

COMPANY OPERATING PROCEDURE

TEK-OX Assembly Procedure VM3/COP/42.01

Date: 12th April 2008

Revision Date: 13-Apr-08

Issue: 1

Parts Required

Quantity	Description	Part No.	
1	TEK-OX Black Front Cover	9530005	
1	TEK-OX Black Bottom cover	9530004	
1	Blu-Ox PC Lens	9530009	
1	TEK-OX Black Shell left	9530012	
1	TEK-OX Black Shell Right	9530013	
1	Blu-Ox Base Seal	9530002	
1	Blu-Ox Front gasket	9530006	
1	Blu-Ox switch	9730036	
1	Blu-Ox Cal contro	9730040	
1	Blu-Ox Photo thread	9530010	
1	Blu-Ox key ring	9530008	
1	Blu-Ox Inside label	9530007	
1	Blu-Ox Instruction manual	9590001	
1	Blu-Ox switch waterproof kit	9730037	
1	Blu-Ox battery terminals right	9730064	
1	Blu-Ox battery terminals left	9730063	
1	Blu-Ox battery terminal common	9730062	
1	LCD assembly	3501002	
1	PCB assembly	9530015	
	Jack plug - plastic 750 1/8"	9071007	
1	Cable assembly	9070004	
2	Blu-Ox batteries AA	9060005	
1	R-17VAN		
2	Screws Black M2 x 5 mm	9730061	
5	Screws Black M2 x 10 mm	9730060	
1	PVC Tape	9711016	
1	Double sided tape	9711017	
1	Loctite	9073005	
1	Silicon grease	9711018	
1	Quick setting adhesive (UHU)	9711020	
1	Slicone rubber black non corrosive CAF10	9711000	
1	Conformal coating RS 714-462		
1	Blu-Tac		

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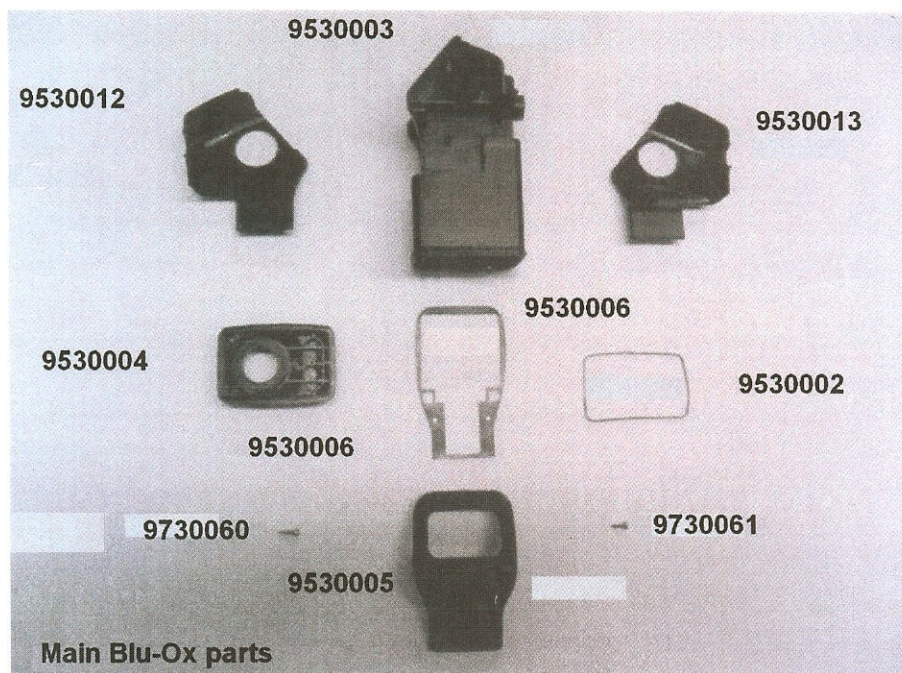
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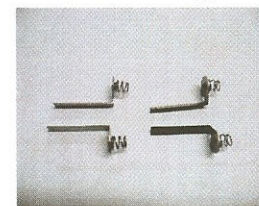
Equipment Required:

Soldering Iron: side cutters: Spanner; Long nose pliers



Assembly:

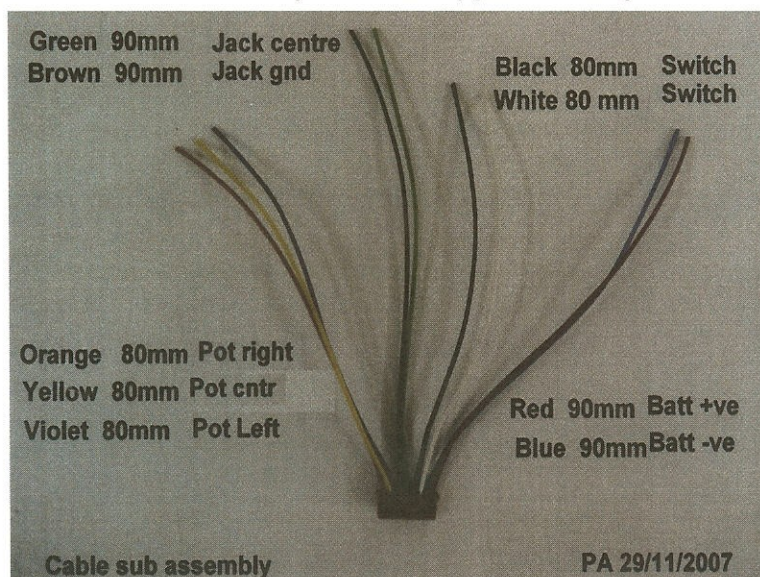
1. Programme the PCB (See Appendix A)
2. Remove the sharp corner on the right hand side of the enclosure where the flat cable will lie
3. Glue the Common battery terminal onto the Battery cover
Locate on the plastic pillar with the pips on top and ensure the cut-out faces the screw hole. Remove any surplus glue
4. Clean the terminals with Isopropyl Alcohol.
5. Lubricate the battery compartment seal and insert into the battery compartment cover
6. Locate the battery springs correctly the springs are offset "Left to left" & "Right to right".
7. Glue into position applying glue to the both parts of the right angle bend of connector, inside face . In the centre of the connector is a hole which locates on a pip in the case
8. The switch should then be fitted 1st
9. Lubricate the switch O ring with silicone grease very lightly



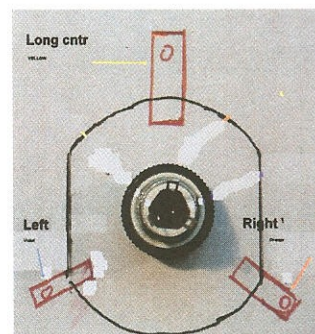
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10. Feed the switch into the enclosure mate the locating peg and add the bridge sealing kit,
11. This has to be tightened through the right hand enclosure aperture
12. Grease O ring of the Pot lightly add to pot and feed pot into enclosure body .
13. The White spot on the pot should be at the top when the pot is half turned.
14. Add Locking washer ,Permabond (Loctite) and tighten nut.
NB If the nut is difficult to locate turn it over
15. The battery terminals inside the case should be sealed with black CAF 10.
NB This is non corrosive.
16. Tin both contacts of the Jack plug
17. Glue Jack plug into the body. Ensure the plug is in the centre and the large terminal (screen) is at the back. Fasten with the nut and use loctite.
18. Solder Green to centre of Jack and Brown to outside.
19. Ensure the jack plug is watertight onto the case
20. Cut, strip & tin cable assembly wires to approximately the correct lengths



