Assessment of Extent of Fogging on Lighting Components (114/16)

Modifications overview:

Release	Date	Modification
1	05/16/2018	▪ First publication
2	05/27/2025	▪ Order types added ▪ Test sequence added ▪ Graphics adjusted
3	07/30/2025	▪ Information added under Work Procedure step 1

Model Line: **All model lines**

Model Year: **As of 2006**

Concerns: **The following lighting components:**

- Headlights
- Side direction indicator
- Front direction indicator light
- Fog lights
- Auxiliary headlight
- number plate light
- Rear light
- Aux. brake light

Cause: **Customers complain that lighting components are fogged up.**

Particularly in cold outside temperatures (autumn and winter) and/or when air humidity is high (geographical location, special climatic conditions), moisture can build up on the inside of the lens.

Information

Lighting components are **not designed to be completely leak-tight** due to the open, spray water-proof ventilation system (required for pressure compensation purposes).

A build-up of moisture on lighting components is not caused by a defect and does not reduce the light output in any way. For this reason, if lighting components fog up, this is **not** a safety-relevant complaint and **does not necessarily justify replacement** of the affected lighting components.

Approval for replacing lighting components and the relevant invoicing must be **evaluated** based on the following pictures.

This Technical Information is designed to help you to **assess the fogging** and **explain the situation to the customer**.
This is not a flat-rate release for the replacement of components. The decision to replace a component must be made based on the information provided in this document. If you are not sure in some cases, we recommend that you get in touch with a contact person with higher authority.

- When **replacing components** that will be settled under warranty or goodwill, **clear documentation is absolutely essential** and must be attached to the job.

⇒ The documentation will be **checked if required** during the PSA (Porsche Service Analysis).

⇒ Furthermore, we reserve the right to reject warranty claims if the instructions relating to documentation are not observed.

Action: Check ventilation of the affected lighting component and then evaluate the condensation.
For assessment purposes, fogging is classified in four levels:

- Step 1: Lighting component is fogged up
- Step 2: Light-emitting surface is fogged up
- Step 3: Slight drops forming on lighting component
- Step 4: Significant drops forming on lighting component

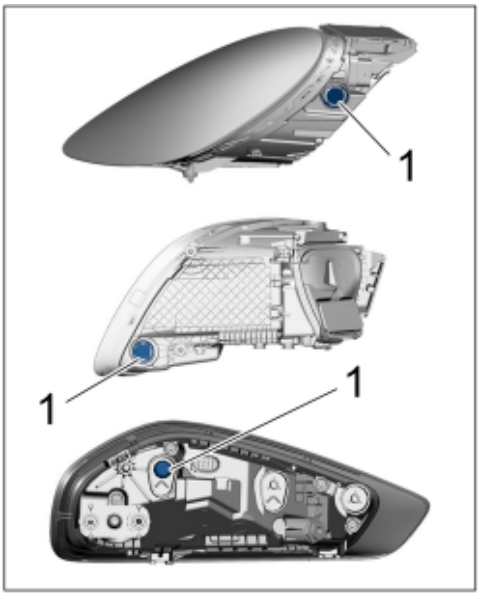
Depending on the level of defrosting, different actions must be carried out.
Further information is described in the following sections.

Checking ventilation of the lighting component

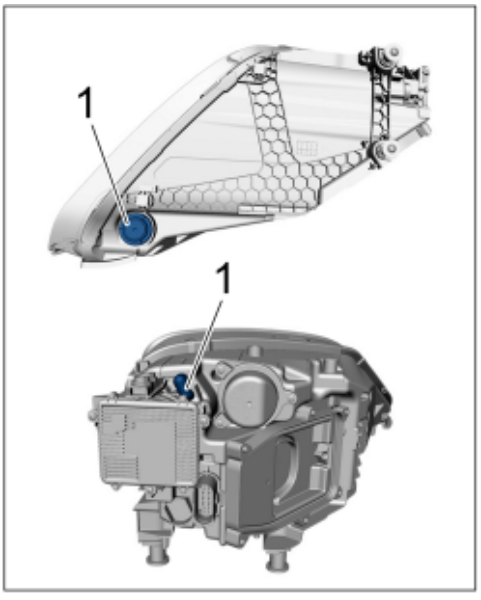
Work Procedure: 1 Check the ventilation and aeration elements ⇒*Aeration and ventilation elements (982 shown as an example)* **-1-** on the affected lighting component for soiling, correct seating and damage and if necessary clean, install properly or replace.
If necessary, order the corresponding ventilation and aeration elements ⇒*Aeration and ventilation elements (982 shown as an example)* **-1-** individually via the Porsche spare parts catalogue (PET2).

