



8.4.6 Flow Meter Replacement

Replacement Part Number (Standard) H627

Included in Kit:	Tools Required:
Standard flow meter w/ washers & nuts Cable tie (x2)	Phillips screwdriver (medium w/ long shaft) Diagonals (wire cutters)

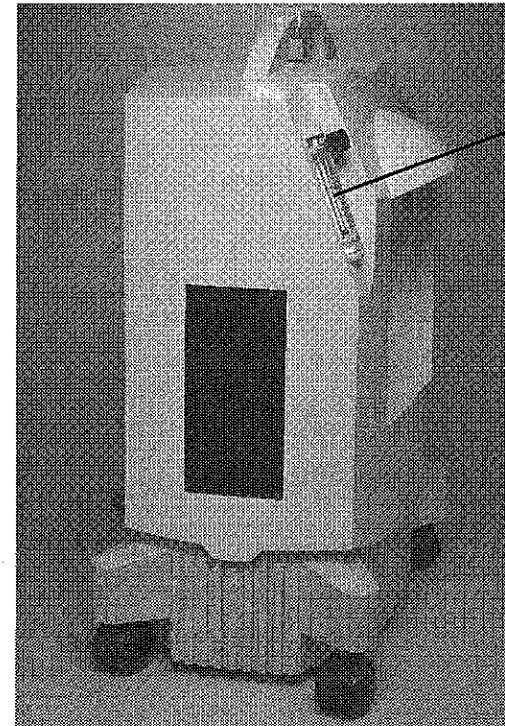
Replacement Part Number (Pediatric) H644

Included in Kit:	Tools Required:
Pediatric flow meter w/ washers & nuts Cable tie (x2)	Phillips screwdriver (medium w/ long shaft) Diagonals (wire cutters)

Procedure

Removed / Installed During Process:

- Rear cabinet (See Section 8.4.4 for more detailed instructions.)
- Front cabinet assembly (separated from unit)
(See Section 8.4.5 for more detailed instructions.)
- Flow meter



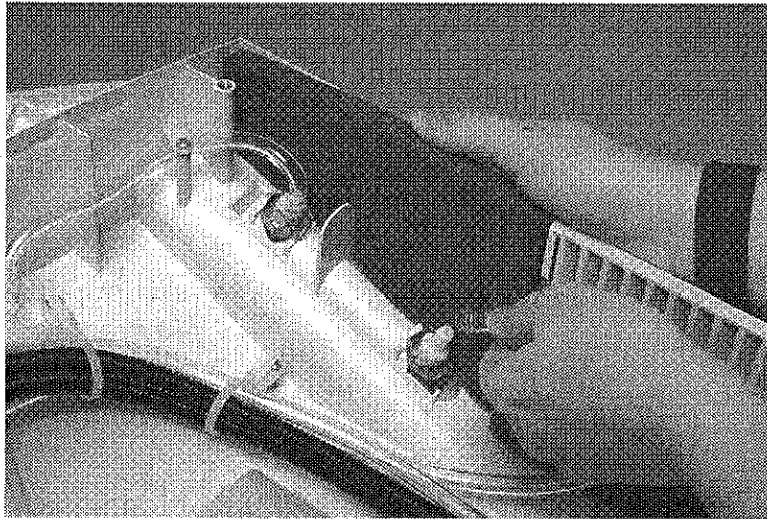
Flow
Meter

Figure 8-22
Location of the Flow Meter

Step 1 Removing the Flow Meter

- Working from the inside of the front cabinet assembly, cut the cable ties then remove the pressure tubing from both fittings on the flow meter by pulling the tubing from each fitting.

Flow Meter Replacement (Continued)

