



Millennium Oxygen Concentrator Repair Kits (Continued)

Replacement Part	Replacement Part No.	Page No.
Wiring Harness, O ₂ / Solenoid / Battery – With OPI Includes: • Wiring harness, O ₂ / solenoid / battery • Tubing, convoluted (with crimped ends)	610-00610-00	8-56
Wiring Harness, Power Switch Includes: • Wiring harness, power switch • Tubing, convoluted (with crimped ends)	610-00615-00	8-53

- Note 1:**
- Illustrations are shown on page 8-18 and 8-19.
 - All items have a quantity of one unless otherwise specified.
 - Part replacement procedures are detailed within this chapter.

Note 2: When replacing the rear cabinet, the original serial number label can either be reused or a new one can be obtained from Respironics Georgia. Contact Respironics Technical Service Department for information (see page 8-3).



8.3 Warnings and Cautions

WARNING: To prevent electrical shock, disconnect the electrical supply before attempting to make any repairs to the Millennium Oxygen Concentrator (Unit).

WARNING: Use extreme caution when handling the compressor / motor assembly capacitor. The capacitor can hold a substantial electrical charge until it is properly discharged.

WARNING: Avoid handling the molecular sieve material. Respironics recommends the return of the sieve canister assembly to Respironics for any service that involves sieve material disposal.

WARNING: Even with the unit disconnected from the electrical supply, the capacitor may still hold an electrical charge strong enough to cause serious bodily injury. **DO NOT** touch the capacitor terminals simultaneously until the capacitor has been completely discharged. Discharge the capacitor by shorting the two posts with an insulated screw driver.

CAUTION: Electronic components used in this unit are subject to damage from static electricity. Repairs made to this unit must be performed only in an antistatic, ESD-protected environment.

CAUTION: During all repair and replacement procedures, assure that any connections that are broken during the process (fittings, tubing, and hoses) are reconnected securely.

CAUTION: When using leak detector, be careful that it does not come in contact with any electrical components.

CAUTION: The fuse on the power control board must be replaced with a fuse of the same rating as the original. Failure to do so will result in damage to the unit.



8.4 Replacement Instructions

See Figures 8-4 and 8-5 before removing or installing any component. These figures will detail the order in which each item must be removed or installed and should be used as a guideline for quick reference.



