SimplyGo/SimplyFlo
Service & Technical Reference Manual

PHILIPS

RESPIRONICS

SimplyFlo Limited Warranty

Respironics, Inc. (“Respironics”) warrants the SimplyGo Portable Oxygen Concentrator System and SimplyFlo Transportable Oxygen Concentrator (the “Product”) as set forth in the following paragraphs.

Limited Warranty

Respironics warrants that the Product, except as otherwise stated herein, is free from defects in materials and workmanship under normal and proper use and when correctly maintained in accordance with applicable instructions, for a period equal to the warranty period purchased with the device, or if not otherwise specified, for a period of two (2) years from the date of shipment. The warranty for repairs is 90 days for labor and one year on the part(s) that was replaced.

Products Not Under Warranty

Accessories, including, but not limited to, filters and fuses, are not covered under this warranty. However, Respironics warrants that the battery in the Product will be free from defects in material and workmanship, under normal and proper use and when correctly maintained in accordance with applicable instructions, for a period of 90 days from the date of shipment by Respironics to the original purchaser. This warranty does not apply to batteries that are dropped, misused, altered or otherwise damaged after they are shipped.

Limitations

If any Product purchased from Respironics fails to conform to the warranties set forth herein during the Warranty Period, as determined by Respironics in its sole discretion, Respironics may discharge its warranty obligation by repairing or replacing the Product, in Respironics’ sole discretion. This may be accomplished by installing new or remanufactured assemblies or components, or by other repairs deemed appropriate in the sole discretion of Respironics. The choice of repair or replacement by Respironics shall be the sole and exclusive remedy of the original purchaser. Respironics reserves the right, in its sole discretion, to refund the purchase price in lieu of repair or replacement of the Product. In no event shall Respironics’ maximum liability under these warranties exceed the price paid to Respironics by the original purchaser for the Product.

Conditions

This warranty does not cover damage or injury whether to the Product or to personal property or persons caused by accident, misuse, abuse, negligence, failure to install in accordance with Respironics’ installation instructions, failure to operate under conditions of normal use and in accordance with the terms of the operating manual and instructions, failure to maintain in accordance with the applicable service manuals, or alteration or any defects not related to materials or workmanship of the Product. This warranty does not cover damage which may occur in shipment. This warranty does not apply to any Product or individual part of a Product that may have been repaired or altered by anyone other than Respironics or an authorized Respironics service center. This warranty does not apply to any Product which is not purchased new.

Exclusions of Warranties

EXCEPT AS SET FORTH IN THIS LIMITED WARRANTY, RESPIRONICS MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, STATUTORY OR OTHERWISE, REGARDING THE PRODUCT, ITS QUALITY OR PERFORMANCE. RESPIRONICS SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL RESPIRONICS BE LIABLE FOR THE COST OF PROCUREMENT OF SUBSTITUTE PRODUCTS OR FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, PUNITIVE, EXEMPLARY OR INCIDENTAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, COMMERCIAL LOSS OR LOST REVENUES), FOR ANY CAUSE OF ACTION, WHETHER IN CONTRACT OR TORT, AND WHETHER OR NOT RESPIRONICS WAS AWARE OR SHOULD HAVE BEEN AWARE OF THE POSSIBILITY OF THESE DAMAGES. EXCEPT FOR THE OBLIGATIONS UNDER THIS LIMITED WARRANTY, RESPIRONICS SHALL NOT HAVE ANY OBLIGATION OR LIABILITY FOR ANY OTHER LOSS, DAMAGE OR INJURY RESULTING DIRECTLY OR INDIRECTLY FROM THE PRODUCT. PURCHASER'S SOLE AND EXCLUSIVE REMEDY FOR BREACH OF THE WARRANTIES SET FORTH IN THIS DOCUMENT SHALL BE AS PROVIDED IN THE PARAGRAPH DESCRIBING LIMITATIONS.

Purchaser is cautioned that no person or entity is authorized to make any warranties on behalf of Respironics and any such alleged warranties are hereby disclaimed by Respironics.

Respironics Inc.
1001 Murry Ridge Lane
Murrysville, PA 15668 USA

Respironics Deutschland
Gewerbestrasse 17
82211 Herrsching, Germany

CHAPTER 1: INTRODUCTION

CHAPTER 2: WARNINGS & CAUTIONS

CHAPTER 3: SPECIFICATION AND CLASSIFICATIONS

CHAPTER 4: SYSTEM OVERVIEW & SETUP

CHAPTER 8: REPAIR KITS

CHAPTER 11: SCHEMATICS

This page intentionally blank.

CHAPTER 1: INTRODUCTION

1.0 CHAPTER OVERVIEW

This chapter provides an introduction for the SimplyGo Portable Oxygen Concentrator and SimplyFlo Oxygen Concentrator as well as contact and service training information.

1.1 SIMPLYGO PRODUCT DESCRIPTION

SimplyGo is a portable oxygen concentrator intended to deliver pulse and continuous flow to the patient. SimplyGo will have an integrated conserving device which triggers a breath by sensing pressure at the onset of inspiration. The volume of the dose will vary based on the user selected settings.

The SimplyGo will operate using any of the multiple power sources listed below:

- AC Power Supply
- DC Power Supply
- Rechargeable Lithium Ion Battery

1.2 SIMPLYFLO PRODUCT DESCRIPTION

SimplyFlo is a transportable oxygen concentrator intended to deliver continuous flow to the patient. The delivery volume will vary based on the user selected settings.

1.3 CONTRADICTIONS

- This device is not intended to be life-sustaining or life-supporting.
- This device is not intended for newborn and infant use.

1.4 SIMPLYGO INTENDED USE

The Philips Respironics SimplyGo Portable Oxygen Concentrator is for prescription use by patients requiring high concentrations of oxygen on a supplemental basis. It is small, portable, and is capable of continuous use in the home, institutional, and travel/mobile environments.

1.5 SIMPLYFLO INTENDED USE

The Philips Respironics SimplyFlo Transportable Oxygen Concentrator is for prescription use by patients requiring high concentrations of oxygen on a supplemental basis.

1.6 SERVICE TRAINING

Philips Respironics offers service training for the SimplyGo and SimplyFlo devices. Training includes complete disassembly of the device, troubleshooting sub-assemblies and components, setup of test equipment, and necessary testing. For more information, contact the Service Marketing department at:

E-mail: service.operations@respironics.com
Phone: (724) 755-8220
Fax: (724) 755-8230

1.7 SERVICE/TECHNICAL SUPPORT STATEMENT

For technical assistance, please contact Philips Respironics Customer Satisfaction.

U.S.A. and Canada
Phone:1-800-345-6443
Fax: 1-800-886-0245

International
Phone: 1-724-387-4000
Fax: 1-724-387-5012

CHAPTER 2: WARNINGS & CAUTIONS

2.0 CHAPTER OVERVIEW

Warnings, cautions, and notes are used throughout this manual to identify possible safety hazards, conditions that may result in equipment or property damage, and important information that must be considered when performing service and testing procedures. Please read this chapter carefully before servicing SimplyGo Portable Oxygen Concentrator.

WARNING
Warnings indicate the possibility of harm to the operator or patient.

CAUTION
Cautions indicate the possibility of damage to the device.

NOTE
Notes are used to emphasize a characteristic or important consideration.

