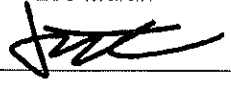


## SERVICE REPORT

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                    |              |             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------|-------------|
| Job Number:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | IN1272                                                             | Quote: 11414 | Sage: _____ |
| Customer:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | San Francisco State University                                     |              |             |
| Contact:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Richard Dugdale, Frances Wilkerson, Jessica Rose Wilson            |              |             |
| Instrument:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Europa 2020, Europa GSL, GC and Orchid (not used, disconnected)    |              |             |
| Date of Visit:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 6 <sup>th</sup> til 8 <sup>th</sup> April 2022                     | Days:        | 3           |
| Engineer:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Lee Martin                                                         |              |             |
| <b>Reason for Visit:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                    |              |             |
| Electronics upgrade of 2020.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                    |              |             |
| Service Contract?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No                                                                 | Expires:     | _____       |
| Warranty?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No                                                                 | Expires:     | _____       |
| Tick as Applicable:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Call Out / Routine Service / Warranty / Emergency / Contract Visit |              |             |
| <b>Details of Visit:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                    |              |             |
| <p>Upgrade needed after source control was lost. Replacing source, digi and analogue boards did not work. Prep not to be upgraded and existing one will be run with prep monitor and valves off the second System Controller bank.</p> <p><u>6<sup>th</sup> April 2022</u></p> <p>Limited control over system though valve numbers and methods noted before shutdown. Instrument pumping but vacuum not clear. Instrument vented and powered down.</p> <p>2020 upgraded and units powered up. Comms with GSL not possible as RS232 cables not compatible with USB ports on the new PC. A solution will need to be generated for this. Comms with 2020 established with no prep. Mass spec valves controllable. Instrument pumping and both pump speeds and vacuum attained. Instrument left pumping overnight with filament fired (thus confirming source control established as well).</p> <p><u>7<sup>th</sup> April 2022</u></p> <p>After discussions with Simon and Wayne its determined that a serial to USB will be needed for GSL comms. However converter purchased at a local electronics store does not work. A PCI-RS232 card will be needed. GSL bitmap configured and ref gas checks show good instrument performance.</p> <p><u>8<sup>th</sup> April 2022</u></p> <p>PCI-RS233 card sourced and fitted to the PC. Comms established after TDS stack removed and grounded on top of the GSL chassis for 5 minutes. Furnaces up to temperature and sample dropped showing similar signal intensity to before the upgrade. Dual method set up and acquisition windows made. GSL manually blanked off and pressure test shows a leak on the carrier flow somewhere. Customer has been advised on how to go about finding it after the visit.</p> <p><u>14<sup>th</sup> April 2022</u></p> <p>Customer reports that the leak has been found.</p> |                                                                    |              |             |
| <b>Recommendations:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                    |              |             |
| Run some precision tests on the GSL to check instrument performance before any significant batches are run                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                    |              |             |
| <b>Follow Up:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                    |              |             |

## SERVICE REPORT

| Contact Service@sercongroup.com for support |                                                                                   |           |                             |
|---------------------------------------------|-----------------------------------------------------------------------------------|-----------|-----------------------------|
| Parts Used:                                 | Stock Number:                                                                     | Quantity: | Charge:                     |
|                                             |                                                                                   |           |                             |
|                                             |                                                                                   |           |                             |
|                                             |                                                                                   |           |                             |
|                                             |                                                                                   |           |                             |
|                                             |                                                                                   |           |                             |
| Total:                                      |                                                                                   |           | _____                       |
| Engineer:                                   | Lee Martin                                                                        | Date:     | 15 <sup>th</sup> April 2022 |
| Signed:                                     |  |           |                             |
| Customer:                                   |  | Date:     | 15 <sup>th</sup> April 2022 |
| Signed:                                     |                                                                                   |           |                             |

All ok although we are trying to get windows correct etc - problem with carbon!  
 Also getting used to software since with the timing for the visit we didn't really get a full training!