Removal Flow Chart

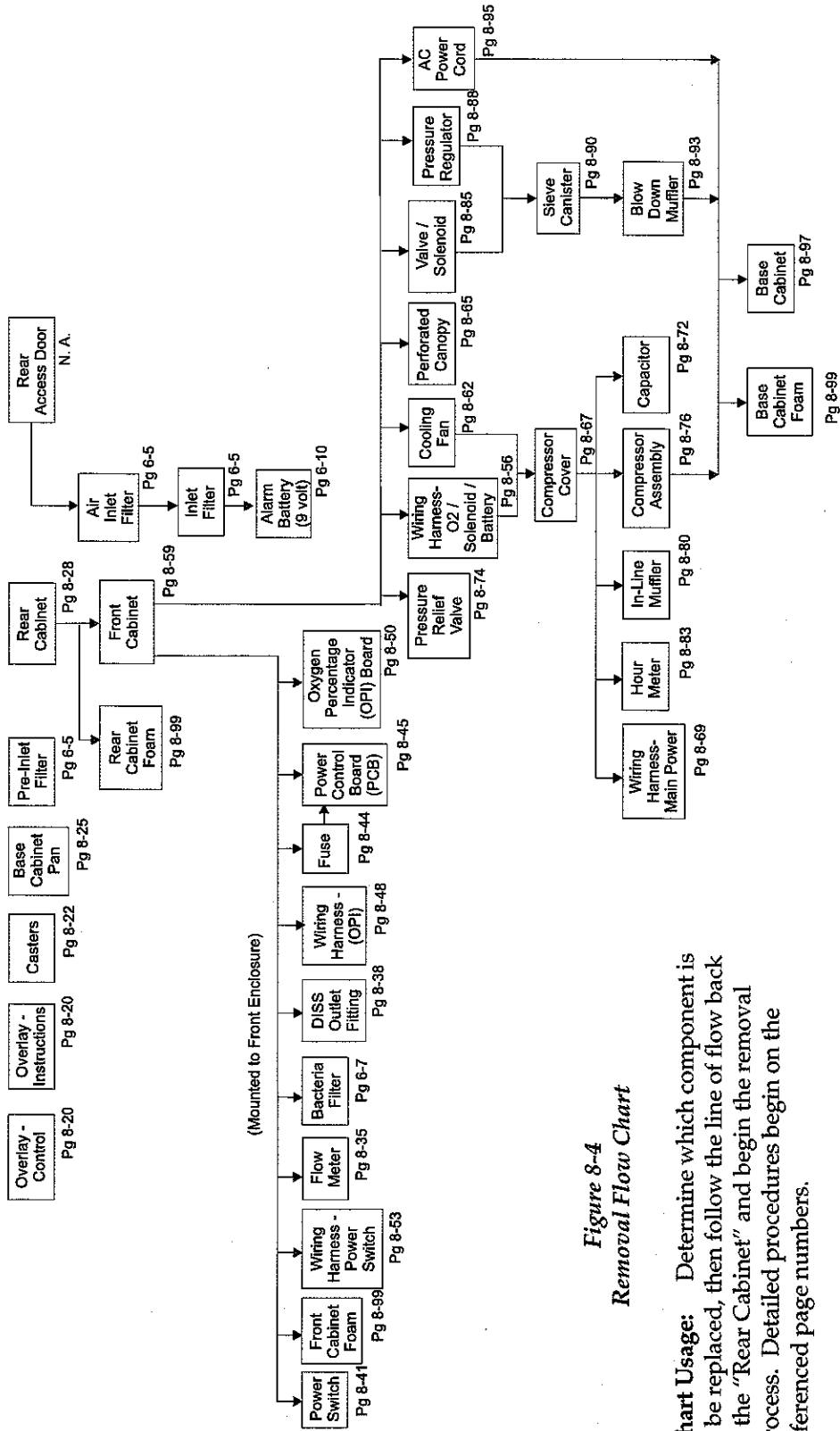


Figure 8-4
Removal Flow Chart

Chart Usage: Determine which component is to be replaced, then follow the line of flow back to the "Rear Cabinet" and begin the removal process. Detailed procedures begin on the referenced page numbers.



Installation Flow Chart

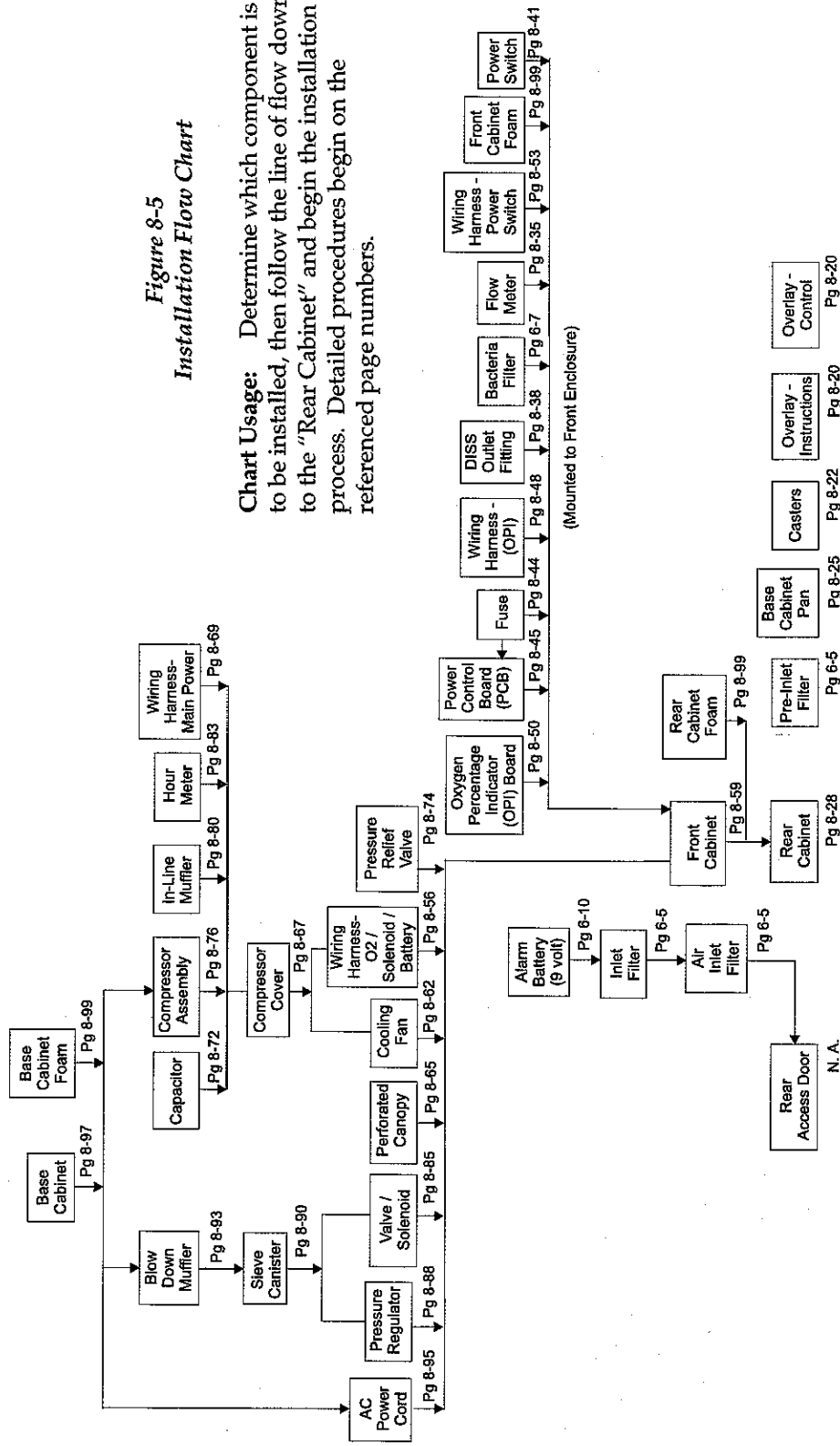


Figure 8-5
Installation Flow Chart

Chart Usage: Determine which component is to be installed, then follow the line of flow down to the "Rear Cabinet" and begin the installation process. Detailed procedures begin on the referenced page numbers.

