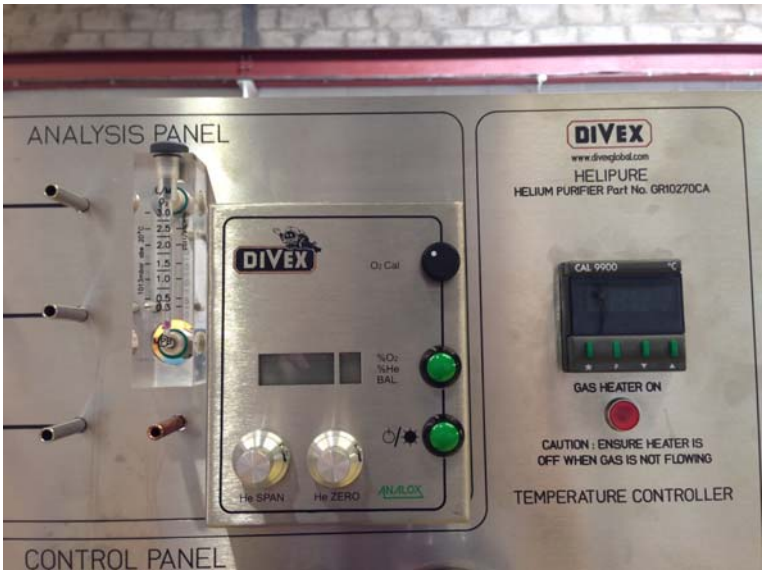
HELIPURE
ANALOX ATA ANALYSER UPGRADE

INSTALLATION INSTRUCTIONS



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1 INTRODUCTION

This guidance note details how to upgrade the analyser on the Helipure system from the Crowcon Helium Sensor to the Analox ATA by installation of GR10270204 conversion kit.