Information

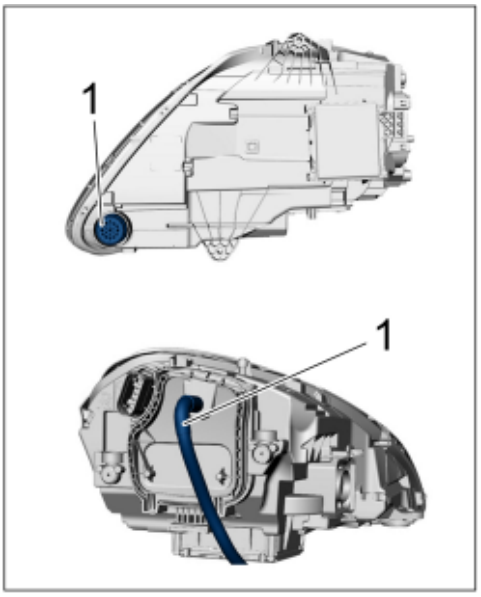
Also check that any service flaps or covers on the headlights are correctly installed and positioned and secure them properly if necessary.



Aeration and ventilation elements (982 shown as an example)



Aeration and ventilation elements (9YA shown as an example)



Aeration and ventilation elements (95B shown as an example)

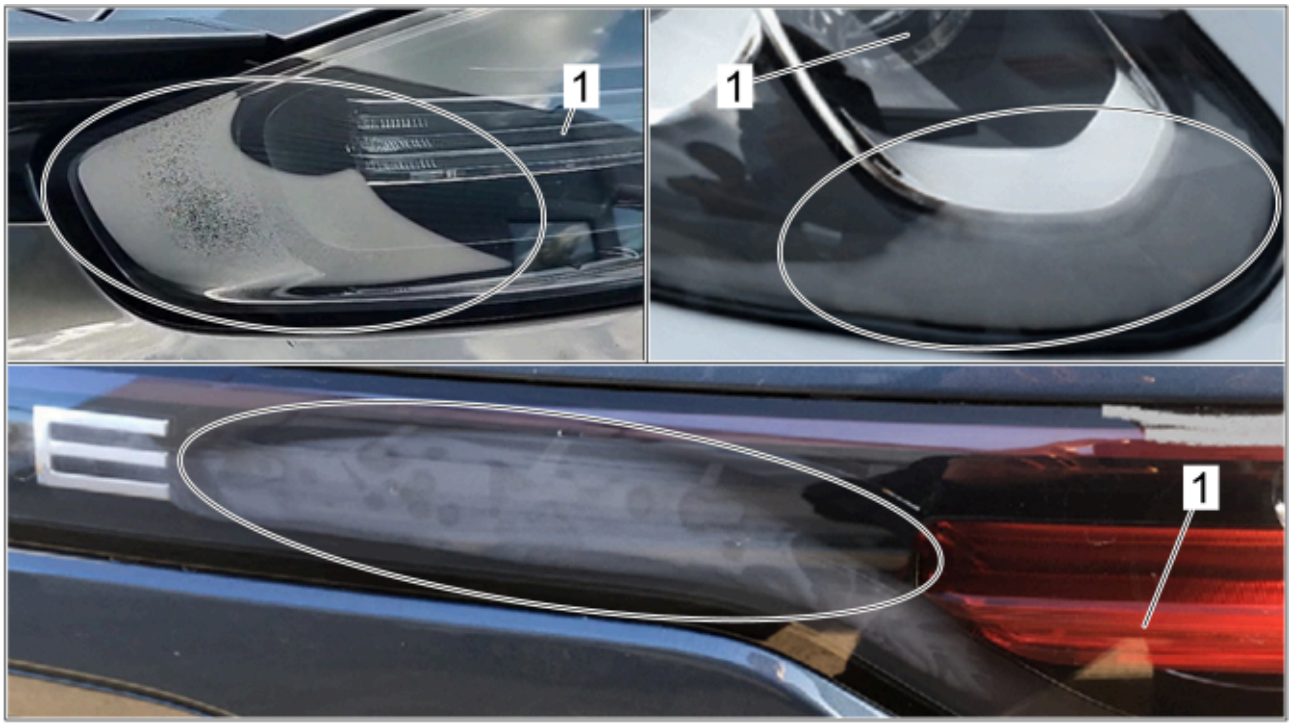
Step 1: The lighting component is fogged up

