

Field Remedy: 1598

Subject: **Headlamps - Glas misted from the inside**

Models: **Engines:** **Option:**

All All None

Complaint: Headlamp glas misted from inside

Cause: Air moisture misting on the inside of headlamp glas or headlamp leaky

Production: None

Remedy:

In case of customer complaint, the following items have to be checked to avoid unnecessary replacement of headlamps.

If there is fogging on the headlamp lens, also designated condensation below, the emergence surface on the lens, which is active as regards lighting technology, must be clear after traveling for approx. 20 minutes with the dipped beam switched on. The remaining surfaces of the lens can and may still be covered with condensation after this.

It should be noted when discussing the matter with customers that the time pattern for the dissipation process for condensation is extremely dependent on the temperature in the immediate area and the relative humidity of the air. In a situation of this kind, AOAG will not accept the costs for replacing headlamps.

If heavy condensation is present (drops forming on the lens) the covering caps and seals on the headlamp casing must be checked and the lens should have oil-free compressed air blown over it. The effectiveness of the measures undertaken should be checked by further observation.

If water is penetrating into the headlamp via damaged seals, bonded joints et cetera, the corresponding repairs should be undertaken (change seal, replace headlamp, ...).

If headlamps, which prove to be in good order according to the manufacturer's test stipulations, are submitted under the warranty, you may be charged for them. Please contact your national service center in problem situations.

Aid for Argumentation:

The following description may be used as an aid to argumentation in discussions with customers.

As a consequence of the open ventilation system, which is, however, protected from spray and which is needed for pressure compensation, different "climate zones" occur within the headlamp, resulting in fogging of the lens. Thus, for example, very warm areas occur in a headlamp with relatively cooler areas on the other side. The heating is generated by the heat emitted by the light source, the cooling of the lens is caused primarily by the slipstream. As a consequence of the labyrinthine design of the ventilation apertures, expanding heated dry air is forced out of the headlamp casing. After switching off the

light source, the air in the headlamp cools down slowly. This causes air saturated with moisture to be drawn from outside into the inside of the headlamp casing.

In the presence of high humidity and high temperature differences between the inside of the housing and the environment, this situation can cause condensation to occur on the inside of the lens, especially in cold times of the year and in damp weather.

Condensation can occur, for example, after using a car wash, steam cleaning the engine and the front of the vehicle, if temperature changes occur during the night, etc.

Even the smallest imaginable moisture in the air inside the headlamp can be precipitated on the lens, especially in the "subsequent heating phase", during which the back of the headlamp is heated because the engine is still warm, but at the same time the lens is being cooled down by cold outside air. Since lenses with a clear glass appearance are now being used, which may also be tinted, this phenomenon is more obvious than on lenses with a structure.

The process involved in condensation in headlamps is caused by physics and does not affect the optical function of the headlamp (light output) in any way. Neither can the condensation cause any corrosion in the headlamp.

The phenomenon of condensation can occur on any headlamp, including those of our competitors, because it is caused by a physical process. Changing the headlamp is therefore unacceptable because no technical defect within the meaning of the warranty is involved.

FunctionalGroup: N - Electrical Equipment

Complaint Group: 10 - Leakage,12 - Misting

Trouble Code: None