

# 49iQPS Plumbing

## Introduction

We have learned some Thermo Scientific 49iQ Ozone Primary Standards shipped prior to 06/01/2019 were manufactured with a minor zero air plumbing configuration error that can affect the operation of the calibrator depending on the zero air pressure supplied to the calibrator. The zero air after entering the calibrator should be plumbed directly to the inlet of the internal pressure regulator and the outlet of the regulator should be plumbed to the ozonator and also zero side of the photometer. The internal zero air line during the manufacture was inadvertently plumbed directly to the zero side of the photometer before pressure regulation resulting in high pressure to the photometer. This can affect the output stability of the calibrator. This potential higher pressure can result in negative zero gas readings and unstable ozone generation. The flow schematic in the manual shows the correct plumbing configuration.

This Technical bulletin and no charge parts retrofit kit, part # 119944-00, provides the instructions and detail on how to rework the zero air plumbing to provide the correct configuration and prevent calibrator issues. Any 49iQPS units received should be internally inspected for proper zero air plumbing configuration and corrected if necessary. This procedure is very simple and should take approximately 15 minutes to install.

1. Power the unit off & remove the cover
2. Locate the “Y” fitting on the inlet side of the regulator (figure 1)
3. Remove the (2) hose clamps marked “Disconnect” & save for assembly
4. Carefully disconnect the tubing marked “Disconnect”
5. Slide a hose clamp over the tubing from the zero air bulkhead
6. Connect the tubing from the zero air bulkhead onto the regulator fitting
7. Tighten the hose clamp down to secure the tubing to the fitting
8. Remove the hose clamp from the tubing on the outlet side of the regulator (figure 2)
9. Carefully disconnect the tubing from the fitting on the outlet of the regulator
10. Remove the straight fitting on the outlet side of the regulator
11. Apply Teflon tape to the elbow fitting and attach to the outlet of the regulator
12. Slide a hose clamp over the short piece of tubing connected to the “Y” fitting

13. Connect the "Y" fitting to the elbow fitting on the outlet side of the regulator
14. Tighten the hose clamp down to secure the tubing to the fitting
15. Slide a hose clamp over the tubing coming from the Ozonator capillary
16. Connect the tubing from the Ozonator capillary to the open end of the "Y" fitting
17. Tighten the hose clamp down to secure the tubing to the fitting

This completes the plumbing modification as shown in figure 3.

If you have any questions, please connect technical support at (866) 282-0430 option #2.