(Mounted to Front Enclosure)



8.4.1 Overlay Replacement

Replacement Part Number

Control Overlay (Model #600)	340-0600-00
Control Overlay (Model #605)	340-0605-00
Instructions Overlay	320-0650-00

Included in Kit: Control overlay and/or Instructions overlay	Tools Required: Isopropyl alcohol Cleaning cloth
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Procedure

Removed / Installed During Process:

- Control overlay and/or
- Instructions overlay

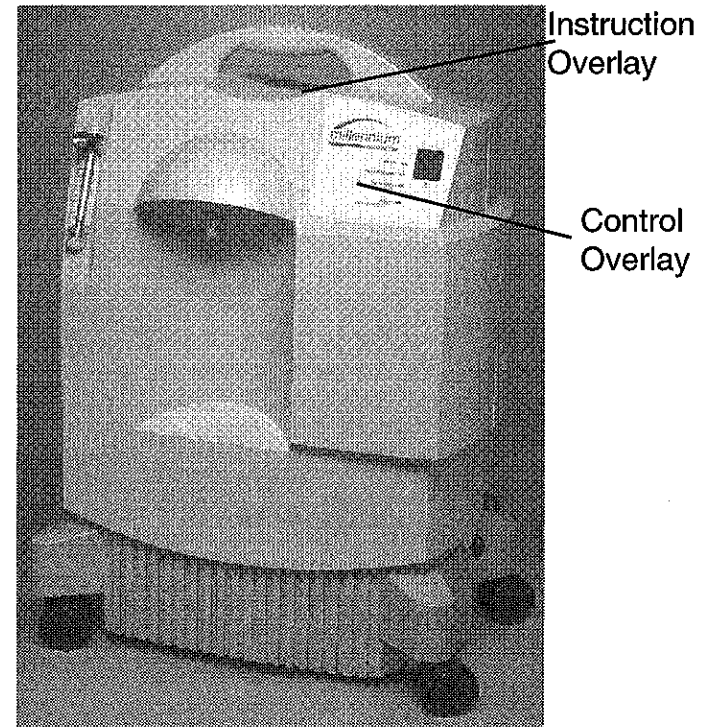


Figure 8-6
Location of the Instruction Overlay and Control Overlay



Overlay Replacement (Continued)

Step 1 Removing an Overlay

- a. Starting at one corner, carefully peel the overlay off of the cabinet.
- b. Use a small amount of isopropyl alcohol applied to a cleaning cloth to remove any adhesive residue from the cabinet.

NOTE: When using isopropyl alcohol to clean the mounting area for the control overlay, insure that no liquid enters the front cabinet or comes in contact with the LEDs. Use protective gloves.

Step 2 Installing an Overlay

- a. Remove the protective backing from the overlay.
- b. Carefully align the overlay with the applicable mounting area. Set the overlay in place and, using a circular motion, firmly rub the overlay until it is securely attached to the cabinet.

8.4.2 Caster Replacement

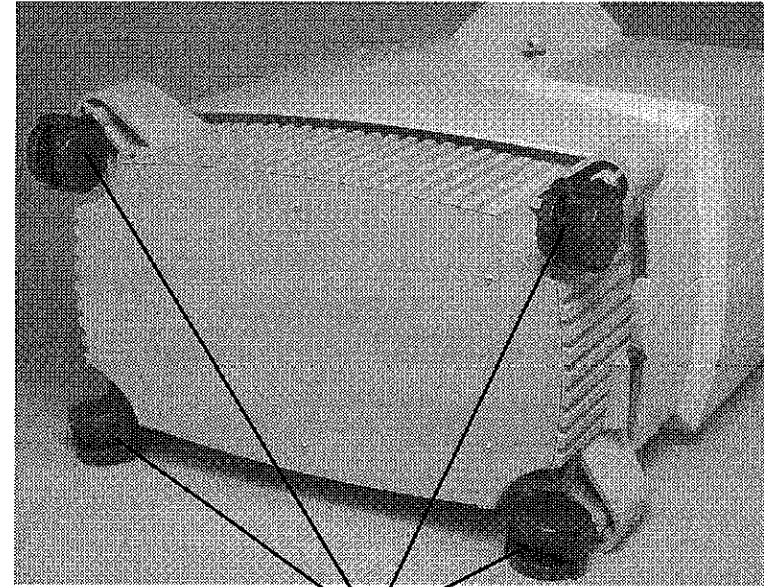
Replacement Part Number H624

Included in Kit:	Tools Required:
Caster (x4)	Flat-blade screwdriver (medium) Rubber mallet (optional)

Procedure

Removed / Installed During Process:

- Caster



Casters

Figure 8-7
Location of the Casters



Caster Replacement (Continued)

Step 1 Removing a Caster

- a. Place the unit on a protected work surface and carefully lay the unit over on its rear cabinet.
- b. While holding the unit firmly in place, grasp the caster to be replaced and pull it firmly out of its receptacle in the molded base.