2.1 WARNINGS

- The operator should read and understand this entire manual before using the device.
- The device is not intended for life support. Where the prescribing health care professional has determined that an interruption in the supply of oxygen, for any reason, may have serious consequences to the user, an alternate source of oxygen should be available for immediate use.
- Geriatric or any other patient unable to communicate discomfort, or hear or see the alarms while using this device, may require additional monitoring.
- Oxygen supports combustion. Oxygen should not be used while smoking or in the presence of an open flame.
- Do not use the device in the presence of a flammable anaesthetic mixture in combination with oxygen or air, or in the presence of nitrous oxide.
- Do not use oil or grease on the concentrator or its components as these substances, when combined with oxygen, can greatly increase the potential for a fire hazard and personal injury.
- If you notice any of the following, discontinue use and contact your home care provider:
  - unexplained changes in the performance of this device
  - unusual or harsh sounds
  - dropped or mishandled device or the power supply
  - water spilled into the enclosure
  - broken enclosure
- Use only with Philips Respironics SimplyGo AC power supply.
- Use only with Philips Respironics SimplyGo batteries.

- Use only approved SimplyGo accessories.
- Repairs and adjustments must be performed by Philips Respironics authorized service personnel only. Unauthorized service could cause injury, invalidate the warranty, or result in costly damage.
- Periodically inspect electrical cords, cables, and the power supply for damage or signs of wear. Discontinue use and replace if damaged.
- To avoid electric shock, unplug the device and remove the batteries before cleaning the bag. DO NOT immerse the device in any fluids.
- Your home care provider is responsible for performing appropriate preventive maintenance at the intervals recommended by Philips Respironics.
- For proper operation, your device requires unobstructed ventilation. Always make sure any openings in the case are not obstructed by items which may impede ventilation. Do not place the device in a small closed space (such as a closet). The device should not be used adjacent to or stacked with other equipment. For more information, contact your home care provider.
- Do not use an extension cord.
- Device operation above or outside of the voltage, breath rate, temperature, humidity and/or altitude values specified may decrease oxygen concentration levels.
- Never drop or insert any object into any opening.
- Be aware that the electrical cord and/or tubing could present a tripping or strangulation hazard.
- Use only power cords supplied by Philips Respironics for this device. Use of power cords not supplied by Philips Respironics may cause overheating or damage to the device and may result in increased emissions or decreased immunity of the equipment or system.
- Do not operate without the battery installed and working. If primary power is lost with no battery in place, the device will stop operating without warning the user. If the device must be operated without the battery, the user should be aware that there is no backup power and no warning if primary power is lost.
- Medical Electrical Equipment needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in this manual.
- Portable and Mobile RF Communications Equipment can affect Medical Electrical Equipment. See the EMC section of this manual for distances to observe between RF Generators and the SimplyGo device to avoid interference.
- Place the device in a location so as to avoid pollutants and fumes

2.2 CAUTIONS

- Do not immerse the device or allow any liquid to enter the enclosure.
- When the device is used in an automobile, disconnect it from the DC auto adapter outlet when the automobile is turned off. Do not operate the device in a non-running vehicle for an extended period of time, as this may deplete the vehicle's battery and prevent the vehicle from starting. Do not allow the device to be connected to the auto adapter outlet while starting the automobile normally or while you are starting the automobile with battery recharging cables. Wait until the automobile starts before connecting the device to the DC power outlet. Secure the device securely when used in any moving vehicle. (The same cautions apply if using the DC adapter outlet on a boat or recreational vehicle.)
- Turn off the device before removing the battery. The device should not be operated without the batteries installed. If the device is operated without the batteries installed, the standard shut-down routine will not be implemented when the power is disconnected prior to turning off the unit. This can result in damage to the device.
- Only use the supplied handle and shoulder strap to carry your device. With every use, verify that the case, shoulder strap and handle are in good condition.

This page intentionally left blank.

CHAPTER 3: SPECIFICATION AND CLASSIFICATIONS

3.0 CHAPTER OVERVIEW

This chapter details the specifications and classifications for the SimplyGo Portable Oxygen Concentrator.

3.1 OPERATING AND STORAGE

Operating Conditions	*Operational temperature:* *41° F to 104° F (5° C to 40° C)* *Relative Humidity: 15% TO 95%* *Altitude: up to 10,000 ft (3048 m)*
Device Storage and Transport Conditions	*-4° F to 140° F (-20° C to 60° C)* *Relative humidity: up to 95%, non condensing*
SimplyGo Battery Storage and Transport Conditions	*-4° F to 140° F (-20° C to 60° C)* *Relative humidity: up to 80%, non condensing* *Best stored below 70° F (21° C) in a cool, dry, well-ventilated facility free from corrosive gas or vapor.* *Storage temperatures above 113° F (45°C), such as in a hot car, may degrade battery performance and reduce battery life. Storage at low temperatures may affect initial battery performance.*

3.2 OXYGEN CONCENTRATOR

*Oxygen Concentration**	*87% - 96% at all settings*
SimplyGo Flow Settings and Pulse Volumes	***Pulse Mode*** *1 = 12 ml; 1 1/2 = 18 ml; 2 = 24 ml; 2 1/2 = 30 ml; 3 = 36 ml; 3 1/2 = 42 ml; 4 = 48 ml; 4 1/2 = 54 ml; 5 = 60 ml; 5 1/2 = 66 ml; and 6 = 72 ml;* *+/- 15% or 4 ml, whichever is greater (Average of 20 consecutive breaths)* *up to a max of 2000 ml/min +/- 200 ml* ***Sleep Mode*** *Variable pulse volumes, based on breath rate, to maintain a constant minute volume per setting.* *1 = 250 ml; 1 1/2 = 375 ml; 2 = 500 ml; 2 1/2 = 625 ml;* *3 = 750 ml; 3 1/2 = 875 ml; 4 = 1000 ml; 4 1/2 = 1125 ml;* *5 = 1250 ml; 5 1/2 = 1375 ml; and 6 = 1500 ml* *+/- 15% or 60 ml, whichever is greater (Average of 20 consecutive breaths)* ***Continuous Mode*** *1/2 = 500 ml/min; 1 = 1000 ml/min; 1 1/2 = 1500 ml/min;* *2 = 2000 ml/min;* *+/- 10% or 100 ml/min, whichever is greater (3 minute running average)* ***NOTE:** Max recommended flow is 2 LPM (at nominal outlet pressures of 0 and 7 kPA)*
SimplyFlo Continuous Flow Settings and Volumes	***Continuous Mode*** *1/2 = 500 ml/min; 1 = 1000 ml/min; 1 1/2 = 1500 ml/min;* *2 = 2000 ml/min;* *+/- 15% or 150 ml/min, whichever is greater (3 minute running average)* ***NOTE:** Max recommended flow is 2 LPM (at nominal outlet pressures of 0 and 7 kPA)*
Dimensions	*11.5 in x 10 in x 6 in* *(29.2 cm x 25.4 cm x x15.2)*
SimplyGo Weight	*10.0 lbs (4.54 kg) with battery installed*
SimplyFlo Weight	*<9.0 lbs (4.1 kg)*
User Interface	*Push Buttons, back-lit liquid crystal display (LCD)*
SimplyGo Sound Level	*43 dBA max. at Nominal Pulse Mode Setting of 2 and 20 BPM*
SimplyFlo Sound Level	*50 dBA typical at 2 LPM continuous*
Audio Alarm	*50 decibels (nominal) at 39 in. (1 m)*

Simply Go Outlet Pressure	*6.5 psig maximum*
SimplyFlo Outlet Pressure	*6.4 psig maximum*
Disposal	*Separate collection for electrical and electronic equipment per EC Directive2002/96/EC. Dispose of this device in accordance with local regulations.*
** Based on an atmospheric pressure of 14.7 psia (101 kPa) at 70° F (21° C)*	

3.3 SIMPLYGO BATTERY

Chemistry	*Lithium Ion 14.4 VDC (nominal)*
Dimensions	*0.9 in x 7.4 in x 4.6 in (2.7 cm x 18.8 cm x 11.7 cm)*
Weight	*1.5 lbs. (0.7 kg)*
Charge Time	*Approximately 2-3 hours per battery from fully discharged to fully charged, depending on the power source and usage.*

3.4 SIMPLYGO BATTERY DURATION TIMES

Continuous Flow) is being used and which setting is selected in the operating mode. SimplyGo is designed to allow easy access to the battery so that it is easy to swap out and utilize extra batteries (sold separately) as needed. Extra batteries fit easily into the zippered pouch of the carrying case or in the handy accessories bag. Additionally, extra batteries can be charged in the external battery charger (sold separately) or in the SimplyGo device (see the “Charging the Battery with the AC Power Supply” section), allowing maximum flexibility to meet your specific battery needs.