Work Procedure: 1 Perform a visual inspection of the lighting component ⇒*Step 1: Lighting component fogged up* **-1-** and assess the situation.

Information

See "Tips for explaining the situation to customers" so that you will be better able to explain this physical occurrence to the customer.

2 If only the technical design area of the lighting component is fogged up ⇒*Step 1: Lighting component fogged up* **-Marking-**, this will not affect the light output.
Replacing the lighting component ⇒*Step 1: Lighting component fogged up* **-1-** will **not** correct the problem.



Step 1: Lighting component fogged up

Step 2: The light-emitting surface is fogged up

Information

If there is soiling within the lighting component (e.g. limescale residues), a "ventilation journey" is no longer expedient. In this case, the affected lighting component must be replaced.

Work Procedure:

1 Perform a visual inspection of the lighting component ⇒*Step 2: Light-emitting surface fogged up* **-1-** and assess the situation.

2 If the technical design area and the technical lighting area of the lighting component are fogged up ⇒ *Step 2: Light-emitting surface fogged up* **-Marking-**, the lighting component ⇒*Step 2: Light-emitting surface fogged up* **-1-** must be checked.

Step 2: Light-emitting surface fogged up

2.1 Check gap dimensions and air gaps of the affected lighting component and correct them if necessary. ⇒ *Workshop Manual '5X00IN Gap dimension'*

2.2 If not already done, check the ventilation and aeration elements.
For work procedure, see: ⇒ *Technical Information '5X00IN Checking ventilation of the lighting component'*

Information

Dirty or damaged aeration and ventilation elements must be replaced before the test drive.

3 Test-drive the vehicle for **at least 30 minutes at a consistent increased speed of 50 km/h (30 mph) (no Stop & Go) and dipped beam on** and check whether the fogging clears.

