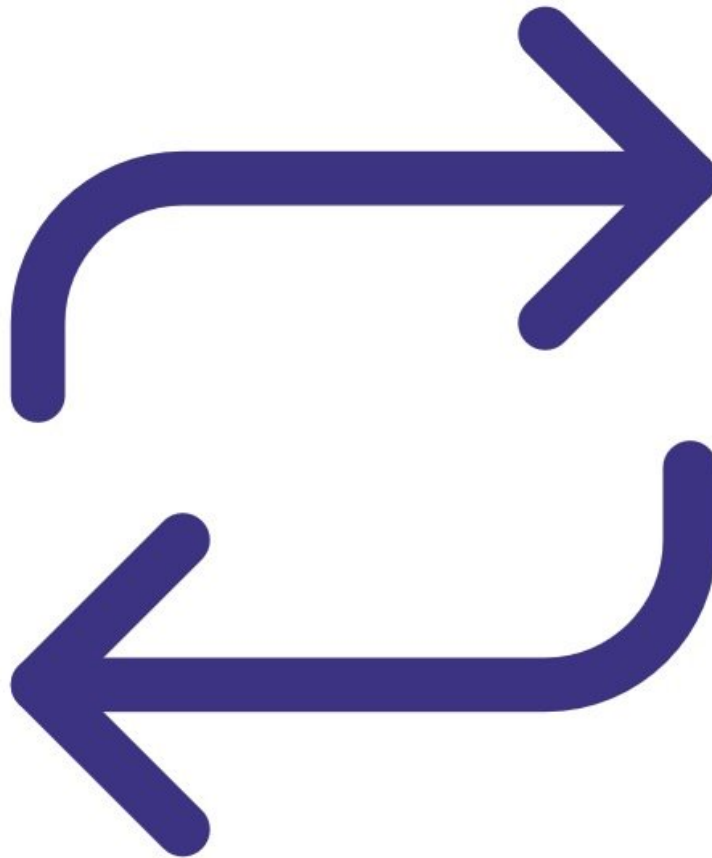




Replace sensors

Written By: StJohn Vuetilovoni

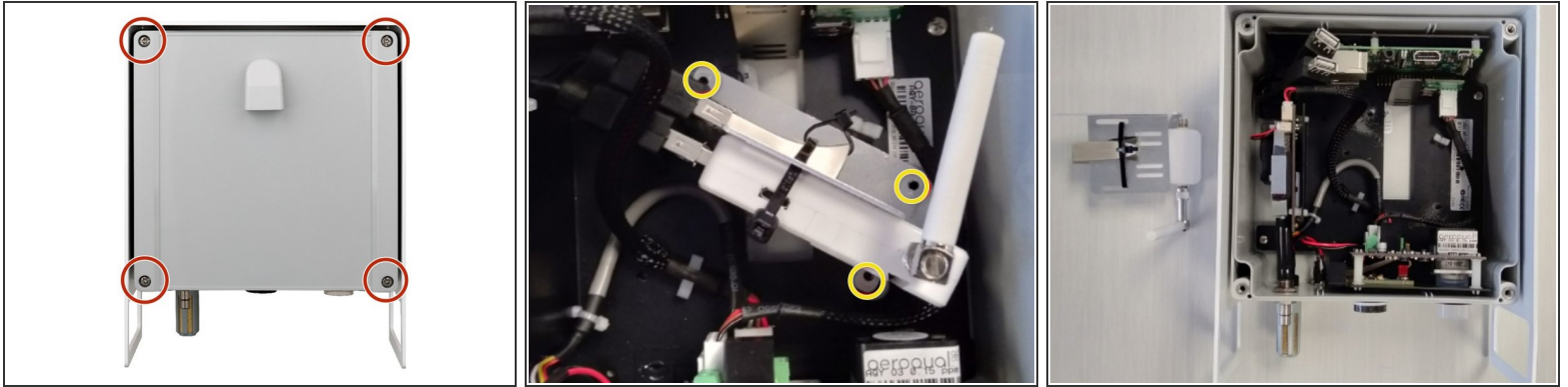




PARTS:

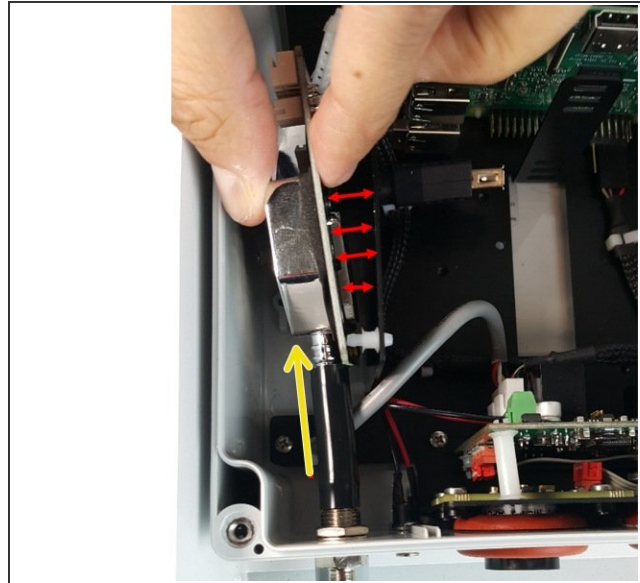
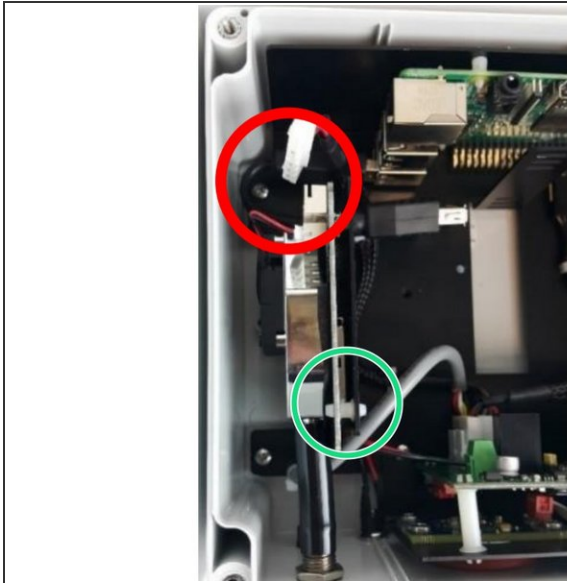
- [PM2.5 sensor](#) (1)
- [NO2 and O3 sensor board](#) (1)

Step 1 — Remove modem



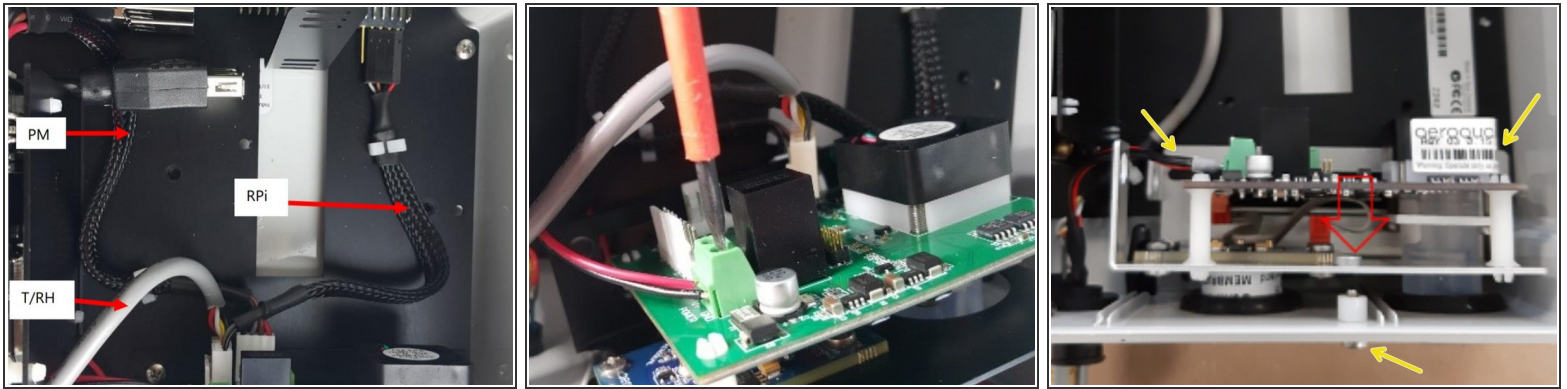
- Disconnect the power supply at the bottom of the AQY 1 unit.
- Remove the front cover by loosening all 4 screws (they won't come out of the casing).
- Unscrew the modem/USB mounting bracket.
- Disconnect the USB connections and remove the entire bracket with USB backup and modem attached.

Step 2 — Replace PM2.5 sensor



- Disconnect the white connector at the top of the PM sensor.
- Separate the sensor from the metal bracket by disconnecting the white spacers.
- Pull the sensor out of the sample tube (wiggling or rotating may be required).
- Insert the new PM sensor into the sample tube.
- Connect the sensor to the metal bracket using the white spacers.
- Connect the white connector at the top of the new sensor.
- If you're only changing the PM sensor, go to step 6 to reset its calibration parameters.

Step 3 — Remove old NO2/O3 sensor board



- Disconnect the 3 white data connections from the NO2/O3 sensor board. The connections are labelled:
 - **PM** = PM
 - **T/RH** = Temperature/RH
 - **RPi** = Raspberry Pi
- Unscrew the positive and negative power supply cables from the sensor board.
- Unscrew the entire sensor board - 1 screw underneath and 2 on the backplate.
- Remove the sensor board by gently pulling it vertically to free the sensors from their grommets.