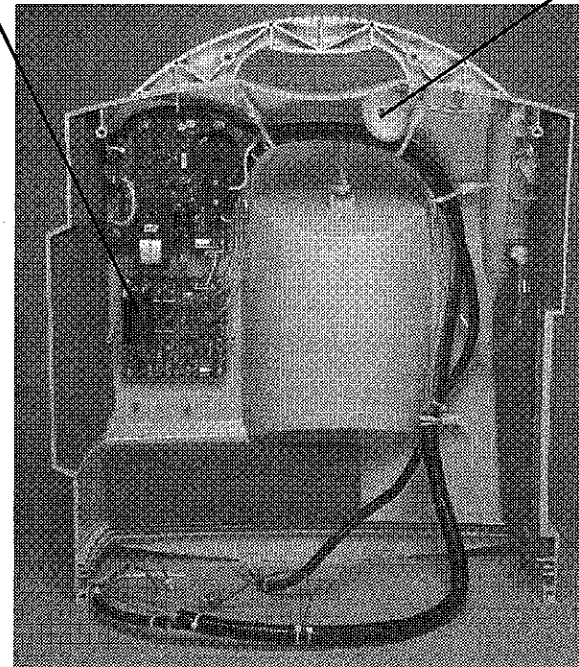


*Figure 8-23
Removing the Pressure Tubing from the Flow Meter*

NOTE: The pressure tubing connected to the top fitting on the flow meter is connected to the bacteria filter. The pressure tubing connected to the bottom fitting is connected to the OPI sensor for Model 605, or the 1/2" tubing in the wiring harness for Model 600.

OPI Sensor

Bacteria
Filter



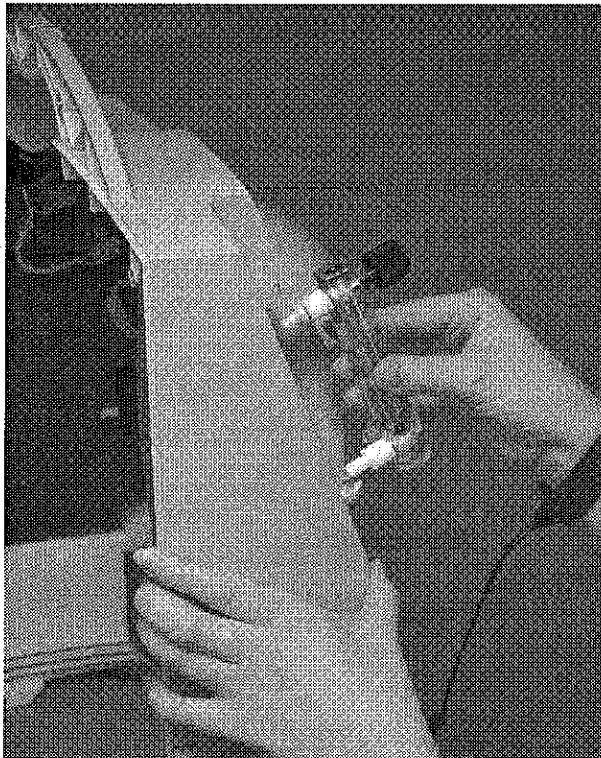
*Figure 8-24
Pressure Tubing Connections and Locations*

- b. While holding the flow meter in place, remove the two speed nuts from the threaded fittings on the back of the flow meter.



Flow Meter Replacement (Continued)

- c. Remove the flow meter from the front cabinet assembly by pulling it straight out from the front cabinet.



*Figure 8-25
Removing the Flow Meter*

Step 2 Installing the Flow Meter

- a. Align the threaded fittings on the back of the supplied flow meter with the holes in the front cabinet.

NOTE: The flow meter must be mounted with the shaft for the flow meter knob at the top.

- b. While holding the flow meter in place, install the support speed nuts to secure the flow meter to the front cabinet. Hand tighten the speed nuts.
- c. Connect the pressure tubing to the fittings on the flow meter then secure the tubing with the cable ties provided.



8.4.7 DISS Outlet Fitting Replacement

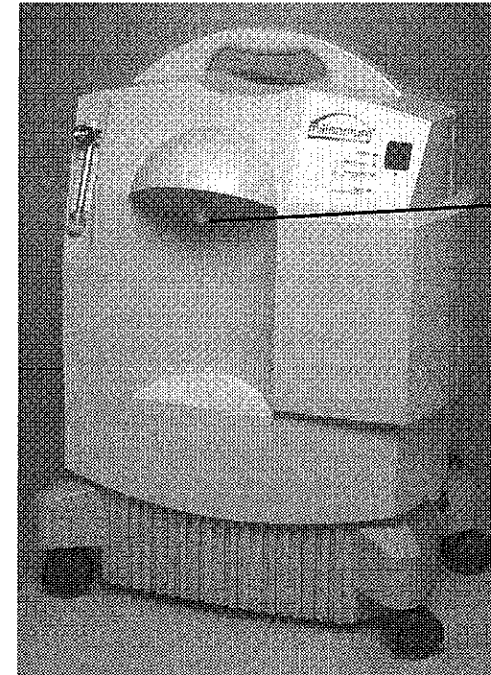
Replacement Part Number H628

Included in Kit:	Tools Required:
DISS outlet fitting 1/2"-13 nylon jam nut 1/2" lock washer	Phillips screwdriver (medium w/ long shaft) 11/16" open-end wrench Diagonals (wire cutters)

