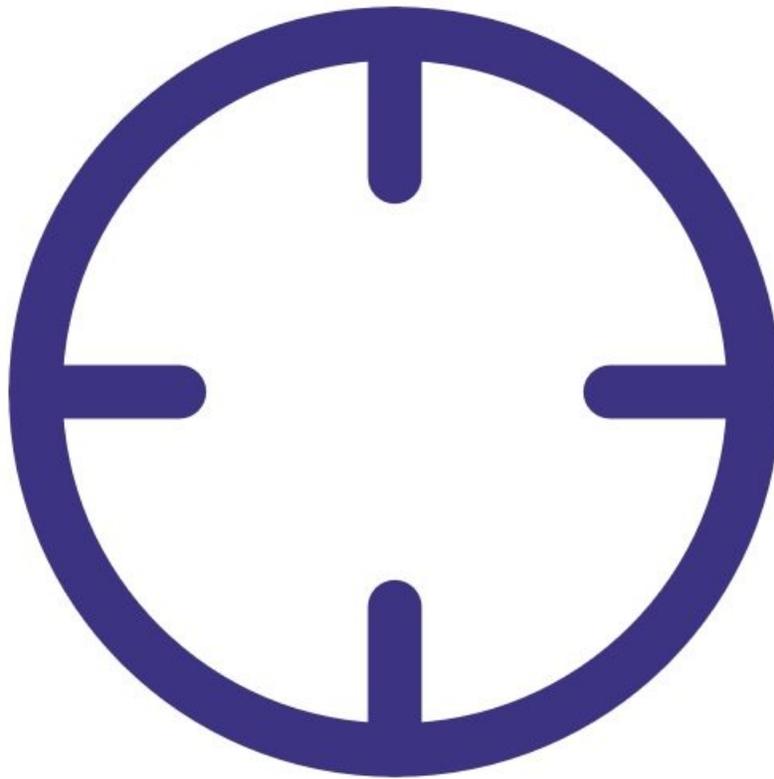




# Check gas module for leaks

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## INTRODUCTION

If the correct flow rate can't be achieved through a gas module, this may indicate a leak. A gas module can be checked for leaks by using a small diaphragm pump and a flowmeter.

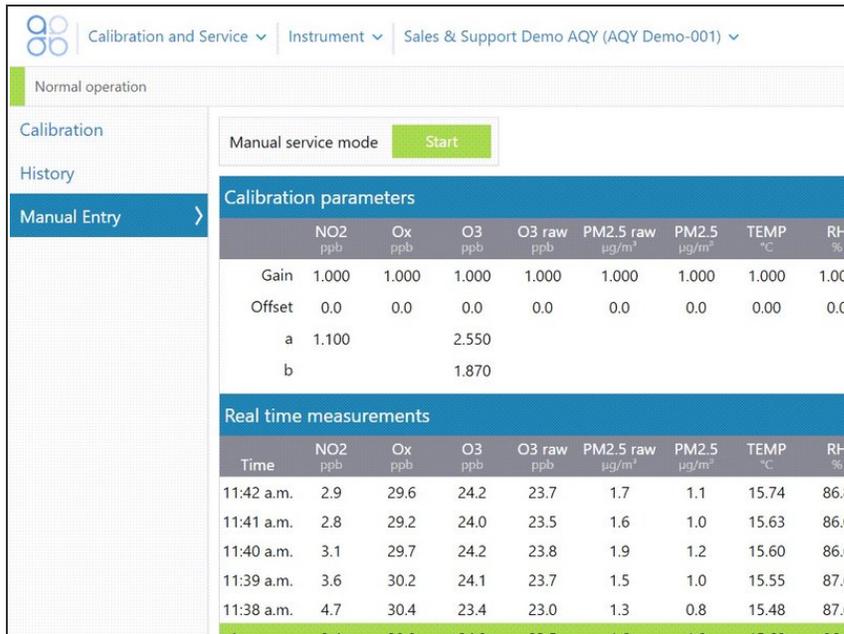
To understand how often you should perform this service activity, [click here](#).



### PARTS:

- [Sample pump](#) (1)
  - [Flowmeter - TSI 4140](#) (1)
  - [Luer cap](#) (1)
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## Step 1 — Enter service mode



Normal operation

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

Manual service mode

Calibration parameters

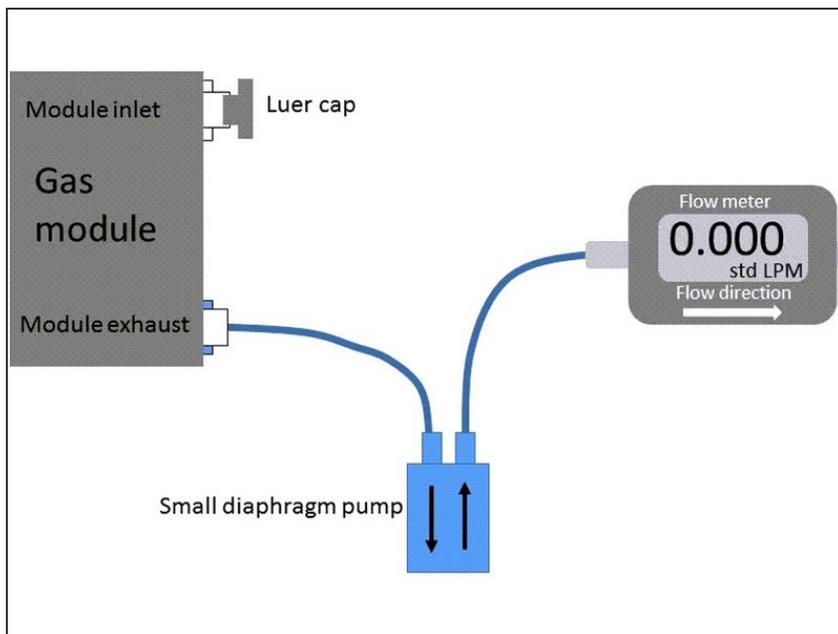
	NO2 ppb	Ox ppb	O3 ppb	O3 raw ppb	PM2.5 raw µg/m <sup>3</sup>	PM2.5 µg/m <sup>3</sup>	TEMP °C	RH %
Gain	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.00
Offset	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0
a	1.100		2.550					
b			1.870					

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 — Test for leaks



- Attach a small diaphragm pump to the module's gas outlet (exhaust).
- Connect the exhaust of the diaphragm pump to a flowmeter. The flow should read about 2.0 LPM.
- Disconnect the sample line from the module's inlet port and insert a luer cap.
- You should see the flowmeter drop to zero. If it doesn't, there's a leak somewhere.
- If you find the module has a leak, contact [Technical Support](#).

## Step 3 — Record in journal

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

All journal types ▾

User entry | Cloud user · John Wagner

<p>1. Site Inspection:</p> <p>No new local emission sources Instrument in good condition No obstructions to monitoring equipment</p> <p>3. Equipment:</p> <p>Aeroqual Gas dilution calibrator: Aircal 1000 Aeroqual Ozone calibrator: AQM O3Cal Aeroqual Flow meter: AQM R7</p> <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> <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> <p>8 Pack up. Next scheduled calibration 3 months from now. June 2017.</p>	<p>2. Instrument inspection:</p> <p>Cooling fan operational PM and gas inlet secure Instrument has been running at stable</p> <p>4 Gas cylinders:</p> <p>CO 1000 ppm in Air (expiry March) SO2 20 ppm in Air (expiry December) NO2 20 ppm in Air (expiry November)</p> <p>5. Open door and change gas inlet filter</p>
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- [Record the results of this service activity in the monitor's journal.](#)
- [Exit service mode.](#)

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