

SPX27057

Electrolyte Recharge Kit for 4101/5100-25 Ammonia Gas

Sensor Modules

SPX27061 **Electrolyte Recharge Kit for** 4101/5100-26 Hydrogen Fluoride

Gas Sensor ModuleS

Instruction Sheet **Electrolyte Recharge Kit**

Electrolyte/Membrane Replacement

The electrolyte needs to be replaced every 6 months, as specified in the sensor instruction manual, or if there is evidence of low sensor output. The membrane should be replaced at the same time that the electrolyte is replaced.

1. Equipment Required

- Electrolyte Recharge Kit consisting of the electrolyte, package of 5 membranes, one (1) O-Ring, wash bottle and alcohol wipes to clean the electrode. The electrolyte is supplied in a colored glass container to protect it from degradation due to UV light. A plastic wash bottle is supplied with the kit to facilitate delivery into the sensor.
- Tweezers to aid in removing and replacing the membrane

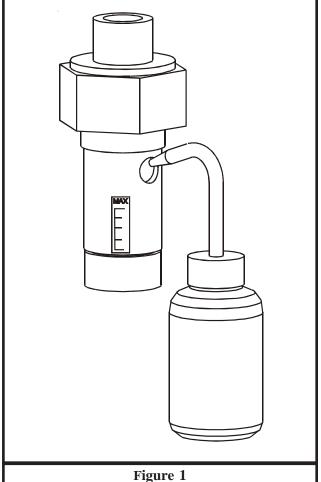
2. Preparation

- a. Confirm that system power has been removed.
- b. Remove the transmitter electronics board from the main housing and unplug the sensor harness from the transmitter electronics.
- c. Unscrew the sensor assembly from the bottom of the enclosure.
- d. Remove the assembly cover from the sensor assembly.

CAUTION: Only remove the sensor cover from the assembly, DO NOT attempt to unscrew the sensor from the mounting assembly or you could damage the wiring.

3. Electrolyte Replacement (See Fig. 2)

- a. Transfer approximately 26 ml of the electrolyte (approximately 25% of the glass bottle) into a plastic wash bottle.
- b. Invert the sensor assembly so that the membrane is facing upward and position it vertically on a work surface using a clamp or fixture.

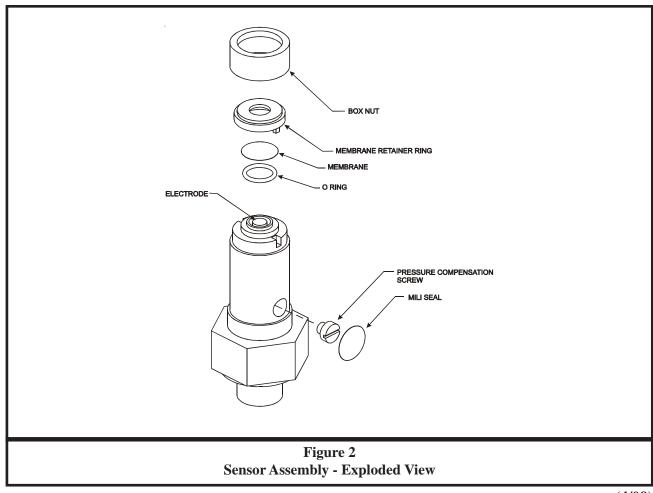


Filling Electrolyte into Sensor with Wash Bottle

- c. Unscrew the box nut (counterclockwise), and remove the membrane retainer ring, membrane, O-Ring, and washer. Pour out the old electrolyte into a beaker for disposal.
 - **CAUTION:** Avoid contact of the electrolyte with skin, eyes and clothing. In case of contact wash immediately - rubber gloves and safety glasses are recommended.
- d. Cover the pressure compensation port with a tissue. Pour approximately 10cc of fresh elec-

- trolyte from the wash bottle into the sensor, and rinse the inside of the sensor. Empty the electrolyte into the beaker.
- e. Clean the electrode with the alcohol wipes included in the electrolyte replacement kit. When dirt is found inside the sensor assembly, wash the dirt off with electrolyte.
- f. Place the O-ring on top of the sensor. Then transfer one drop of electrolyte from the plastic wash bottle to the exposed electrode surface.
- g. Place a **new** membrane into the hold-down ring and carefully place the plastic hold-down ring on top of the sensor body with the ring ears in the slots of the sensor body. Then fasten the sensor cover over the assembly.
 - **CAUTION:** Never touch the membrane with your hands. Use rubber gloves or tweezers.
- h. Invert the sensor so that the membrane is down. If this is the first time that electrolyte has been replaced, there should be a round

- Mili Seal covering the pressure compensation screw. This Mili-Seal prevented loss of electrolyte during shipment. Remove and discard the round Mili Seal and remove the screw to expose the electrolyte supply port.
- i. Transfer electrolyte from the plastic wash bottle into the electrolyte supply port (see Fig. 1) until the level is at the maximum level line on the side of the sensor body.
- j. Replace the pressure compensation screw into the electrolyte supply port.
- k. Replace the sensor protective cover.
- 1. Install the sensor assembly into the enclosure hub and tighten firmly.
- m. Reconnect the sensor harness to the transmitter, carefully install the transmitter into the housing and restore system power.
- n. Recalibrate the transmitter following the instructions in the instruction manual.



(4/09)