Navigator 550
Hydrazine cell assembly

1 Introduction
These procedures must be carried out by a trained technician.

2 For more information
Further information is available from:
www.abb.com/analytical

or by scanning these codes:
Sales
Service
3 Safety

Warning.

CHEMICAL

- Ensure personal protective equipment (PPE) such as gloves and eye protection are worn during any maintenance.
- Observe all health and safety procedures for handling chemicals.
- To familiarize yourself with handling precautions, dangers and emergency procedures, always review the Material Safety Data Sheets prior to handling containers, reservoirs and delivery systems that contain chemical reagents and standards.
- Take care if cleaning any spillages and observe all relevant safety instructions. Wipe up any spillages using clean water.
- Perform general cleaning of the wet-section using a damp cloth only – mild detergent can be used as a cleaning aid. Do not use Acetone or any organic solvents.

ELECTRICAL

- Isolate all high voltage supplies to the transmitter before performing replacement procedures.
- The wet-section is vulnerable to electrostatic damage. Wear an anti-static strap or dismantle the wet-section on an anti-static workbench.
- Ensure all electrical connections are kept dry at all times.

GENERAL

- Before performing replacement procedures prevent sample flow by closing the sample isolating valve upstream of the wet-section and allowing the constant head unit to drain, or pinching off the sample inlet line from the constant head unit to the cell assembly.
- When a procedure is complete, restore power to the transmitter, sample to the wet-section at the correct flow rate and, if necessary, calibrate the wet-section – refer to the wet-section Operating Instructions (OI/AHM550-EN) for calibration instructions.
- Dispose of the old components in accordance with the guidelines contained in the Operating instructions (OI/AHM550-EN).

4 Hydrazine cell assembly location

5 Replacing the hydrazine cell assembly

Part number: Hydrazine cell assembly: AW503 040

5.1 Removing the hydrazine cell assembly

Referring to Fig. 5.1:

1. Disconnect hydrazine sensor A (red) and temperature sensor B (blue) electrical connectors.
2. Pull hydrazine cell assembly C out of mounting clip D.
3. Holding the hydrazine cell assembly C over a suitable container, pull the inlet tube off inlet nipple E.
   Allow the tube and sensor cell to drain into the container, then place the end of the inlet tube in the container.
4. Dispose of the old hydrazine cell safely – see Section 3, page 1.

![Fig. 5.1 Removing the hydrazine cell assembly](image-url)
5.2 Fitting a new hydrazine cell assembly

Part number: AW503 040

Referring to Fig. 5.2:

1. Fill the cell assembly with fresh gel as follows:
   a. Remove the two 10-32 UNF blanking plugs A and B.
   b. Holding the black closure cap tightly in place on the filling syringe, snap the syringe plunger into position and remove the black closure cap.
   c. Slowly inject the filling gel through the lower hole in the outer jacket until it reaches the top hole.
   d. Remove the syringe and replace its closure cap.
   e. Refit lower 10-32 UNF blanking plug A.
   f. Refit upper 10-32 UNF blanking plug B.

2. Push the hydrazine cell assembly into clip C on the sub-panel, ensuring cell outlet tube D is positioned above drain tundish E.

3. Reconnect the inlet tube to inlet nipple F.

**Note.** Hold the cell firmly at the top so that the centre portion is not pushed out when the tube is connected.

4. Reconnect hydrazine sensor G (red) and temperature sensor H (blue) electrical connectors.

5. Fill the reagent and calibration solution containers with their respective solutions.

**Warning.** The sample is dosed with sodium hydroxide and the concentration, although small at first, increases if any spillage is left to evaporate. Dispose of the outflow safely.

6. Open the sample isolating valve upstream of the wet-section and adjust the sample flow rate until sample is overflowing from the constant head unit but not from the emergency overflow.

7. Ensure that the sample is flowing through the cell at the correct rate – refer to the wet-section Operating instructions (OI/AHM550-EN).

8. Close and lock the wet-section door.

9. Carry out a calibration sequence – refer to the wet-section Operating instructions (OI/AHM550-EN).

*Fig. 5.2 Fitting a new hydrazine cell assembly*