



Mercedes-Benz

Campaign No. 2019100002, October 2019

TO: ALL MERCEDES-BENZ CENTERS

SUBJECT: **Model 447 (Metris), Model Year 2016 - 2017**
Steering Gear Bolt Corrosion

DAG determined that the aluminum bolts affixing the steering gear housing cover and the aluminum bolts affixing the power pack could corrode due to the intrusion of moisture and road salt (brine) while the vehicle is operating in certain geographic areas with high salt concentrations. Advanced corrosion can weaken the strength of the bolts. If all three of the mounting bolts on the power pack become compromised, the power pack could separate from the steering gear and cause the power steering to fail, increasing the risk of a crash. An authorized Mercedes-Benz Metris dealer will replace the aluminum bolts with steel ones and apply wax to the steering gear.

Prior to performing this Recall Campaign:

- Please check VMI to determine if the vehicle is involved in the Campaign and if it has been previously repaired.
- Please review the entire Recall Campaign bulletin and follow the repair procedure exactly as described.

Please note that Recall Campaigns **do not expire** and may also be performed on a vehicle with a vehicle status indicator.

Approximately **4,144** vehicles are involved.

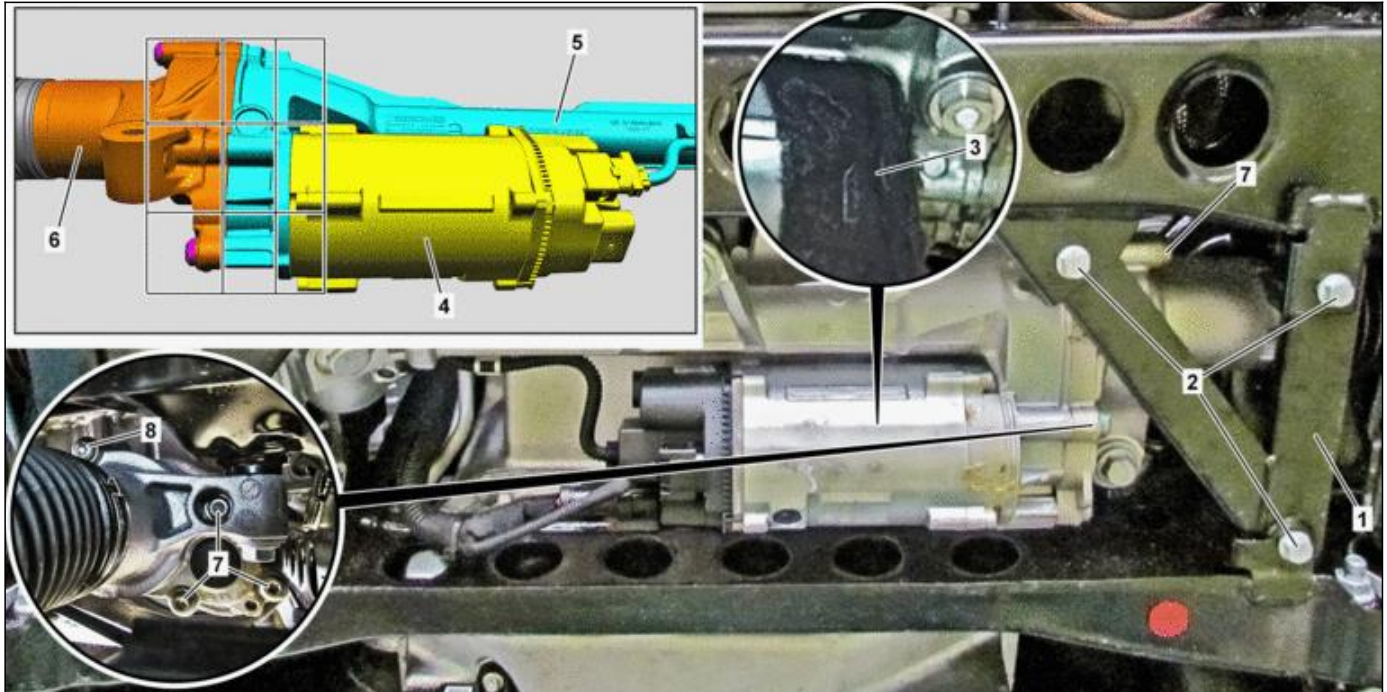
Order No. V-RC- 2019100002

This bulletin has been created and maintained in accordance with MBUSA-SLP S423QH001, Document and Data Control, and MBUSA-SLP S424HH001, Control of Quality Records.

Warranty Information

Operation items and work units

Operation number	Flat rate	Operation text	Damage Code
02 3017	0.7 hrs.*	Replace and wax five screws on the steering gear	46 942 54 7
02 3019	2.4 hrs.	Extra work for: Replace and wax threaded connection on steering gear for vehicles with damaged screw	46 942 54 7



Shown with engine 274

- | | | | | | |
|---|-----------|---|----------------|---|-------|
| 1 | Strut | 4 | Electric motor | 7 | Bolts |
| 2 | Bolts | 5 | Housing | 8 | Screw |
| 3 | Fiber rag | 6 | Cover | | |

Procedure

1. Clean steering gear
2. Replace screws
Info: If necessary, replace steering gear when screws are defective or cannot be removed
3. Wax steering gear

Work Scope:






Screws NOT defective: 02 3017 (0.7 h)






Screws DEFECTIVE - Replacement of steering gear necessary: 02 3017 (0.7 h) + 02 3019 (2.4 h)


Danger	Risk of death caused by vehicle slipping or toppling off the lifting platform.	Align vehicle between vehicle lift columns and position the four support plates at the vehicle lift support points specified by the vehicle manufacturer.	AS00.00-Z-0010-01A
