TECHNICAL SERVICE BULLETIN
Steering Gear Clatter Noise Over Bumps On Extremely Rough Road Surfaces

18-2392
21 December 2018

Model:

Lincoln 2015-2019 MKC

Issue: Some 2015-2019 MKC vehicles may exhibit an electronic power assist steering (EPAS) gear clatter-type noise over bumps that is only present on extremely rough road surfaces.

Action: Follow the Service Procedure steps to correct the condition.

Parts

Part Number	Description	Quantity
3504	Steering Gear Assembly (Refer To The Parts Catalog For The VIN Specific Application)	1
W711137-S442	Steering Coupling Bolt	1
W715135-S440	Stabilizer Bar Nut	1
W520203-S442	Tie Rod Nut	1
W520415-S442	Lower Control/Knuckle Nut	1
W716075-S442	Lower Control/Knuckle Bolt	1
W713199-S442	Subframe Bracket Bolt	1
W714807-S900	Steering Gear Bolts	1
MW790418-S900	Spacer (Contact Technical Support To Order)	1
TA-25-B	Motorcraft® Threadlock and Sealer	1

Warranty Status: Eligible Under Provisions Of New Vehicle Limited Warranty Coverage Warranty/ESP coverage limits/policies/prior approvals are not altered by a TSB. Warranty/ESP coverage limits are determined by the identified causal part and verified using the OASIS part coverage tool.

Labor Times

Description	Operation No.	Time
2015-2019 MKC: Diagnose And Repair Steering Gear Clatter Noise Following The TSB Service Procedure	MT182392	Actual Time

Repair/Claim Coding

Causal Part:	3504
Condition Code:	42

Service Procedure

1. Attach Rotunda Wireless Chassis Ears or equivalent. While driving over extremely rough road surfaces, is a clatter-type noise present at the steering gear?

(1). Yes - proceed to Step 2.

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

2. Was the vehicle built on or before 7-Dec-2015?

(1). Yes - replace the steering gear. Refer to WSM, Section 211-02. Proceed to Step 3.

(2). No - proceed to Step 3.

3. If the noise or clatter concerns in the front suspension are still present, proceed to diagnose according to the Workshop manual Section 204-00 Suspension System - General Information, Diagnostic and Testing. Check the following components in search of possible damage.

(1). Stabilizer Bar

- Check its condition of the bushings and gaps.

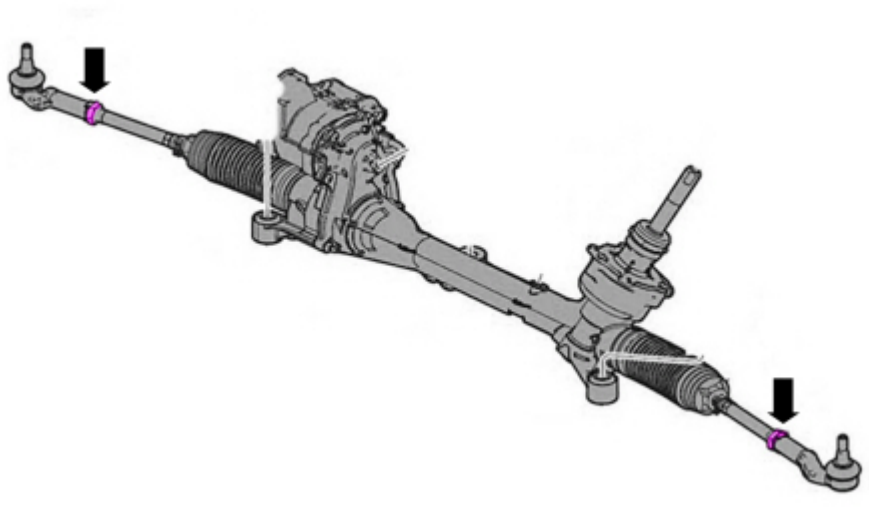
(2). Suspension wishbone ball joints

- Check for cracks in the suspension wishbone ball joints.
- Check for free play in the suspension wishbone ball joints.
- Check the condition of the suspension wishbone bushings.