Procedure

Removed / Installed During Process:

- Rear cabinet (See Section 8.4.4 for more detailed instructions.)
- Front cabinet assembly (separated from unit)
(See Section 8.4.5 for more detailed instructions.)
- DISS outlet fitting



DISS
Outlet
Fitting

Figure 8-26
Location of the DISS Outlet Fitting

Step 1 Removing the DISS Outlet Fitting

- a. Cut the cable tie then remove the pressure tubing connected to the DISS outlet fitting by pulling it off the fitting.

DISS Outlet Fitting Replacement (Continued)

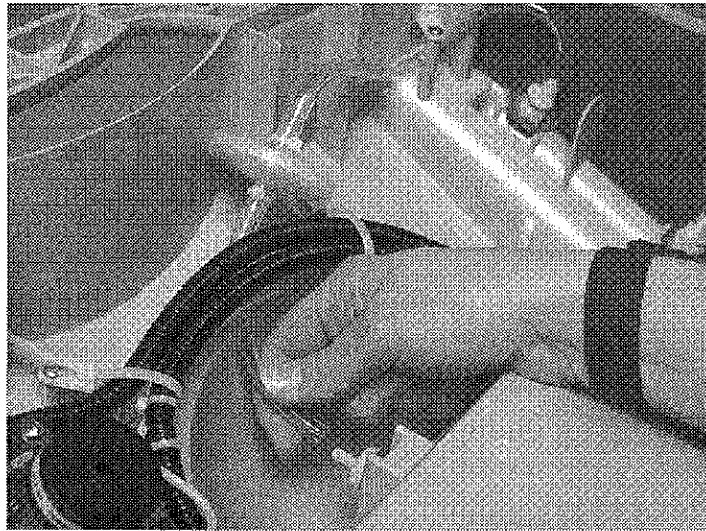


Figure 8-27

Removing the Pressure Tubing from the DISS Outlet Fitting

- b. While holding the DISS outlet fitting in place, use an 11/16" wrench to loosen the nylon jam nut securing the DISS outlet fitting.

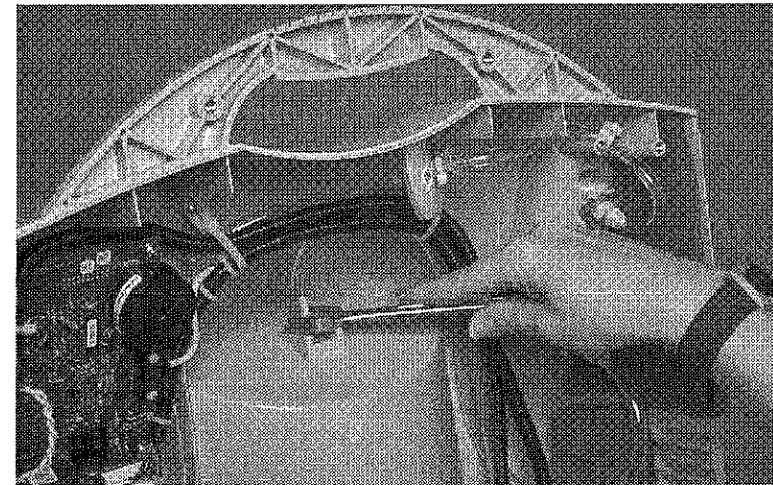
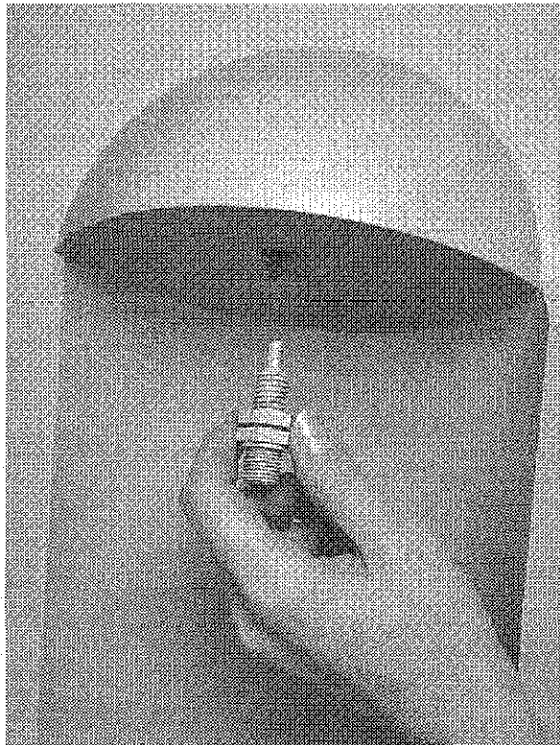


