

USING THE SEALTECH 430R

PREPARING THE RV

Because the leak diagnosis concept is based on creation of a positive air pressure inside the RV, it is necessary to prevent undue loss of air pressure through openings in the RV exterior.

1. Securely close all doors, windows and vents, excluding roof vent used for access air.
2. **All** exterior access doors should be closed and latched.
3. 110 V power must be supplied to the RV power inlet connection.
4. Any device covering the air access roof vent cover must be removed to permit adequate air flow.
5. Turn off all fans, air conditioners etc.

MACHINE SET UP

Notes:

- a) The R.V. roof vent referred to below is the vent covered by a crank up cover and measuring 13.25 inches square (inside dimensions) on most units.
 - b) All set up functions are normally performed from inside the RV; exception is "Fantastic Fan" type vent preparation below.
1. Crank vent cover to maximum open position, min. 45 deg. angle from roof.
 2. Remove roof vent garnish, normally secured by 1 screw near each corner.
 3. Remove vent cover crank handle, secured by screw in center of handle spindle.
 4. Remove insect screen, secured by 2 screws at opposite sides of screen frame.
 5. Replace garnish, to protect ceiling finish and provide best air seal for checking vent-to-roof juncture for leaks.
 6. Position the SEALTECH 430R vent mating mechanism and secure against ceiling by connecting turnbuckle end clasps to top lip of roof vent, (see 6.1 below re use of adapter with "Fantastic Fan" type vents) and turnbuckle hook end to appropriate attachment point in mechanism cross member. Do not over tighten. Thicker ceilings will require use of the snap ring and possibly 1 or more chain links (supplied with unit). **Note:** orient mating mechanism with single "J" cutout facing front or rear of RV, depending on which direction you wish the fan unit controls and gauge to face.
 7. Affix one end of shorter tubing to upper side of barbed bulkhead fitting in mating mechanism; other end outside, on roof for ambient air access.
 8. Position duct cuff over vent mating mechanism cuff; align duct cuff pins with "J" cutouts in mechanism cuff and secure by twist-lock.
 9. Provide level and stable support for fan unit, at a height that allows duct connection without significant additional stretching of duct. The system will not require such a support where ceiling height is less than 7'7", or where a table or bed is available.
 10. Insert duct cuff into fan unit cuff; secure as with upper cuff.
 11. Check that power switch on fan unit is in "OFF" position. Plug power cord into R.V. interior 110V power supply.
 12. Install pressure gauge on fan unit using supplied wing screw; affix one end of longer plastic tubing to barbed connector on rear of gauge; other end to barbed bulkhead fitting extending downward from vent mating mechanism.

EXTERIOR FAULT DIAGNOSIS

Supplies required:

- water
- liquid dish soap or other surfactant liquid to mix with water, approx. 1 %.
- hand held sprayer (fine nozzle) to project soapy mixture onto R.V. exterior
- system to record location of diagnosed faults; suggest use of copies of supplied schematics

Note: normal operating pressures range from 0.3 inch to 0.6 inch water column. If initial pressure with impeller at maximum RPM is less than 0.4 inch, additional preliminary sealing of RV should be undertaken. A walk around the exterior of the unit will usually disclose causes of major air escapement, (indicated by outrushes of air) which can then be corrected.

1. With door closed, turn on fan unit switch. Vary RPM to determine that pressures are within operating parameters noted above.
2. Set RPM to produce differential pressure of 0.3 - 0.5 inch water column (subject to 4. below) exit the RV, closing and securing door.
3. Spray soapy solution to all exterior areas where leaks are likely to be found and note location of faults. Judgement is required; for example, Pittsburgh seams will permit air escapement, but not all resulting bubbles will be indicative of a leak due to the seam overlap. However, where bubbles appear in a Pittsburgh seam at a junction with the leading edge of a window or other outer skin break, rain water could be forced in by air pressure arising from highway travel.
4. **Note: Larger leaks require lower pressure than small leaks. Pinholes may require up to 0.6" water column; big holes as low as 0.15".**

.1 USE OF ADAPTER WITH "FANTASTIC FAN" TYPE VENTS

- a) From position on roof of RV, remove 4 screws securing fan unit, remove fan unit from housing and carefully it lay on roof. Do not disconnect wires.
- b) Position bridge adapter (supplied) across top of vent mechanism.
- c) From inside RV, position the SEALTECH 430R vent mating mechanism and secure against ceiling by connecting turnbuckle end clasps to adapter, rather than to top lip of roof vent.
- d) Proceed as normal once vent mating mechanism is secure.

Ensure that vent fan unit is re - installed following completion of testing.

If you have any questions regarding use of the Sealtech 430R system, please call 810-310-3070.