NOTE: It may be necessary to insert a medium flat-blade screwdriver between the caster and the molded base to “pry” the caster from its receptacle. Once the caster has been partially removed, a rubber mallet can be used to completely remove the caster from its receptacle. If this is necessary, care should be taken to prevent damage to the molded case.

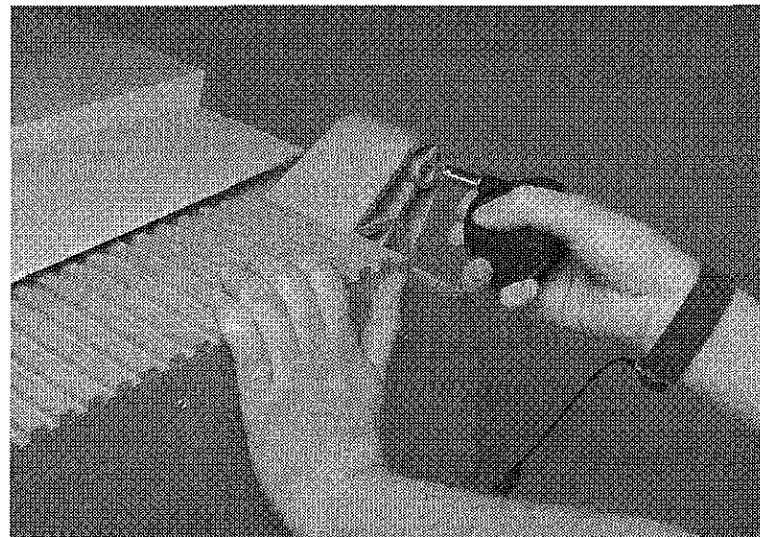


Figure 8-8
Removing a Caster

- c. If more than one caster is to be replaced, repeat the procedure for each caster to be replaced.



Caster Replacement (Continued)

Step 2 Installing a Caster

- a. Align the caster shaft with its receptacle in the molded base.
- b. While holding the unit in place, firmly push the caster into its receptacle until completely seated.

NOTE: It may be necessary to use a rubber mallet to gently tap the caster into the molded base. If this is necessary, care should be taken to prevent damage to the molded case. In some cases, use water to lubricate post.

- c. If more than one caster is being replaced, repeat the procedure for each caster to be replaced.
- d. Carefully return the unit to the upright position.



8.4.3 Base Cabinet Pan Replacement

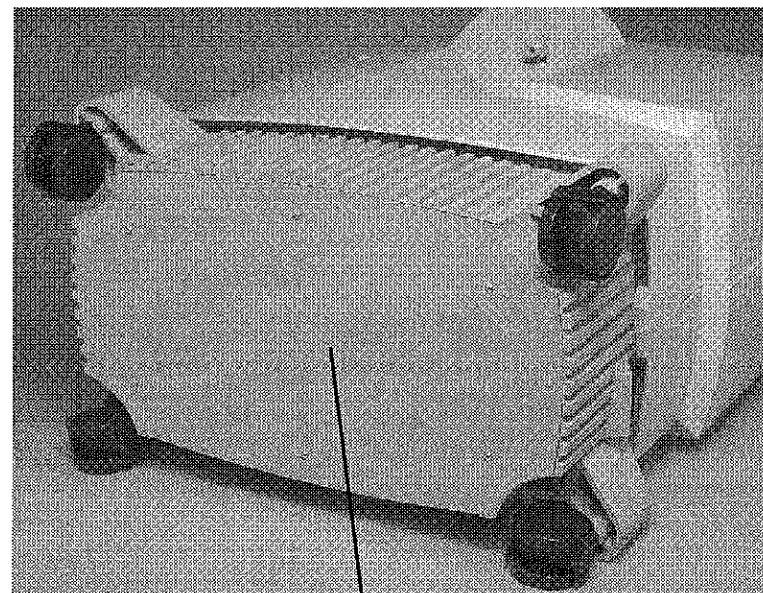
Replacement Part Number H642

Included in Kit: Base bottom pan (w/ foam insulation)	Tools Required: Phillips screwdriver (small)
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Procedure

Removed / Installed During Process:

- Base cabinet pan



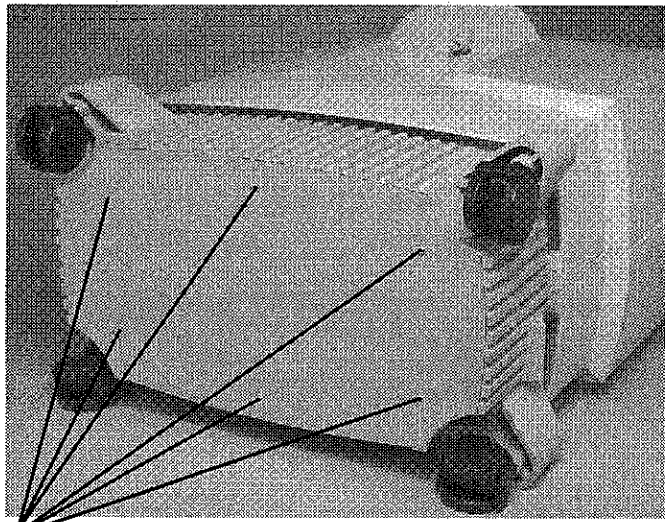
Base Cabinet Pan

Figure 8-9
Location of the Base Cabinet Pan

Base Cabinet Pan Replacement (Continued)

Step 1 Removing the Base Cabinet Pan

- a. Place the unit on a protected work surface and carefully lay the unit over on its rear cabinet.
- b. Remove the six Phillips screws securing the base cabinet pan to the base cabinet.