The following shows the approximate battery durations for Pulse flow settings at 20 BPM and Continuous Flow settings when the battery is fully charged. Your times may vary based on your activity level, the condition of the batteries, and the age of your SimplyGo device.

Pulse Dose Setting of 2	*Continuous Flow Setting of 2*
3.5 hours	*0.7 hours*

3.5 AC POWER MODULE (BRICK)

SimplyGo/SimplyFlo Type	*Philips Respironics 1082661*
SimplyGo Input	*100 to 240 VAC, 50/60 Hz, 2.0 A*
Output	*19 VDC, 7.9 A max*
SimplyGo Power Consumption	*150 W while charging* *120 W while not charging*
SimplyFlo Power Consumption	*120 W*

3.6 DC POWER

SimplyGo Input	*13-19 VDC, 7.9 A max*

3.7 STANDARDS COMPLIANCE

SimplyGo and SimplyFlo are designed to conform to the following standards

- IEC 60601-1, Medical Electrical Equipment, Part 1: General Requirement for Safety
- IEC 60601-1-2, 2nd edition, Medical Electrical Equipment, Part 1-2: General Requirement for Safety - Collateral Standard: Electromagnetic (EMC) Compatibility - Requirements and tests.
- ISO 8359, Oxygen Concentrators for Medical use - Safety Requirements

SimplyGo is designed to conform to the following standard

- RTCA/DO-160F section 21, category M; Emission of Radio Frequency Energy

3.8 CLASSIFICATION

The SimplyGo and SimplyFlo are classified as:

- IEC Class II Internally Powered Equipment
- Type BF Applied Part
- IPX1: Drip Proof Equipment
- Not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.
- Continuous Operation

3.9 EMC INFORMATION

Guidance and Manufacturer's Declaration - Electromagnetic Emissions		
SimplyGo and SimplyFlo are intended for use in the electromagnetic environment specified below. The user of SimplyGo and SimplyFlo should assure that it is used in such an environment.		
Emissions Test	***Compliance***	***Electromagnetic Environment - Guidance***
RF Emissions *CISPR 11*	*Group 1*	*The Device uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.*
RF Emissions *CISPR 11*	*Class B*	*The Device is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.*
Harmonic Emissions *IEC 61000-3-2*	*Class A*	
Voltage Fluctuations/Flicker Emissions *IEC 61000-3-3*	*Complies*	

Guidance and Manufacturer's Declaration - Electromagnetic Immunity			
SimplyGo and SimplyFlo are intended for use in the electromagnetic environment specified below. The user of SimplyGo and SimplyFlo should assure that it is used in such an environment.			
Immunity Test	***IEC 60601 Test Level***	***Compliance Level***	***Electromagnetic Environment - Guidance***
Electrostatic Discharge (ESD) IEC 61000-4-2	*±6 kV Contact ±8 kV Air*	*±6 kV Contact ±8 kV Air*	*Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.*
Electrical Fast Transient/Burst IEC 61000-4-4	*±2 kV for Power Supply Lines ±1 kV for Input/Output Lines*	*±2 kV for Power Supply Lines ±1 kV for Input/Output Lines*	*Mains power quality should be that of a typical home or hospital environment.*
Surge IEC 61000-4-5	*±1 kV Line to Line ±2 kV Line to Ground*	*±1 kV Line to Line ±2 kV Line to Ground*	*Mains power quality should be that of a typical home or hospital environment.*
Voltage Dips, Short Interruptions and Voltage Variations on Power Supply Input Lines IEC 61000-4-11	*<5% U_T (>95% Dip in U_T) for 0.5 Cycle* *40% U_T (60% Dip in U_T) for 5 Cycles* *70% U_T (30% Dip in U_T) for 25 Cycles* *<5% U_T (>95% Dip in U_T) for 5 Seconds*	*< 5% U_T (>95% Dip in U_T) for 0.5 Cycle* *40% U_T (60% Dip in U_T) for 5 Cycles* *70% U_T (30% Dip in U_T) for 25 Cycles* *<5% U_T (>95% Dip in U_T) for 5 Seconds*	*Mains power quality should be that of a typical home or hospital environment. If the user of the Device required continued operation during power mains interruptions, it is recommended that the Device be powered from an interruptible power supply or battery.*
Power Frequency (50/60) Magnetic Field IEC61000-4-8	*3 A/m*	*3 A/m*	*Power frequency magnetic fields should be at levels characteristic of a typical location in a typical home or hospital environment.*
Note: U_T is the A.C. mains voltage prior to application of the test level.			

Guidance and Manufacturer's Declaration - Electromagnetic Immunity			
SimplyGo is intended for use in the electromagnetic environment specified below. The user of SimplyGo and SimplyFlo should assure that it is used in such an environment.			
Immunity Test	***IEC 60601 Test Level***	***Compliance Level***	***Electromagnetic Environment - Guidance***
			Portable and mobile RF communications equipment should be used no closer to any part of the Device, including cables, that the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.
			Recommended separation distance
Conducted RF IEC 61000-5-6	*3 Vrms 150 kHz to 80 MHz*	*3V*	$d = 1.2 \sqrt{P}$ *150 kHz to 80 MHz*
Radiated RF IEC 61000-4-3	*3 V/m 80 MHz to 2.5 GHz*	*10 V/m* [c]	$d = 3.5 \sqrt{P}$ *80 MHz to 800 MHz* $d = 7 \sqrt{P}$ *800 MHz to 2.5 GHz* *where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m).* *Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,*[a] *should be less than the compliance level in each frequency range.*[b] *Interference may occur in the vicinity of equipment marked with the following symbol:*
Note 1: At 80 MHz and 800 MHz, the higher frequency range applies.			
Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.			
a Field strength from fixed transmitters such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the Device is used exceeds the applicable RF compliance level above, the Device should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the Device.			
b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.			
c SimplyGo and SimplyFlo incorporate a robust design and conform with Radiated RF Immunity Test up to 10 V/m between 80 MHz and 2.5 GHz while the test requirement is 3 V/m.			

Recommended Separation Distance Between Portable and Mobile RF Communication Equipment and Device

SimplyGo is intended for use in the electromagnetic environment in which radiated RF disturbances are controlled. The user of Ever Go can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communication equipment (transmitters) and SimplyGo as recommended below, according to the maximum output power of the communications equipment.

