



48-20-01 - Electromechanical Power Steering - Creaking Noise when Turning

Release date: 11/23/2020

Condition

Applicable Vehicles					
Model(s)	Year	Eng. Code	Trans. Code	VIN Range From	VIN Range To
Atlas	2020 – 2021	All	All	CA_LC503305	CA_MC533373
Atlas Cross Sport	2020	All	All	CA_LC208517	CA_LC231396

Revision Table			
Instance Number	Published Date	Version Number	Reason For Update
2061309/1	11/23/20	48-20-01	Original publication.

Customer reports hearing a creaking noise in the front end when turning or maneuvering.



Tip:

If present, the creaking noise may be duplicated by turning the steering wheel slowly while the vehicle is in park on a flat paved surface without the brakes applied with the A/C off and the windows closed. For example, watch and listen to the attached video clip.



Note:

If the creaking noise cannot be duplicated, this bulletin does not apply.

Technical Background

Noise resulting from tension between the servo motor unit and the steering gear housing.

Production Solution

Optimization of steering gear assembly process since CW39/20.

Service

If the noise concern is duplicated and found to be coming from the steering gear, proceed as follows:



Tip:

Note that the steering gear does not need to be removed from the subframe!

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- Disconnect the 12V vehicle battery according to the repair manual. See repair manual: Electrical Equipment; Rep. Gr.27.
- If equipped, disconnect the connector for the Oil Level Thermal Sensor -**G266**-.
- Remove the clips -1 and 2- for the wiring harness -3- from the subframe and the steering gear (Figure 1).

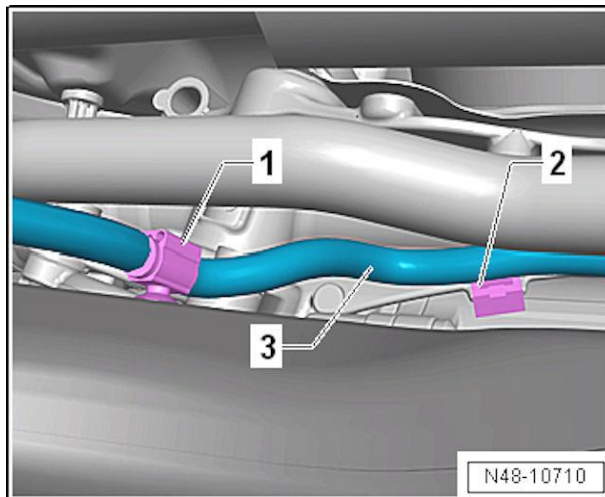


Figure 1

- Secure and lower the subframe according to the repair manual. See repair manual: Front Suspension; Rep. Gr.40.

**Note:**

While the universal joint is separated from the steering gear:

- Do not connect the 12V vehicle battery.
- Do not switch on the ignition.
- Do not turn the steering gear input shaft.
- Do not turn the front wheels.
- Do not turn the steering column shaft.

Failure to observe these points could cause irreparable damage!

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- Remove the T30 Torx screws holding the heat shield in place and remove it from the steering gear.
- Note the position of the servo motor unit within the steering gear housing.
- Following the sequence 1, 2, and 3 shown (Figure 2) loosen the three T40 Torx screws about half a turn to relieve tension in the servo motor unit.

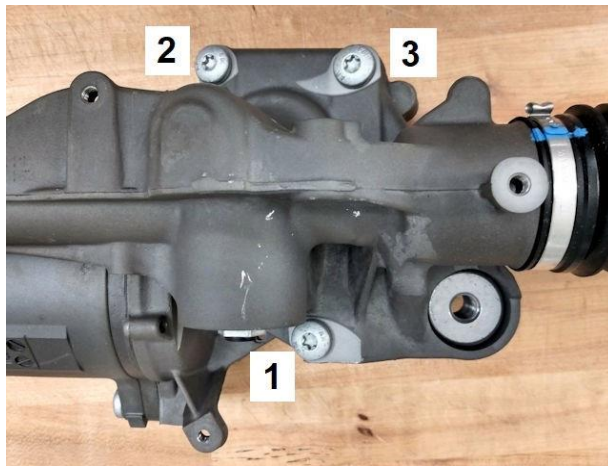


Figure 2

- Grasp the servo motor unit by hand (no tools) and rotate it a few times back and forth slightly in the steering gear housing without exerting force on the flange (Figure 3).

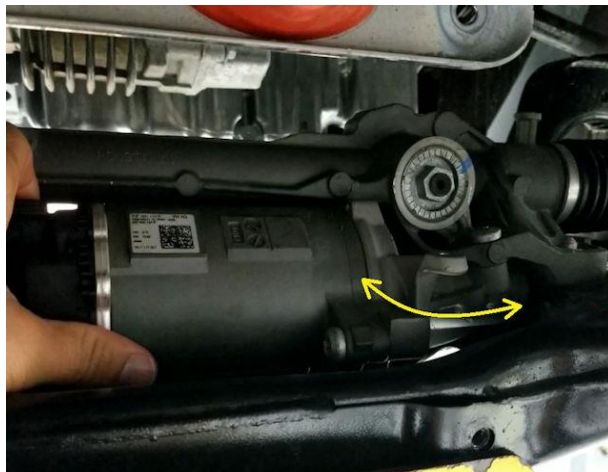


Figure 3

- Return the servo motor unit to its starting position.
- Tighten the three T40 Torx screws in sequence 1, 2 and 3 (Figures 2, 4, 5 and 6) with a torque of **10 Nm**.