Topical note	Notes on self-locking nuts and bolts		AH00.00-N-0001-01A
Topical note	Notes on threaded connections fastened using a tightening angle-based tightening process		AH00.00-P-0020-01A
Check			
1	Check whether vehicle is affected by measure.	<p>Affected vehicles: Replace bolts on steering gear and apply wax to them (code: VS2SCHRALU)</p> <p>i</p> <p>For authorized Mercedes-Benz service partners, only the entry in the "Extended VEGA Application" (EVA) system, in the "Current" tab is decisive.</p> <p>An additional test of the affected vehicles in the workshop information system (WIS) or vehicle list is thereby not necessary.</p>	SM46.20-S-0003-01A
Remove			
2	Raise vehicle.		AR00.60-S-1000E
3	Remove lower engine compartment lining		AR61.20-S-1105E
4	Remove strut (1) at right.	<p>i</p> <p>To do this, remove screws (2).</p>	

Clean

5	Clean steering gear.	<p>Do not clean steering gear using steel or brass brush. Otherwise corrosion will occur.</p> <p>i</p> <p>To do so, first remove coarse soiling in the entire repair area on the steering gear using the cleaner.</p> <p>Then thoroughly clean the following areas (in the grid) using a fiber rag (3):</p> <ul style="list-style-type: none">- Connections, electric motor (4) to housing (5)- Connections from cover (6) to housing (5)- Areas of screws (7, 8)- Area of bores of screw (8) <p>Assembly cleaner</p>	BR00.45-Z-1028-04A
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Replace			
6	Replace screws (7, 8).	<p>Each screw (7, 8) must be unscrewed, replaced and screwed in individually.</p> <p>Otherwise, the steering will be damaged and the power steering system will fail.</p> <p> To do so, the screws (7, 8) must be removed individually one after the other and replaced with new screws (7, 8).</p> <p> Additional replacement part scopes, small parts and consumable materials for a possible replacement of the steering gear must be replaced as per the listed repair documents. They must be determined according to the vehicle identification number (VIN) via the "Parts process" system and, although not listed in the parts ordering note, they are included in the costing.</p> <p> If it is necessary to replace the steering gear, the steering gear must be returned in the original packaging with any parts that have broken off. All steering gears are checked and analyzed individually for the cause of damage.</p> <p> Screw, electric motor to steering gear</p> <p> Screw, cap to steering gear</p> <p>If a screw (7, 8) has sheared off or if it has already broken off.</p> <p>↓</p> <p>Replace steering gear. Remove/install steering gear</p>	<p>BA46.20-N-1004-010</p> <p>BA46.20-N-1005-010</p> <p>AR46.20-S-0500E</p>

