



Technical note: Replacing the particle inlet collar

This document details actions required to inspect the heated particle inlet and replace the collar.

It is advised that this process is completed in a clean dry dust free environment and the AQMesh pod is positioned on a flat surface in such a way as to protect the heated particle inlet.

Tools / parts required:

- 2mm hex key
- 2.5mm security bit and handle
- Side cutters
- Sharp utility knife
- Damp cleaning cloth – clean fresh water only.
- 1 x AQM-HEATED INLET COL – replacement heated inlet collar.

Actions:

- If not already done, remove the two-part mounting bracket by removing the 3 x security screws and sliding it off the pod.
- Remove the antenna by rotating the knurled ring at its base counterclockwise.
 - Do not rotate the antenna by twisting the blade, this will cause out of warranty damage to the antenna.
- Remove the 4 x screws that secure the white sunshield to the grey case.
- Lift the sunshield free of the case assembly, taking care not to damage the particle inlet and set to one side.
- Using the utility knife to remove the original heated inlet collar.
- Carefully clean the affected section of the heated particle inlet with a damp cloth to remove any excess material from the original collar. Do not use any solvents to clean the inlet.
- Inspect the exposed section of the heated particle inlet as per the instructions below to determine if it is suitable for continued use.

Inspecting the heated inlet collar:

- Visually inspect the heated particle inlet for signs of damage, crumbling plastic, holes or degradation
- Using the photos below confirm if the heated particle inlet is in a suitable condition to have its collar replaced or if the whole assembly requires repair.



Good particle inlet
- replace the collar

Poor particle inlet
- inlet requires replacing

- Good particle inlet – the plastic material is intact, free from cracks or holes and only shows slight signs of pitting of the plastic material.
 - This inlet can have its collar replaced.
 - If you are unsure if the inlet is in an acceptable state send a photo and pod serial number to support@aqmesh.freshdesk.com.
- Poor particle inlet – there are clear signs of the plastic material degrading due to the chemical reaction between original collar and the inlet assembly.
 - The entire inlet assembly requires replacing at factory.
 - Contact support@aqmesh.freshdesk.com to arrange for the pod to be returned to Environmental Instruments Ltd for the work to be carried out.

Fitting the new collar:

- Wrap the new heated particle inlet collar around the inlet as shown in the picture below.
- Secure with the two cable ties that are provided in the kit, one towards the top and the other towards the bottom – do not overtighten.



- Slide the sunshield over the inlet and pod assembly being careful not to damage the inlet.
- Secure the sunshield with the 4 screws that were previously removed. Do not overtighten.
- Install the antenna making sure that it is fully connected and hand tight.
- If required install the mounting bracket by sliding it back onto the pod making sure that the 3 anchor points are correctly engaged.
- Secure with the security screws.
- The pod is now ready to return to site.