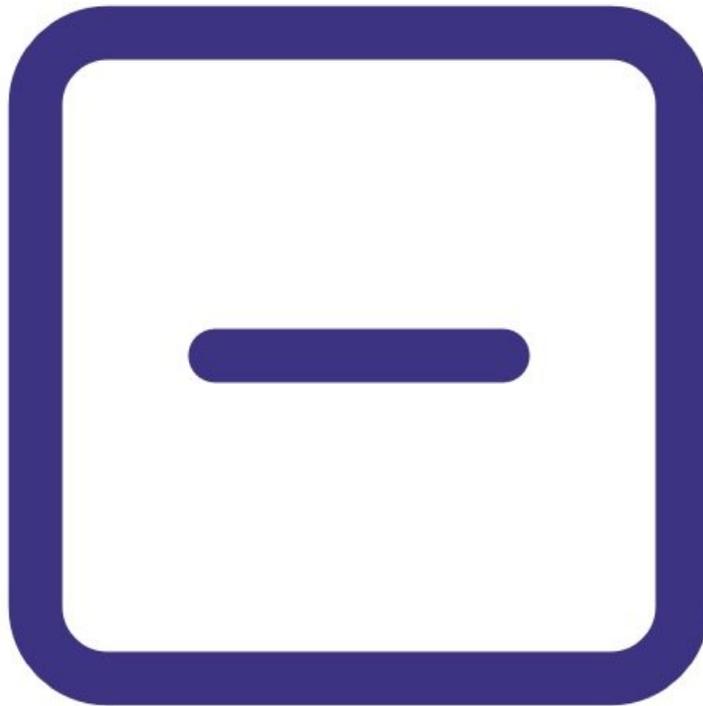




# Remove gas module

Learn how to remove a gas module without replacing it.

Written By: Tanya Taylor



## INTRODUCTION

You can easily do this procedure on site at the monitoring location.

To understand how often you should perform this service activity, [click here](#).



### TOOLS:

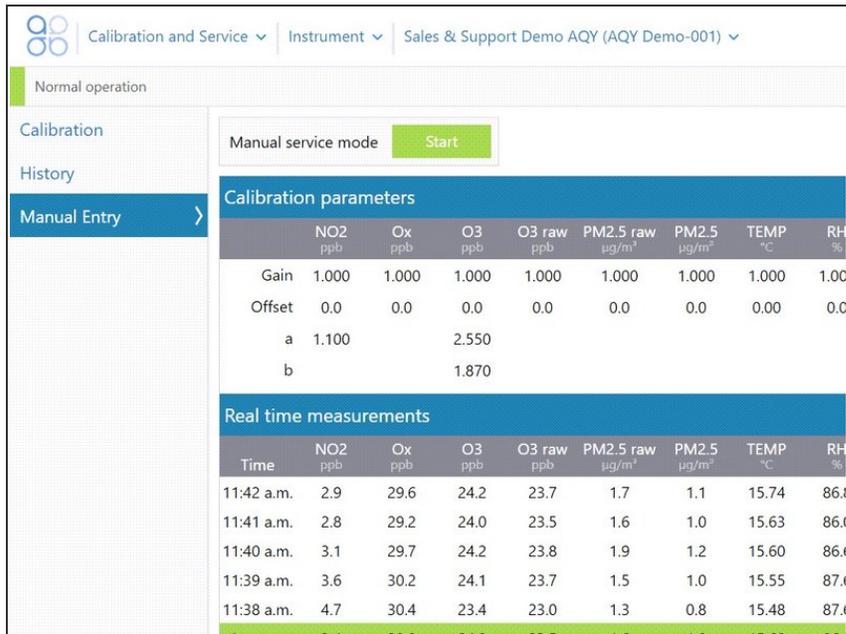
- Large Phillips head screwdriver (1)



### PARTS:

- Luer cap (1)
- Flowmeter - TSI 4140 (1)

