The Truth About Headlight Condensation

Customers who pay a premium price for headlights expect premium performance, so when they observe condensation inside their light, they may be alarmed. The truth is that condensation is a natural process that happens to ALL headlights (ALL brands and ALL styles). The purpose of this Product Bulletin is to arm you with factual information so that you can educate your customers on the subject. Our hope is that a more educated customer base will not only lead to higher levels of customer satisfaction, but also reduce the number of RMAs we’re seeing where condensation is cited as the problem.

WHAT IS CONDENSATION AND WHY DOES IT HAPPEN?

Condensation is defined as the change in the physical state of matter from a gas to a liquid (the opposite of evaporation). No doubt you've experienced condensation first-hand on the outside surface of a cold drinking glass or aluminum can on a hot Summer day. This is a natural process that CAN and WILL happen if the correct conditions are present.

In the case of headlights, condensation takes place when the lamp heats up through normal operation. As this happens, moisture inside the lamp (in the air and plastic components) collects on the coolest surfaces (typically the inside of the outer lens). This condensation will clear (generally within 30-60 minutes), and does not adversely impact the functionality of the light. Again, this is a natural process and is not indicative of any defect.

If water is pooling inside the lamp and not evaporating, that may be indicative of water ingress. Water ingress, unlike condensation, can cause damage to the lamp and is not a natural process. In the unlikely event that one of your customer's lamps is leaking and does not show signs that the leaking is due to abuse, please follow the normal RMA process.

ISN'T THERE SOMETHING J.W. SPEAKER CAN DO TO ADDRESS THIS?

There are a number of different options available to manufacturers to reduce condensation. Each of these, however, has tradeoffs. One popular solution is to add a breathable patch that allows moisture to escape, thus reducing condensation. However, this approach introduces a leak path for water ingress that can wreak havoc on the light's electronics, ultimately causing it to fail. As such, we believe that fully sealing the lamp is ultimately a better long-term solution.

WHAT SHOULD I TELL MY CUSTOMERS?

As our authorized dealer, you interact with customers every day. We recognize this interaction is a great opportunity for you to assume the role of “Expert” in the customers’ eyes, so we'd like for you to explain what condensation is and why it happens. Will they be happy about it? Perhaps not, however, our experience has been that reasonable people are much more understanding/accepting of the situation once this information has been shared with them. The fact is that condensation is a normal process and it won’t hurt their lamp, nor is it technically a defect will go a long way towards addressing customer concerns.