



## Technical Service Bulletin

Transaction No: 2061309/3

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

Release date: 8/30/2021

### Condition

Applicable Vehicles					
Model(s)	Year	Eng. Code	Trans. Code	VIN Range From	VIN Range To
Atlas	2020 – 2021	All	All	CA_LC503305	CA_MC699999
Atlas Cross Sport	2020 – 2021	All	All	CA_LC208517	CA_MC399999

Revision Table			
Instance Number	Published Date	Version Number	Reason For Update
2061309/3	8/30/21	48-20-01	Updated applicable vehicles table, updated labor operation number 44950300 time units per SAGA updates, added labor operation 44881550.
2061309/2	2/9/21	48-20-01	Updated parts table.
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.



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## 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!

- 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).

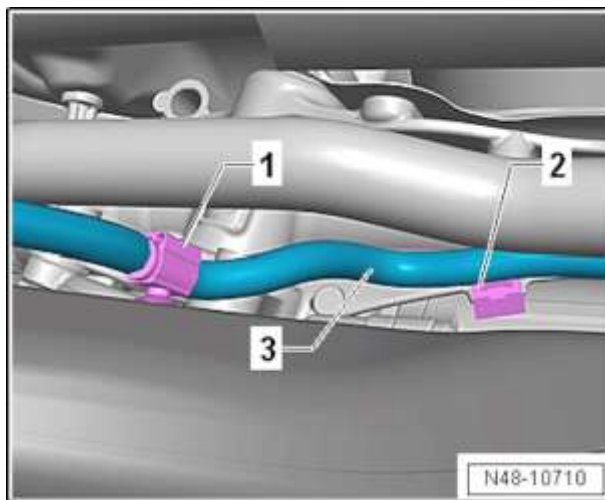


Figure 1

- 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.



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- Do not turn the steering column shaft.

Failure to observe these points could cause irreparable damage!

- 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.

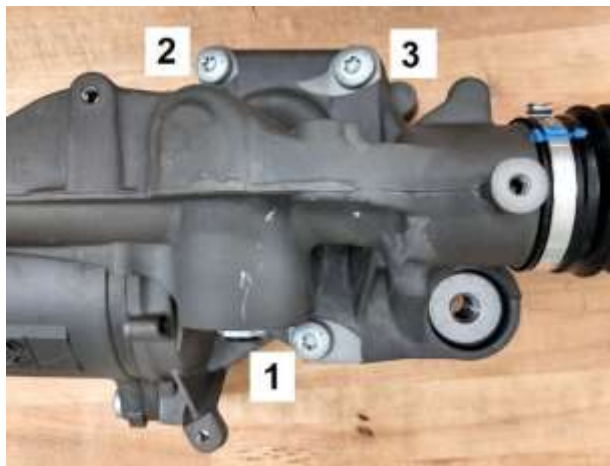


Figure 2

- 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.



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- Tighten the three T40 Torx screws in sequence 1, 2 and 3 (Figures 2, 4, 5 and 6) with a torque of **10 Nm**.
- 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**.



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- 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



**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.

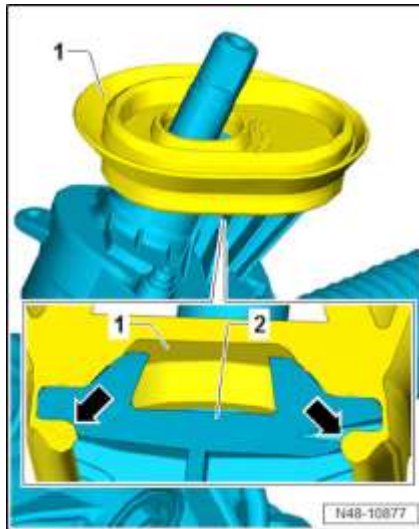


Figure 7

- 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 <sup>1)</sup>

Model(s)	Year(s)	Eng. Code(s)	Trans. Code(s)	VIN Range From	VIN Range To
Atlas	2020 – 2021	All	All	CA_LC503305	CA_MC699999
Atlas Cross Sport	2020 – 2021	All	All	CA_LC208517	CA_MC399999
<b>SAGA Coding</b>					
<b>Claim Type:</b>	Use applicable Claim Type <sup>1)</sup>				
<b>Service Number:</b>	<b>Damage Code</b>	<b>HST</b>	<b>Damage Location (Depends on Service No.)</b>		
4835	0020	--	--		
<b>Parts Manufacturer</b>		Atlas, Atlas Cross Sport	WWO <sup>2)</sup>		
<b>Labor Operation <sup>3)</sup>: Charge Battery</b>			27068950 = 10 TU		
<b>Labor Operation <sup>3)</sup>: Noise Dampening Pan Removed &amp; Reinstalled</b>			10821900 = 50 TU		
<b>Labor Operation <sup>3)</sup>: Subframe Loosened &amp; Fastened</b>			40070950 = 120 TU		
<b>Labor Operation <sup>3)</sup>: Actual Time – Repair Steering Gear</b>			48351999 = 50 TU (Max.)		
<b>Labor Operation <sup>3)</sup>: Vehicle Front &amp; Rear Measured</b>			44950300 = 90 TU		
<b>Labor Operation <sup>3)</sup>: Front Wheel Track Adjusted</b>			44881550 = 20 TU (If Necessary)		
<b>Causal Part: Select Labor Operation</b>			48351999		
<b>Diagnostic Time <sup>4)</sup></b>					
<b>GFF Time expenditure</b>	01500000 = Actual GFF print out		YES		



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<b>Road Test</b>	01210002 = 10 TU 01210004 = 10 TU	YES
<b>Technical Diagnosis</b>	01320000 = 00 TU max.	NO
<b>Claim Comment:</b> 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	
WHT000729A	Hexagon socket head bolt, self-locking (underbody noise insulation)	3	Atlas Cross Sport
			Atlas – with PR code 1SA
		Not applicable	Atlas – with PR code 1SB



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Part numbers are accurate at time of publication. Always refer to ETKA for the latest part information.

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.