Rated Maximum Output Power of Transmitter (Watts)	*Separation Distance According to Frequency of Transmitter (meters)*		
	150 kHz to 80 MHz $d = 1.2\sqrt{P}$	*80 MHz to 800 MHz* $d = 0.35\sqrt{P}$	*800 MHz to 2.5 GHz* $d = 0.7\sqrt{P}$
0.01	*0.12*	*0.04*	*0.07*
0.1	*0.37*	*0.11*	*0.22*
1	*1.17*	*0.35*	*0.70*
10	*3.69*	*1.11*	*2.21*
100	*11.67*	*3.50*	*7.00*

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power of the transmitter manufacturer.

Note 1: At 80 MHz and 800 MHz, the higher frequency range applies.

Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

This page intentionally blank.

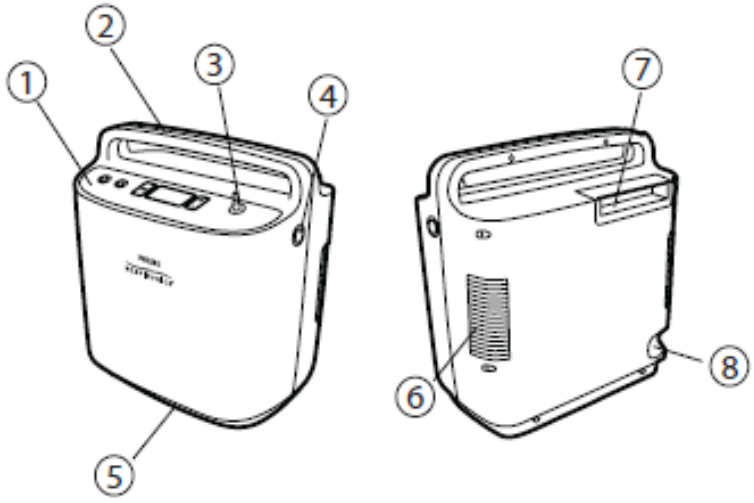
CHAPTER 4: SYSTEM OVERVIEW & SETUP

4.0 CHAPTER OVERVIEW

This chapter details the specifics of the SimplyGo and SimplyFlo Oxygen Concentrator and how to change settings.

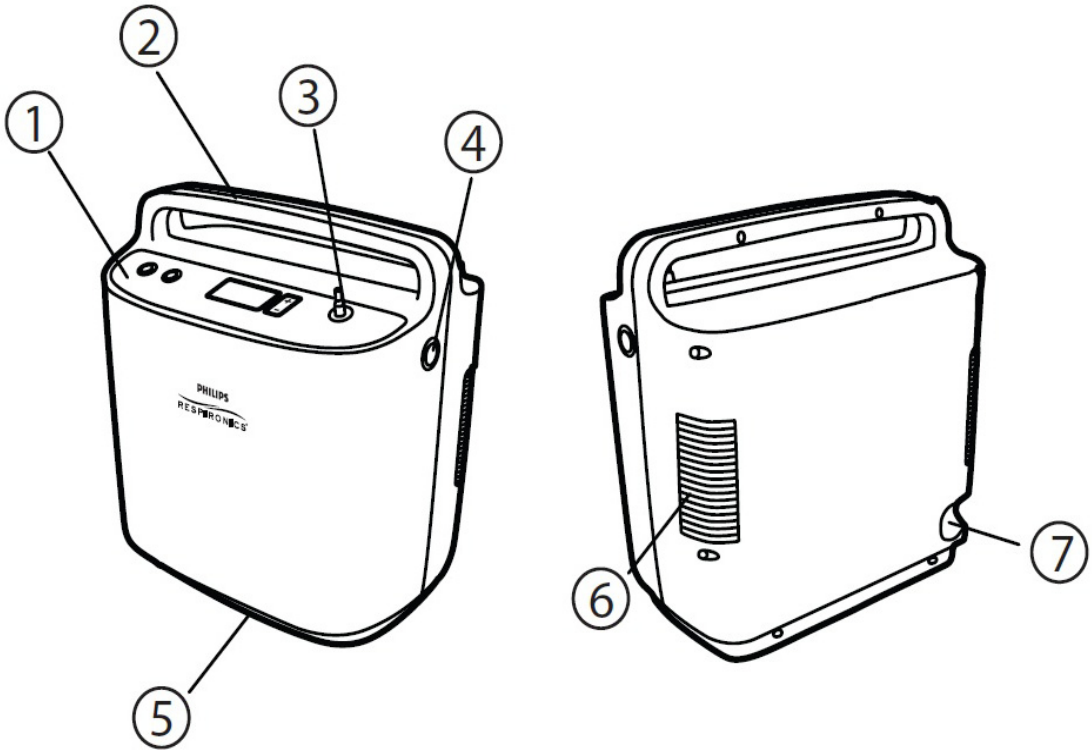
4.1 SYSTEM OVERVIEW

4.1.1 SIMPLYGO SYSTEM OVERVIEW



Item	*Description*	*Function*
1	*Control Panel*	*Control Switch and LCD Display*
2	*Carrying Handle*	*hand grip area for lifting and transporting the device*
3	*Patient Cannula Connector*	*Oxygen output and connection point for patient cannula*
4	*Power Input Connector*	*Connection point for Philips Respironics provided external power supplies: AC line voltage, vehicle DC*
5	*Air Exhaust Vent*	*Air outlet for enclosure ventilations fan*
6	*Air Intake Vent*	*Air inlet for enclosure ventilation fan*
7	*Battery*	*Rechargeable lithium-ion battery with integrated handle used to remove and install battery pack*
8	*Data Port*	*Input-Output data communication with the device.*

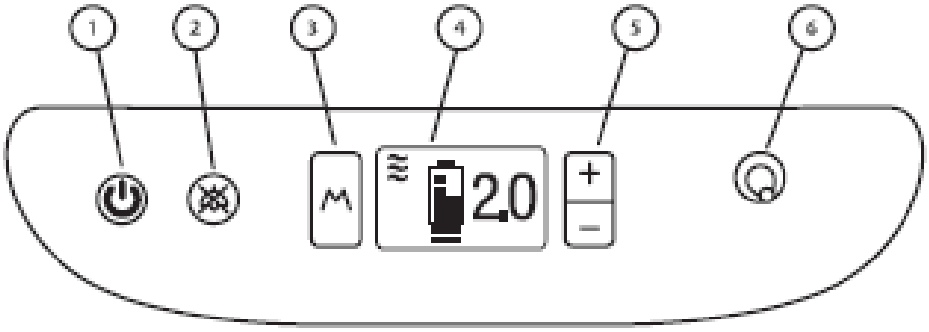
4.1.2 SIMPLYFLO SYSTEM OVERVIEW



Item	Description	Function
1	Control Panel	Control switches and LCD display
2	Carrying Handle	Hand grip area for lifting and transporting the device
3	Patient Cannula Connector	Oxygen output and connection point for patient cannula
4	Power Input Connector	Connection point for Philips Respironics provided external power supplies: AC line voltage
5	Air Exhaust Vent	Air outlet for enclosure ventilation fan
6	Air Intake Vent	Air inlet for enclosure ventilation fan
7	Data Port	Input-Output data communication with the device