Figure 8-28

Removing the Nylon Jam Nut

- c. Remove the DISS outlet fitting from the front cabinet assembly.

DISS Outlet Fitting Replacement (Continued)



*Figure 8-29
Removing the DISS Outlet Fitting*

Step 2 *Installing the DISS Outlet Fitting*

- a. Align the DISS outlet fitting with the opening in the front cabinet assembly. Insert the DISS outlet fitting into the opening.
- b. While holding the DISS outlet fitting in place, install the new lock washer and nylon jam nut on the DISS outlet fitting. Use an 11/16" wrench to carefully tighten the nylon jam nut.
- c. Connect the pressure tubing to the fittings on the DISS outlet fitting. Secure the tubing to the fitting with the cable tie provided.



8.4.8 Power Switch Replacement

Replacement Part Number 441-0600-00

Included in Kit:	Tools Required:
Power switch	Phillips screwdriver (medium w/ long shaft) Needle-nose pliers Flat-blade screwdriver (small)

Procedure

Removed / Installed During Process:

- Rear cabinet (See Section 8.4.4 for more detailed instructions.)
- Front cabinet assembly (separated from unit)
(See Section 8.4.5 for more detailed instructions.)
- Power switch

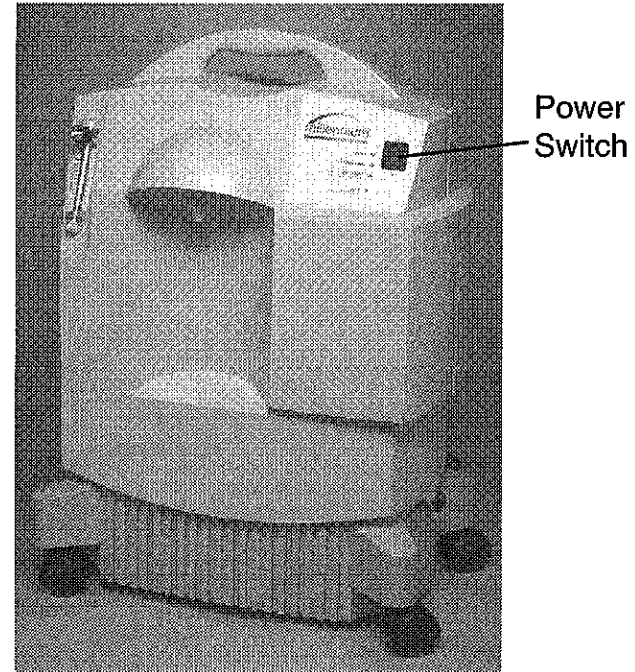


Figure 8-30
Location of the Power Switch

Step 1 Removing the Power Switch

- a. Looking at the back of the power switch from inside the front cabinet assembly, note the position and colors of the wires connected to the terminals on the power switch.

Power Switch Replacement (Continued)

