

Identification of Noise Complaints of the Vehicle Body-in-White

Topic number	LI60.00-P-075851
Version	2
Function group	60.00 - General
Date	2/16/23
Validity	Valid for all model series
Reason for change	Updated Guidelines for Searching for A Noise Complaint
Reason for block	Edit of Attachments for Remedy

Complaint

Noise complaints of the vehicle body-in-white

Cause

Fit of component parts; body-in-white openings; bondings; welded, clinch, and riveted joints; pieces of sheet metal and component parts making contact, etc.

Remedy

The guide and the additionally attached documents (questionnaire for customers and service employees) are intended to assist with a structured analysis and identification of noise complaints at the body-in-white. If the problem has still not been rectified after following the steps outlined in the standardized guide, a TIPS case must therefore be created.

In order to continually optimize the quality standard, we rely on receiving the following information, which should be attached to the TIPS case:

- Include informative video
- Picture and audio material
- Detailed information regarding the customer complaint (questionnaire filled out by both the customer and the service employees)
- Information/data via TIPS

In principle, always state the code of the component part causing the damage (see the warranty provisions).

Attachments	
File	Description
Questionnaire_customer_noise complaint.docx	standardized questionnaire for the customer after the occurrence of a noise complaint
Questionnaire_service-employee_noise complaint.docx	standardized questionnaire for workshop employees after receiving a noise complaint, including a test drive
Guideline+for+searching+a+noise+complaint.docx	With the help of the structured guideline, a noise complaint is to be efficiently identified and processed.

XENTRY TIPS

Symptoms
Body > Body/Cab > Body noises > Wind noises
Body > Body/Cab > Body noises > Ripping noise
Body > Body/Cab > Body noises > Cracking/creaking
Body > Body/Cab > Body noises > Whirring
Body > Body/Cab > Body noises > Clattering
Body > Body/Cab > Body noises > Droning
Body > Body/Cab > Body noises > Vibrates/makes noises

Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note

Customer survey after noticing a noise complaint

FIN/VIN	First registration	mileage	start of repair
Klicken oder tippen Sie hier, um Text einzugeben.	Klicken oder tippen Sie, um ein Datum einzugeben.	Klicken oder tippen Sie hier, um Text einzugeben.	Klicken oder tippen Sie, um ein Datum einzugeben.

1) Can you estimate how long you have been hearing the noise from the vehicle?

2) Are there certain driving situations where the noise can be heard? (multiple answers possible)

- ☐ City traffic
- ☐ Traffic jam
- ☐ Freeway
- ☐ Expressway
- ☐ (start-stop) at traffic lights
- ☐ In all traffic situations

3) On which road surface does the noise occur?

(Freeway/gravel/ cobblestones /etc.)

4) What tires are you currently driving on the vehicle?

- ☐ Summer tire
- ☐ Winter tire
- ☐ All-season tire

5) Under what environmental influences does the noise occur? (multiple answers possible)

- ☐ Summer
- ☐ Winter
- ☐ Raining season
- ☐ Dry season
- ☐ From an outside temperature of: °C

6) Could you describe the noise? (For example: wind noise, crack, creak, etc.)

7) How long does the noise last?

- ☐ Less than a minute
- ☐ More than 3 minutes
- ☐ After the first occurrence, permanently while driving

**8) Does the noise occur when driving over bumps?
(e.g. bumps, curbs, speed bumps, uneven road surfaces, etc.)**

9) Is the noise speed dependent?

- ☐ Yes
- ☐ No

If yes, at what speed: [Klicken oder tippen Sie hier, um Text einzugeben.](#)

10) Can you also hear the noise, when the car is standing?

- ☐ Yes
- ☐ No

11) Is the vehicle in its original condition?

- ☐ Yes
- ☐ No

12) Was the vehicle involved in an accident?

- ☐ Yes
- ☐ No

If yes, which area or component was repaired?

13) Other remarks

Questionnaire for service employees after a test drive (noise complaint)

FIN/VIN	First registration	Mileage	Start of repair
Klicken oder tippen Sie hier, um Text einzugeben.	Klicken oder tippen Sie, um ein Datum einzugeben.	Klicken oder tippen Sie hier, um Text einzugeben.	Klicken oder tippen Sie, um ein Datum einzugeben.