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- Retighten the three T40 Torx screws in sequence 1, 2 and 3 (Figures 2, 4, 5 and 6) with a turning angle of **65°**.
- Verify the final torque of the three T40 Torx screws in sequence 1, 2, and 3 (Figures 2, 4, 5 and 6) using a torque value of **25 Nm** while checking that no more than **10°** of additional turn is applied.

**Note:**

If a torque of **25 Nm** is not reached with no more than **10°** of additional turn (max. total turn **75°**), then the steering gear must be replaced! Worn or damaged threads are non-repairable.



Figure 4



Figure 5



Figure 6

- Install the heat shield to the steering gear and tighten the T30 Torx screws with a torque of **8 Nm**.
- Replace the steering gear seal -1- (Figure 7) according to the repair manual.
- Slowly lift and secure the subframe according to the repair manual. See repair manual: Front Suspension; Rep. Gr.40



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**Note:**

After connecting the steering gear to the universal joint verify that the seal -1- (Figure 7) is flush on the surface of the steering gear to ensure a good seal against water ingress or noise.

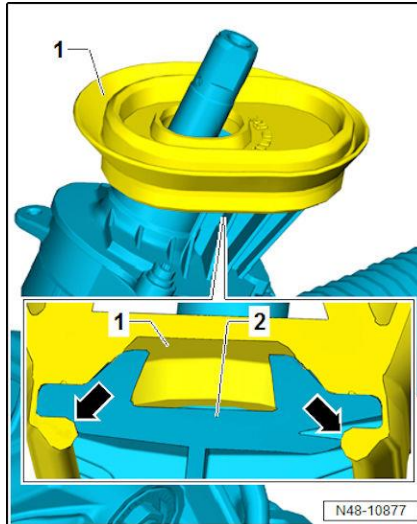


Figure 7

- Reattach the clips -1 and 2- for the wiring harness -3- to the subframe and the steering gear (Figure 1).
- If equipped, reconnect the connector for the Oil Level Thermal Sensor -**G266**-.
- Reconnect the 12V vehicle battery according to the repair manual. See repair manual: Electrical Equipment; Rep. Gr.27
- Perform the basic settings of the steering angle sender -**G85**- using the ODIS tester.
- Check the alignment according to the repair manual and perform alignment if necessary. See repair manual: Wheels, Tires, Wheel Alignment; Rep. Gr.44
- Perform a test drive to verify the creaking noise has been eliminated.



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Warranty

To determine if this procedure is covered under Warranty, always refer to the Warranty Policies and Procedures Manual 1)

Model(s)	Year(s)	Eng. Code(s)	Trans. Code(s)	VIN Range From	VIN Range To
Atlas	2020 – 2021	All	All	CA_LC503305	CA_MC533373
Atlas Cross Sport	2020	All	All	CA_LC208517	CA_LC231396
SAGA Coding					
Claim Type:	Use applicable Claim Type 1)				
Service Number:	Damage Code	HST	Damage Location (Depends on Service No.)		
4835	0020	--	--		
Parts Manufacturer		Atlas, Atlas Cross Sport		WWO 2)	
Labor Operation 3): Charge Battery			27068950 = 10 TU		
Labor Operation 3): Noise Dampening Pan Removed & Reinstalled			10821900 = 50 TU		
Labor Operation 3): Subframe Loosened & Fastened			40070950 = 120 TU		
Labor Operation 3): Actual Time – Repair Steering Gear			48351999 = 50 TU (Max.)		
Labor Operation 3): Vehicle Front & Rear Measured			44950300 = 100 TU		
Causal Part: Select Labor Operation			48351999		
Diagnostic Time 4)					
GFF Time expenditure		01500000 = Actual GFF print out		YES	



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Road Test	01210002 = 10 TU 01210004 = 10 TU	YES
Technical Diagnosis	01320000 = 00 TU max.	NO
Claim Comment: Input "As per Technical Bulletin 2061309 in comment section of Warranty Claim.		
<p>1) Vehicle may be outside any Warranty in which case this Technical Bulletin is informational only.</p> <p>2) Code per warranty vendor code policy.</p> <p>3) Labor Time Units (TUs) are subject to change with ELSA updates.</p> <p>4) Documentation required per Warranty Policies and Procedures Manual.</p>		

Required Parts and Tools

Part No:	Part Description	Quantity
N 0150816	Shouldered hex nut (lower sway bar connecting link)	2
N 10785401	Hexagon flange screw (subframe)	6
N 10784801	Hexagon flange screw (pendulum support)	1
N 10513102	Bolt, hex-head with shoulder (pendulum support)	1
N 91231201	Screw (rear mount)	4
N 01033513	Screw, hex-head (steering column universal joint)	1
5Q0423187F	Steering gear seal	1
Part numbers are accurate at time of publication. Always refer to ETKA for the latest part information.		

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Tool Description	Tool No:
Midtronics Battery Tester/Maintainer	GRX3000VAS or MTRMSP0702
VAS Diagnostic Tool	VAS 6150/X & VAS 6160/X with ODIS Service with current online updates
Assembly Tool, Sub-frame Alignment	-T10486A-
Torque Wrench 40-200 Nm	-VAG1332A- (or equivalent)
Torque Wrench 6-50 Nm	-VAG1331A- (or equivalent)
Engine and Gearbox Jack	-VAS6931- or -VAG1383A-

Additional Information

All part and service references provided in this Technical Bulletin are subject to change and/or removal. Always check with your Parts Dept. and Repair Manuals for the latest information.