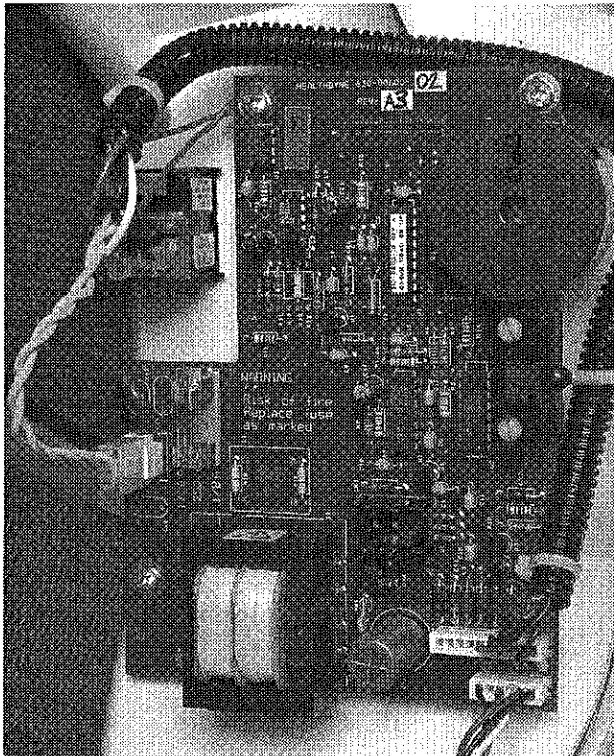


Figure 8-31
View of Power Switch from Inside the Front Cabinet Assembly

CAUTION: Except for the two red wires that are interchangeable, the wires must be connected to the power switch as shown. Failure to do so will result in damage to the unit.

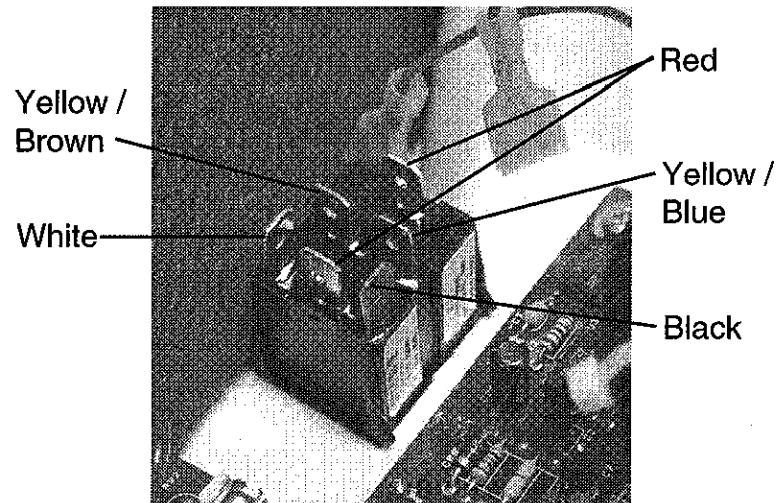


Figure 8-32
Correct Connection of the Wires to the Power Switch

- b. Using needle nose pliers, remove the wires from the power switch terminals.

Power Switch Replacement (Continued)

- c. Using your fingers or a small flat-blade screwdriver, depress the latches on each corner of the power switch.

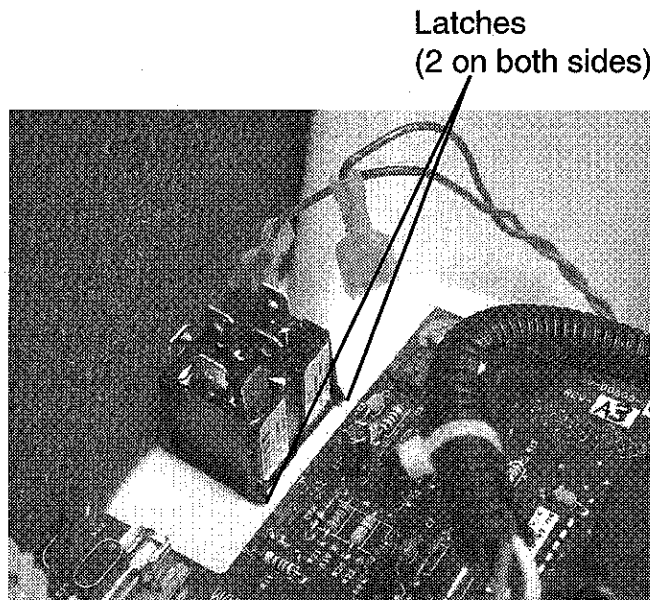


Figure 8-33
Location of the Power Switch Latches

- d. While depressing the latches, push the power switch out of the front cabinet assembly.



Figure 8-34
Removing the Power Switch from the Front Cabinet Assembly

Step 2 Installing the Power Switch

- a. Orient the power switch so that the single terminal is at the top. Align the power switch with the opening in the front cabinet assembly. Press the power switch into the front cabinet assembly until all four latches on the power switch lock in place.
- b. Install the wires onto the terminals of the power switch. Insure that they are installed in their original position (see Figure 8-24).



