| TEST DATE AND CONDITIONS | | |
|---|---|---|
| Date | 24/11/2022 | |
| Atmospheric Pressure | 982 | mB |
| Ambient Temperature | 21.1 | °C |
| Environics Serial No. | 5089 | |

***GFM436 Final Inspection & Calibration Check Certificate***


**GAS DATA LTD**
Unit 4, Fairfield Court
Seven Stars Estate
Wheler Rd
Coventry
CV3 4LJ
Tel 02476303311 Fax 02476307711





| | |
|---|---|
| Customer | IGE Consulting Ltd |
| Certificate Number | 123692 |
| Order Number | 332744 |

| | |
|---|---|
| Serial Number | 13397 |
| Software Version | G436-00.0027/0010 |

| Recalibration DUE Date |
|---|
| 24/11/23 |

| Instrument Checks | | | | | |
|---|---|---|---|---|---|
| Keyboard | ✓ | | Display Contrast | ✓ | |
| Pump Flow In | 500 | *Accept > 200 cc/min* | Pump Flow @ -200mB | 250 | *Accept > 200 cc/min* |
| Clock Set / Running | ✓ | | Labels Fitted | ✓ | |

| Gas Checks | | | | | | |
|---|---|---|---|---|---|---|
| Sensor | $CH_4$ | | $CO_2$ | | $O_2$ | |
| | Instrument Gas Readings % | True Gas Value % | Instrument Gas Readings % | True Gas Value % | Instrument Gas Readings % | True Gas Value % |
| | 59.7 | 60 | 40.0 | 40 | 20.9 | 20.9 |
| | *Accept ±3.0* | | *Accept ±3.0* | | *Accept ±0.5* | |
| | 5.0 | 5 | 5.0 | 5 | 6.0 | 6 |
| | *Accept ±0.3* | | *Accept ±0.3* | | *Accept ±0.3* | |
| Zero Reading 100% N2 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| | *Accept ±0.0* | | *Accept ±0.0* | | *Accept ±0.1* | |

| Optional Gas Checks | | | | | | |
|---|---|---|---|---|---|---|
| Applied Gas & Range | | Concentration Tested @ (ppm) | Instrument Readings *(ppm)* | | | |
| Gas Type | Range *(ppm)* | | Zero Reading | | Instrument Gas Reading | |
| H2S | 5000 | *1500* | 0 | *Accept ±0.0* | 1500 | *Accept ±5.0* |
| CO | 2000 | *1000* | 0 | *Accept ±0.0* | 1000 | *Accept ±5.0* |
| Hexane | *2.0%* | 2.0% | 0 | *Accept ±0.0* | 1.99 | *Accept ±10.0* |

| Cross Gas Effects | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Applied Gas *(ppm)* | | Instrument Readings *(ppm)* | | | | | | | |
| Gas Type | Concentration | Toxic 1: | H2S | Toxic 2: | CO | Toxic 3: | HEX | | |
| H2S | *1500* | 1500 | | 0 | | 0 | | | |
| CO | *1000* | 100 | | 1000 | | 0 | | | |
| Hexane | *2.0%* | 0 | | 0 | | 1.99 | | | |

| Pressure Checks | | | |
|---|---|---|---|
| Atmospheric Pressure [AP] *(mB)* | | | |
| Current Atmospheric Pressure (mB) | | Instrument Atmospheric Pressure Reading (mB) | |
| *AP Open Ports* | | 982 | *Accept ±2.0* |
| AP Port (Internal) | *+800 mB* | 800 | *Accept ±5.0* |
| | *+1200mb* | 1200 | *Accept ±5.0* |

| Flow Checks | | | | | |
|---|---|---|---|---|---|
| Borehole Flow | | | Differential Pressure | | |
| Applied Reading *(l/h)* | Instrument Reading *(l/h)* | | Applied Pressure *(Pa)* | Instrument Reading *(Pa)* | |
| *-30* | -30.1 | *Accept ±3.0* | -277 | -280 | *Accept ±50* |
| *-3* | -3.0 | *Accept ±1.0* | -14 | -14 | *Accept ±6.0* |
| *0* | 00.0 | *Accept ±0.0* | 0 | 0 | *Accept ±0.5* |
| *3* | 3.0 | *Accept ±0.5* | 16 | 15 | *Accept ±3.0* |
| *30* | 29.8 | *Accept ±3.0* | 336 | 331 | *Accept ±50* |
| *60* | 60.0 | *Accept ±6.0* | 1023 | 1020 | *Accept ±130* |
| *90* | 90.4 | *Accept ±9.0* | 2032 | >>>>> | *Accept ±250* |

