

Condensation in light units

Light units fitted to vehicles can become 'fogged up' with moisture collecting on the lens when not in use. This can be incorrectly diagnosed as a fault with the lamp or an issue during its construction.

When a filament bulb is illuminated, the heat generated from it evaporates the moisture, and the increase in pressure forces the air out through the vents producing an undisturbed light pattern. When the bulb is switched off the cooling atmosphere in the lamp causes a drop in air pressure, drawing air and moisture back into the lamp. Once this moisture contacts the cooling surface inside the lamp, it condenses and causes an opaque lens.



Example of a headlamp with moisture on the lens

This is an accepted occurrence in light units and does not affect the performance or life span on the lens. A light unit is designed with ventilation ports to allow air to escape freely when there are differences in air pressure.

If the condensation is not evaporated away from the lighting surface or droplets of moisture are inside the lamp, excess moisture will need to be dried away and the lamp conditions closely monitored. If this reoccurs, the light unit could be damaged, allowing too much moisture to enter and should be replaced.

