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EZ-1X Sensor Replacement

Replacing the sensor and recalibrating the instrument should only be attempted by a trained and experienced gas instrument technician.

Tools required: small phillips screwdriver, fine point low power soldering iron, needle nose pliers, and assorted small tools. An ozone source of known output will also be required for calibration.

Be sure the EZ-1X is turned off and its AC adapter is unplugged from the instrument. Remove the four screws attaching the back cover and remove the cover. Carefully lift the circuit board about 4 cm. Care must be taken not to break any of the wires going to the sensor or to the panel meter.

The sensor is the 10 mm diameter gray part which protrudes through the top of the instrument. Pushing it slowly but firmly with your thumb will break it loose from the case.

Before disconnecting any wires from the sensor, put a little coloring or other unique identifier on each wire and make a drawing showing which wire goes to which pin on the sensor. The identification of the sensor pins can be made by noting as for example pin #1 the pin which is welded directly to the sensor's metal base.

Our sensors now are usually shipped with connection wires attached. If the replacement sensor has no wires attached, cut the replacement sensors pins to about 4 mm in length and solder the lead wires to the replacement sensor's pins according to your notes above. In either case, the replacement sensor should be rewired to the circuit board.

Arrange the finished reconnections so that no short circuits will develop. Push the new sensor into the case until it fits snugly and won't fall out. DO NOT EXCESSIVELY TOUCH THE GRILL AREA OF THE SENSOR, OR LET OILS, ETC. SETTLE THERE, BECAUSE THIS CAN CHANGE OR NULLIFY THE SENSOR'S OPERATION. THE GRILL AREA MUST REMAIN DRY AND FREE OF CHEMICALS.

Replace the circuit board and back cover of the case.

Turn the instrument on. The meter should read 0.00 or close to 0.00. If this is not the case, the sensor was not wired correctly and its wiring should be rechecked.

Plug in the AC adapter and leave the instrument powered for at least 2 days and preferably one week. This is required to condition or "burn in" the sensor. Preferred technique is to leave the instrument running in several ppm of ozone during the last two days of its burn-in. This will assure more correct and stable calibration.

Recalibrate with a known concentration ozone source and by adjusting the screw pot (span pot) accessed through a patch-covered hole in the left side of the case.

8/03