(3). Electric Steering Rack

- Check if the electric terminals on the steering rack for cracks in the housing or holes.
- Check the torque on the steering terminals, if loose, tighten to 90 Nm (67lb-ft) (Figure 1)

Figure 1



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4. Is the noise still present?

(1). NOTE: It is recommended that all noise concerns shall be evaluated with the customer to identify the type of noise and all the information that could help in diagnosing the probable cause.

(2). Yes - proceed to Step 5.

(3). No - repair is complete.

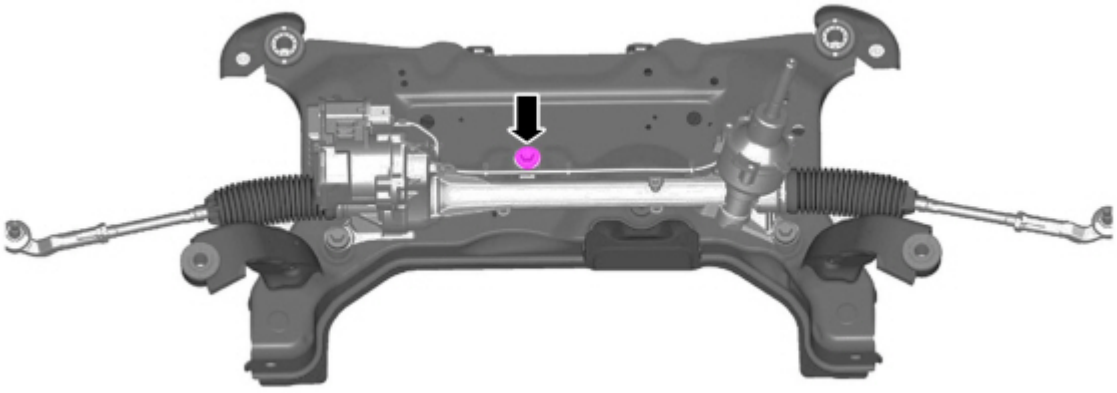
5. Is the noise present when driving straight at 10-50 km/h on rough roads but decrease when the steering wheel is turned?

(1). Yes - a spacer needs to be installed between the EPAS gear and the frame. Proceed to Step 6.

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

6. Remove the front frame and identify the center bolt which holds the EPAS gear. (Figure 2)

Figure 2



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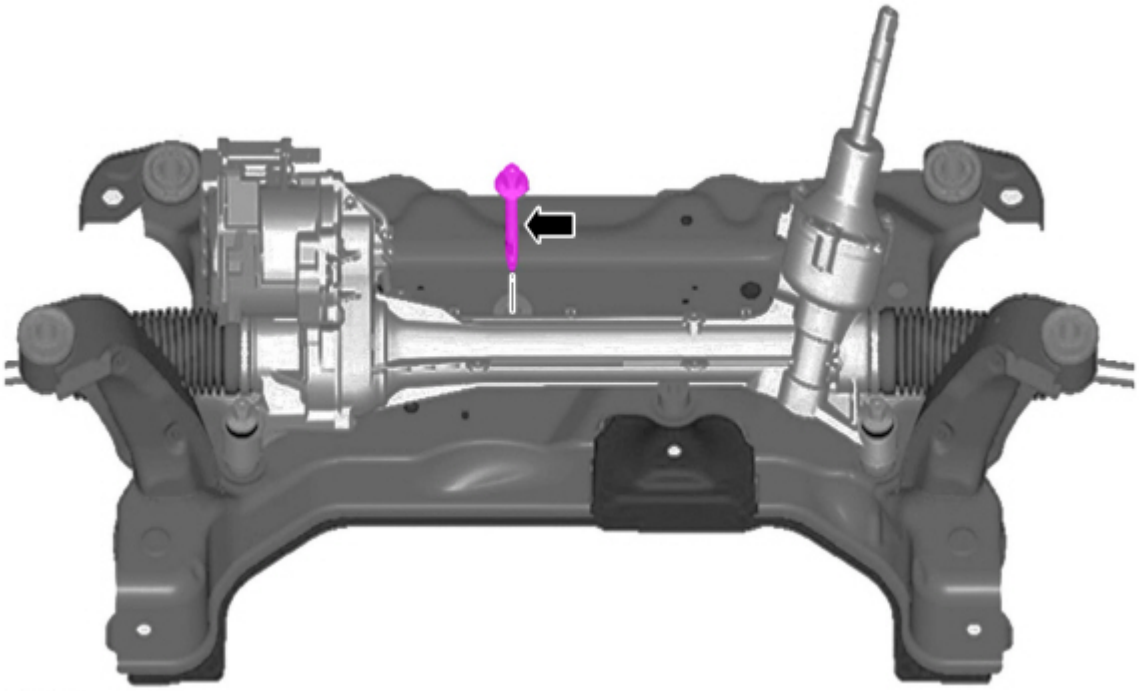
7. Remove and discard the central bolt which holds the EPAS gear. (Figure 3)