2 DISASSEMBLY

2.1 Disconnect the Helipure from mains supply.

2.2 Remove Electrical Enclosure covers as indicated in Figure 2.1.

Figure 2.1 - Helipure Electrical Enclosures

2.3 Remove zero and span knobs and digital display from front panel as indicated in Figure 2.2.

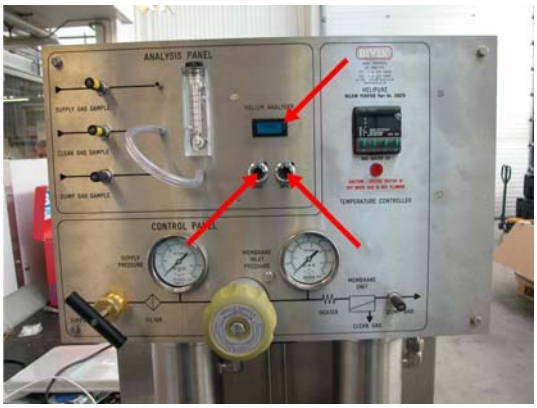

Figure 2.2 - Helipure Front Panel

2.4 Remove existing wires to digital display.

2.5 Cut back wires from potentiometers and remove.

2.6 Disconnect existing earth wire from upper electrical enclosure. This will be reconnected at a later stage.

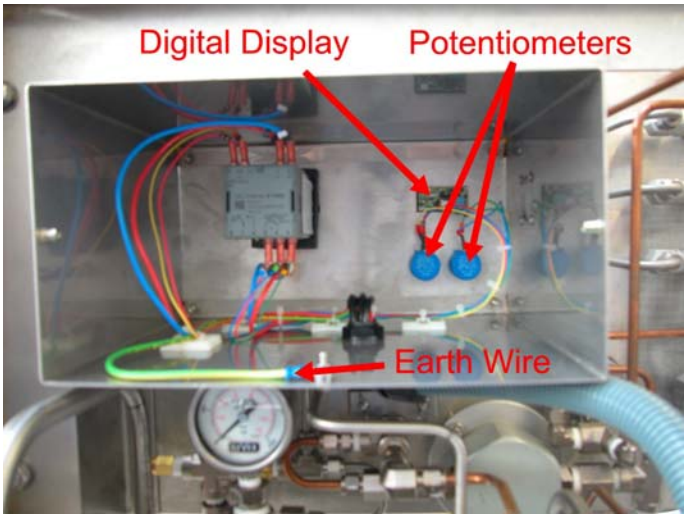

Figure 2.3 - Upper Electrical Enclosure

2.7 Remove the wires from the bottom of terminals 18-24 in the lower electrical enclosure as indicated on Figure 2.4.

2.8 Disconnect the Crowcon unit, including copper pipe leading from top of flowmeter and Conduit 2 connecting it to the lower electrical enclosure.

2.9 Disconnect the wires from the top of terminals 18-24 in the lower electrical enclosure as indicated on Figure 2.4 and remove all wires from Conduit 1 connecting the lower and upper electrical enclosures.

