SERVICE REPORT

Job Number:	IN1346 Quote: ------- Sage: ----------		
Customer:	Natural Resources Institute Finland (LUKE)		
Contact:	Elina Sahlstedt (00358504324879)		
Instrument:	HS2022 Emag		
Date of Visit:	14-15.5.2026 Days: 2		
Engineer:	Robert Kameny		
Reason for Visit:			
Service Visit			
Service Contract?	**Yes** / No	Expires:	N/A
Warranty?	Yes / ~~No~~	Expires:	30.1.2027
Tick as Applicable:	~~Call Out / Routine Service~~ / Warranty / ~~Emergency / Contract Visit~~		
Details of Visit:			

- Customer reported severe issues with 18O results during LA analysis for last 6 months
- Symptoms: noticeable oscillations across all 3 beams during stability scans, regular spike pattern spiced apart every 2 minutes or so,
- Attempts to fix since first report (Henry Cook visit 04_2026): Replaced Analyser Turbo pump (05/2026),swapped system controller, head amp cable, source cable, re-plumbed REF side, replaced LA prep isolation valve
- Recommended actions: head Amp replacement, Emag/ Emag supply replacement
- RK to visit site 05_2026
- Observed identical issues as listed above
- Suspected areas:
- Mass spec has tendency to be slower getting background down when running samples of the LA, causing the peaks to tail off (possible carry over)
- Ref gas specs using CO gives good reproducible carbon and oxygen results
- Att. Marginal/ poor stability trace observed at the start of the troubleshooting for N2 mode (Mass 30 has tendency to incline across time), CO2 and CO 2/1 and 3/1 scans also highlight noticeable instability over the time.
- Attempts to fix : Head Amp replaced (no improvement), Replaced 24V solenoid control valve V4 (ref gas side) to mitigate any potential malfunction (no improvement), Re-placed 6 thou feed link(and re-crimped to 4.0e-06mBAR) on the LA isolation valve – (no improvement), Increased the E-mag Drive current to match 14000Amps (Att. unable to set the drive current higher than 13950Amps) made very little or no effect at the re-occurring oscillations

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Recommendations:

- Consider : Magnet/ Magnet power supply exchange
- Consider : Turbo Pump replacement (source)
- Consider : Sending the Mass Spec to Sercon for a detailed testing

Follow Up:

Parts Used:	*Stock Number:*	*Quantity:*	*Charge:*
		Total:	

Engineer: Robert Kameny Date: 21.05.2026

Signed: 

Customer: Elina Sahlstedt Date: 21.5.2026

Signed: 

Sercon Ltd
Unit 3B Crewe Trade Park
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