



TECHNICAL SERVICE BULLETIN

Turbocharger Wastegate Rattle Noise

25-2215

20 May 2025

This bulletin supersedes 25-2008. Reason for update: update the Service Procedure

Model:

Ford 2024 F-150	Engine: 2.7L EcoBoost Built On Or Before 04-Oct-2024
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Markets: North American market only

Issue: Some of the vehicles listed in the Model statement above may exhibit a condition where the turbocharger wastegate will make a rattling noise. This may be due to a missing wave spring between the wastegate actuator lever arm and the turbine housing on both the left and right turbochargers.

Action: For vehicles that meet all of the criteria in the Issue and Model statements, follow the Service Procedure to install a wave spring on both the left and right turbochargers.

Parts

Service Part Number	Claim Quantity	Package Order Quantity	Number in Package	Description	Note
RL3Z-9G488-D	1 Kit	1 Kit	1 Kit	Wastegate Lever Spring Kit	Kit contains 3 turbocharger wastegate actuator wave springs

Service part numbers and "number in package" quantity may change after publication, thus also affecting the "package order quantity". Refer to the parts catalog for the latest information.

Claim Quantity refers to the total number of individual pieces required to repair the vehicle.

Package Order Quantity refers to the amount of the service part number package(s) required to repair the vehicle.

Number In Package refers to the number of individual pieces included in a service part number package.

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

Labor Times

Description	Operation No.	Time
2024 F-150 2.7L: Inspect For Wave Spring (Pass) Reassemble Vehicle (Do Not Use With Any Other Labor Operations)	252215A	1.0 Hrs.
2024 F-150 2.7L: Inspect For Wave Spring (Fail) Install A Wave Spring On One Turbocharger (Do Not Use With Any Other Labor Operations)	252215B	1.2 Hrs.
2024 F-150 2.7L: Inspect For Wave Spring (Fail) Install A Wave Spring On Both Turbochargers (Do Not Use With Any Other Labor Operations)	252215C	1.4 Hrs.

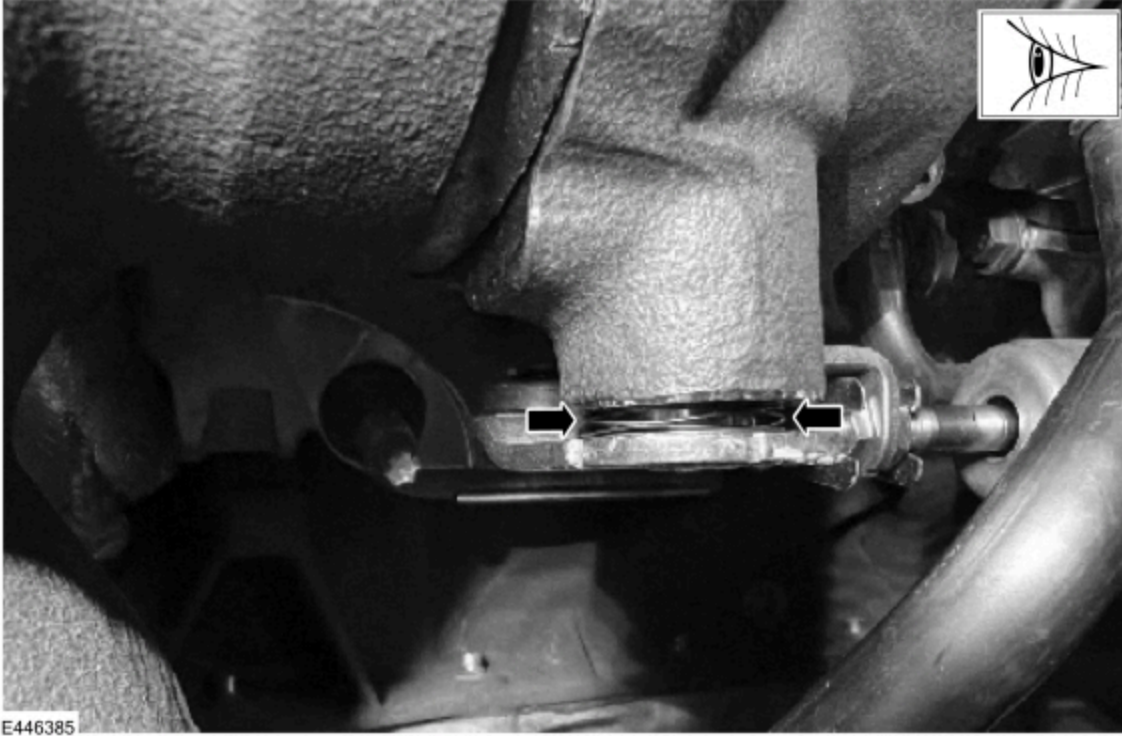
Repair/Claim Coding

Causal Part:	6K682
Condition Code:	39

Service Instruction

1. Remove both front wheels. Refer to WSM, Section 204-04A > Wheels and Tires > Removal and Installation > Wheel and Tires.
2. Remove both front inner splash shields. Refer to WSM, Section 501-02 Front End Body Panels > Removal and Installation > Fender Splash Shield.
3. Is a wave spring installed between the wastegate actuator lever arm and the turbine housing on both the left and right turbochargers? (Figure 1)

Figure 1



- (1). Yes - this article does not apply. Refer to WSM, Section 303-04 for normal diagnostics.
 - (2). No - proceed to Step 4 to install a wave spring on both the left and/or right turbochargers.
4. Using a paint pen, mark the position of a wastegate. (Figure 2)

Figure 2



5. Manually manipulate the wastegate to the open position on the right turbocharger.

NOTE: This will create additional space to allow for wave spring installation.