Figure 3



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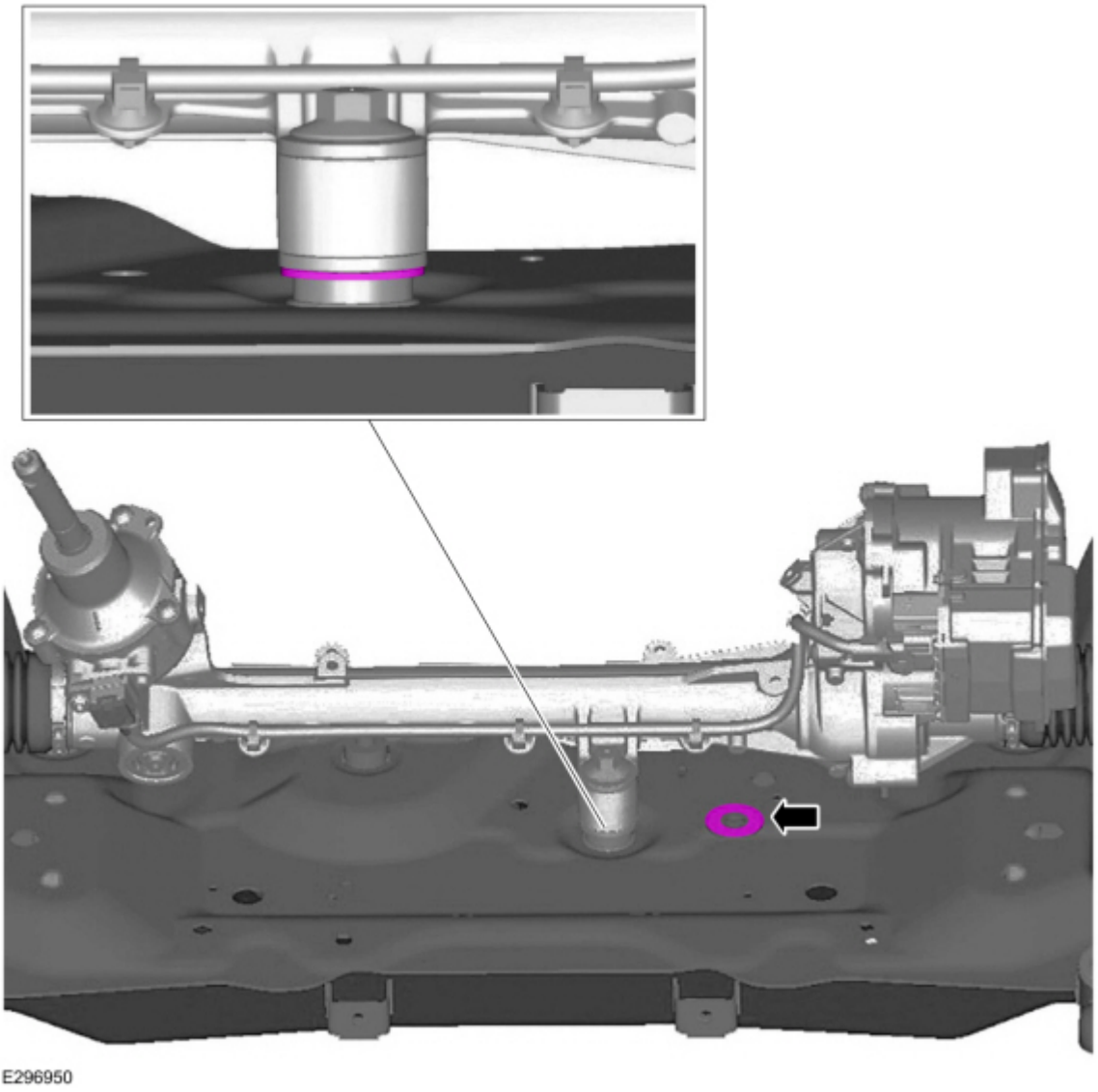
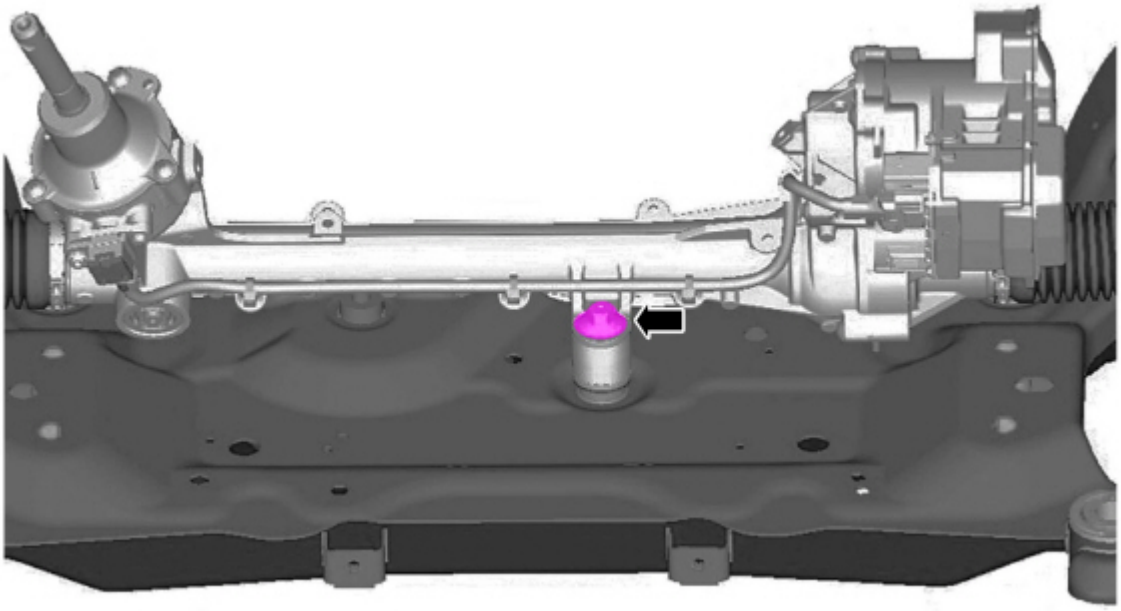
8. Using a pry bar, move the steering mechanism upwards to allow the insertion of the spacer between the EPAS gear and the frame. Do not install more than one spacer. (Figure 4)

Figure 4



9. Install the bolt into the central fixing point in such a way that the spacer can be centered with the EPAS gear and the frame. (Figure 5)

Figure 5



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10. Tighten only the central bolt. (Figures 6 - 7)

(1). Step 1: Tighten to 110 Nm 82 (lb-ft)

(2). Step 2: Loosen 360°

(3). Step 3: Tighten to 56 Nm (42 lb-ft)

(4). Step 4: Tighten 180°

Figure 6

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Figure 7

11. To reassemble, reverse the removal procedure.

12. Perform a wheel alignment.

13. Evaluate the vehicle with the spacer installed based on the customers concern with the following steps.

(1). Evaluate for noise while driving in a straight line at 10-50 km/h on an irregular surface, turning the steering wheel right or left.

(2). Return the steering wheel to the 12 o'clock position. Drive in a straight line (preferably on highways) for 10-15 minutes with minimal steering wheel movement.

(3). At the 12 o'clock position of the steering wheel, confirm that there is no unusual effort with small movements side to side while returning the steering wheel to the 12 o'clock position.