Screws

Figure 8-10
Base Cabinet Pan Screw Location

- c. Grasp the back edge of the base cabinet pan and remove it from the base cabinet.

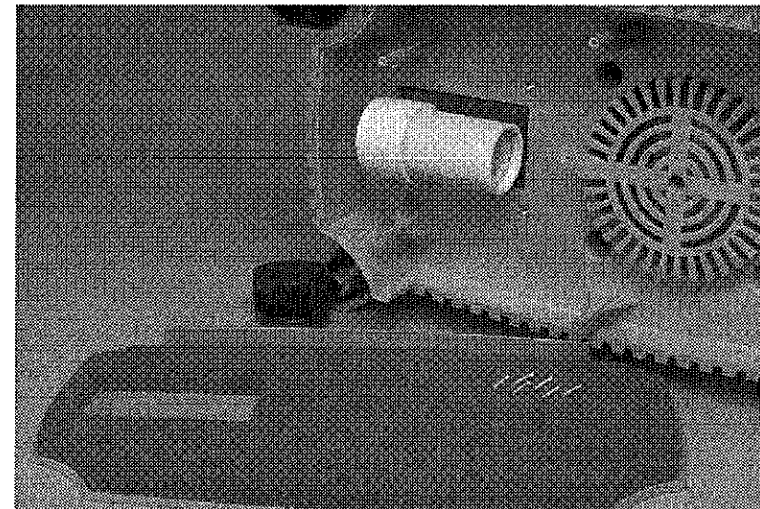


Figure 8-11
Base Cabinet Pan Removal



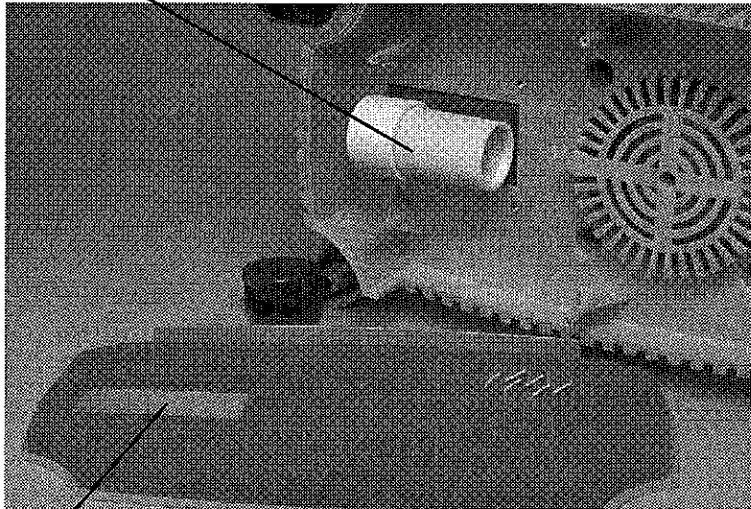
Base Cabinet Pan Replacement (Continued)

Step 2 Installing the Base Cabinet Pan

- a. Position the base cabinet pan so the cut-out in the foam insulation corresponds with the blow down muffler.

- b. Align the base cabinet pan with the base cabinet and set it into place.
- c. Insert and gently tighten the six Phillips screws provided to secure the base cabinet pan to the base cabinet.

Blow Down
Muffler



Cut-out

Figure 8-12
Location of the Blow Down Muffler and Foam Cut-Out



8.4.4 Rear Cabinet Replacement

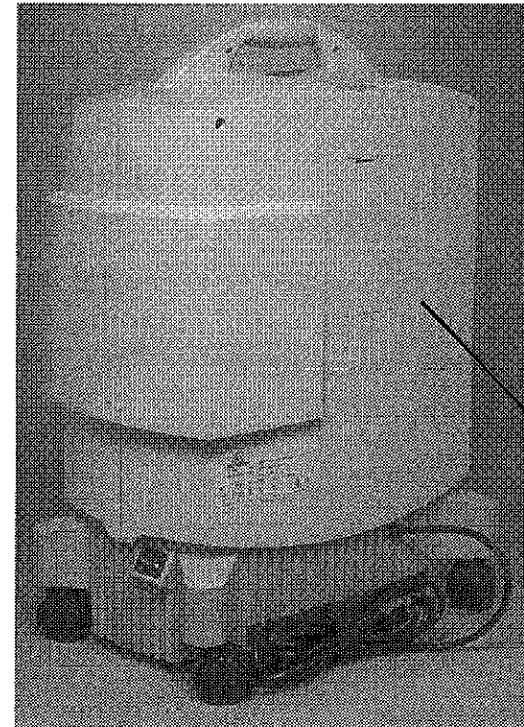
Replacement Part Number H635
(See Note¹ on page 8-15)

Included in Kit:	Tools Required:
Rear cabinet (w/ foam insulation) Access door Instruction label 6 screws #10-32 x .500 LG PAN HD Phillips	Phillips screwdriver (medium w/ long shaft)

Procedure

Removed / Installed During Process:

- Rear cabinet



Rear Cabinet

Figure 8-13
Location of the Rear Cabinet



Rear Cabinet Replacement (Continued)

Step 1 Removing the Rear Cabinet

- a. Using a Phillips screwdriver, remove the six screws that secure the rear cabinet to the front cabinet.

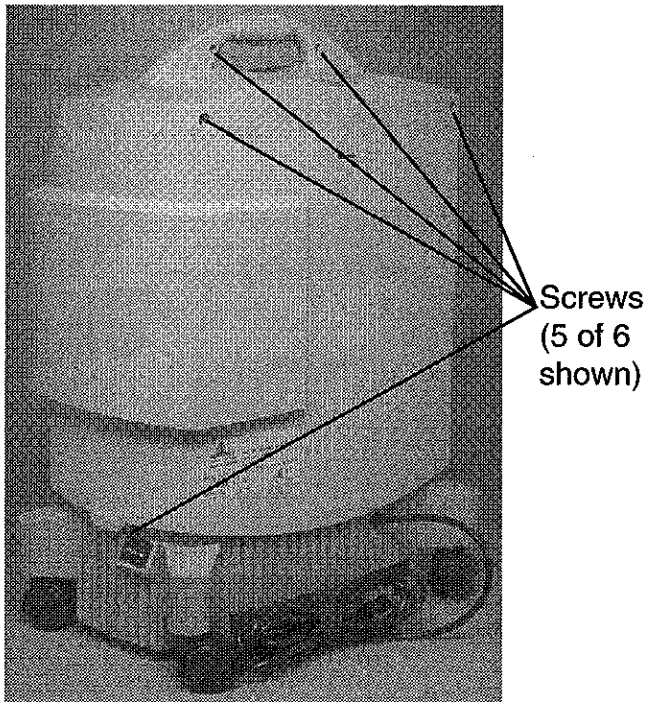


Figure 8-14
Location of the Screws Securing the Rear Cabinet

- b. Grasp the rear cabinet firmly then slide it towards the back of the unit until it is clear of the guide slot on the base cabinet. Once clear of the guide slot, the rear cabinet can be lifted away from the unit.

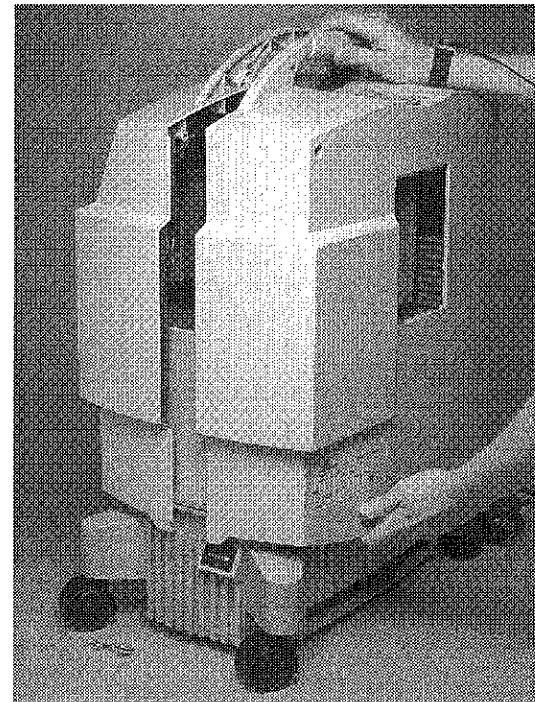


Figure 8-15
Removing the Rear Cabinet

Rear Cabinet Replacement (Continued)

Step 2 Installing the Rear Cabinet

NOTE: The base cabinet has a guide slot to insure proper alignment of the rear and front cabinets. The rear and front cabinets **MUST** be properly aligned with the guide slot to insure correct installation.

- a. Align the ridges on the rear cabinet with the guide slot in the base cabinet, as shown.

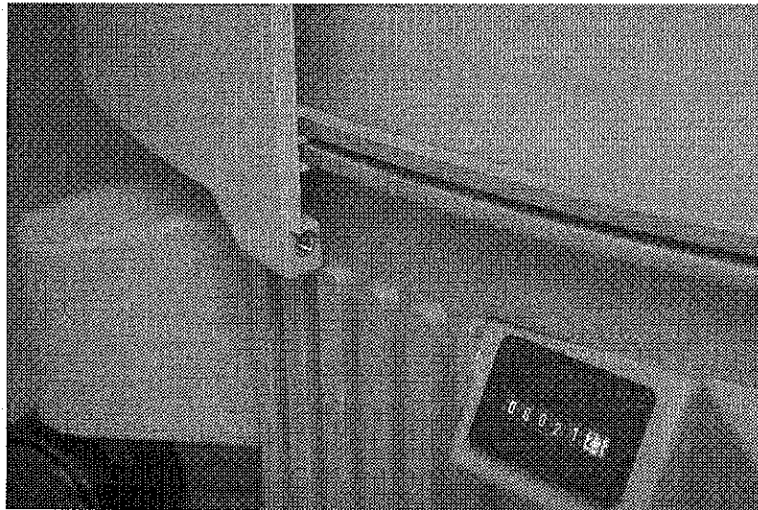


Figure 8-16
Correct Alignment of the Guide Slot and Ridges

- b. Once the guide slot and ridges are correctly aligned, hold the front cabinet in place while sliding the rear cabinet onto the base cabinet.
- c. Using a Phillips screwdriver, install and secure the six mounting screws securing the rear cabinet to the front cabinet.