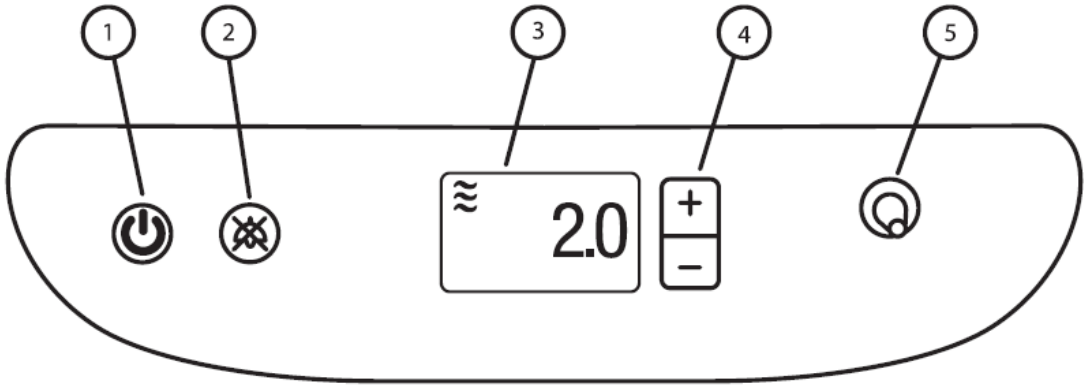
4.2 CONTROL PANEL

4.2.1 SIMPLYGO CONTROL PANEL



Item	*Description*	*Function*
1	*Power*	*Turns the device On and Off*
2	*Alarm Silence*	*Turns the audible alarm off*
3	*Mode*	*Selects one of the three possible operating states of the device*
4	*Display Screens*	*Shows information about the operating status of the device*
5	*Plus (+)/Minus(-)*	*+ Increases the displayed setting; -Decreases the displayed setting*
6	*Patient Cannula Connector*	*Oxygen output and connection point for patient cannula*

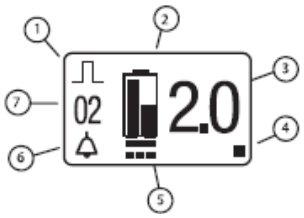
4.2.2 SIMPLYFLO CONTROL PANEL



Item	Description	Function
1	Power	Turns the device On and Off
2	Alarm Silence	Turns the audible alarm off
3	Display Screen	Shows information about the operating status of the device
4	Plus (+)/Minus (-)	+ Increases the displayed setting; - Decreases the displayed setting
5	Patient Cannula Connector	Oxygen output and connection point for patient cannula

4.3 RUN TIME SCREEN DESCRIPTION

4.3.1 SIMPLYGO RUN TIME SCREEN DESCRIPTION



Item	Symbol Description
1	Operating Mode
2	Battery Status
3	Setting
4	Breath Indicator
5	External Power Status
6	Audible Alarm Status
7	Alarm Type

4.3.2 SIMPLYFLO RUN TIME SCREEN DESCRIPTION

Item	Symbol Description
1	Operating Mode
2	Setting
3	Audible Alarm Status
4	Alarm Type

4.4 SIMPLYGO DEVICE PULSE MODE WARM-UP BREATHING

When you turn on your SimplyGo device, it will sense if you are breathing from it. If you are not yet breathing through the cannula, SimplyGo will begin to pulse automatically about once every five seconds. The only purpose of this “device warm-up breathing” is to help the device warm up faster. As soon as you begin breathing through the cannula, the device will begin delivering pulses based on your breathing. Device warm-up breathing occurs only when your first turn on the device. You may begin breathing from the SimplyGo at any time. If the device does not sense a breath after two minutes, a No Breath alarm will sound.

4.5 SIMPLYGO INSERTION AND REMOVAL OF THE BATTERIES

To insert the battery correctly, follow these steps.

1. Place your device in a well ventilated location and make sure it is turned off.

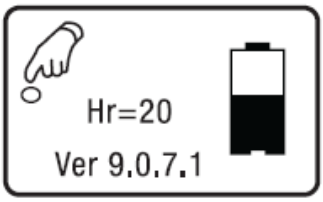
CAUTION
Only remove the battery when the SimplyGo is turned off. Never remove the battery while the device is operating.

2. To remove the battery, insert your fingers into the opening in the battery handle. Steadily pull upward on the handle until the battery is released from the enclosure. Continue to lift the battery until it is entirely removed from the battery compartment. If the device has been operating, the surfaces may be warm to the touch. This is normal.
3. Check the battery gauge. To do so, press the white button on the battery and watch how many LEDs light up. If the batteries are low, you can recharge them.

No. of LEDs	*Battery Charge*
4 LEDs Light:	*75% to 100% full*
3 LEDs Light:	*50% to 75% full*
2 LEDs Light:	*25% to 50% full*
1 LED Light:	*10% to 25% full*
1 LED Blinks 3 Times:	*Battery is less than 10% full and needs to be recharged.*

4. To insert the battery, insert your fingers into the opening in the battery handle and grip the handle between your fingers and thumb. Position the battery over the battery compartment in the top, rear corner of the SimplyGo enclosure with your fingers pointing toward the handle. The battery compartment is shaped so that there is only one way the battery can be inserted and this will align the battery correctly. Lower the battery into its compartment until the handle contacts the equipment enclosure. Firmly push on the battery handle until it snaps into place in the enclosure top.
5. After the battery is inserted, check to make sure the battery handle is level with or slightly below the top of the plastic case.
6. Momentarily depress the Power key, and the following should occur.
   - The LCD and the 5 Key backlights turn ON

- The screen shown here displays on the LCD



NOTE

If you do not see the battery symbol or the device does not turn On, the battery is not installed correctly. Re-insert the battery and make sure it snaps in place.

4.6 OPERATING THE DEVICE AND CHANGING DEVICE SETTINGS

4.6.1 OPERATING THE SIMPLYGO DEVICE AND CHANGING DEVICE SETTINGS

You can change all device settings using the buttons on the control panel. This includes starting the device, stopping it, silencing an alarm, and changing oxygen flow.

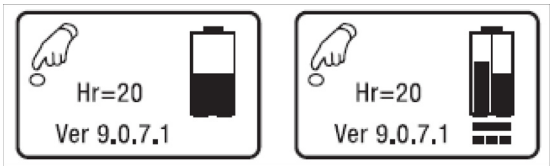
To start your SimplyGo device, follow these steps.

1. Connect a nasal cannula to the patient cannula connector on the top of the device. Ensure the cannula is routed to prevent it from being pinched or kinked to avoid a disruption.

NOTE

A standard single lumen nasal cannula and tubing should be used to deliver oxygen from the SimplyGo device. The device works with cannula tubing up to 30 ft. (9m).

2. To start the device, press the Power button. After the first press, the display screen and the 5 button backlights turn off and on and you will see a screen similar to the one below, left. If the battery capacity is 1/2 full and the battery is being charged, the screen will appear as shown right.



3. Press the Power button a second time to place the device in operating mode. This second press helps prevent unwanted starts or inadvertent changes in oxygen flow. The introductory screen momentarily appears, shown at the left below, followed by the final operating mode screen, shown at right.

4. Every time the device starts up, the device starts producing oxygen to meet the specified setting. It may take up to ten minutes to reach the specified purity levels for the setting. It is safe to begin breathing from the SimplyGo device immediately. Breathing from the device will cause it to reach oxygen purity levels faster than ten minutes. The dot in the lower right hand corner of the LCD display is the pulse symbol. It appears whenever you take a breath and the device delivers a pulse of oxygen.

NOTE

When it is turned on, the device will automatically start at the flow rate setting used when the device was last turned off. As a precaution, each time you start the device, verify the flow setting.

5. To set the device's flow setting, press either the + or - button. To increase the flow setting, press the + button. To decrease the flow setting, press the - button. The device can be set to 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, and 6 in Pulse or Sleep Mode. It can be set to .5, 1, 1.5, and 2 in Continuous Flow Mode.

