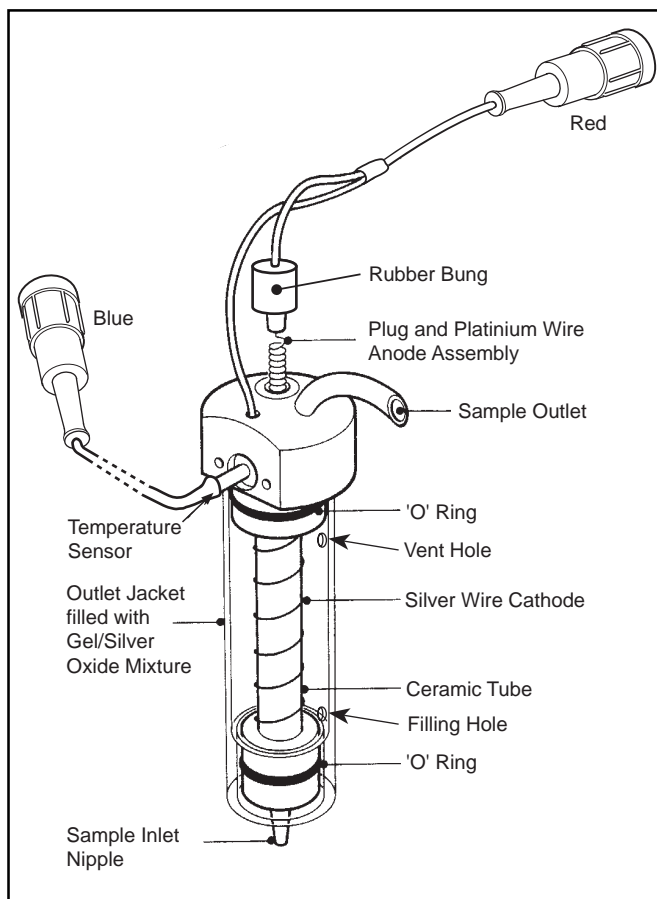


Hydrazine Sensor (7835 Version)



Refurbishing the sensor

A good indication of whether the sensor needs refurbishing is the state of the gel in the outer jacket. If the gel appears to have dried out, separated or become liquid, then the sensor requires refurbishing.

The following procedures should restore the sensor to full life.

Sensor disassembly

- Close the sample isolator valve and allow the constant head unit to empty.
- Turn the red and blue sensor plugs, located on the side of the liquid handling panel, a half turn anticlockwise and disconnect them by pulling them from the sockets.
- Carefully pull the hydrazine sensor out of its mounting clips on the sub-panel.



Warning. The gel in the hydrazine sensor contains silver oxide and sodium hydroxide. It is caustic and stains skin and clothing.

- Holding the sensor over the drain tundish, pull off the sample inlet tube and let the tube and sensor drain. Leave the end of the inlet tube dipping into the tundish.

- Carefully dismantle the sensor, as detailed below, and wash the components thoroughly to remove all traces of gel.
- Loosen the rubber bung on the top of the sensor and carefully withdraw the platinum anode from the centre of the ceramic tube, taking care not to damage the anode or the electrical connection. Insert the brush in the sensor kit, down the bore of the ceramic tube, rotate gently and withdraw. Clean the platinum anode by immersing it in a test tube containing 50% nitric acid for a few minutes.



Caution. Take care not to let the acid touch the rubber bung.



Warning. Avoid any spillage of acid, and take care to keep all electrical connectors free of acid.

- If not already done, remove the outer jacket of the sensor.
- If the silver cathode is tarnished or blackened, dip a cotton wool bud in 50% nitric acid and run this over the wire to restore it to its original matt silver colour.
- Rinse the cotton wool bud and safely dispose of it.



Warning. Clean up any spillage of the caustic solution.

- Soak the ceramic tube for one hour in 2% sodium hydroxide solution, rinse with high purity water and then reassemble the sensor.

Sensor assembly

- Assemble the sensor in the reverse order to that outlined above in 'Sensor disassembly'.
- Holding the white closure cap tightly in place on the filling syringe, snap the syringe plunger into position and then remove the white closure cap.
- Place the blue Luer fitting on the syringe nozzle.



Warning. The gel contains silver oxide and sodium hydroxide. It is caustic and stains skin and clothing.

- Slowly inject the filling gel through the bottom filling hole in the outer jacket of the sensor until it reaches the top vent hole.
- Remove the syringe and replace its closure cap.
- Push the cell into the clips on the sub-panel – the clips incorporate small protrusions which cover the filling and exit holes in the outer jacket
- Connect the tube from the mixing coil to the bottom of the sensor.



Note. Take care to hold the sensor firmly at the top so that the centre portion is not pushed out when the tube is connected

- Plug the red and blue sensor connectors into their respective coloured sockets on the liquid handling panel.

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