21. Solder Red & Blue wires to battery terminals. This is best done first
 1. Red to Right looking into enclosure right way up
 2. Blue to left
 3. Batteries only work one way.
22. Solder wires to switch (Black & White)
23. Solder wires to the pot see Diagram
 1. Orange Right
 2. Yellow Centre
 3. Violet Left




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24. Add labels
 1. +ve Inward Right -ve on the visible edge
 2. -ve Inward left. +ve on the visible edge.
25. Add Batteries and fix onto the base .
26. Check the unit functions using a test LCD/PCB and Test battery
27. The excess pips on the side of the PCB may need removing
28. NB If the PCB has a serial number. This must be recorded for traceability. If not record the batch number.
29. Plug the LCD lead into the PCB socket
30. **Can be tested with a dummy analyser**
31. Connect the LCD to the PCB with a small amount of double-sided tape e.g 1-1.0 cm x 1.0cm (this allows removal)
32. Take care the LCD input cable is very fragile. It breaks just after the connector
33. Take care not to bend the ribbon cable too sharply
34. Add two small amounts of Blu-Tack one on either corner of the LCD mounting
35. Introduce the PCB into the enclosure.
36. The connectors should be at the top of the instrument..
37. Ensure alignment is good and the LCD lies level. The Blu-Tack allows the LCD to be aligned & levelled correctly
38. Test the unit.
39. Locate the seal on the back of the front panel ensure it fits under the locking lugs
40. Offer the front panel up to the enclosure
41. It locates with small fragile lugs on each side and a lock on the top.
42. Screw the front panel on with 2 size M2x10 screws from the rear
43. Add the two outer side covers and fix with M2 x 5 screws. Take care not to over tighten
44. Add serial number label White to inside
45. Add same serial number Black Label to rear of Instrument
46. Add Sensor ; note serial number
47. Rotate to ensure no contamination on connectors
48. Add batteries and fix cover with three M2 x 10 screws
49. Check the unit functions
50. Add the front labels
51. Switch On
52. Check correct software version
53. Check correct title
54. Check the correct colour switch
55. Yellow auto switch off Green no auto switch off
56. Using Test box Oxycal or mV source 100% = 50mV Air =21mV (or Air & 100% Oxygen)
57. Set Calibration knob to read 20.9%
58. Check 100%

Sensor R-17 VAN
Batt: MN1500 x2
Ser. No. TX

TEK-OX Oxygen Analyser
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Ser. No. TX 



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- 59. Add Foam to box (see Appendix B)
- 60. Add label to box
- 61. Add sensor occlusion seal label to sensor
- 62. Add Quick-OX or DINKIT
- 63. Add user guides
- 64. TEK-OX
Quick-OX
- 65. Add labels to outside of Box

Appendix A

Software:

The main software is :-

Version 4.0

Legend; Vandagraph TEK-OX alternating

Auto switch-off

Auto-switch off can be disabled by breaking the shorting link on the PCB

The software can be changed to Derived Nitrogen by breaking a link on the PCB

By using the Logo maker programme the Legends can be changed to two 10 letter words.
More letters will reduce the size and the quality of the print

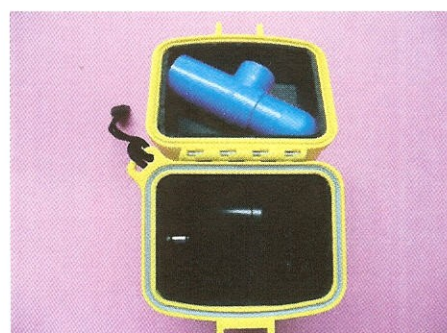
Carrying case

An alternative case is the Otter Extreme 9000.

The Quick-ox fits in the lid and the analyser in th main part.

Labels should be fitted

A User sheet should be placed in the box



ERRORS:

E1: LCD socket not 100% aligned or faulty LCD

No Reading: Remove battery to reset software (mainly when using test unit)

Check batteries are in correct. Faulty LCD

OO With sensor: Rotate sensor to ensure Jack plug is clean