Figure 1

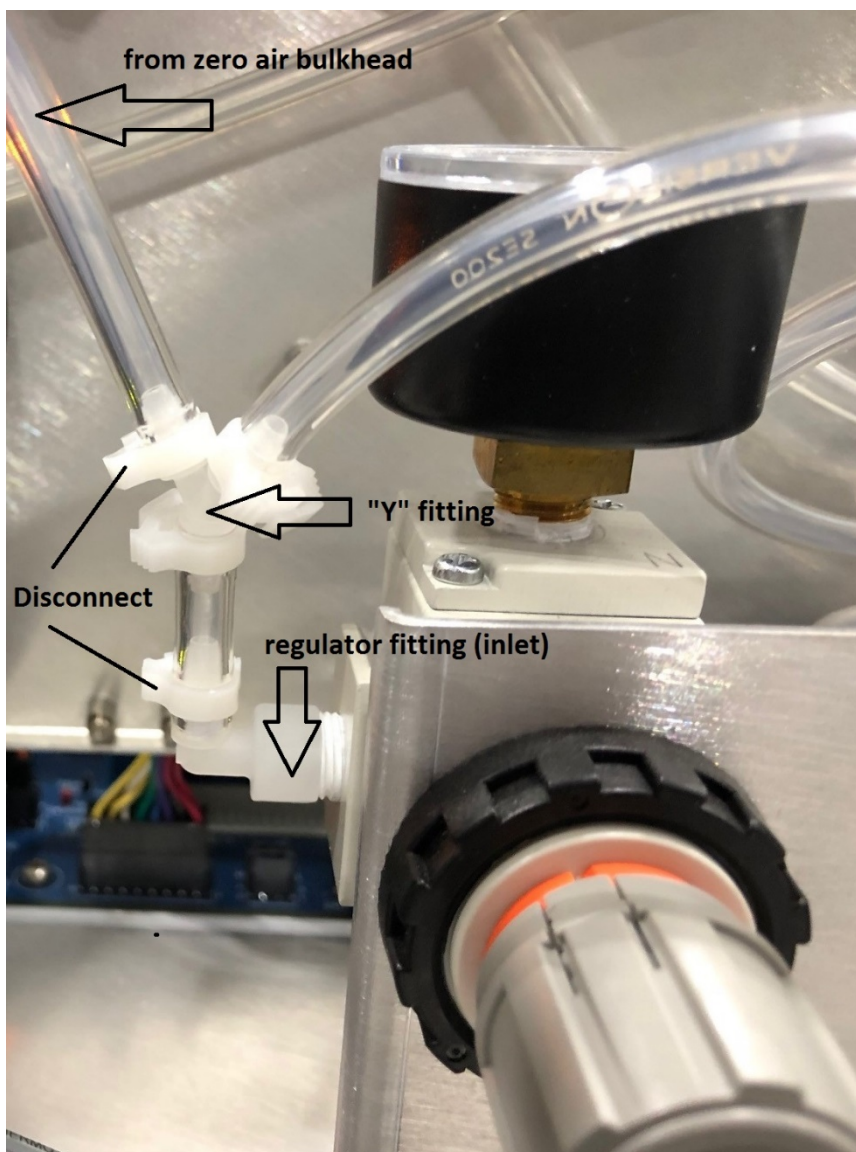


Figure 2

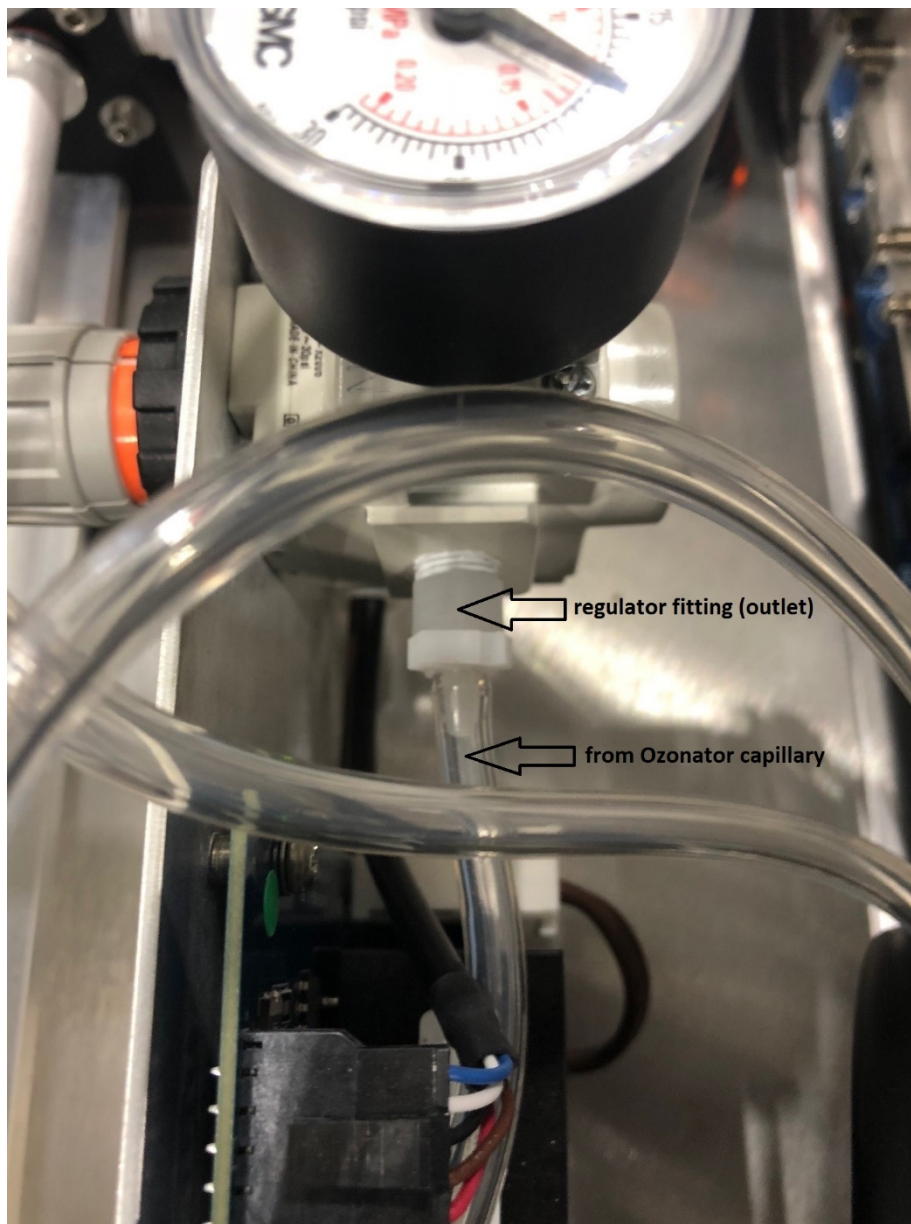