1) What area is the noise coming from?

2) In which situations is the noise audible?

- ☐ Driving in curves
- ☐ With fast steering movements
- ☐ When driving at high speeds
- ☐ With bad road surface

3) Could you describe the sound of the noise-complaint? (e.g.: wind noise, crack, creak, etc.)

4) Are there photo or video material?

- ☐ Yes
- ☐ No

If yes, please attach them to the TIPS-case!

5) Other remarks

Klicken oder tippen Sie hier, um Text einzugeben.

Workshop document for identifying noise complaints

1. Entry into the workshop

- Leave the vehicle in the customer's condition
- Carry out a customer survey (see list of questions)
- Carry out a test drive together with the customer
- Carry out a worker survey after the test drive
- Analysis of the information collected through the test drive and the questionnaire
- Recreate the noise in the workshop in a reproducible manner

2. Locate

- During the test drive, localize and narrow down the area/point from which the noise can be heard with the help of tools (depending on which tools are available to the workshop) or the information collected.

3. Appraisal of the vehicle

- Check and evaluate vehicle for standard condition
- Clear storage compartments of loose objects

4. Expose

- Disassemble cladding parts/components in the area/place and check for correct assembly.

→ For disassembly, a systematic approach is advantageous, which allows the source of the error to be located more quickly.

5. Noise containment and elimination

1. Noise caused by spot weld:

- Locate weld spots using suitable aids during a repeat test drive
- Rework localized weld spots:
 - Weld spot in the area/place with the help of a hammer and center punch
 - Test drive again to check the processing step
 - If the noise is still present, move the area to be removed selectively. In addition, caulking of edges can be helpful
 - Repeat the top five steps until the noise-causing weld spot/area is located
 - Mark the localized weld spot/area and document them with images
 - Process localized weld spots with possible methods:
 - a. Resistance welding:**
 - ➔ Only rework the same weld spot!
 - ➔ Do not set additional welding spots! No guarantee of component strength due to cured adhesive
 - b. Rivet:**
 - ➔ For this purpose, drill and deburr spot weld point
 - ➔ Set rivet (Attention: In the area of door cutouts only use flow form rivets)

c. MIG/MAG welding:

- ➔ Use in non-visible areas of the vehicle
- ➔ Not usable for components in combination with adhesive
 - ➔ Fire hazard
 - ➔ Strength not given

2. Noise caused by rivets

- Check rivets for correct processing (see Figs. 1 & 2)
- Rivet with the help of a suitable aid.
- If the complaint persists, enlarge the affected area.
- Should the noise change due to caulking, drill open the affected rivet and re-rivet
- Re-test drive for inspection
- If these measures were not effective, additional rivets can be set if there is sufficient installation space. (see Fig. 2)



Fig.1



Fig.2

3. Noise caused by two touching sheets

- Find the point of contact of the sheets
 - ➔ Pay attention to friction marks and the like (see Fig. 3)
- Edit affected area/area using a suitable tool
- Re-test drive for verification
- If the noise persists, increase the processed gap so that the noise no longer occurs. (see Fig.4)

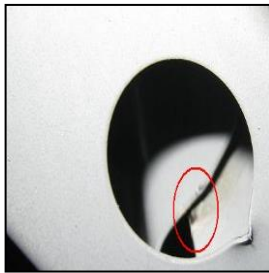


Fig.3



Fig.4

4. Wind noise

- Checking the gap dimensions for correct dimensions
 - ➔ (See also WIS for the corresponding BR)
- Systematic masking of the area/area with adhesive tape
- Tape the gap along its entire length with adhesive tape
- If overlaps cannot be avoided, design in a streamlined manner
- Re-test drive for verification
- Repair localized area or replace component, if possible

Hints:

- Do not cause wrinkling of the adhesive tape
- Use proper tape



ATTENTION: If there is no accessibility due to the noise causes 1; 2; 3 due to installation space, please contact the MPC.



6. Preservation and varnishing

- After eliminating the noise, restore the affected area according to Mercedes-Benz specifications (see WIS).

7. Final drive and final inspection

- Remove the vehicle from processing residues (e.g.: chips, dirt, etc.)



If you could not eliminate the noise with the guide, create a TIPS case with photos, videos and sound files and send it to the MPC.



notes: