ABCA2 Maintenance Report

Job Number:	SE0781		
Customer:	Diagnosticni centre Bled, Novo Mesto Slovenia		
Instrument Serial #	20602/2022/1298	Gas Box Serial #	60101/1-2022/1298
Versa Serial #	60101/1-2022/1298	Software Version	ABCA13c breath analyser v 800.9.0
Contact:	Saša Pogačar, Grega Kimovec		
Date of Visit:	28-30.10.2026	Days:	3
Engineer:	Robert Kamený		

Pre Maintenance Checks

Initial Tuning Parameters: N/A

HT: IR:

Focus: eV:

HP: Trap:

Emission:

Vacuum 4.3e-06mBar (isol. valve open)

Initial Performance Evaluation

Peak Shape: pass Sheet Number:1

Stability: pass Sheet Number:2

Ref Gas Precision: Sheet Number:3

Breath Precision: Sheet Number:4

Sensitivity: Sheet Number:5

5% in tube Precision: Sheet Number:6

Linearity: Sheet Number:7

Maintenance Checklist		
Filament Change	Initial: RK	Date: n/a
Oil Change	Initial: RK	Date: n/a
Filament Condition	Initial: RK	Date: n/a
Tune Optimisation	Initial: RK	Date: 28.10.26
Replace Syringe O Rings	Initial: RK	Date: 28.10.26
Gas Flow Check and Optimisation	Initial: RK	Date: 28.10.26
Magnet Position Optimisation (If Applicable)	Initial: RK	Date: N/A
System Leak Check	Initial: RK	Date: 29.10.26

Final Performance Evaluation

HT: 2521 IR: -4.0

Focus: 84 eV: -80

HP: 10 Trap: 250

Emission: 686

Vacuum: 4.5e-06mBar (isol. valve open)

Final Performance Evaluation

Peak Shape: pass Sheet Number:1

Stability: pass Sheet Number:2

Ref Gas Precision: 0.06 Sheet Number:3

Breath Precision: 0.20 Sheet Number:4

Sensitivity: n/a Sheet Number:5

5% in tube Precision: n/a Sheet Number:6

Linearity: n/a Sheet Number:7

Faults and Issues:

- Instrument was reported as a significant loss of sample from the tube
- Engineer to visit end of October
- Initially as found Test/REF Total beam areas +- 7e-08, Sample from the tube +- 1e-09 but consistent
- Att. found a small crack on the needle peak tubing located just behind the 1/16 knut on the bulkhead (shortened the peak tubing by 0.5cm + leak check)
- REF-Breath achieved 5.5e-08/8.0 e-08 +- 0.50 (flows 20 nafion-20 needle out)
- Breath precision (parameters above) 0.40‰std
- Fitted longer peak tubing, but total beam areas dropped off down to 6.0e-08
- REF/Breath 9.7e-08/6e-08 +- 0.4 but adequate repeatability with 0.14‰std
- Matched the flows needle vs nafion to around 25ml/min + increased trap to 250uAmps
- REF/Breath 1.8e-07/1.1e-07
- Adjusted ref gas pulse to match 1.2e-07, ref gas precision 0.06‰std
- Changed the needle also as a good measure of precaution , breath precision achieved 0.20‰std

Service actions:

Syringe seals: changed

Needle: changed

Peak tubing: changed

Flows as indicated on the portable flowmeter:

Carrier 25ml/min

Needle out: 30ml/min

Unit released back to service on day 2 (29.10.2026)

Att. ***One day is to be brought forward during the next visit***

Follow Up:			
• Service contract expiry 23.10.2027			
Engineer:	Robert Kameny	Date:	04.11.2026
Signed:			
Customer:		Date:	
Signed:	 Digitalno podpisal Gregor Kimovec Datum: 2026.11.17 14:29:12 +01'00'		