



TECHNICAL SERVICE BULLETIN

Rattle Noise From The Exhaust

23-2341

13 November
2023

This bulletin supersedes 22-2388.

Model:

Ford	
2021-2023 F-150 Raptor	

Summary

This article supercedes TSB 22-2388 to update the Service Procedure and vehicle model years affected.

Issue: Some 2021-2023 F-150 Raptor vehicles may experience a rattle noise from the exhaust at the exhaust tailpipe actuators. This may be due to the exhaust tailpipe actuator valves rattling inside the muffler assembly. To correct the condition, follow the Service Procedure to reprogram the powertrain control module (PCM) and install new exhaust tailpipe actuator and/or valve springs on the exhaust tailpipe actuator valves.

Action: Follow the Service Procedure to correct the condition on vehicles that meet all of the following criteria:

- 2021-2023 F-150 Raptor
- Rattle noise from the exhaust at the exhaust tailpipe actuators

Parts

Service Part Number	Quantity	Description	Unit of Issue	Piece Quantity
ML3Z-5K245-B	2	Exhaust Tailpipe Actuator Valve Spring	1	2
ML3Z-5K245-C	2	Exhaust Tailpipe Actuator	1	2

Warranty Status: Eligible under provisions of New Vehicle Limited Warranty (NVLW)/Service Part Warranty (SPW)/Special Service Part (SSP)/Extended Service Plan (ESP) coverage. Limits/policies/prior approvals are not altered by a TSB. NVLW/SPW/SSP/ESP coverage limits are determined by the identified causal part and verified using the OASIS part coverage tool.

Labor Times

Description	Operation No.	Time
2021-2023 F-150 Raptor: Check For Available PCM Update (None Available) Replace The Exhaust Tailpipe Actuators Or Springs Following The Service Procedure (Do Not Use With Any Other Labor Operations)	232341A	0.6 Hrs.
2021-2023 F-150 Raptor: Check For Available PCM Update (Available) Download And Run The PCM Update App And Replace The Exhaust Tailpipe Actuators Or Springs Following The Service Procedure (Do Not Use With Any Other Labor Operations)	232341B	0.7 Hrs.

Repair/Claim Coding

Causal Part:	5230
Condition Code:	33

Service Procedure

1. Check the PCM for software updates using the latest software level of the Ford Diagnosis and Repair System (FDRS) scan tool. Is there a software update available for the PCM?

(1). Yes - download and run the PCM - Powertrain Control Module (PCM) Software Update app. Proceed to Step 2.

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.

(2). No - proceed to Step 2.

2. Determine the repair based on the vehicle build date.

NOTE: Make note of the positioning of the exhaust tailpipe actuator valve shaft after the actuator has been removed. The valve has a 90 degree range of motion and is likely positioned closed when the actuators are removed. When removing and installing the actuator shields, use a wrench or socket on the backing nut when removing the 10 mm bolt to help prevent damage and/or minimize distortion to the shield.

(1). For vehicles built on or after 7-June-2022, replace both exhaust tailpipe actuators by performing Workshop Manual (WSM) Section 309-00C, skip steps for removal and installation of the muffler assembly. Repair is complete.

(2). For vehicles built on or before 6-June-2022, proceed to Step 3.

3. Remove both exhaust tailpipe actuators and exhaust tailpipe actuator valve springs by performing WSM Section 309-00C, skip steps for removal of the muffler assembly. Proceed to Step 4.

4. Install the new exhaust tailpipe actuator valve springs. The steps below are to be performed on each actuator independently. Once completed, proceed to Step 5.

(1). Position the bottom of the service exhaust tailpipe actuator valve spring (Figure 1) on the top of the exhaust tailpipe actuator valve shaft. The top of the service exhaust tailpipe actuator valve spring with the rectangle shaped opening, should be facing upwards. Refer to Figures 1-2 for orientation.

Figure 1



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Figure 2



(2). While holding the service exhaust tailpipe actuator valve spring in place on the top of the exhaust tailpipe actuator valve shaft, install the exhaust tailpipe actuator by slightly pressing downward and rotating clockwise to lock the actuator in the assembly.

(3). Carefully inspect the service exhaust tailpipe actuator valve spring to make sure that the actuator and exhaust tailpipe actuator valve shafts are properly seated. A properly installed service exhaust tailpipe actuator valve spring should appear as shown in Figure 3.

Figure 3



5. Install both exhaust tailpipe actuators by performing WSM Section 309-00C, skip steps for installation of the muffler assembly.

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NOTE: The information in Technical Service Bulletins is intended for use by trained, professional technicians with the knowledge, tools, and equipment to do the job properly and safely. It informs these technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by "do-it-yourselfers". Do not assume that a condition described affects your car or truck. Contact a Ford or Lincoln dealership to determine whether the Bulletin applies to your vehicle. Warranty Policy and Extended Service Plan documentation determine Warranty and/or Extended Service Plan coverage unless stated otherwise in the TSB article. The information in this Technical Service Bulletin (TSB) was current at the time of printing. Ford Motor Company reserves the right to supersede this information with updates. The most recent information is available through Ford Motor Company's on-line technical resources.