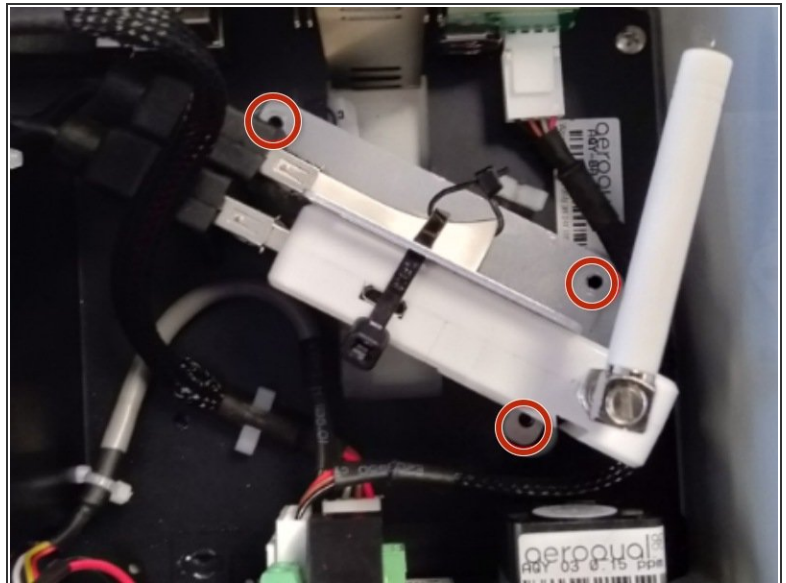
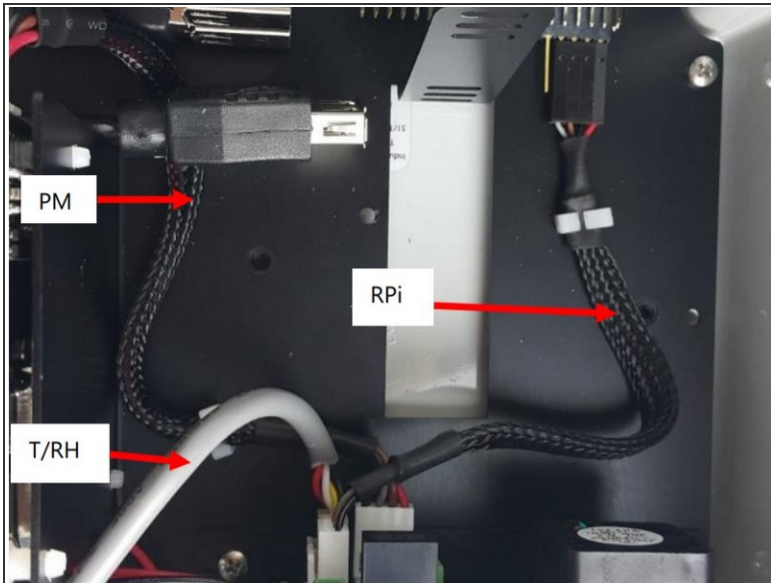
Step 4 — Connect new NO2/O3 sensor board



⚠ Never directly touch the exposed NO2 sensor at the bottom. If it becomes disconnected from your replacement sensor assembly, grip the sides of it when reconnecting.

- Connect the positive and negative power supply cables to the replacement sensor board. Double check the polarity.
- Align the NO2 and O3 sensors with the appropriate holes in the base and push the sensor board into position.
- Screw the new sensor board in, bottom screw then backplate screws.

Step 5 — Reconnect cables and modem



- Re-connect the data connections to the correct terminals.
- Reconnect the USB backup and modem to their USB cables and screw the bracket back onto the backplate.
- Replace the front cover ensuring the front vent is at the top with the opening pointing down.
- Reconnect the power supply.

Step 6 — Reset calibration

The left screenshot shows the Aeroqual Cloud dashboard for AQY BB-525. A red arrow points to the 'Calibration and Service' button in the top navigation bar. The right screenshot shows the 'Calibration and Service' app. The 'Particles' dropdown menu is open, and 'PM2.5 raw' is selected. Below the menu, there are line graphs for 'PM2.5 raw' and 'PM2.5'. A red arrow points to the 'PM2.5 raw' graph. Below the graphs, there is a table for calibration data.

Time	Current	Average
3:49:00 PM	144.6	125.6
3:48:00 PM	102.4	120.3
3:47:00 PM	94.4	127.1
3:46:00 PM	116.9	133.8
3:45:00 PM	108.6	136.7
3:44:00 PM	124.1	152.0
3:43:00 PM	146.8	161.4
3:42:00 PM	142.1	164.2
3:41:00 PM	154.9	166.1
3:40:00 PM	121.7	172.4

i After replacing the PM2.5 sensor, you need to reset its calibration parameters.

- Connect to the monitor via Aeroqual Connect or Aeroqual Cloud.
- Ensure the monitor is in **Normal operation** and not displaying an error message. If an error is displayed, check the PM2.5 sensor and connections.
- Enter the **Calibration and Service** app and select **Particles** from the drop-down.
- Select the **PM2.5 raw** channel and check the **New offset** is set to **0.0** and the **New gain** is set to **1.0**.

⚠ Don't adjust these parameters for any other particle channel.

For further support, contact [Technical Support](#).