X2 Single Turbo 10R80 KIT - VIETNAM/PHILIPPINES
W 715618 S437	6	NUTS, TORQUE CONVERTER - ZAF/INDIA
W 715694 S300	8	Splash Shield PIN TRIM - ZAF/INDIA
JB3Z 7J227 A	4	ATOC Cooler O rings - ZAF/INDIA
W 700056 S450B	5	Transmission Cooler and Selector Cable to Trans Fasteners - ZAF INDIA
AB39 4B496 AB	6	Front Drive Shaft Fasteners - ZAF/INDIA
W 710233 S437	4	Rear Drive Shaft Fasteners to Axle - ZAF/INDIA
W 716344 S437	4	Rear Drive Shaft Fasteners to Transfer Case - ZAF/INDIA
W703457S900	2	Drive Shaft Center Bearing Nuts - ZAF/INDIA
W 500547 S439	4	Transmission Cross Member Bracing to Chassis Bolts (Raptor and Everest/Endeavour only) - ZAF/INDIA

W 520515 S440	4	Transmission Cross Member Bracing to Chassis Nuts (Raptor and Everest/Endeavour only) - ZAF/INDIA
9YA02 123F	4	Transmission Cross Member to Chassis Bolts (All Vehicles) - ZAF/INDIA
W 520415 S440	4	Transmission Cross Member to Chassis Nuts (All Vehicles) - ZAF/INDIA
JB3Z 9450A	1	Exhaust Gasket Bi-Turbo to DPF - ZAF
GK21 9451 AB	1	Exhaust Gasket Single Turbo to DPF - ZAF/INDIA
JB3Z 5A215 A	1	Exhaust Clamp Bi-Turbo to DPF - ZAF
AB39 9451 AA	1	Exhaust Gasket Flex Pipe to Front Muffler - ZAF
EB3G 4B496 AA	4	Rear Drive Shaft Fastners to Transfer Case (Everest/Endeavour) - ZAF/INDIA
W500121S437	9	Transfer case to Transmission Bolts - ZAF/INDIA
JB3Z 5A215 B	1	Exhaust Clamp Single Turbo to DPF - ZAF/INDIA
JV41 9451 AA	1	Exhaust Gasket DPF to Front Muffler - INDIA
391308S	1	Filler Tube O-ring - ZAF/INDIA
9YA02123F	4	Transmission Cross Member to Chassis Bolt - ZAF / INDIA
JB3Z 7902 E	1	Torque Converter
7T4Z7Z302A	1	SEAL, FILTER
HL3Z 7A248 A	1	SEAL, CONVERTER HUB
HL3Z 7G090 A	1	SEAL STATOR SUPPORT (F1)
HL3Z 7G199 A	1	SEAL, AUX PUMP (AUTO STOP-START VEHICLES)
L1MZ 7A098 A	1	FILTER ASSEMBLY
JB3Z 7J048 A	1	DRIVEN GEAR (PUMP)
JB3Z 7177 A	1	DRIVE GEAR (TORQUE CONVERTER)
HL3Z 7025 A	1	BEARING, IDLER GEAR
W718158 S300	1	RETAINING RING PUMP DRIVEN GEAR
JB3Z 6652 B	1	IDLER GEAR

#### Labor Times

Description	Operation No.	Time
Inspect the transmission heat shield, firewall brake lines, wiring loom, any loose bolts around the engine/transmission area and fuel lines and clips	232263A	0.4 Hrs.
Update PCM and TCM software	232263B	0.4 Hrs.
Reprogram the transmission strategy download into the PCM/TCM and perform adaptive learning drive cycle (No) repair complete	232263C	0.8 Hrs.
Remove the transmission and replace the transmission fluid pump driven gear, drive gear and idler gear 4X4/AWD	232263D	8.8 Hrs.
Remove the transmission and replace the transmission fluid pump driven gear, drive gear and idler gear 2WD	232263E	8.2 Hrs.
Replace the torque converter (If the part number is earlier then (e.g JB3P-(7902)-JC) replace the part with new torque converter)	232263F	0.3 Hrs.