Information

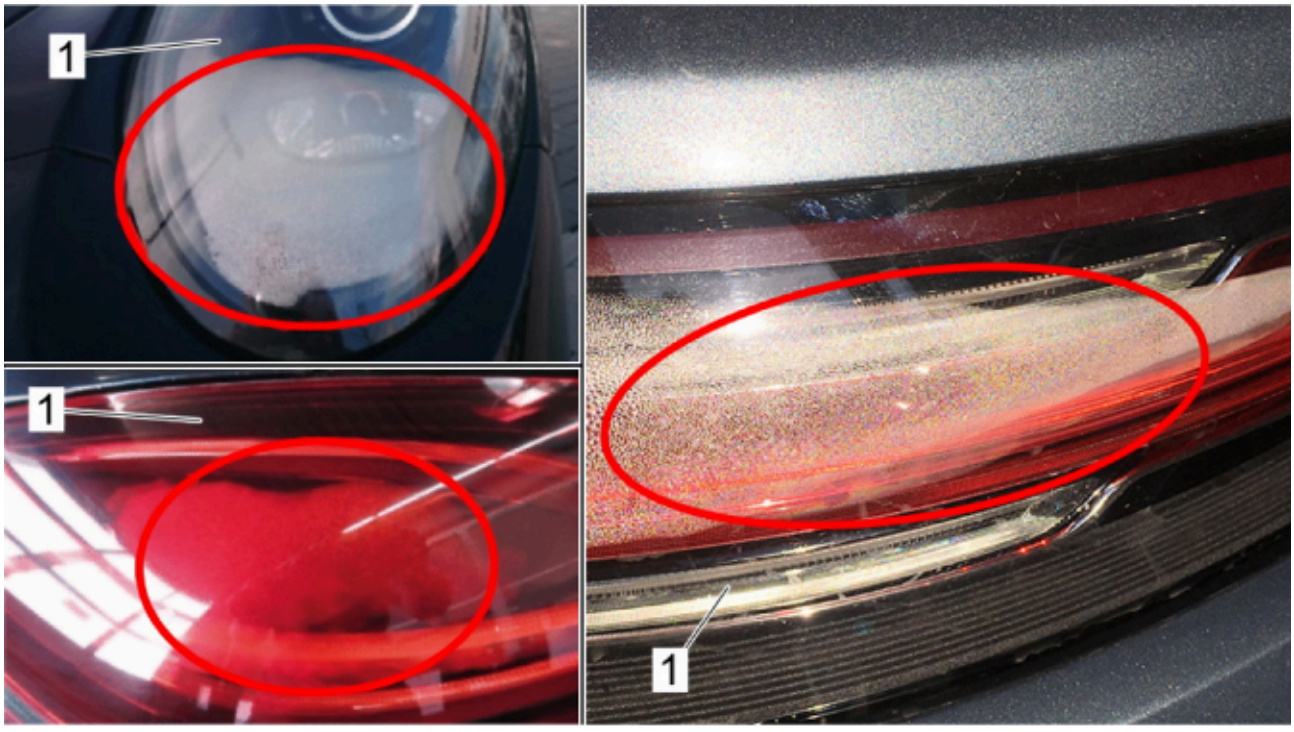
See "Tips for explaining the situation to customers" so that you will be better able to explain this physical occurrence to the customer.

- If the fogging clears, replacing the lighting component will **not** correct the problem.
- If the fogging does **not** clear, replace lighting components **and complete the relevant documentation**.

Step 3: Slight drops forming on the lighting component

Work Procedure: 1 Perform a visual inspection of the lighting component ⇒ *Step 3: Slight drops forming on lighting component* **-1-** and assess the situation.

2 If the technical design area and the technical lighting area of the lighting component are fogged up and there are slight drops of moisture forming ⇒ *Step 3: Slight drops forming on lighting component* **-Marking-**, the lighting component ⇒ *Step 3: Slight drops forming on lighting component* **-1-** must be checked.



Step 3: Slight drops forming on lighting component

2.1 Check gap dimensions and air gaps of the affected lighting component and correct them if necessary. ⇒ *Workshop Manual '5X00IN Gap dimension'*

2.2 If not already done, check the ventilation and aeration elements.
For work procedure, see: ⇒ *Technical Information '5X00IN Checking ventilation of the lighting component'*

Information
Dirty or damaged aeration and ventilation elements must be replaced before the test drive.

3 Test-drive the vehicle for **at least 30 minutes at a consistent increased speed of 50 km/h (30 mph) (no Stop & Go) and dipped beam on** and check whether the fogging clears.

Information
If there is soiling within the lighting component (e.g. limescale residues), a "ventilation journey" is no longer expedient. In this case, the affected lighting component must be replaced.