WARNING

It is very important to set your device to your prescribed level of oxygen flow. Do not increase or decrease your flow rate from your prescribed level until you first consult with your physician.

6. Position the nasal cannula on your face and breathe normally through your nose.

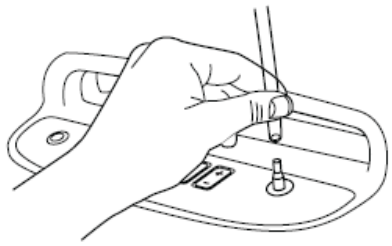
4.6.2 OPERATING THE SIMPLYFLO AND CHANGING DEVICE SETTINGS

1. Select a location that allows the concentrator to draw in room air without being restricted.Make sure that the device is at least 15 to 30 cm away from walls, furniture, and especially curtains that could impede adequate airflow to the device.Do not place the device near any heat source.
2. After reading this entire manual, connect the output cable of the AC Power Supply to the SimplyFlo power input connector.
3. Connect the AC Power Cord's connector into the AC power supply.
4. Connect the AC Power Cord's plug into an AC outlet installed to meet national or regional electrical code.

NOTE

The AC Power Supply is equipped with a green light, which illuminates when it is connected to an energized AC power source.

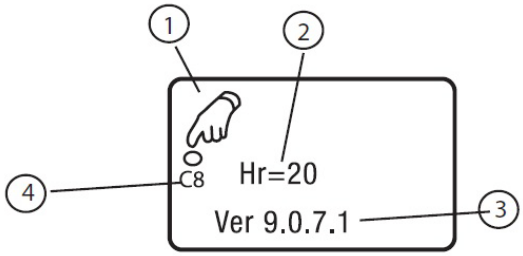
5. Connect a nasal cannula to the patient cannula connector on top of the device. Ensure that the cannula is routed to prevent it from being pinched or kinked to avoid a disruption of oxygen flow?.



NOTE

A standard single lumen nasal cannula and tubing (not supplied) should be used to deliver oxygen from the device. The device works with cannula tubing up to 100ft. (30.5 m).

6. To start the device, press the Power button.After the first press, the display screen and the 4 button backlights turn on and you will see a screen similar to the one shown below.



ITEM	DESCRIPTION
1	Push Power again to turn device on.
2	Total number of operating hours for the device.
3	Software version in the device.
4	Indicates the allowable modes configuration of the device. Note: This may not display on all devices. This is normal

7. Press the Power button a second time to place the device in operating mode. This second press helps prevent unwanted starts or inadvertent changes in oxygen flow. The Introductory screen momentarily appears, shown at left below, followed by the final operating mode screen, shown at right.

Every time it starts up, the device starts producing oxygen to meet the specified setting.It may take up to twenty minutes to reach the specified purity levels for the setting.It is safe to begin breathing from the SimplyFlo device immediately.

NOTE

When it is turned on, the device will automatically start at the flow rate setting used when the device was last turned off. As a precaution, each time you start the device, verify the flow setting.

8. To set the device's flow setting, press either the + or – button.

   To increase the flow setting, press the + button.To decrease the flow setting, press the – button.

   The device can be set to .5, 1, 1.5, and 2 liters per minute (LPM) of continuous flow.

WARNING

It is very important to set your device to your prescribed level of oxygen flow.Do not increase or decrease your flow rate from your prescribed level until you first consult with your health care professional.

9. Be sure oxygen is flowing through the cannula. If it is not, refer to the Troubleshooting section of this manual.
10. Position the nasal cannula on your face, as shown below, and breathe normally through your nose.

11. When you are ready to turn your SimplyFlo device off, press the Power button. The screen below appears.

12. Press the Power button a second time and the SimplyFlo device will turn off.
13. Rather than pressing the Power button a second time, when this screen is displayed, the back light intensity may be increased or decreased by repeatedly pressing the Plus (+) or Minus (-) key until the desired back light intensity is achieved.The device may then be powered off using steps 11 and 12 above.

4.7 CLEANING THE SIMPLYGO/SIMPLYFLO AND SIMPLYGO RECHARGEABLE BATTERY

WARNING

To avoid electrical shock, do not remove the SimplyGo/SimplyFlo Covers. Do not apply liquid directly to the covers. Do not use alcohol, solvents, polishes or any oily substances on the device, as they are flammable.

CAUTION

Do not allow liquids into any of the controls, the interior of the case, or the oxygen tubing connector.

The exterior covers of the device and rechargeable battery should be cleaned as needed:

1. Turn the device off and disconnect from the power source before cleaning.
2. If the SimplyGo battery is removed, wipe the battery bay and battery with a dry cloth.
3. Clean the device exterior using a damp cloth with a mild household cleaner and wipe dry. Or, if you use medical disinfectants, be sure to follow the manufacturer's instructions. For disinfection, Philips recommends the following:
   - Discide Ultra Towelettes: Manufacture - Palmero, www.palmero-health.com (or equivalent)

4.8 CLEANING THE CARRYING CASE

If necessary, the carrying case can be washed in a washing machine using a mild laundry detergent. Air dry.

To wash the carrying case, use only warm water and a mild liquid dish detergent

1. Remove the SimplyGo/SimplyFlo device from the carrying case.
2. Dampen a cloth in the detergent and water solution and wipe the outside surfaces of the case clean.

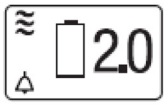
This page intentionally blank.

CHAPTER 5: ALARMS & TROUBLESHOOTING

5.0 CHAPTER OVERVIEW

This chapter identifies the alarms associated with the SimplyGo Portable Oxygen Concentrator and SimplyFlo Transportable Oxygen Concentrator. This chapter should be used by service technicians to help diagnose problems with the SimplyGo or SimplyFlo, along with determining what parts, if any, need to be replaced.

5.1 SIMPLYGO ALARM INDICATORS AND SCREEN SYMBOLS

VISUAL, AUDIO INDICATORS	DESCRIPTION
 *3 short beeps + 1 long beep*	***No Breath Alarm*** *This alarm occurs when a breath is not detected for a period of 2 minutes or more. It can be silenced by pressing the Alarm symbol shown on the screen. This alarm becomes silent as soon as a breath is detected. If no breath is detected after approximately 30 minutes, the device shuts down to conserve power. (This alarm is inactive for ten minutes after startup.)*
 *3 long beeps + 1 short beep*	***Low Oxygen Concentration Alarm*** *This alarm occurs when the device is delivering a lower concentration of oxygen than specified. This alarm can be silenced by pressing the Alarm symbol.*
 *1 long beep after 2 minutes*	***High Breath Rate Alarm*** *This alarm indicates that the user's breath rate is exceeding the capacity of the device. The device is still working properly and is still providing oxygen at the rate specified for the setting. The beeps can be silenced by pressing the Alarm symbol.*
 *3 short beeps + 3 long beeps*	***Technical Fault Alarm*** *This alarm occurs when the device has a general malfunction and the device is no longer operating properly.* *The device may or may not shut down depending on the severity of the alarm.* *This alarm can be silenced if the Alarm Silence Symbol appears.*
 *1 short beep*	***Low Battery Alarm*** *This alarm occurs when approximately 17 minutes of battery life remains. Remaining battery life is dependant on your device settings and your activity level. The empty battery symbol flashes on-screen.*