#### Repair/Claim Coding

Causal Part:	7177
Condition Code:	42

#### PDR Table

PDR Code	Description	Time
TSB232263A	All Markets - Inspect the transmission heat shield, firewall brake lines, loose bolts around the engine/transmission area, and fuel lines and clips and update PCM and TCM software, download and perform adaptive learning drive cycle (No) Repair Complete	1.6 Hrs.
TSB232263B	Australia, New Zealand, Phillippines, Vietnam, South Africa - Ranger (4X4) Inspect the transmission area for loose bolts, update PCM and TCM software, perform adaptive learning cycle, remove the transmission, replace fluid pump driven, drive and idler gear, replace torque converter if part number is before JB3P7902JC	10.7 Hrs.
TSB232263B	Thailand - Ranger (4X4 single turbo) Inspect the transmission area for loose bolts, update PCM and TCM software, perform adaptive learning cycle, remove the transmission, replace fluid pump driven, drive and idler gear, replace torque converter if part number is before JB3P7902JC	10.7 Hrs.
TSB232263C	Australia, New Zealand, Phillippines, Vietnam, South Africa - Ranger (4X2) Inspect the transmission area for loose bolts, update PCM and TCM software, perform adaptive learning cycle, remove the transmission, replace fluid pump driven, drive and idler gear, replace torque converter if part number is before JB3P7902JC	10.1 Hrs.
TSB232263C	Thailand - Ranger (4X4 single turbo) Inspect the transmission area for loose bolts, update PCM and TCM software, perform adaptive learning cycle, remove the transmission, replace fluid pump driven, drive and idler gear, replace torque converter if part number is before JB3P7902JC	10.1 Hrs.
TSB232263D	Australia, New Zealand, Phillippines, Vietnam, South Africa, India - Everest/Endeavour (4X4) Inspect the transmission area for loose bolts, update PCM and TCM software, perform adaptive learning cycle, remove the transmission, replace fluid pump driven, drive and idler gear, replace torque converter if part number is before JB3P7902JC	10.7 Hrs.
TSB232263D	Thailand - Everest (4X4 Bi turbo) Inspect the transmission area for loose bolts, update PCM and TCM software, perform adaptive learning cycle, remove the transmission, replace fluid pump driven, drive and idler gear, replace torque converter if part number is before JB3P7902JC	10.7 Hrs.
TSB232263E	Australia, New Zealand, Phillippines, Vietnam, South Africa, India - Everest/Endeavour (4X2) Inspect the transmission area for loose bolts, update PCM and TCM software, perform adaptive learning cycle, remove the transmission, replace fluid pump driven, drive and idler gear, replace torque converter if part number is before JB3P7902JC	10.1 Hrs.
TSB232263E	Thailand - Everest (4X2 single turbo) Inspect the transmission area for loose bolts, update PCM and TCM software, perform adaptive learning cycle, remove the transmission, replace fluid pump driven, drive and idler gear, replace torque converter if part number is before JB3P7902JC	10.1 Hrs.
TSB232263F	Australia, New Zealand, Thailand, Phillippines, Vietnam - Raptor Inspect the transmission area for loose bolts, update PCM and TCM software, perform adaptive learning cycle, remove the transmission, replace fluid pump driven, drive and idler gear, replace torque converter if part number is before JB3P7902JC	10.7 Hrs.
TSB232263G	Thailand - Ranger (4X4 Bi turbo) Inspect the transmission area for loose bolts, update PCM and TCM software, perform adaptive learning cycle, remove the transmission, replace fluid pump driven, drive and idler gear, replace torque converter if part number is before JB3P7902JC	10.7 Hrs.

## Service Procedure

### 1. Confirm the vehicle concern and inspect the following components:

- Transmission heat shield and transmission fluid cooler heat shield for security
- Firewall brake lines for security and damage
- Transmission wiring loom for correct routing and security
- Missing or loose bolts, paying particular attention around the engine/transmission area.
- Fuel lines and fuel line clips for security and ensure fuel lines are not rattling in the clips.
- A slight rattle at stop start is normal therefore this TSB does not apply.

### 2. Re-evaluate the vehicle. Is the concern still present?

(1). Yes - proceed to Step 3.

(2). No - the concern is fixed no further action required. Return the vehicle to the customer.

3. Connect the Ford Diagnostic and Repair System (FDRS) to the vehicle and check for any Diagnostic Trouble Codes (DTCs). Were any powertrain related DTCs logged?
  - (1). Yes - address and repair any powertrain related DTCs first referring to the relevant section of the Workshop Manual (WSM). If after addressing the DTCs and the concern is still present proceed to Step 4.
  - (2). No - proceed to Step 4.
4. Check and ensure the Powertrain Control Module (PCM) and Transmission Control Module (TCM) are at the latest service calibrations using FDRS release 35.5.3 or higher.
5. Carry out an Adaptive Learning Drive Cycle. For additional information, refer to WSM Section, 307-01.
6. Re-evaluate the vehicle to confirm correct operation. Does the rattle noise persist?
  - (1). Yes - proceed to Step 7.
  - (2). No - the concern is fixed.

**NOTE: The suggested evaluating condition is as follows: With a very light throttle application mainly on a slight to moderate gradient at approximately 1750 rpm (+/- up to 250 rpm). The rattle is more apparent at lower engine temperatures (within 5 minutes of engine start from cold). The rattle can be in heard at any speed or gear.**

7. Remove the transmission and verify the torque converter part number Prefix and Suffix. Ensure the torque converter part number is JB3P-(7902)-JD or later. If the part number is JB3P-(7902)-JC or earlier, then replace the part with a new torque converter (JD or later). (Figure 1)

Callout 1: Ford Part Number Prefix and Suffix 3mm Max High Here

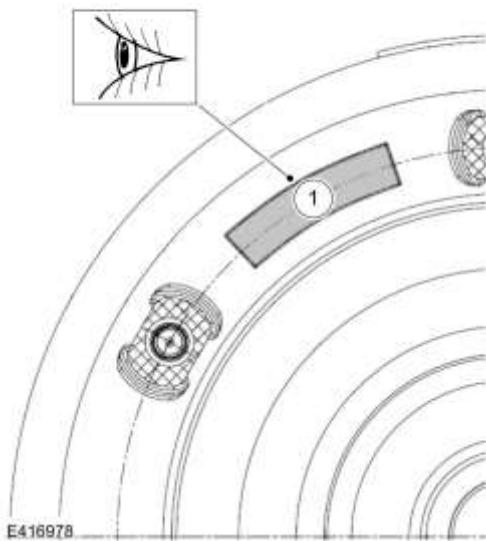


Figure 1

8. Replace the transmission fluid pump driven gear, drive gear and idler gear. For additional information, refer to WSM section 307-01.
9. Re-evaluate the vehicle to confirm correct operation. Does rattle noise persist?
  - (1). Yes - contact the hotline for further assistance.
  - (2). No - the concern is fixed and no further action is required. Return the vehicle to the customer.

**NOTE: Advise the customer this vehicle is equipped with an adaptive transmission shift strategy which allows the vehicle's computer to learn the transmission's unique parameters and improve shift quality. When the adaptive strategy is reset, the computer will begin a relearning process. This relearning process may result in firmer than normal upshifts and downshifts for several days.**