8.4.5 Separating the Front Cabinet Assembly from the Unit

Replacement Part Number N. A.

Included in Kit:	Tools Required:
N. A.	Phillips screwdriver (medium w/ long shaft) Hog ring or slip joint pliers (medium)

Procedure

Removed / Installed During Process:

- Rear cabinet (See Section 8.4.4 for more detailed instructions.)
- Pressure tubing
- Wire harnesses
- Front cabinet (separated from unit)

Front Cabinet

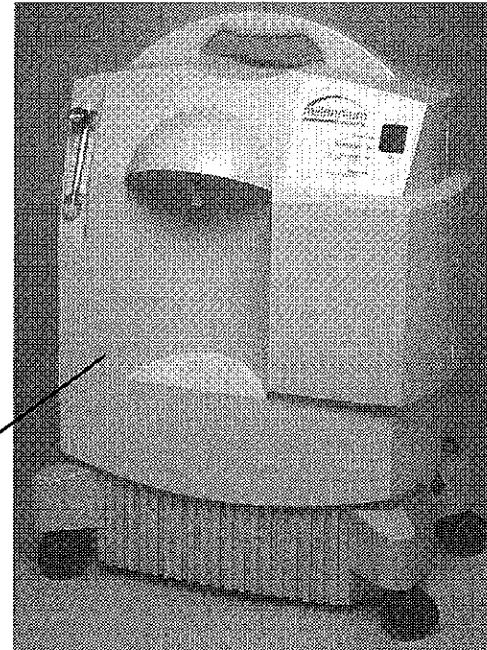


Figure 8-17
Location of the Front Cabinet

NOTE: The components listed at the end of this note can be replaced without separating the front cabinet assembly from the unit.

- Flow meter
- Bacteria filter (See Chapter 6)
- DISS outlet fitting



Separating the Front Cabinet Assembly from the Unit (Continued)

- Power switch
- Power control board (PCB)
- Oxygen percentage indicator (OPI) board
- Wiring harnesses
- Pressure tubing

Step 1 *Separating the Front Cabinet Assembly from the Unit*

- a. Grasp the front cabinet assembly firmly then slide it towards the front of the unit until it is clear of the guide slot on the base cabinet. Once clear of the guide slot, set the front cabinet near the front of the unit.

NOTE: The front cabinet assembly is still connected to the unit via both the pressure tubing and wire harnesses. When removing the front cabinet assembly, care should be taken so the tubing, harnesses, or the components to which they are attached are not damaged.

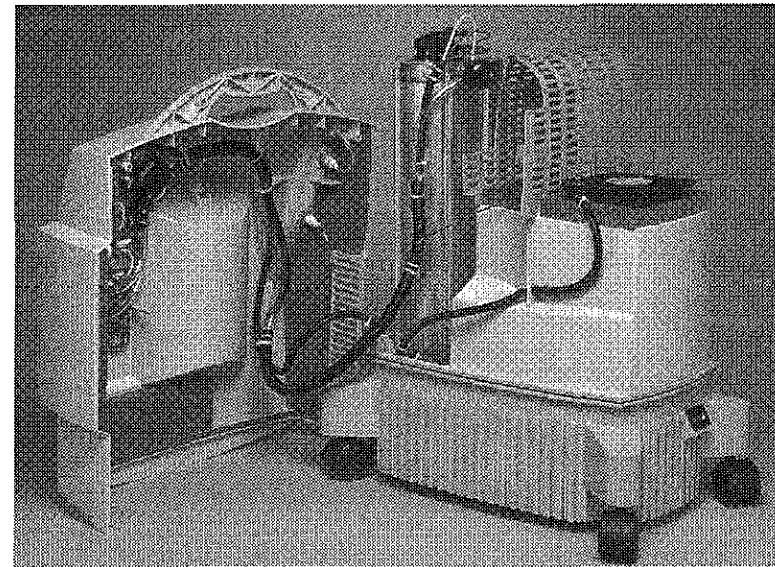


Figure 8-18
Front Cabinet Assembly Partially Removed from the Unit

- b. Remove the connector from the 9-volt alarm battery (see Section 6.4.6 for detailed instructions).
- c. Using hog ring or slip-joint pliers, loosen then slide the hog ring clamp along the pressure tubing away from the pressure regulator. Remove the pressure tubing from the fitting on the pressure regulator.



Separating the Front Cabinet Assembly from the Unit (Continued)

- d. Depress each locking tab, then remove each of the two wire connectors from the valve / solenoid assembly.
- e. Remove the thin yellow pressure tubing from the fitting on the top of the sieve canister assembly.

