

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

Model Line: **All model lines**

Model Year: **As of 2006**

Subject: **The following lighting components:**

- Headlights
- Side direction indicator light
- Front direction indicator light
- Fog lights
- Auxiliary headlights
- License plate light
- Tail light
- Additional brake light

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

Particularly at cold outside temperatures and/or when air humidity is high, 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 examples.

This Technical Information is designed to help you to **assess the extent of fogging** and **explain the situation to the customer**.

It is not a blanket approval for replacing 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.

**Remedial
Action:**

For assessment purposes, fogging is classified in four levels:

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

Different measures must be carried out, depending on the level of fogging.
Further information is provided in the next sections.

Level 1: The lighting component is fogged up

Work Procedure: 1 Perform a visual inspection of the lighting component ⇒ *Level 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 ⇒ *Level 1: Lighting component fogged up -marking-*, this will not affect the light output.
Replacing the lighting component ⇒ *Level 1: Lighting component fogged up -1-* will **not** correct the problem.



Level 1: Lighting component fogged up

Level 2: The light-emitting surface is fogged up

- Work Procedure: 1 Perform a visual inspection of the lighting component ⇒ *Level 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 ⇒ *Level 2: Light-emitting surface fogged up -marking-*, the lighting component ⇒ *Level 2: Light-emitting surface fogged up -1-* must be checked.



Level 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 dimensions'*
- 2.2 Check aeration and ventilation elements ⇒*Aeration and ventilation elements (shown as an example) -1-* on the lighting component for soiling, correct fit and damage.



*Aeration and ventilation elements
(shown as an example)*



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 speed of 30 mph (50 km/h)** 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.**

Level 3: Slight drops forming on the lighting component

- Work Procedure: 1 Perform a visual inspection of the lighting component ⇒ *Level 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 ⇒ *Level 3: Slight drops forming on lighting component -marking-*, the lighting component ⇒ *Level 3: Slight drops forming on lighting component -1-* must be checked.



Level 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 dimensions'*

- 2.2 Check aeration and ventilation elements ⇒ *Aeration and ventilation elements (shown as an example) -1-* on the lighting component for soiling, correct fit and damage.



Aeration and ventilation elements (shown as an example)



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 speed of 30 mph (50 km/h)** 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 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**.

Level 4: Significant drops forming on the lighting component

- Work Procedure: 1 Perform a visual inspection of the lighting component ⇒ *Level 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 ⇒ *Level 4: Significant drops forming on lighting component -marking-*, the lighting component ⇒ *Level 4: Significant drops forming on lighting component -1-* must be replaced.



Level 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 is **not a safety-relevant complaint**.

Fogging can occur in all lighting components depending on environmental conditions and is particularly visible on lights in clear glass look.

Invoicing: For invoicing and documentation using PQIS, enter the following coding:

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

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