VISUAL, AUDIO INDICATORS	DESCRIPTION
 *3 long beeps + 1 short beep*	***No Flow Alarm*** *This alarm occurs when the device detects there is no oxygen flowing in the patient cannula.*
 *Alternating short and long beeps*	***Depleted Battery Alarm*** *This alarm occurs when approximately two minutes of battery life remains. The battery symbol flashes on-screen.*
	***Alarm Silence Symbol*** *This symbol appears when you press the Alarm Silence button to silence the audible alarm (beeps).*
	***Attention*** *This symbol appears when corrective action is required.*
	***Battery Charging While Almost Empty Symbol*** *This battery symbol appears (with the charging bars scrolling on the left side) when the battery is depleted and recharging.*
	***Battery Charging While Partly Full Symbol*** *When a battery symbol similar appears (with the charging bars scrolling on the left and at mid-height on the right), the battery is partly full and recharging.* *The left side of the symbol indicates charging, and the right side indicates the battery level.*
 *1 long beep*	***Battery Charge Complete Symbol*** *This battery symbol appears when the battery is fully charged.*
	***Power Connection Symbol*** *This symbol appears when the device is connected to an AC, DC, or airline power source.*

VISUAL, AUDIO INDICATORS	DESCRIPTION
(Power Connection Symbol Disappears) *1 short beep*	*The Power Connection symbol disappears when the device is disconnected from the power source.*
 *1st press of the Power button = 1 long beep* *2nd press of the Power button to turn device OFF = 3 long beeps*	***On/Off Symbol*** *This symbol appears when the device is powered on, or is ready to be turned on or off.*
	***Pulse Symbol*** *The dot appears in the lower, right hand corner of the display screen when the device delivers a pulse, whenever you take a breath.*
	***Pulse Mode Indicator*** *This symbol appears when the device is operating in Pulse Mode.*
	***Sleep Mode Indicator*** *This symbol appears when the device is operating in Sleep mode.*
	***Continuous Flow Mode Indicator*** *This symbol appears when the device is operating in Continuous Flow Mode.*
 *1 short beep*	***Flow Control Setting*** *The large number on the right side of the screen shows the oxygen flow setting. (In this example, it is a 2.) This number can range from 1 to 6 in increments of one-half for Pulse and Sleep modes and from .5 to 2 for Continuous Flow Mode*

5.2 SIMPLYFLO ALARM INDICATORS AND SCREEN SYMBOLS

VISUAL, AUDIO INDICATORS	DESCRIPTION	WHAT TO DO
 A sequence of 3 long beeps + 1 short beep that repeats every 4 seconds	**Low Oxygen Concentration Alarm** This alarm occurs when the device is delivering a lower concentration of oxygen than specified.This alarm can be silenced by pressing the Silence button. Note: This alarm occurs when the internal O2 sensor reads <82% O2.This alarm will turn off if the system is able to recover from the fault and achieve >84% O2.	Change to another source of oxygen and contact your home care provider.
 A sequence of 3 short beeps + 3 long beeps that repeats every 4 seconds.	**Technical Fault Alarm** This alarm occurs when the device has a general malfunction and the device is no longer operating properly. The device may or may not shut down depending on the severity of the alarm. This alarm can be silenced if the  symbol appears on-screen. If not, the user must turn off the power to silence the alarm.	If this alarm occurs again, change to another source of oxygen and contact your home care provider.
 A sequence of 3 long beeps + 1 short beep that repeats every 4 seconds.	**No Flow Alarm** This alarm occurs when the device detects there is no oxygen flowing in the patient cannula.This alarm can be silenced by pressing the Silence button.	Check the cannula for kinks or other obstructions that are stopping oxygen flow through it.

VISUAL, AUDIO INDICATORS	DESCRIPTION	WHAT TO DO
	**Alarm Symbol** This symbol appears when an event occurs that generates an audible alarm.	Refer to the associated alarm indicator also being displayed.
	**Alarm Silenced Symbol** This symbol appears when you have pressed the alarm silence button on the control panel to silence an audible alarm.	Refer to the associated alarm indicator also being displayed
	**Attention** This symbol appears when corrective action is required.	Ensure that the intake and exhaust vents are not blocked. Allow the device to warm up. If the alarm continues, contact your home care provider.
 1st press of the Power button = 1 beep 2nd press of the Power button = 3 beeps	**On/Off Symbol** This symbol appears when the device is powered on, or is ready to be turned on or off.	Press the Power button to turn the device on or off. **Note**: To prevent inadvertent starts and stops, the device requires two presses of the Power button to turn it on and off.
2.0 1 short beep	**Flow Control Setting** The large number on the right side of the screen shows the oxygen flow setting. (In this example, it is 2.) This number can range from .5 to 2 for Continuous Flow.	**If this is your flow setting, no action is needed.** **If this is not your flow setting**, press the + button to increase this number or press the – button to decrease this number.

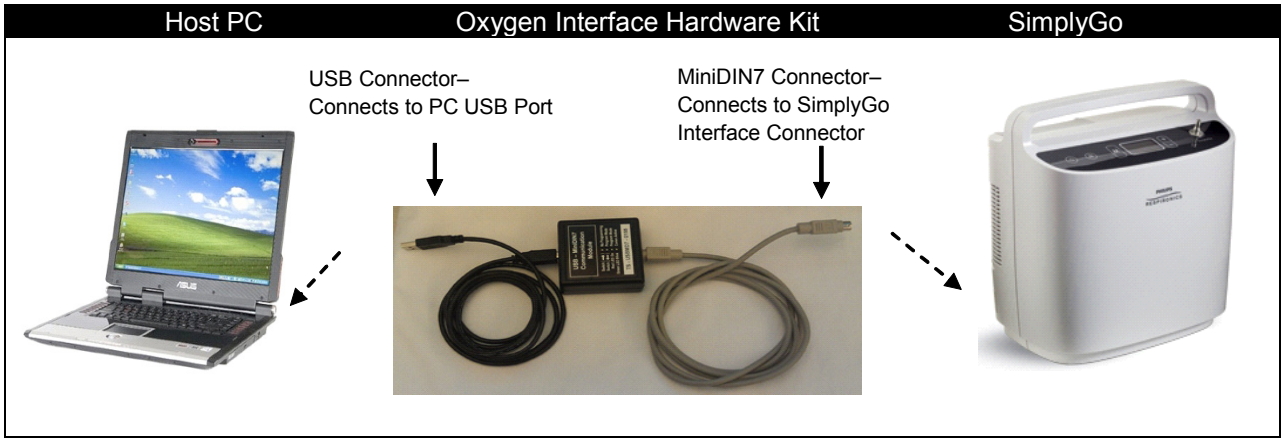
VISUAL, AUDIO INDICATORS	DESCRIPTION	WHAT TO DO
Constant audible alarm	**Loss of Power alarm** The SimplyFlo will sound a constant audible alarm if the device detects it has lost sufficient power to operate properly.	Verify that the device is plugged into an appropriate external power source. On the SimplyFlo AC power supply, verify that the green LED is illuminated. If the device has in fact lost power, the alarm can be silenced by tilting the device 90 degrees to the left or right. If power cannot be restored to the device, change to another source of oxygen and contact your home care provider.

5.3 SIMPLYGO/SIMPLYFLO DATA RECOVERY TOOL AND MANIFEST FILE

This Software is designed to recover and view events from the SimplyGo and SimplyFlo devices and also provide “real-time” viewing of certain system parameters during operation. The Tool is to be used for system monitoring and troubleshooting, if required. Readings displayed by the indicators in the real time viewer shall not be used for measurements or readings required for final testing of the SimplyGo/SimplyFlo.

