



TECHNICAL SERVICE BULLETIN

3.5L PowerBoost - Lariat/XLT/XL Trim Levels - Right Side Turbocharger Concerns

24-226423 August
2024**Model:**

Ford 2024 F-150	Engine: 3.5L PowerBoost Lariat/XLT/XL trim level
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Issue: Some 2024 F-150 Lariat/XLT/XL trim level vehicles equipped with a 3.5L PowerBoost engine may exhibit a condition where the right side turbocharger will enter an overspeed condition, causing turbocharger damage and may exhibit an illuminated MIL with DTC P0299:00 stored in the PCM. This may be due to the upper air deflector deforming and restricting the intake air to the turbocharger. To correct this condition, follow the Service Procedure to replace the upper air deflector.

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

- 2024 F-150
- Lariat/XLT/XL trim level
- 3.5L PowerBoost engine
- At least one of the following symptoms:
 - Damaged right side turbocharger
 - Smoke from exhaust
 - Reduced power
 - Reduced acceleration
 - Runs rough
 - Low engine oil
 - Excessive turbocharger noise
 - Illuminated MIL with DTC P0299:00 stored in the PCM

Parts

Service Part Number	Claim Quantity	Package Order Quantity	Number in Package	Description
RL3Z-19E525-A	1	1	1	Air Deflector
W705589-S300	16	4	4	Pin Retainer

Parts - Parts To Inspect And Replace Only If Necessary

Service Part Number	Claim Quantity	Package Order Quantity	Number in Package	Description
W520514-S440	Only If Necessary (2 Possible)	Only If Necessary (2 Possible)	1	Right Catalytic Converter Bolt
W714418-S439	Only If Necessary (4 Possible)	Only If Necessary (1 Possible)	4	Transmission Support Cross Member Bolt
W718353-S900	Only If Necessary (4 Possible)	Only If Necessary (1 Possible)	4	Transmission Support Insulator Bolt
W714418-S439	Only If Necessary (4 Possible)	Only If Necessary (1 Possible)	4	Transmission Support Crossmember Bolt M12 x 130 mm
PL3Z-5C226-A	Only If Necessary (1 Possible)	Only If Necessary (1 Possible)	1	Catalytic Converter To Turbo Gasket
ML3Z-6L625-A	Only If Necessary (1 Possible)	Only If Necessary (1 Possible)	1	Turbocharger Filter Assembly

PL3Z-5C226-A	Only If Necessary (1 Possible)	Only If Necessary (1 Possible)	1	Exhaust Gasket
ML3Z-9450-A	Only If Necessary (1 Possible)	Only If Necessary (1 Possible)	1	Turbocharger Gasket
FT4Z-6N652-D	Only If Necessary (2 Possible)	Only If Necessary (2 Possible)	1	Turbocharger Coolant Tube Gasket
W709771-S440	Only If Necessary (2 Possible)	Only If Necessary (2 Possible)	1	Transmission Mount Nut
W709771-S440	Only If Necessary (2 Possible)	Only If Necessary (2 Possible)	1	Transmission Support Nut
W520114-S442	Only If Necessary (8 Possible)	Only If Necessary (2 Possible)	4	Transmission Support Crossmember Nut
ML3Z-6775-K	Only If Necessary (1 Possible)	Only If Necessary (1 Possible)	1	Shield
W716088-S900	Only If Necessary (3 Possible)	Only If Necessary (2 Possible)	2	Turbocharger Stud
ML3Z-9T515-A	Only If Necessary (1 Possible)	Only If Necessary (1 Possible)	1	Turbocharger Oil Return Tube Assembly
ML3Z-9G440-A	Only If Necessary (1 Possible)	Only If Necessary (1 Possible)	1	Right Turbocharger Oil Supply Tube Assembly
RL3Z-6K682-D	Only If Necessary (1 Possible)	Only If Necessary (1 Possible)	1	Right Turbocharger Assembly
AA5Z-6714-A	Only If Necessary (1 Possible)	Only If Necessary (1 Possible)	1	Engine Oil Filter
XO-5W30-Q1SP	Only If Necessary	Only If Necessary		Motorcraft® SAE 5W-30 Premium Synthetic Blend Motor Oil (All Markets Except Canada)
CXO-5W30-LSP6	Only If Necessary	Only If Necessary		Motorcraft® SAE 5W-30 Super Premium Motor Oil (Canada Only)

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.

Only If Necessary indicates the part is not mandatory. Refer to the Service Procedure to determine the inspection/inclusion criteria.

Warranty Status: Eligible under provisions of New Vehicle Limited Warranty (NVLW)/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/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 PowerBoost: Check for DTC P0299:00, Replace The Upper Air Deflector Following The Service Procedure (Do Not Use With Any Other Labor Operations)	242264A	0.4 Hrs.