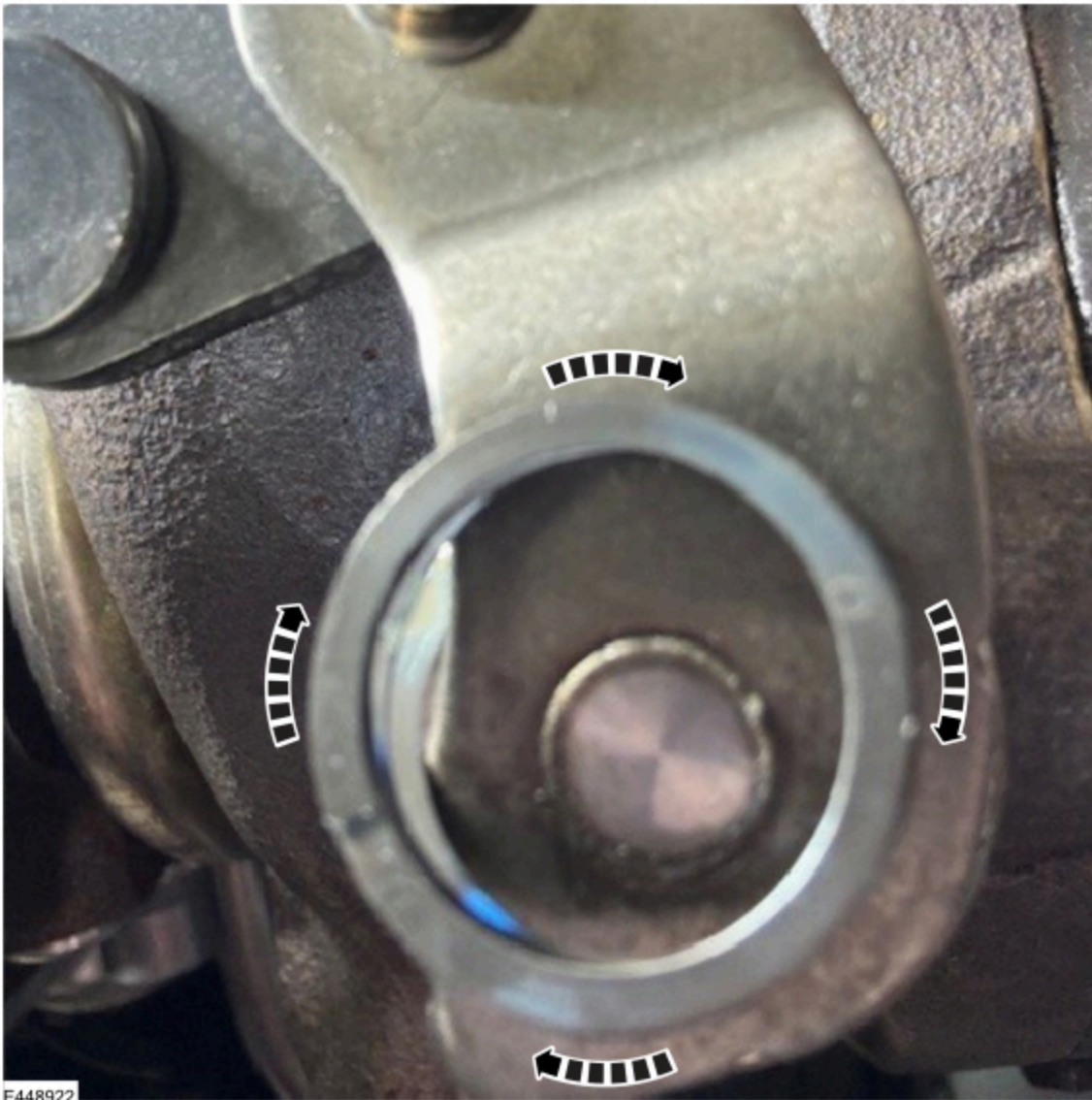
6. If necessary, using a small wire brush, clean the gap between the actuator turbine housing lever arm and the turbine housing and make sure it is free of debris.

7. Install one wave spring per turbocharger by inserting one coil end under the concave/curved side of the lever arm on the right turbocharger. (Figures 3-4)

Figure 3



Figure 4



NOTE: Use caution when installing the spring to not bend/kink the spring. If bent or kinked when installing, remove and discard and use a new spring from the kit.

8. Keeping the wave spring centered over the wastegate lever arm shaft, rotate and guide the wave spring on the wastegate lever arm shaft until all coils of the wave spring are under the lever arm. If the spring becomes difficult to rotate on, open or close the actuator as needed. A small flathead screwdriver may be needed to push the last part of the coil under the lever arm. (Figures 3-4)
9. Manually return the wastegate to the original marked position. (Figure 2)
10. Repeat Steps 4-9 to install a wave spring on the left turbocharger.
11. Install both front inner splash shields. Refer to [WSM](#), Section 501-02 Front End Body Panels > Removal and Installation > Fender Splash Shield.
12. Install both front wheels. Refer to [WSM](#), Section 204-04A > Wheels and Tires > Removal and Installation > Wheel and Tires.

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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.