Airflow Balancing Instructions

Instruction Sheet: SL70H, SL70L

BALANCING

Balancing an airflow is done by setting the Outdoor Air fan speed and then adjusting the Return Air fan speed to eject the same or somewhat less air to the outdoors.

Equipment required for testing airflows:

- A magnehelic gauge (or manometer) or other device capable of measuring 0–1.0 in. w.g. of differential pressure.
- 2 pieces of natural rubber latex tubing, 1/8" I.D., 1/16" wall thickness works best.

Manometers are relatively inexpensive devices that are readily available from online retailers. Accuracy within the range of 0–1.0 in. w.g. is the critical measure. Water manometers generally have graduations of 0.1" that are difficult to accurately determine. For all manometers, there are two plastic tubes that connect at the manometer and then the other ends go to pressure ports on the SL.

Individual differential static pressures (DP) are measured ACROSS the core, using the installed pressure ports located on the removable door.

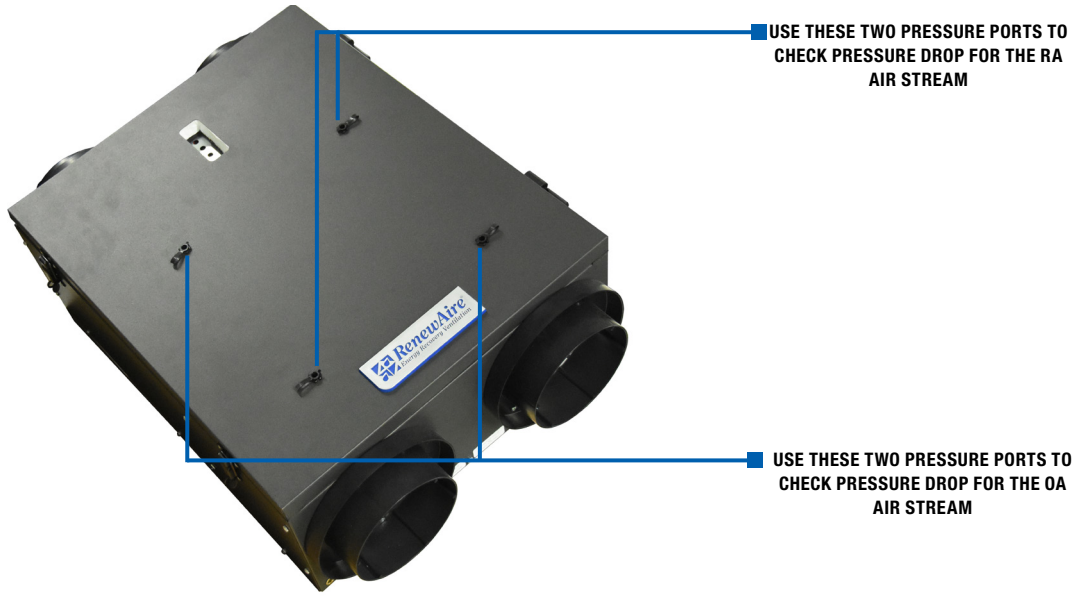

FIGURE 1.0 PRESSURE PORT LOCATIONS

- Verify the unit has clean filters in place.
- Install a jumper between the 24VAC and LOW SPEED terminals so that the unit is forced into Continuous (low speed) mode.
- Press the PROGRAM button to begin changing the fan settings. The yellow LED will blink slowly.
- Open the pressure port caps for the OA air stream and then insert the tubing into the openings about 1".
- Take a differential pressure reading for the OA airstream and compare the pressure drop to the chart on the unit or in the IOM to obtain the CFM. Adjust the potentiometer marked OA-L to obtain the desired CFM. Record the CFM setting for future reference.
- Take a differential pressure reading for the RA airstream and compare the pressure drop to the chart on the unit to obtain the CFM. Adjust the potentiometer marked RA-L to obtain the desired CFM. Record the CFM setting for future reference.
- Remove the jumper wire and reinstall it between the 24VAC and HIGH SPEED terminals so that the unit is forced into Boost (high speed) mode.
- Repeat the process for both airstreams to set both the CFM and balance using the OA-H and RA-H potentiometers. Record the CFM setting for future reference.
- After adjusting the potentiometers, take additional readings as needed to verify that fan speed settings are correct. See illustration below.
- Press the PROGRAM button to store the new fan settings. The yellow LED will flash quickly to indicate that the settings have been stored.

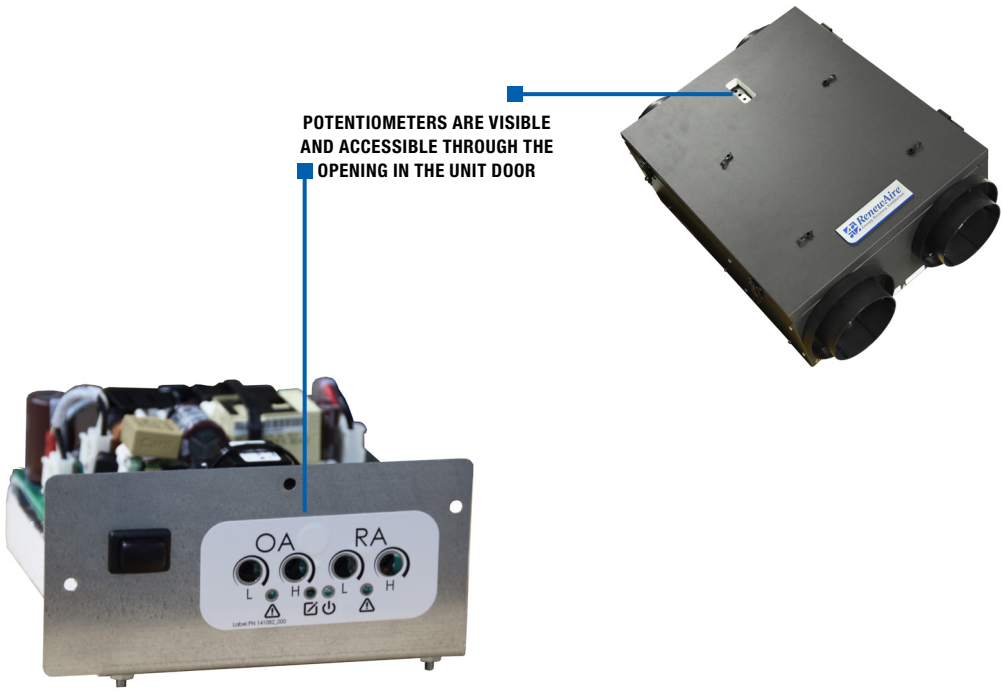

FIGURE 1.1 FAN SPEED CONTROL POTENTIOMETERS