



Mercedes-Benz

Campaign No. 2020110012, December 2020

Updated 1/2021

Updated 2/2021

TO: ALL MERCEDES-BENZ CENTERS

SUBJECT: **Model GLC-Class (253 platform)**
Model Year 2020
Replace Steering Control Unit Wiring Harness Insulation

Mercedes-Benz AG ("MBAG"), the manufacturer of Mercedes-Benz vehicles, has determined that on certain Model Year ("MY") 2020 GLC-Class (253 platform) vehicles, the power steering control unit wiring harness might have been damaged during the production process. A damaged wiring harness could lead to moisture ingress into the wiring harness and/or the power steering control unit, resulting in a loss of the power steering assist, which could increase the risk of a crash. In addition, a damaged wiring harness could result in a short circuit, which could increase the risk of a fire. An authorized Mercedes-Benz dealer will check the steering control unit wiring harness on the affected vehicles and replace it, if necessary.

Prior to performing this Recall Campaign:

- VMI must always be checked before performing campaigns to verify that the campaign is required on a specific vehicle. Always check for any other open campaigns, and perform accordingly.
- 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 2533 vehicles are involved.

Order No. P-RC-2020110012

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.

Check/test procedure

1. Switch off ignition and store vehicle key at least 2 meters away from vehicle.
2. Remove lower engine compartment lining.
For basic data for model 253, see **AR61.20-P-1105LW**;
3. Release and remove both connectors at steering control unit (**figure 1**).
4. Check connector of **red** power supply cable and **brown** ground cable for moisture.
i In the case of moisture, make detailed photos, create the steering (N68) control unit log and clarify the further repair procedure via **PTSS case**.
5. Expose wiring harness up to a length of 300 mm from the connector. This can be achieved by sliding back the protective hose.
i There are two different cable routings (**figure 1**).

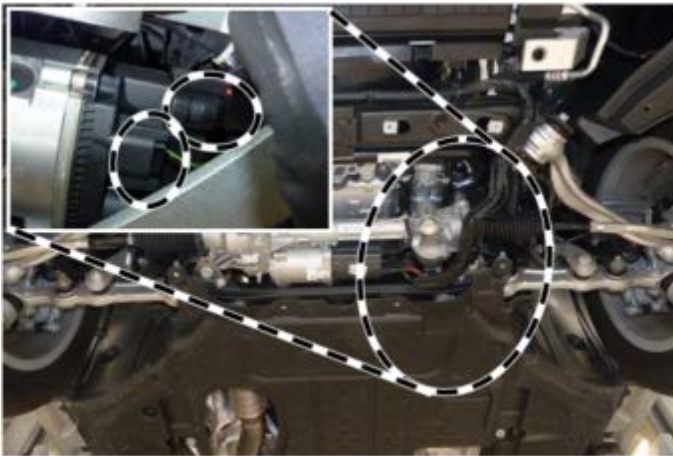


Figure 1 (Routing in cable duct)



(Routing in protective hose)

i In the case of routing in cable duct

1. Release cable duct.
2. Mark position of cable ties so that these are located at same position during the installation.
3. Release cable ties (from the connector, the first four) and remove lines from cable duct.
4. Slide back the protective hose for check purposes.

i In the case of routing in the protective hose without cable duct

1. Mark position of cable ties so that these are located at same position during the installation.
2. Release cable ties (starting from the connector, the first two) and slide back the protective hose.

6. Check the **red** power supply cable and **brown** ground cable 300 mm up to 320 mm after the connector for cuts in the insulation (**figure 2**). Move the **red** power supply cable and **brown** ground cable in all directions for check purposes.

i The **red** power supply cable and **brown** ground cable may **not** be damaged.



Figure 2 (NOT OK)

i The following damage may be present.

- a. Brown ground cable **damaged**: Perform **work procedure A**.
- b. Red power supply cable or both cables **damaged**: Perform **work procedure B**.
- c. Red power supply cable and brown ground cable **not damaged**: **End measure**.

i The **findings** from the check/test procedure must be recorded **in writing in the workshop order** and then stored **in a tamperproof manner**.

Work procedure A

IMPORTANT: The original FlexRay cable installed in the vehicle remains in the vehicle and may in **no case** be damaged.

Replace brown ground line

i If the **brown** protective covering is damaged but no leads of the line can yet be seen, a quick test is **not** necessary. The brown ground line **must** be replaced.

i **Only** if the leads of the **brown** line can be seen:

1. Check connector couplings of the **red** power supply cable and **brown** ground line for moisture.

i **Only** if there are drops of water in the plug **within the sealed area** : Take detailed pictures, create a control unit log for the steering (N68), and clarify further repair procedure using a **PTSS case**.

i The red seal may appear a bit "wet" (in **Figure 3 (A)**). This is residual oil from manufacturing and is normal. If this is the only area that looks "wet" **No PTSS case** needs to be created in this case.