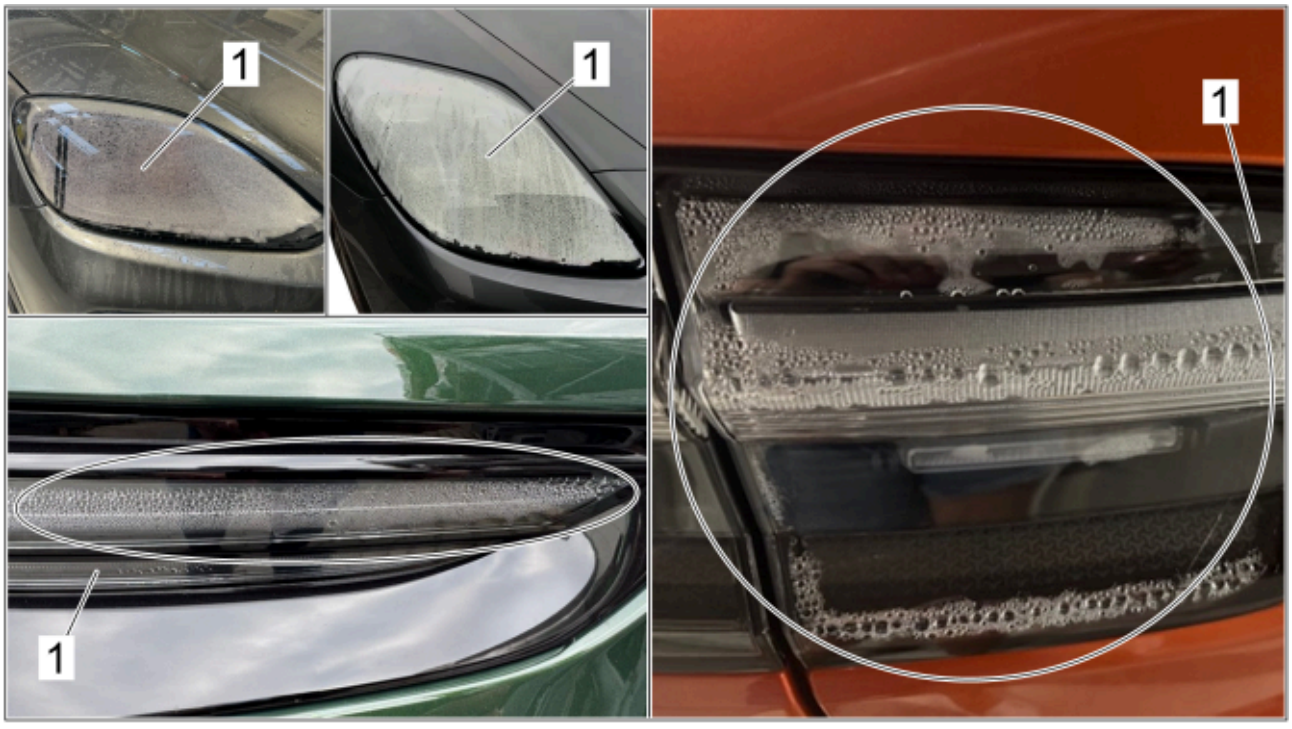
Information
See "Tips for explaining the situation to customers" so that you will be better able to explain this physical occurrence to the customer.

- If the fogging clears and the amount of drops forming is reduced, replacing the lighting component will **not** correct the problem.
- If the fogging does **not** clear and the amount of drops forming is not reduced, replace the lighting component **and complete the relevant documentation**.

Step 4: Significant drops forming on the lighting component

Work Procedure: 1 Perform a visual inspection of the lighting component ⇒*Step 4: Significant drops forming on lighting component* **-1-** and assess the situation.

2 If the technical design area and the technical lighting area of the lighting component are fogged up and there are significant drops of moisture forming ⇒*Step 4: Significant drops forming on lighting component* **-Marking-**, the lighting component ⇒*Step 4: Significant drops forming on lighting component* **-1-** must be replaced.



Step 4: Significant drops forming on lighting component

Tips for explaining the situation to customers

- Due to the **open, spray water-proof ventilation system** (required for pressure compensation purposes), there are **different "climate zones"** inside a lighting component. Very hot spots, where the lens is heated by the light and relatively cool spots, where the lens is cooled by the airflow while driving.
- This can cause the moisture on the inside of the lens to condense, particularly when air humidity is high and there are significant differences in temperature.
- Lighting components can also fog up after driving through a car wash or after cleaning the vehicle using a high-pressure cleaner.

⇒ The physical process of fogging does not **affect the light function in any way** and also does **not constitute a safety-relevant complaint**.
Depending on the environmental conditions, fogging can occur in each lighting component and is particularly clear in versions with a clear glass look.

PCSS encryption:

Information

The **fault location "Headlights"** listed is only selected as an example. For invoicing and documentation, the lighting component in question must always be specified using the relevant coding.

Example PCSS encryption:

Location (FES5)	94150	Headlights
Damage type (SA4)	5012	Fogging up, condensation, moisture