## Step 1 — Enter service mode



Normal operation

Calibration and Service | Instrument | Sales & Support Demo AQY (AQY Demo-001)

Calibration

History

Manual Entry

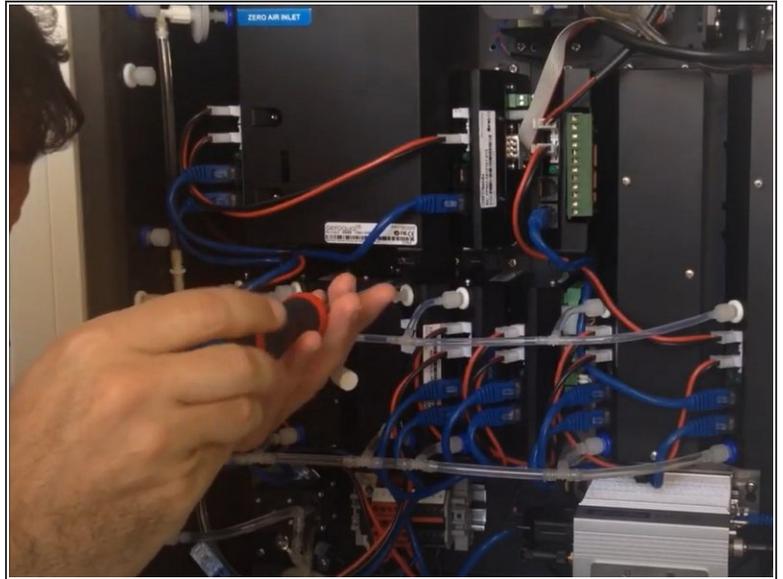
Manual service mode

Calibration parameters								
	NO2 ppb	Ox ppb	O3 ppb	O3 raw ppb	PM2.5 raw µg/m <sup>3</sup>	PM2.5 µg/m <sup>3</sup>	TEMP °C	RH %
Gain	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.00
Offset	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0
a	1.100		2.550					
b			1.870					

Real time measurements								
Time	NO2 ppb	Ox ppb	O3 ppb	O3 raw ppb	PM2.5 raw µg/m <sup>3</sup>	PM2.5 µg/m <sup>3</sup>	TEMP °C	RH %
11:42 a.m.	2.9	29.6	24.2	23.7	1.7	1.1	15.74	86.0
11:41 a.m.	2.8	29.2	24.0	23.5	1.6	1.0	15.63	86.0
11:40 a.m.	3.1	29.7	24.2	23.8	1.9	1.2	15.60	86.0
11:39 a.m.	3.6	30.2	24.1	23.7	1.5	1.0	15.55	87.0
11:38 a.m.	4.7	30.4	23.4	23.0	1.3	0.8	15.48	87.0

- [Enter service mode](#) so any fluctuations in the data caused from this activity can be excluded from air quality reports.

## Step 2 — Remove the module



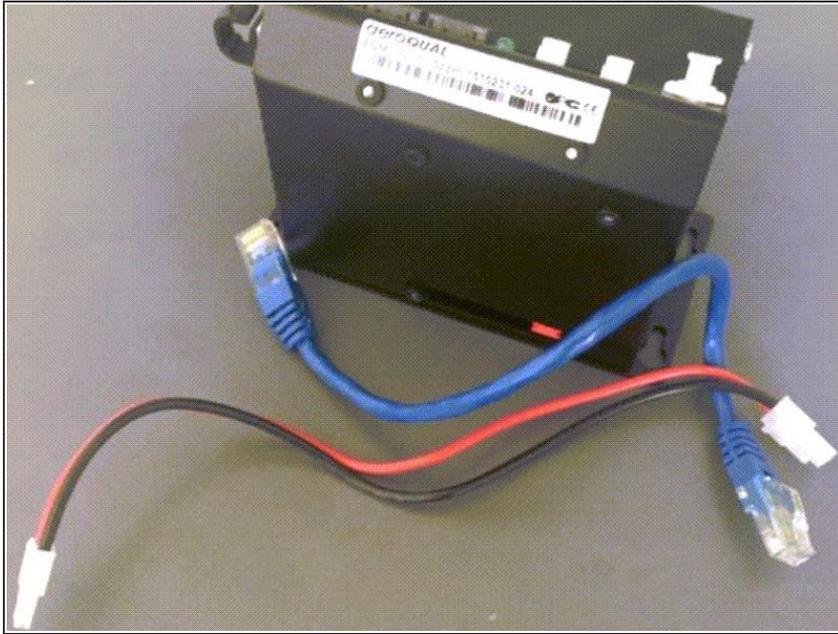
**i** Keep your monitor on. You don't need to turn it off for this procedure.

- Remove one blue communications cable and one red and black power cable.
- Disconnect the sample inlet and exhaust tubes.
- Loosen the retaining screws and carefully remove the module.
- Reconnect the communication and power cables to ensure the remaining modules have power and communications.

**⚠** Make sure the polarity of the red and black cable is the correct.

- Insert luer caps into the sample inlet and exhaust connections.

### Step 3



- After you've completed this task you should have one communication cable and one power cable left over.

### Step 4 — Remove configuration

System	Sensors	Communications
Serial number <b>AQY Demo-001</b>	Aeroqual Sensor Port <b>COM 1</b>	Remote config interval <b>Every minute</b>
Name <b>Sales &amp; Support Demo</b>	Poll interval <b>Every 5 seconds</b>	Remote config server <b>Demo Server</b>
Instrument type <b>AQY1</b>	Poll time-out <b>1.5 seconds</b>	VPN Server <b>Demo</b>
Software version <b>1.16.7263</b>	Active Sensors <b>NO2</b> <span style="border: 1px solid red; padding: 2px;">X</span>	Offline reboot interval <b>24 hours</b>
Time zone <b>(UTC+12:00) Auckland</b>	<b>O3</b> <b>O3 raw</b>	Ethernet mode <b>Direct (DHCP server)</b>
Summer time adjusted <input checked="" type="checkbox"/>	<b>PM2.5 raw</b> <b>PM2.5</b>	Ethernet IP address <b>10.10.0.1</b>
Location <input type="text"/>	<b>TEMP</b> <b>RH</b>	WiFi mode <b>Client</b>
Default averaging period <b>1 hour</b>	<b>DP</b>	WiFi SSID <b>PDEV Router</b>
	<b>Add new sensor ...</b>	

- Go to the **Configure** app and click **Settings** from the side menu.
- Remove the module from the **Active Sensors** list in the **Sensors** column by hovering over the sensor name and clicking the cross that displays.
- Click **Save** when the confirmation message appears.

## Step 5 — Check inlet flow



- i When you remove a gas module, you reduce the overall flow rate of the main gas inlet.
- Read the PDF attached to the end of this user guide to understand the expected flow rate for the gas inlet.
- [Measure the inlet flow rate to make sure it's as expected.](#)