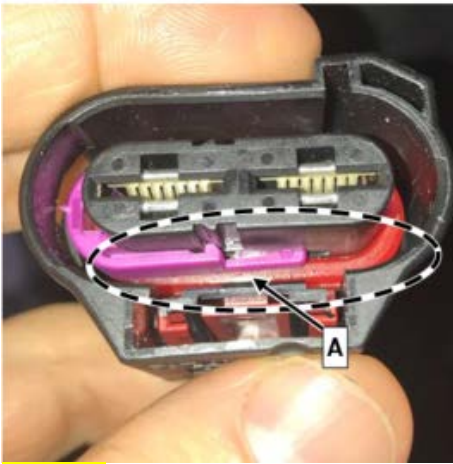


Figure 3

i If no moisture can be detected near the contacts, a quick test with connected steering must be performed. If the fault code B210F00 is stored in the steering control unit (N68), this can be ignored during the evaluation. This fault code has nothing to do with the current topic.

i This fault code arises if the workshop removes the power connector of the steering and the steering is not yet in sleep mode and/or is in idle state.

i Solely in the case of the following two fault codes **P063500** or **C159800** in the steering control unit, a **PTSS case** must be created.

i Create steering (N68) control unit log and clarify the further repair procedure via **PTSS case**.

i If neither of the two indicated codes is stored, then only the brown ground line must be replaced.

i If the protective covering is damaged but no strands of the line can yet be seen, a quick test is **not** necessary. The brown ground line **must** be replaced.

1. Dismount right front wheel.
2. Remove fender liner in front fender (**AR88.10-P-1300LW**).

3. Disconnect ground line at power connector at new and old wiring harness.
i The primary lock can be opened by moving the pink lug outwards (**figure 4**).
4. Disconnect plug contact (**figure 5**).



Figure 4



Figure 5

5. Open all cable ties at new wiring harness and remove both the FlexRay and the power supply line.
6. Unscrew cable lug of old ground line, cut off and wrap in fabric tape (**figure 6**).



Figure 6

7. Screw new ground line onto ground point, connect into existing power connector and route parallel to existing line.
 - i** In the case of routing in the protective hose, it must be ensured that the new ground line is also installed with the delivered protective hose.
 - i** In the case of routing in the cable duct, an identical routing to the previous wiring harness must be ensured.
8. Assemble in reverse order.

Work procedure B

IMPORTANT: The original FlexRay cable installed in the vehicle remains in the vehicle and may in **no case** be damaged.

Replace red power supply line

i If the **red** protective covering is damaged but no leads of the line can yet be seen, a quick test is **not** necessary. Both lines **must** be replaced.

i **Only** if the leads of the **red** power supply cable can be seen:

1. Check connector couplings of the **red** power supply cable and **brown** ground line for moisture.

i **Only** if there are drops of water in the plug **within the sealed area** : Take detailed pictures, create a control unit log for the steering (N68), and clarify further repair procedure using a **PTSS case**.

i The red seal may appear a bit "wet" (in **Figure 7 (A)**). This is residual oil from manufacturing and is normal. If this is the only area that looks "wet" **No PTSS case** needs to be created in this case.



Figure 7

i If no moisture can be detected near the contacts, a quick test with connected steering must be performed. If the fault code B210F00 is stored in the steering control unit (N68), this can be ignored during the evaluation. This fault code has nothing to do with the current topic.

i This fault code arises if the workshop removes the power connector of the steering and the steering is not yet in sleep mode and/or is in idle state.

i Solely in the case of the following two fault codes **P063500** or **C159800** in the steering control unit a **PTSS case must** be created.

i Create steering (N68) control unit log and clarify the further repair procedure via **PTSS case**.

i If neither of the two indicated codes is stored, then only the red power supply line must be replaced.

i If the protective covering is damaged but no strands of the line can yet be seen, a quick test is **not** necessary. The red power supply line **must** be replaced.

i In the case of damage to the red power supply line, the brown ground line is **always** also replaced.

1. Dismount right front wheel.
2. Remove fender liner in front fender (**AR88.10-P-1300LW**).
3. Unscrew ground line of steering (**figure 6, see work procedure A**)
4. Release all cable ties at cable duct in wheel arch and open cable duct (**figure 8**).



Figure 8

5. Remove cover over battery and remove filter housing (**figure 9**).



Figure 9

6. Disconnect the contacts of power supply cable (**figure 10**).

In vehicles with 12 V on-board electrical system

- a. Remove 12 V battery (**AR54.10-P-0005LW**).
- b. Release prefuse box F32/3, unclip cover and disconnect power supply cable of steering (connection 8) (**figure 10**).

i For basic data, see **AR54.15-P-1330LW**.