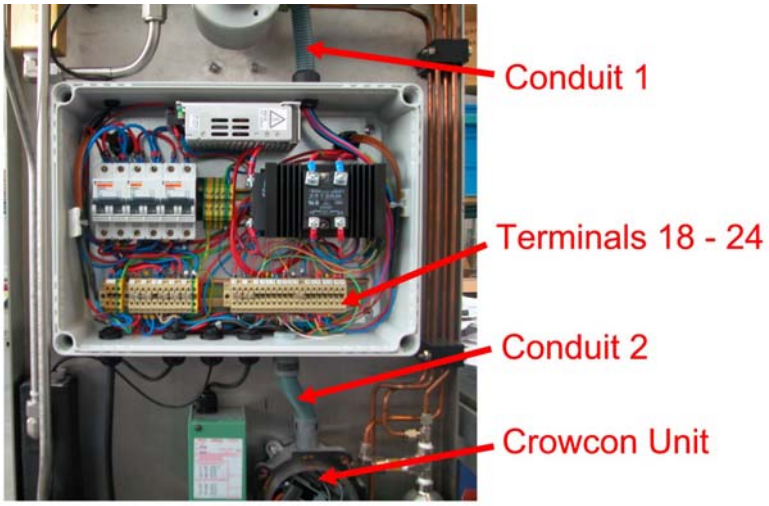

Figure 2.4 - Lower Electrical Enclosure

3 MODIFICATIONS & REASSEMBLY

3.1 Drill two 4.5mm holes on front of fascia as shown in Figure 3.1 below.

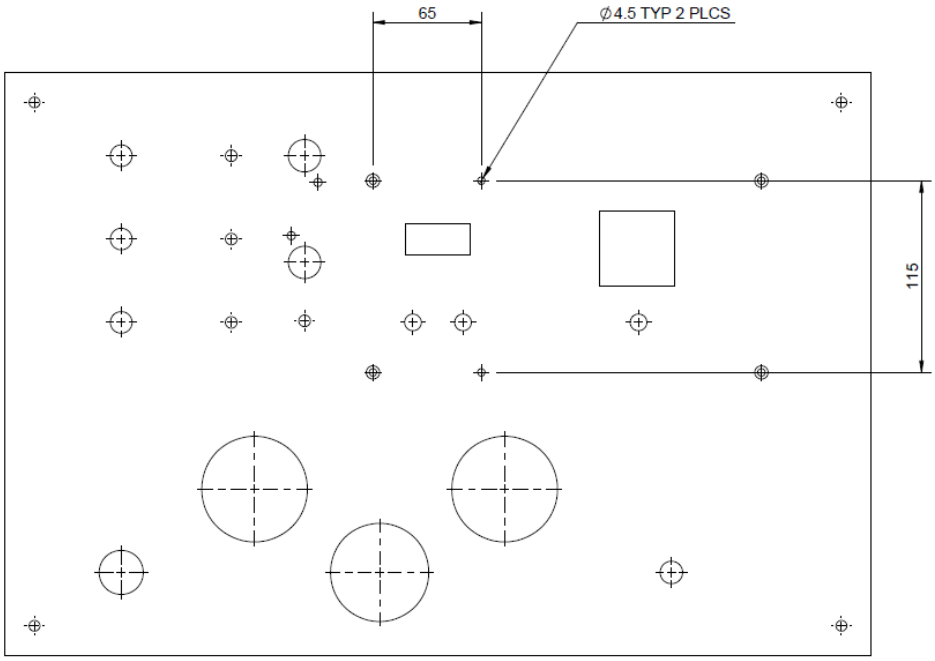

Figure 3.1 - Fascia modification details

3.2 Drill 20mm hole in lower electrical enclosure at the top left hand side of the box (within gland plate area) and fit 20mm straight adaptor as per Figure 3.2.

3.3 Remove conduit 1 (see Figure 2.4) from existing adaptor on lower electrical enclosure and fit to newly installed straight adaptor (cut back conduit length if necessary).

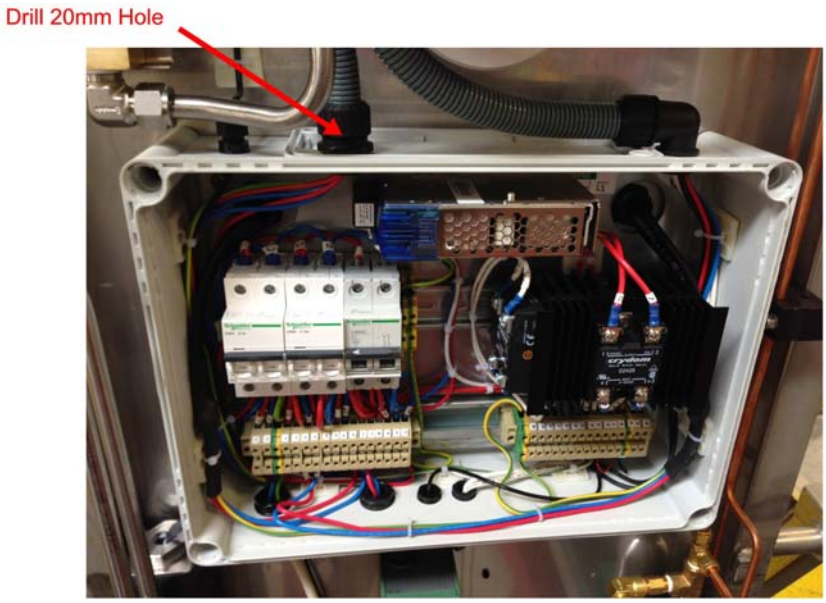

Figure 3.2 - Conduits fitted to lower electrical enclosure

3.4 Drill 20mm hole in upper electrical enclosure to the right of the existing 90° adaptor and fit new 90° adaptor in accordance with Figure 3.3.

3.5 Connect conduit between new adaptor and the existing adaptor on the lower electrical enclosure.

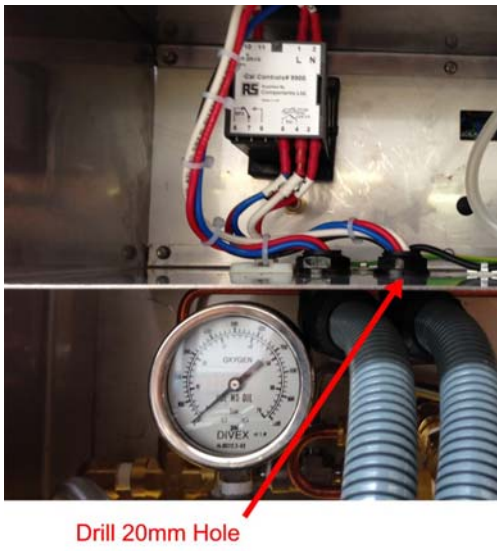

Figure 3.3 - Upper electrical enclosure

3.6 Pull temperature controller power cables up through conduit on the left hand side.

3.7 Pull new analyser power cable, temp controller sensor cables and temp controller relay cables up through conduit on the right hand side.