8.4.9 Fuse Replacement (On the Power Control Board (PCB))

Replacement Part Number H639 - 63 mA @ 250 V,
50 Hz, Slo - Blo

H638 - 125 mA @ 120 V,
60 Hz, Slo - Blo

Included in Kit: Fuses 63 mA @ 250 V, 50 Hz, Slo - Blo (x2) or 125 mA @ 120 V, 60 Hz Slo - Blo (x2)	Tools Required: Phillips screwdriver (medium w/ long shaft) Fuse extractor
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Procedure

Removed / Installed During Process:

- Rear cabinet (See Section 8.4.4 for more detailed instructions.)
- Front cabinet assembly (separated from unit) (See Section 8.4.5 for more detailed instructions.)
- Fuse

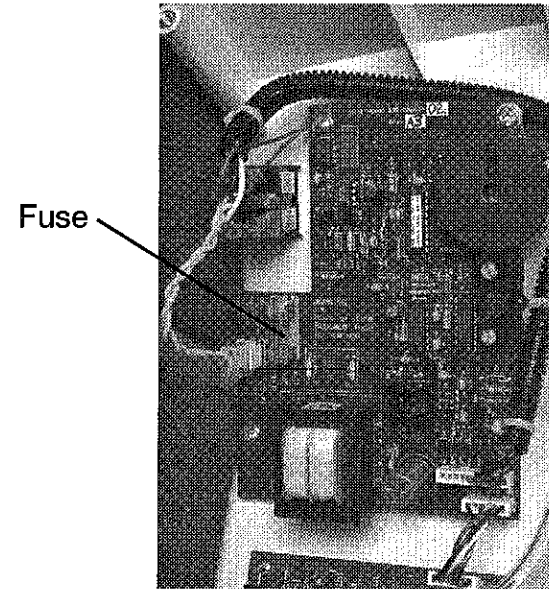


Figure 8-35
Location of the Fuse

Step 1 Removing the Fuse from the PCB

- a. Using a fuse extractor, remove the fuse from its receptacle on the PCB.

Step 2 Installing the Fuse on the PCB

- a. Align the fuse with its receptacle on the PCB.
- b. Carefully press the fuse into its receptacle until completely seated.



8.4.10 Power Control Board (PCB) Assembly Replacement

Replacement Part Number H629 - 120 V without OPI
H630 - 120 V with OPI
H631 - 230 V without OPI
H632 - 230 V with OPI

Included in Kit:	Tools Required:
PCB assembly 6-19 x .31" low torque screw (x4)	Phillips screwdriver (medium w/ long shaft) Phillips screwdriver (small)

Procedure

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, Electro-Static Discharge (ESD)-protected environment.

Removed / Installed During Process:

- Rear cabinet (See Section 8.4.4 for more detailed instructions.)
- Front cabinet assembly (separated from unit) (See Section 8.4.5 for more detailed instructions.)
- PCB assembly

Power Control Board

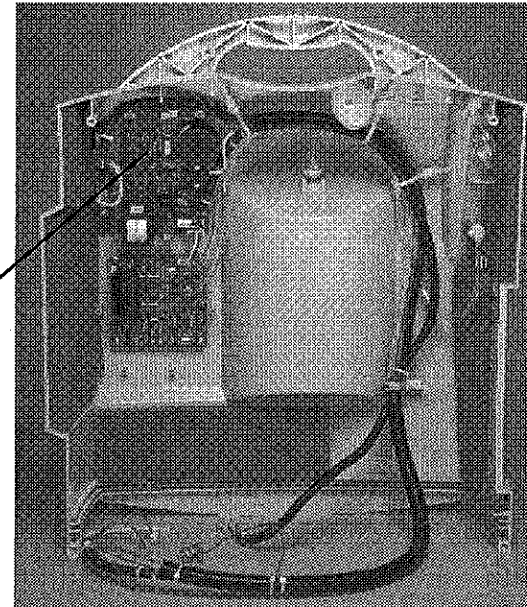


Figure 8-36
Location of the Power Control Board

Step 1 Removing the PCB Assembly

- While holding the pressure transducer, remove the thin yellow pressure tubing from the pressure transducer by carefully pulling the tubing off the fitting.
- Remove the main power wiring harness connector from the J1 location on the PCB assembly by pulling the connector directly up from the J1 receptacle.