| Temperature Checks | | |
|---|---|---|
| Calibration Temperature<br>Applied Temperature $^0$C | Instrument Temperature Reading $^0$C | |
| *-10* | -10.0 | *Accept ±2.0* |
| *0* | 0.0 | *Accept ±1.0* |
| *30* | 30.0 | *Accept ±1.0* |
| *60* | 60.0 | *Accept ±1.0* |
| *100* | 100.0 | *Accept ±1.0* |

| Technician: | Date Tested: |
|---|---|
| *Jack Rutland* | *24/11/2022* |

The instrument identified by the serial number stated above has been tested by Gas Data personnel for calibration accuracy on the date and under the ambient conditions stated. Gas Data Ltd internal BS EN ISO9001:2015, BS EN ISO14001:2015, BS EN ISO45001:2018 compliant workshop procedures were followed to apply known calibration test gases, gas flow rates, pressures and temperatures of the values stated. The results displayed on the instrument at each stage are recorded above.

Gas Data Ltd is certified to BS EN ISO9001:2015, BS EN ISO14001:2015, BS EN ISO45001:2018.

| TEST DATE AND CONDITIONS | | |
|---|---|---|
| Date | 24.11.22 | |
| Atmospheric Pressure | 982 | mB |
| Ambient Temperature | 21.1 | °C |
| Environics Serial No. | 5089 | |

**GAS DATA LTD**
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UK
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GAS DATA
LISTEN · ANALYSE · INFORM

# GFM436-1 OUTWARD INSPECTION & QUALITY CHECK SHEET

| INSTRUMENT DETAILS | | | |
|---|---|---|---|
| SO Number | Instrument Type | Instrument Serial Number + SW Version | Job Number(s) |
| 332744 | GFM436 | 13597 9436-27/10 | 1236972 |

**Calibration Technician** ..... **Date** 24.11.22

**Inspection Technician** ..... **Date** 28.11.22

| INSTRUMENT CHECKS | | Pass (P), Fail (F) or not applicable (NA) | INSTRUMENT PACKING LIST | | Tick if included |
|---|---|---|---|---|---|
| Function Tests | Dust Caps Fitted | P | Instrument | | ✓ |
| | Keyboard Test (All Keys) | P | Leather Case | | ✓ |
| | Backlight | P | Instrument Strap | | ✓ |
| | Clock Set / Running | P | AC Battery Charger (UK) | | ✓ |
| | Comms Test | P | AC Battery Charger (EURO) | | X |
| | Pump Flow Test (In & Out) | P | AC Battery Charger (US) | | X |
| | Overall Leak Test (30mB) | n/a | AC Battery Charger (AUS) | | X |
| | Battery Charge Test | P | Gas Sample Pipe - *(new issue)* | | X |
| | Service Date set to? | 24.11.23 | Flow Sample Pipe - *(new issue)* | | X |
| Channel Tests | Data Logging Enabled? | P | Hard Carry Case | | ✓ |
| | Verify CH4/LEL/Hexane/PID | P | Spares Pot | | ✓ |
| | Verify CO2 | P | Allen Key | | X |
| | Verify O2 | P | Temperature Probe | | X |
| | Verify H2S | P | Vane Anemometer | | X |
| | Verify CO | P | USB Cable | | ✓ |
| | Verify LEL | P | USB Memory stick | | X |
| | Verify 1st Option Gas | N/A | SM V5 Software | Ver 6.05 | X |
| | Verify Atmospheric pressure | P | Internal Filter Pack | Qty | X |
| | Verify differential pressure | P | External Filter Pack | Qty | X |
| | Verify flow | P | Field Guide | | X |
| | Verify temperature probe input | P | **Extra Items:** | | |
| | Verify vane anemometer input | P | Sample Tubes & Filters. | | |
| DataBase Checks | Jobcard(s) completed and signed | P | | | |
| | Jobcard(s) booked off database | P | | | |
| | Calibration certificate completed | P | | | |
| | Complete & print QI record | n/a | | | |
| Label Checks | No. of Calibration label fitted | GDC 11649 | **Comments:** | | |
| | MCERTS label displayed | N/A | | | |
| | Warranty label fitted | P | | | |
| H2S Range | H2S Range from Sales Order | 5000 ppm | | | |
| | H2S Range from Cal Cert | 5000 ppm | | | |
| | Over-range value correct? | P | | | |