MODEL 901 START OF SHIFT PROCEDURE

I. PRE-CHECK

Depress the power switch to turn the unit on. Allow the analyzer approximately 30-60 seconds to warm up and equilibrate. If the unit was stored at a significantly different temperature then where it will be used, allow 10 minutes for equilibration.

II. QUICK CALIBRATION

Turn the unit on. The analyzer may read low – this is normal. You need to refresh the sensor before making any adjustments (if needed):

1) Remove needle and filter from end of probe.
2) Press pump button to draw in a fresh sample of room air, allow 30 seconds for reading to stabilize.
3) If the reading on the LCD is outside of the range of 20.5% to 21.3%, adjust the SPAN potentiometer on the left side of the instrument until the reading shows 20.9%.
4) NOTE: The pump time should be about 5 seconds.

III. TESTING A SAMPLE

1) Place a foam seal pad on the package you wish to test.
2) With needle and filter on the end of the probe, insert the needle into the foam septum.
3) Press the pump button. Allow about 20 seconds for the reading to stabilize. It should stabilize (you may see the number move +/- 0.1%), although eventually it may drift up slowly (i.e. 0.1% every 10 seconds) as ambient air starts to leak into the system.

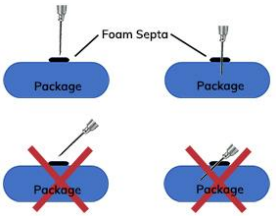
III(2). ADDITIONAL SAMPLING TIPS

Prepare the sample probe: After you have set the oxygen quick calibration, and adjusted the pump time, place the filter and needle on the end of the sample probe:

Remove the yellow needle protector prior to testing. (Needle protectors may be other colors, depending on the brand of needle and gauge).

Foam Septa Placement: Manipulate the package to create an "air pocket" if needed. Place a foam septum where you want to insert the needle. Depending on the package, it may be easiest to hold the probe as you would hold a pen or pencil.

Pierce the Package: Insert the needle through the foam septa, preferably at a 90° angle. If the needle is inserted at a 45° angle, this increases the chance that ambient air will leak in through the puncture point.



Now, press the pump button – reading should stabilize in ~ 20 seconds.

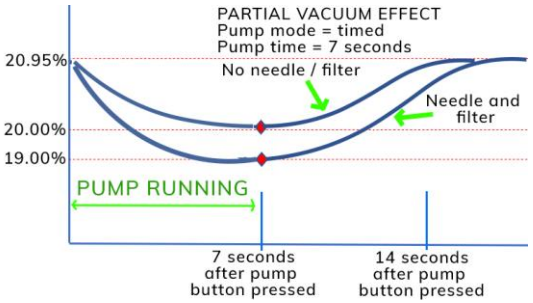
IV. TROUBLESHOOTING – MOST COMMON PROBLEMS

MOST COMMON ISSUE – Clogged Needle or Filter

The following test will determine if you have a clog in the needle, filter, or probe. If you do have a clog, your test result may show 9% to 12% - you aren't drawing in any sample, you're just creating a vacuum condition with the pump.

Press the pump button with the last needle and filter you used, just testing the air. You will see the reading go down, and then back up. Make a note of the *minimum* number the instrument reaches.

With no needle or filter on the end of the probe, the reading will decrease to about 19.0% to 20.0%. This lower minimum number will vary, depending on several factors. This decrease in the reading is normal as the instrument creates a slight vacuum:



This graph depicts the change in reading with the pump time set to 7 seconds. **With no needle and no filter**, the reading drops to about 20%. **With a needle and filter**, the reading drops to about 19%. If you have a clogged needle and/or filter, the reading will drop to 10-16% and climb back up very slowly! If this happens, replace the needle and filter.

SECOND MOST COMMON PROBLEM – LOOSE PROBE

The hex fitting where the sample probe connects to the instrument can occasionally come loose. If this happens, you may end up with a reading that is much higher than anticipated, because you are mixing in ambient air with your sample.

Turn the hex fitting clockwise (finger tight) and try again. The hex fitting is typically blue – it is circled in red on this diagram:

V. END OF SHIFT PROCEDURE

For best charging results:

1) Turn the unit off
2) Open the battery compartment and verify that there are no alkaline batteries installed. The original batteries are white Sanyo Eneloops.
3) If the charger is still plugged into an outlet, unplug it and then plug it back in (this resets the timer). Plug it into the instrument. The LED on the charger should ~~begin blinking~~ turn red as it enters the "precharge" state.