3.8 Remove upper brass fitting from flowmeter and replace with Nylon Barb and silicone tube as per Figure 3.4.

3.9 Drill 9.5mm hole in top of top enclosure, fit grommet MC1200 and feed Silicone tube through hole for connecting to sensors as per Figure 3.4.

Figure 3.4 - Flowmeter outlet tube

3.10 Drill 6.4mm hole in side of top enclosure, fit grommet MC1219 and fit oxygen cell and helium cell inside the top enclosure securing in place using tie wraps and tie wrap bases as per Figure 3.5.

Figure 3.5 - Sensors

3.11 Connect molex connector from the new analyser power cable to analyser PCB JP3 (top left looking from rear).

3.12 Connect molex connector from the oxygen cell to the 2 way wired connector on the analyser.

3.13 Connect molex connector from the helium cell to 3 way wired connector on the analyser.

3.14 Mount new analyser to the front fascia panel, fitting the existing earth wire to one of the fixing screws as per Figure 3.6.

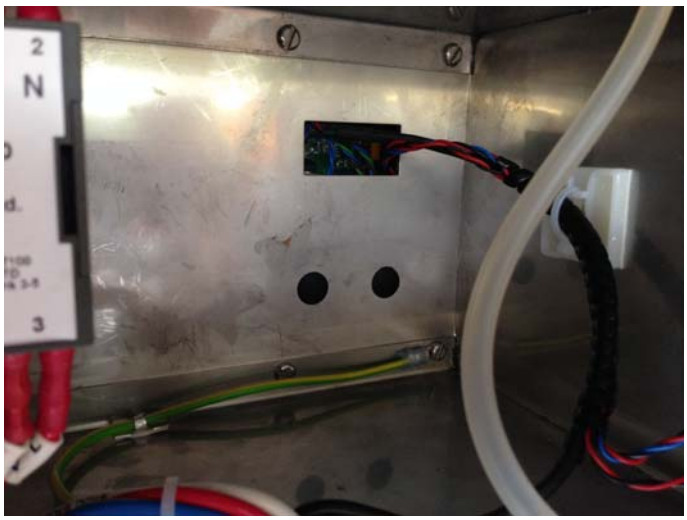

Figure 3.6 - Earth wire secured

3.15 Tidy up wiring using tie wraps supplied.

3.16 Connect other end of new power cable to terminals 17 (+24Vdc) & 19 (0V).

3.17 Fit blanking grommet EM3567 to the 20mm hole in the bottom of lower electrical enclosure box as per Figure 2.4 (replacing Conduit 2).

3.18 Fit blanking grommets EM3566 to the two 10mm holes in the rear of the upper electrical enclosure where adjustment knobs were previously fitted as seen in Figure 3.6.

3.19 Fit blanking grommets EM3565 to the two 6.5mm holes on front of the unit where the Crowcon unit was previously fixed onto.

Figure 3.7 - Modified upper electrical enclosure

3.20 Refit covers on upper and lower electrical enclosures.

Figure 3.8 - Modified Helipure assembly

3.21 Reconnect the Helipure to the mains supply

3.22 Calibrate Analyser using Air as O_2 Cal / Helium Zero and 100% Helium for Helium Span.

4 ANALYSER TROUBLESHOOTING

Symptom	Condition	Action
Zero Reading on O_2	O2 sensor disconnected	Remove upper electrical enclosure cover and check connection
	O2 sensor expired	Change sensor
	No Oxygen	Check in air. Turn calibration knob to the right
'Err' shown on Helium display	Helium sensor disconnected	Remove upper electrical enclosure cover and check connection
	Helium sensor fault	Return to supplier
	Calibration knob turned too far to the left	Turn knob to the right then read just the calibration