Power Control Board Replacement (Continued)

- c. *For Model 605 Units Only:* Remove the OPI wiring harness connector from the J3 location on the PCB assembly by pulling the connector directly up from the J3 receptacle.
- d. Depress the locking tab, then remove the power switch wiring harness connector from the J2 location on the PCB assembly by pulling the connector directly up from the J2 receptacle.
- e. Using a Phillips screwdriver, remove the four screws securing the PCB assembly to the front cabinet assembly.

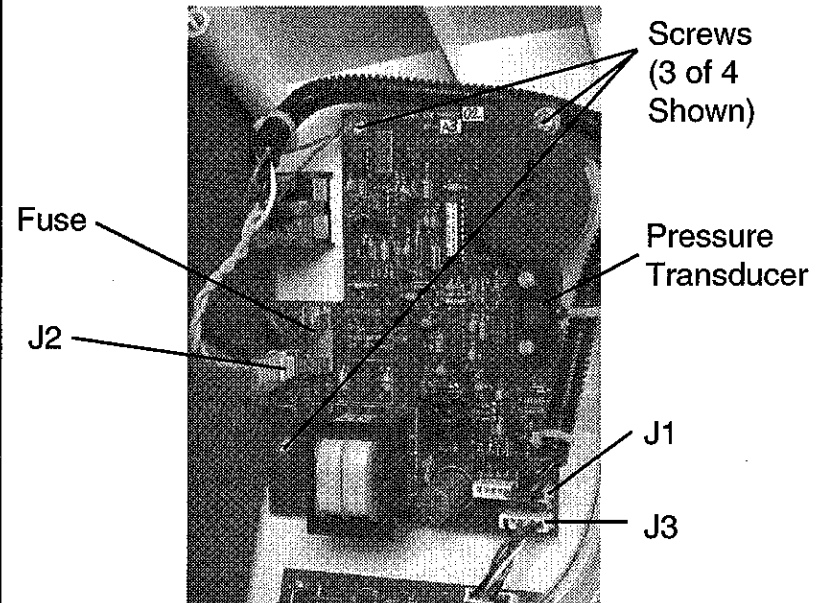


Figure 8-37
Connections and Mounting Screw Locations on the PCB Assembly

- f. While holding the wiring harnesses out of the way, remove the PCB assembly from the front cabinet assembly.



Power Control Board Replacement (Continued)

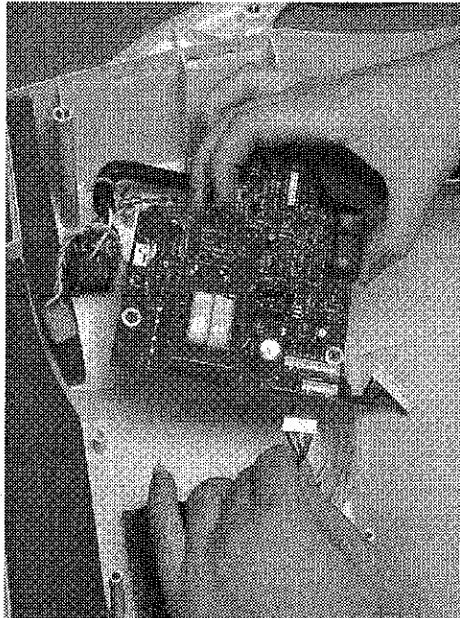


Figure 8-38
Removing the PCB Assembly

Step 2 Installing the PCB Assembly

- a. While holding the wiring harnesses out of the way, align the holes in the PCB assembly with the stand-offs on the front cabinet assembly.
- b. Insert then tighten the four screws provided to secure the PCB assembly to the front cabinet assembly.
- c. Align the connector on the power switch wiring harness with the J2 receptacle on the PCB assembly. Carefully press the connector onto the receptacle until completely seated.
- d. *For Model 605 Units Only:* Align the connector on the short OPI wiring harness with the J3 receptacle on the PCB assembly. Carefully press the connector onto the receptacle until completely seated.
- e. Align the connector on the main power wiring harness with the J1 receptacle on the PCB assembly. Carefully press the connector onto the receptacle until completely seated.
- f. While holding the pressure transducer, install the thin yellow pressure tubing onto the pressure transducer by firmly and carefully pushing the tubing onto the fitting.



