



TECHNICAL SERVICE BULLETIN

Pop/Clunk/Snap Noise From The Rear Of Vehicle When Driving Up/Down An Incline At An Angle

21-2253

01 September
2021

Model:

Ford
2021 F-150

Issue: Some 2021 F-150 vehicles with rear gross axle weight rating (GAWR) of 1542 kg (3,400 lb) or 1724 kg (3,800 lb) shown on the vehicle certification (VC) label may experience a pop/clunk/snap noise from the rear of vehicle when driving up/down an incline at an angle (frame twist). This approach angle would be similar to entering or leaving a driveway. This may be due to movement between the rear spring and the rear spring mounting plate on the rear axle. To correct the condition, follow the Service Procedure to apply lubrication between the rear spring and the rear spring mounting plate mating surfaces on the rear axle.

Action: Follow the Service Procedure steps to correct the condition if the vehicle meets all of the following criteria:

- 2021 F-150
- With a rear GAWR of 1542 kg (3,400 lb) or 1724 kg (3,800 lb) shown on the VC label
- Pop/clunk/snap noise from the rear of vehicle when driving up/down an incline at an angle (frame twist)

NOTE: Part quantity refers to the number of that service part number required, which may be different than the number of individual pieces. Service part numbers contain 1 piece unless otherwise stated. "As Needed" indicates the part is required but the number may vary or is not a whole number; parts can be billed out as non-whole numbers, including less than 1.

Parts

Part Number		Description	Quantity
ML3Z-5705-A	Package Contains 1 Piece, 4 Pieces Required	U-bolt (4x2 Only)	4
ML3Z-5705-B	Package Contains 1 Piece, 4 Pieces Required	U-bolt (4x4 Only)	4
W520215-S441	Package Contains 4 Pieces, 8 Pieces Required	U-bolt Nut	2
W506545-S439	Package Contains 4 Pieces, 2 Pieces Required	Shock Bolt	1
W520214-S440	Package Contains 4 Pieces, 2 Pieces Required	Shock Nut	1
XG-1-E1	-	Motorcraft® Premium Long-Life Grease	As Needed

Special Tool(s)

General Equipment: Transmission Jack

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

Repair/Claim Coding

Causal Part:	5560
Condition Code:	14

Service Procedure

1. Check the rear GAWR found on the VC label. Refer to Workshop Manual (WSM) Section 100-01. Is the rear GAWR 1542 kg (3,400 lb) or 1724 kg (3,800 lb)?

(1). Yes - proceed to Step 2.

(2). No - this article does not apply. Refer to WSM, Section 100-04 for normal diagnostics.

2. Position the vehicle on a hoist. Refer to WSM, Section 100-02.

3. Support the axle assembly on both sides with a transmission jack.

NOTE: Perform the following steps one side at a time.

4. Remove and discard the rear shock absorber lower nut and bolt.

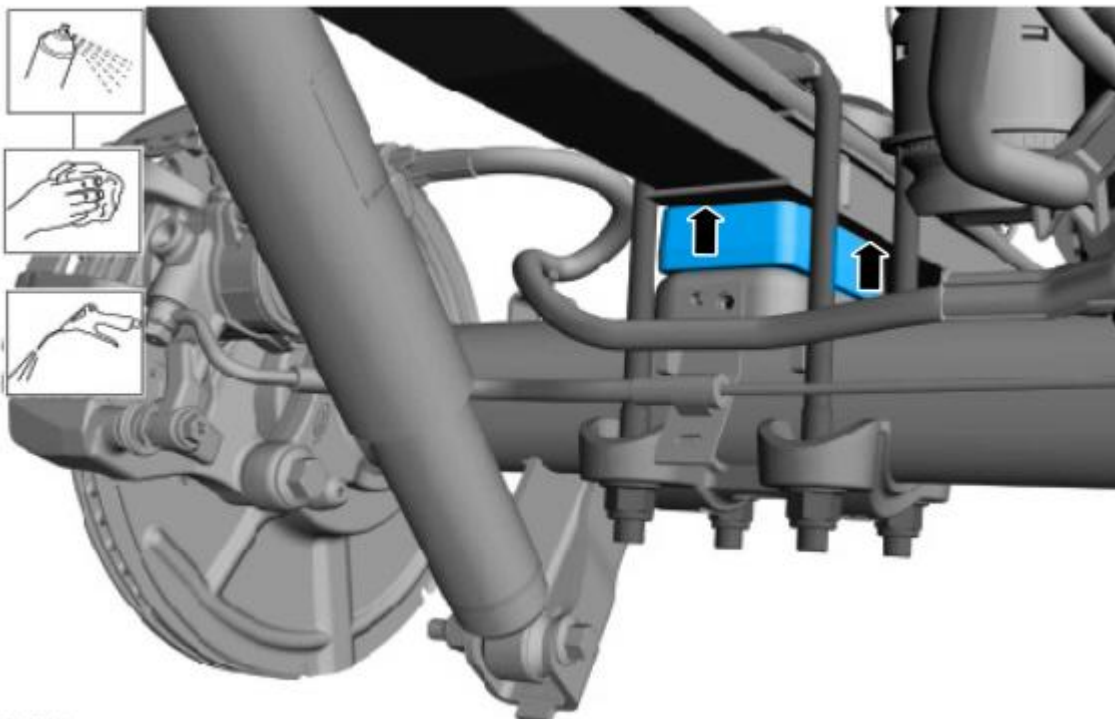
5. Remove and discard the rear spring U-bolts and U-bolt nuts.

6. Lower the transmission jack 5-7.5 cm (2-3 inches) to allow the rear axle assembly to separate from the rear spring.

NOTE: On 4X4 equipped vehicles, make sure to note the correct orientation of spring spacer before removal. Refer to WSM, Section 204-02 > Spring Installation > Step 1 for information about spring spacer orientation based on the vehicle's wheelbase. Failure to properly install the spring spacer could lead to noise vibration and harshness (NVH) related issues.

7. Clean any debris from the mating surfaces between the rear spring and the rear spring mounting plate on the rear axle. If equipped with four-wheel drive (4WD), mating surfaces for the spring spacer will also need to be cleaned of any debris. (Figure 1)

Figure 1



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8. Apply a thin layer of Motorcraft® Premium Long-Life Grease to the bottom surface of the rear spring.

9. Raise the rear axle assembly and install new U-bolts and new U-bolt nuts and tighten the U-bolt nuts in a cross pattern in 4 stages.

- (1). Stage 1: Tighten to 40 Nm (30 lb-ft)
- (2). Stage 2: Tighten to 80 Nm (59 lb-ft)
- (3). Stage 3: Tighten to 120 Nm (89 lb-ft)
- (4). Stage 4: Tighten to 150 Nm (111 lb-ft)

10. Install the new rear shock absorber lower nut and bolt and tighten to 90 Nm (66 lb-ft).

11. Lower the transmission jack and remove the vehicle from hoist.

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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.