## Step 6 — Record in journal

Instrument ▾ Air Quality Monitor (AQM65 04082015-437) ▾

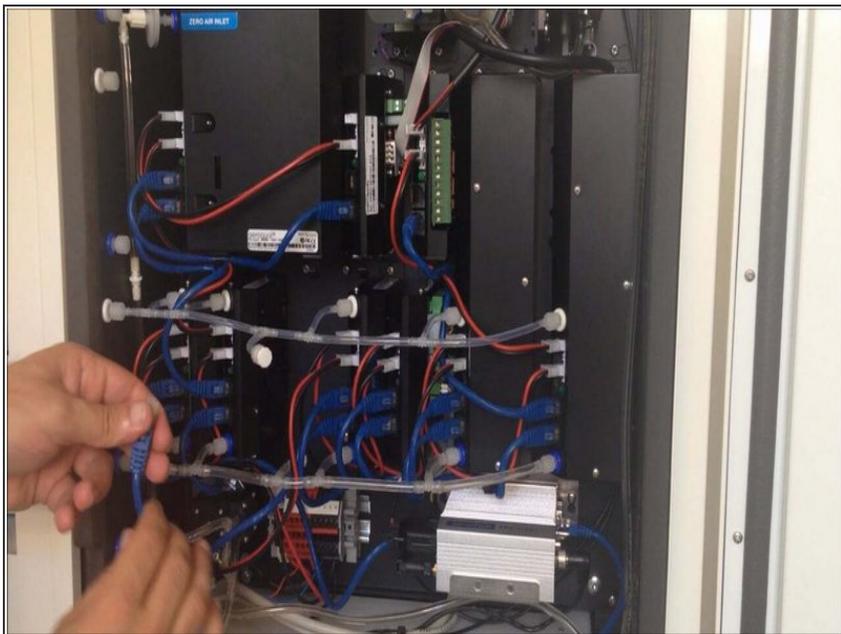
All journal types ▾

User entry | Cloud user - John Wagner

<p>1. Site Inspection:</p> <ul style="list-style-type: none"> <li>No new local emission sources</li> <li>Instrument in good condition</li> <li>No obstructions to monitoring equipment</li> </ul> <p>3. Equipment:</p> <ul style="list-style-type: none"> <li>Aeroqual Gas dilution calibrator: Aircal 1000</li> <li>Aeroqual Ozone calibrator: AQM O3Cal</li> <li>Aeroqual Flow meter: AQM R7</li> </ul> <p>4. Flow rate check: Expected flow rate = 0.450 ml per min, Measured flow rate = 0.452 ml per min Main inlet flow rate OK, individual module flow rates were not measured.</p> <p>6. Zero calibration All modules passed zero calibration, all modules were stable and all offsets were within acceptable limits.</p> <p>7. Span Calibration</p> <table border="0" style="width: 100%;"> <tr> <td>CO @ 10.00 ppm</td> <td>Module response was 8.95 ppm gain adjustment to 1.15</td> <td>pass</td> </tr> <tr> <td>SO2 @ 0.2 ppm</td> <td>Module response was 0.210 ppm gain adjustment to 0.92</td> <td>pass</td> </tr> <tr> <td>NO2 @ 0.2 ppm</td> <td>Module response was 0.090 ppm gain adjustment to 2.10</td> <td>pass (module may need replacing soon contact A</td> </tr> </table> <p>8 Pack up. Next scheduled calibration 3 months from now. June 2017.</p>	CO @ 10.00 ppm	Module response was 8.95 ppm gain adjustment to 1.15	pass	SO2 @ 0.2 ppm	Module response was 0.210 ppm gain adjustment to 0.92	pass	NO2 @ 0.2 ppm	Module response was 0.090 ppm gain adjustment to 2.10	pass (module may need replacing soon contact A	<p>2. Instrument inspection:</p> <ul style="list-style-type: none"> <li>Cooling fan operational</li> <li>PM and gas inlet secure</li> <li>Instrument has been running at stable</li> </ul> <p>4 Gas cylinders:</p> <ul style="list-style-type: none"> <li>CO 1000 ppm in Air (expiry Marc</li> <li>SO2 20 ppm in Air (expiry Decem</li> <li>NO2 20 ppm in Air (expiry Nove</li> </ul> <p>5. Open door and change gas inlet filter</p>
CO @ 10.00 ppm	Module response was 8.95 ppm gain adjustment to 1.15	pass								
SO2 @ 0.2 ppm	Module response was 0.210 ppm gain adjustment to 0.92	pass								
NO2 @ 0.2 ppm	Module response was 0.090 ppm gain adjustment to 2.10	pass (module may need replacing soon contact A								

- [Record the results of this service activity in the monitor's journal.](#)
- [Exit service mode.](#)

## Step 7 — Video of steps



- To see the process of removing a module in an AQM 65, watch this video.

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