8.4.11 Oxygen Percentage Indicator (OPI) Wiring Harness Replacement - Model 605 Only

Replacement Part Number 610-0625-00

Included in Kit: OPI wiring harness	Tools Required: Phillips screwdriver (medium w/ long shaft)
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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, Electro-Static Discharge (ESD)-protected environment.

Procedure

Removed / Installed During Process:

- Rear cabinet (See Section 8.4.4 for more detailed instructions.)
- Front cabinet assembly (separated from unit) (See Section 8.4.5 for more detailed instructions.)
- OPI wiring harness

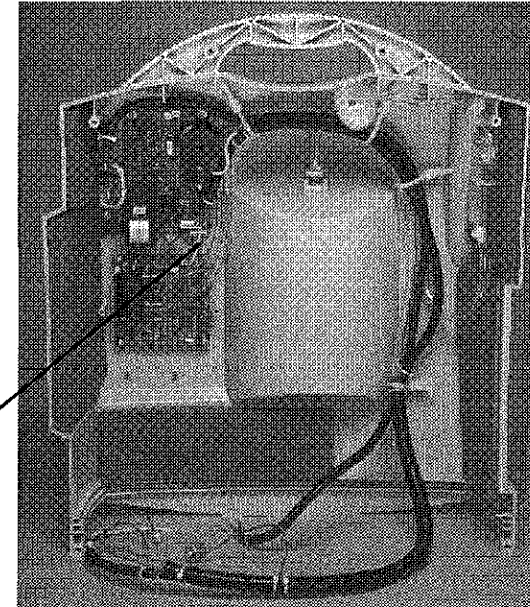


Figure 8-39
Location of the OPI Wiring Harness

Step 1 Removing the OPI Wiring Harness

- a. Remove the OPI wiring harness connector from the J3 location on the PCB assembly by pulling the connector directly up from the J3 receptacle.
- b. Remove the OPI wiring harness connector from the J7 location on the OPI board by pulling the connector directly up from the J7 receptacle.



OPI Wiring Harness Replacement (Continued)

Step 2 Installing the OPI Wiring Harness

- a. Align the connector on the OPI wiring harness with the J7 receptacle on the OPI board. Carefully press the connector onto the receptacle until completely seated.
- b. Align the connector on the OPI wiring harness with the J3 receptacle on the PCB assembly. Carefully press the connector onto the receptacle until completely seated.



8.4.12 Oxygen Percentage Indicator (OPI) Board Replacement - Model 605 Only

Replacement Part Number H633

Included in Kit:	Tools Required:
OPI board 6-19 x .31" low torque screw (x4)	Phillips screwdriver (medium w/ long shaft) Phillips screwdriver (small)

Procedure

Removed / Installed During Process:

- Rear cabinet (See Section 8.4.4 for more detailed instructions.)
- Front cabinet assembly (separated from unit) (See Section 8.4.5 for more detailed instructions.)
- OPI board

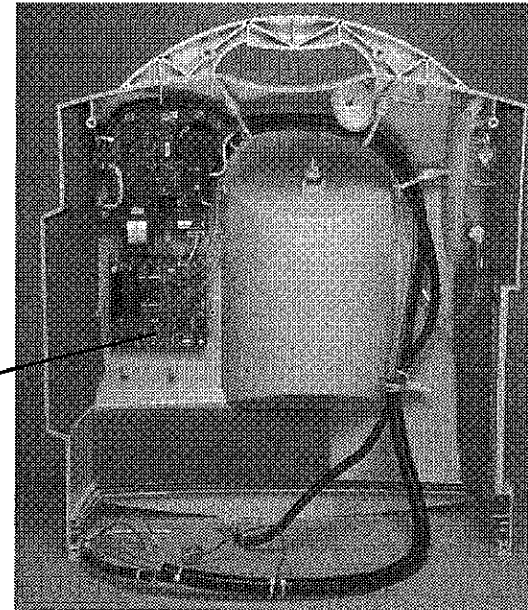


Figure 8-40
Location of the OPI Board

Step 1 Removing the OPI Board

- Remove the OPI wiring harness connector from the J7 location on the OPI board by pulling the connector directly up from the J7 receptacle.
- While holding the oxygen sensor, remove the pressure tubing from the sensor by carefully prying the tubing off both oxygen sensor fittings.