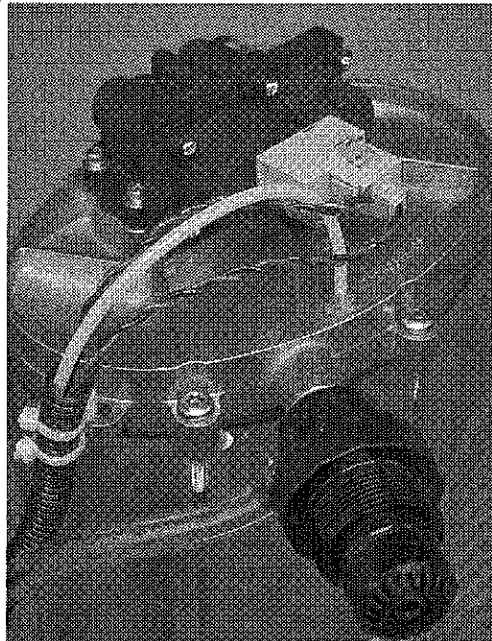


Figure 8-19
Pressure Tubing and Wiring Connections on the Sieve Canister Assembly

- f. Cut the cable tie securing the convoluted tubing to the top of the sieve canister assembly.
- g. Depress the locking tab, then remove the main power wiring harness female receptacle from the male connector on the base cabinet wiring harness. The connector is located near the base of the sieve canister assembly.

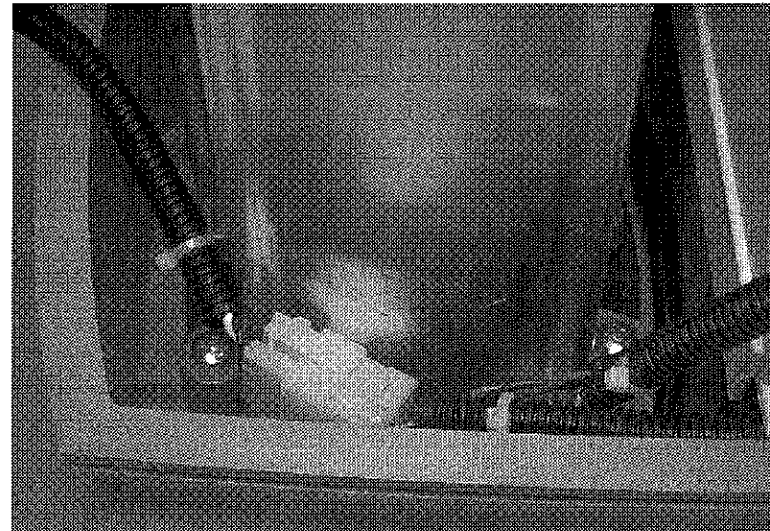


Figure 8-20
Location of the Power Switch Wiring Harness to Main Power Wiring Harness Connector



Separating the Front Cabinet Assembly from the Unit (Continued)

- h. The front cabinet assembly is now free from the rest of the unit.

Step 2 Connecting the Front Cabinet Assembly to the Unit

- a. Set the front cabinet assembly near the front of the unit.
- b. Press the male connector on the base cabinet wiring harness into the female receptacle on the main power wiring harness until completely seated.
- c. Connect the thin yellow pressure tubing to the fitting on the top of the sieve canister assembly.
- d. Install the two wire connectors onto the receptacles on the valve / solenoid assembly.

NOTE: The two wire connectors are interchangeable.

- e. Connect the pressure tubing to the fitting on the pressure regulator. Using hog ring or slip-joint pliers, slide the hog ring clamp along the pressure tubing until it is on the fitting.
- f. Secure the convoluted tubing to the top of the sieve canister assembly with a cable tie.
- g. Connect the wiring harness connector to the 9-volt alarm battery.

- h. Align the ridges on the front cabinet assembly with the guide slot on the base cabinet, as shown.

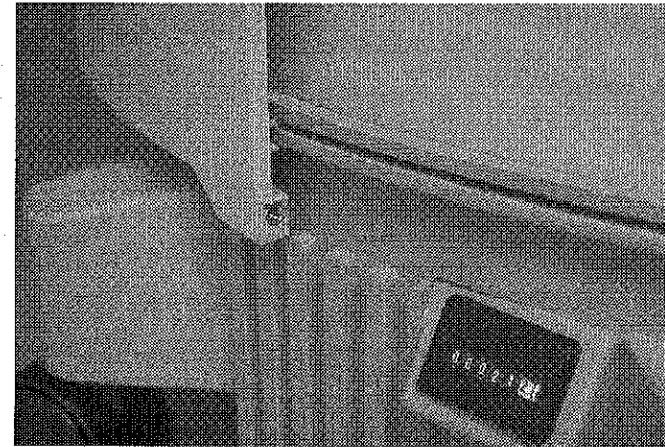


Figure 8-21
Correct Alignment of the Guide Slot and Ridges

- i. Once the guide slot and ridges are correctly aligned, slide the front cabinet assembly onto the base cabinet.
- j. Insure the wiring harnesses are positioned so they will not be pinched when the front cabinet is installed: power switch wiring harness between the sieve canister and left side of the cabinet; O₂ / solenoid / battery harness between the sieve canister and compressor cover.