



VANDAGRAPH LTD

Replacement of the Alpha-1 Oxygen Sensor using Vandagraph Teledyne R-22SHO

Serial No's: 194 and above

1. Remove the rear cover by undoing the 4 screws.
2. Disconnect the battery.
3. Carefully withdraw the sensor connector lead from the sensor.
4. Unscrew the sensor from the case. The sensor may be tight due to the sealing "O" ring, and a tool such as a pair of large pliers or grip may be required to rotate the sensor.
5. Position the new sensor inside the case with the screw thread aligned with the hole in the case. Gently screw the sensor into the hole, taking care not to cross-thread. The sensor thread is plastic, and fine, so can be easily damaged. When the thread is finger tight, the sensor can be gripped carefully with a tool and tightened gently just enough to compress the "O" ring seal. Over tightening can damage either the thread or the "O" ring.
6. Replace the sensor connector, which can only be fitted one way. Ensure the connector is fully mated.
7. Replace the Battery.
8. **Carry out a full calibration in accordance with the manufacturers instructions**

The following notes are supplied as a guide only:

Carry out the calibration in dry outdoor air.

Turn the front calibration control clockwise to maximum.

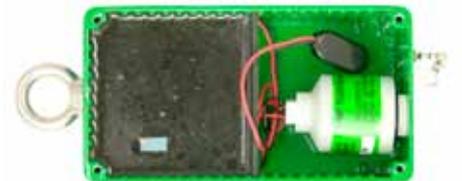
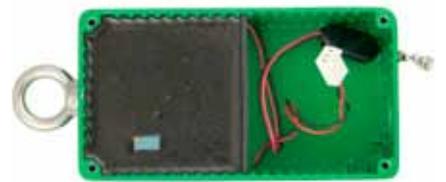
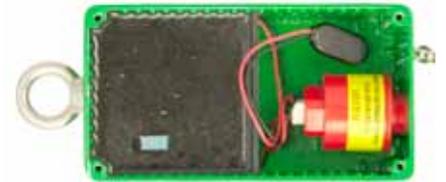
Adjust the internal calibration control until the display reads 22.2%.

The setting 22.2% assumes an ambient pressure of 1013mb.

0.1% should be added for every increase of 5mb and 0.1% subtracted for every 5mb below.

Seal the internal calibration control with a dab of paint, or nail varnish etc.

9. Replace the rear panel, taking care not to over tighten the screws.
10. Calibrate the outer calibration control to 20.9%.
The Vandagraph equivalent sensor is the R-22SHO
11. Requires adapter 9711110 inside the sensor to fit the Alpha adapter.



VANDAGRAPH LTD

Vandagraph Ltd

15 Station Road, Cross Hills

Keighley, West Yorkshire, BD20 7DT, UK

Tel: +44 (0) 1535 634900 - Fax: +44 (0) 1535 635582

Email: info@vandagraph.co.uk

Website: www.vandagraph.co.uk