Wax			
7	Wax steering gear. 000 588 01 72 00 Sealing and corrosion protection gun	<p> To do so, wax the following areas (grid) in two processes generously and thoroughly:</p> <ul style="list-style-type: none"> - Connections, electric motor (4) to housing (5) - Connections from cover (6) to housing (5) - Areas of screws (7, 8) - Area of bores of screw (8) <p> After the first process, observe a drying time of 2 min. After each process, check whether the area is completely coated with wax and dried.</p> <p>Cavity preservation, solvent-free (1 l container)</p>	<p>WS97.00-N-0002B</p> <p>BR00.45-Z-1011-05A</p>
Install			
8	Install strut (1) at right.	<p> Screw in bolts (2) to do this.</p> <p> Screw/bolt, cross strut to front axle carrier</p>	BA33.10-N-1001-01E
9	Install lower engine compartment lining.		AR61.20-S-1105E
10	Lower vehicle.		AR00.60-S-1000E
11	Enter steering number of new steering gear in online vehicle data card via vehicle documentation (VeDoc).	<p>If the steering gear is replaced.</p> <p> Redocumentation is absolutely essential.</p>	

 **Front axle carrier**

Number	Designation		
			Model 447 with engine 651 except code ZG2 (Permanent all-wheel drive) Model 447, 448 with engine 274
BA33.10-N-1001-01E	Screw/bolt, cross strut to front axle carrier	Nm	31

 **Steering gear**

Number	Designation		
			Model 447 with engine 274, 651 Model 448 with engine 274
BA46.20-N-1004-01O	Screw, electric motor to steering gear	Stage 1	Nm 5
		Stage 2	¼° 90

Steering gear

Number	Designation		
			Model 447 with engine 274, 651 Model 448 with engine 274
BA46.20-N-1005-01O	Screw, cap to steering gear	Stage 1	Nm 5
		Stage 2	¼° 90

Repair materials

Number	Designation	Order number
BR00.45-Z-1011-05A	Cavity preservation, solvent-free (1 l container)	A 000 986 72 70 10
BR00.45-Z-1028-04A	Assembly cleaner	Adolf Würth GmbH & Co. KG Reinhold-Würth-Str. 12-17 74653 Künzelsau-Gaisbach Germany Tel. +49 7940 15-0 Fax +49 7940 15-1000 http://www.wuerth.de

Parts ordering note

Part no.	Designation	Quantity	Replacement Rate of Affected Population
A 447 460 73 00	Screw set	1	100%
7000077723	3M Scotch-Brite WR-SH 158 mm x 224 mm (fiber rag)	1	100%
A 447 460 29 00	Steering gear	If necessary	4 % or 166
-	Replacement part scopes, small parts and consumable materials	If necessary	-

Note: Please be aware that the product 3M Scotch-Brite WR-SH 158 mm x 224 mm (fiber cloth, article number 7000077723) is to be ordered directly from 3M. It is also possible to use a similar product from another manufacturer. However, abrasives or brushes **must not be used**.

7000077723	3M Scotch-Brite WR-SH 158 mm x 224 mm (fiber rag)	3M Deutschland GmbH Carl-Schurz-Straße 1 41453 Neuss Deutschland Tel. +49 2131 14-0 Fax +49 2131 14-2649 http://www.3m.com
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