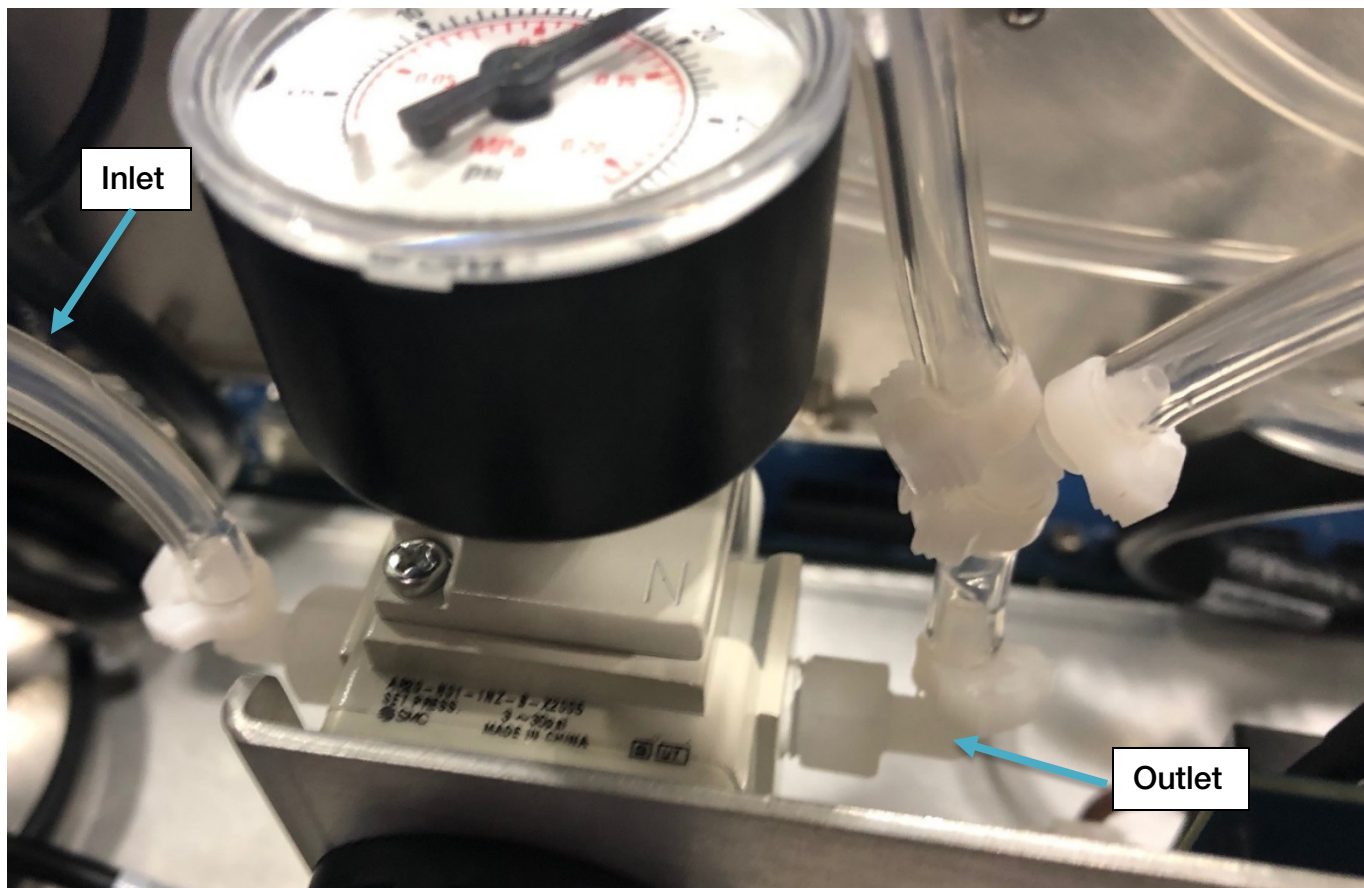


Figure 3



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