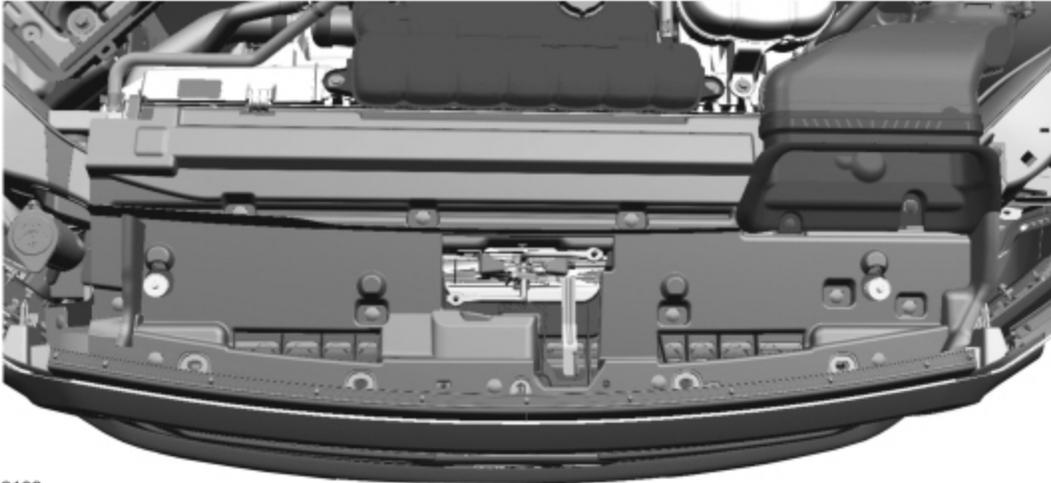
Repair/Claim Coding

Causal Part:	19E525
Condition Code:	33

Service Procedure

1. Does the upper air deflector match the one outlined in Figure 1?

Figure 1



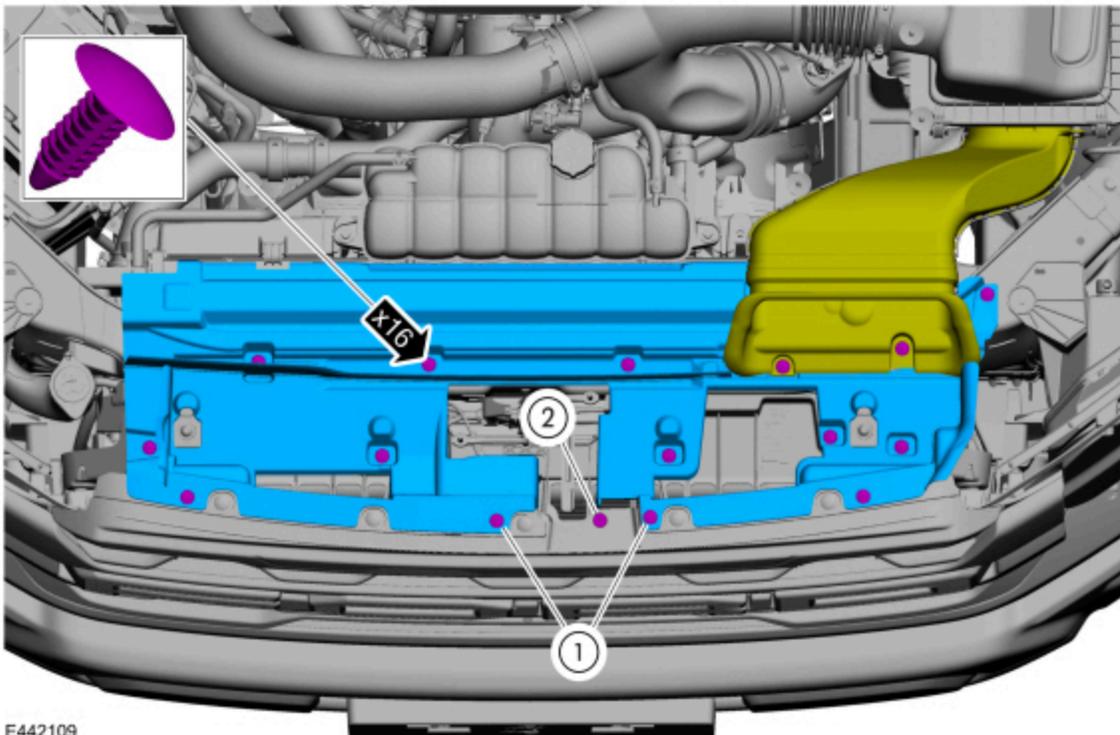
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(1). Yes - proceed to Step 2.

(2). No - this article does not apply. Refer to the WSM for additional diagnostics.

2. Remove and discard the upper radiator air deflector and the 15 air deflector push pin retainers. (Figure 2)

Figure 2



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3. Install the new air deflector.

(1). Set the new air deflector in place and install 13 pin retainers except for the 2 shown in Figure 2, Callout 1 and the 1 shown in Figure 2, Callout 2

(2). Using the 2 remaining holes in the newly installed air deflector as a guide, use a 1/4 in. (6.5 mm) drill bit and drill a hole through the radiator grille at each location shown in Figure 2, Callout 1.

NOTE: Use a drill stop or tape set to a 1/4 inch depth on the drill bit as a guide to avoid drilling into components such as wiring on the back side of the grille.

(3). Install the remaining 2 pin retainers to secure the air deflector in place.

(4). Install a single pin retainer in the now exposed hole in the grille as shown in Figure 2, Callout 2.

4. For additional diagnosis of the right side turbocharger and other affected powertrain components, refer to WSM, Section 303-04G Fuel Charging and Controls - Turbocharger - 3.5L EcoBoost (BM)/3.5L V6 PowerBoost (CN) > Diagnosis and Testing.

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