Figure 10

In vehicles with 48 V on-board electrical system

- a. Remove battery of 48 V on-board electrical system (**AR54.10-P-0022LWO**).
- b. Release prefuse box F32/3, unclip cover and disconnect power supply cable of steering (**connection 8**) (**figure 10**).

i For basic data, see **AR54.15-P-1330LW**.

In the case of hybrid and all-electric vehicles

- a. Perform power disable for vehicle (**AR47.70-P-1000EQ**).
- b. Remove 12 V battery (**AR54.10-P-0005LW**).
- c. Release prefuse box F32/3 and disconnect the power supply cable of steering (**connection 8**) (**figure 10**).

i For basic data, see **AR54.15-P-1330LW**.

7. Cut off power supply cable of steering (**connection 8**) approx. **100 mm** after cable lug.

i Sharp edges that could cause potential chafe marks must be removed and insulated.

8. Release engine compartment seal and place to one side, and unclip cable boot (figure 11).



Figure 11



Figure 12

9. Carefully open right cable boot (figure 12).

i For this purpose, accordingly remove cable tie and fabric tape.

10. At the **new** wiring harness, release cable ties at protective hose and remove the FlexRay cable or cut off if necessary.

IMPORTANT: The original FlexRay cable installed in the vehicle remains in the vehicle and may in **no case** be damaged.

11. Position new wiring harness, starting from ground branch-off line in wheel arch, parallel to the existing wiring harness.

i In the case of the branch-off line for the ground connection, ensure the correct position and route power supply cable along the existing wiring harness.

i Ensure a chafe mark-free routing!

12. Connect new line to prefuse box and tighten with **8 Nm**. Fully wrap line by means of fabric tape, parallel to the existing wiring harness, up to the branch-off line of the ground cable in the existing wiring harness (figure 13).

i Ensure a chafe mark-free routing!



Figure 13

13. Close cable boot using fabric tape (figure 13).

14. Unscrew old ground line in wheel arch from ground point and cut off (**figure 14**).



Figure 14

15. Screw new ground line onto ground point in wheel arch with 10 Nm.

16. Route entire new wiring harness parallel to the previous wiring harness and wrap in fabric tape (**figure 15**). Attach old and new wiring harness at the marked locations (during removal) with cable ties and clips according to the original condition.

In individual cases, an additional cable duct can be installed. If the new wiring harness does not fit in the cable duct, the old ground cable and old power supply cable must be accordingly removed.

IMPORTANT: The original FlexRay cable installed in the vehicle remains in the vehicle and may in **no case** be damaged.

i Only in case of routing in cable duct

16.1. Slide back protective hose of old wiring harness up to start of cable duct.

16.2. Cut off old ground cable and old power supply cable in front of cable duct (**arrow, see figure 15**). This is necessary, as the cable duct is too small for two wiring harnesses.

IMPORTANT: The original FlexRay cable installed in the vehicle remains in the vehicle and may in **no case** be damaged.



Figure 15

i Only in case of routing in protective hose without cable duct

16.1. Cut off old power connector (**figure 16**) and wrap cable ends in fabric tape.

IMPORTANT: The original FlexRay cable installed in the vehicle remains in the vehicle and may in **no case** be damaged.



Figure 16

17. Connect power connector and FlexRay connector again to steering.

18. Assemble in reverse order.

i In the case of hybrid and all-electric vehicles, the HV system must be recommissioned.

Primary Parts Information

Qty.	Part Name	Part Number
As required*	Wiring Harness, Steering	*
0.5**	Tape	A 007 989 07 85 08

* The replacement parts must be determined according to VIN via Xentry Portal Parts process (XPPI).
 Applicable harnesses for the Electric Power Steering can be found in parts group 54/121.

** 1 packaging unit must be used for 2 vehicles.

Warranty Information

Operation: Check electrical wiring harness of steering (02-1035)

Includes: Remove/install underfloor paneling

Replace ground line of steering (after check)(02-1036)

Replace power supply of steering (after check)(02-1037)

Includes: Replace ground line of steering

Extra work for: Replace power supply of steering in veh. with 48 V on-board electrical System (02-1038)

Additional operation for hybrid and all-electric vehicles Perform power disconnect/commissioning for high-voltage on-board electrical system (02-2193)

Create TIPS case (02-2186)

ONLY in case of moisture in connector or fault code **P0603500** or **C159800** in the steering control unit N68

Perform quick test (02-1853)

ONLY in case of visible damage to line (strands visible)

Extra work for: Remove/install engine compartment lining in vehicle with underbody protection (02-9676)

Damage Code	Operation Number	Labor Time (hrs.)
54 910 22 7	02-1035	0.6
	02-1036*	0.5
	02-1037	2.1
	02-1038	1.0
	02-2193	0.5
	02-2186	0.2
	02-1853	0.2
	02-9676	ZM

*Cannot be claimed in combination with 02-1037

Note

Operation Number labor times are subject to change.