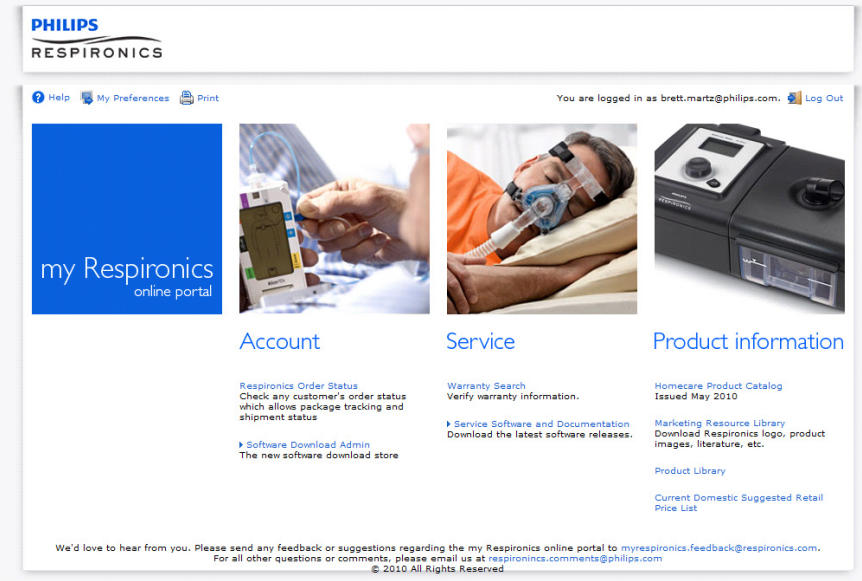
5.3.1 COMPUTER SYSTEM & EQUIPMENT REQUIREMENTS

- Computer with Microsoft Windows 7 (32/64 bit) or XP (32 bit) operating systems only.
- Oxygen Interface Hardware Kit, Respironics Part Number 1073499, includes the following:
  - 1 ea. USB-MiniDIN7 Communication Module
  - 1 ea. USB Interface Cable
  - 1 ea. MiniDIN Interface Cable

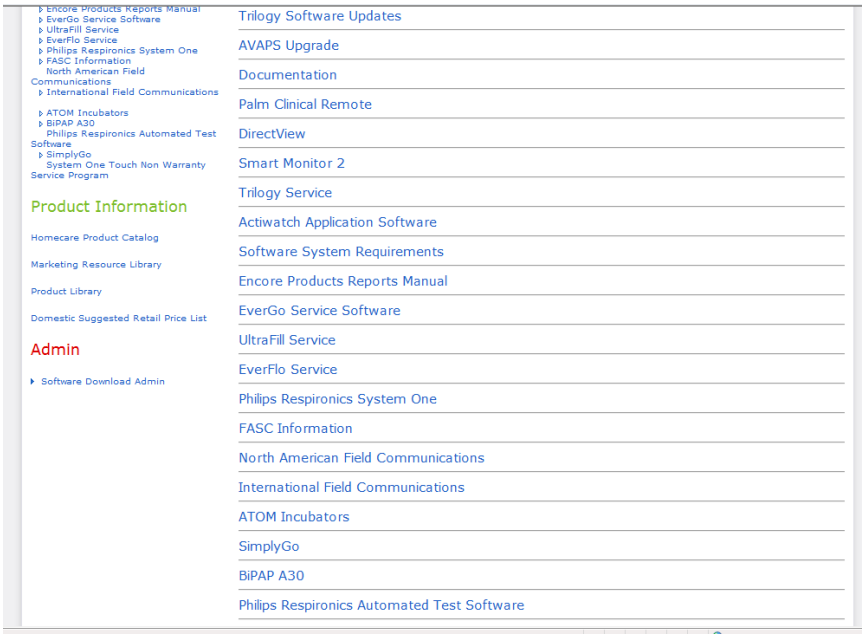


5.3.2 SOFTWARE INSTALLATION

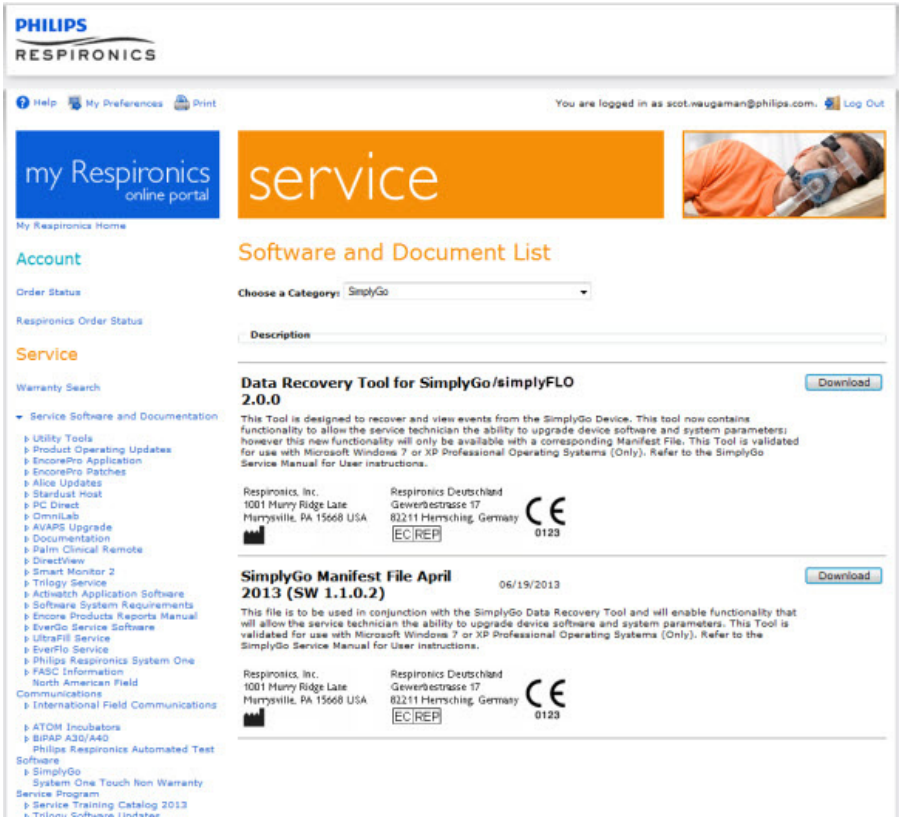
1. Log into http://my.respironics.com.
2. Click on the Service Software and Documentation link.



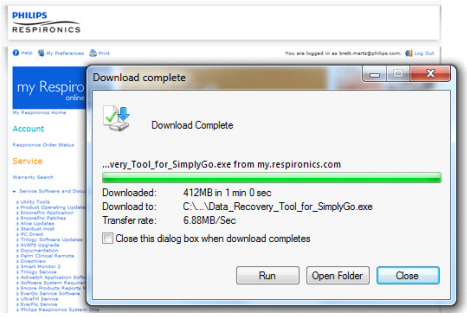
3. In the menu below, select SimplyGo/SimplyFlo.



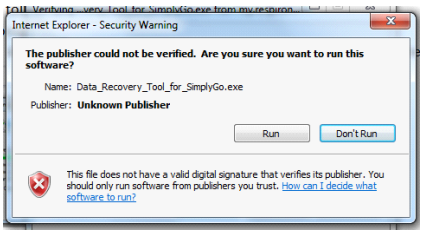
4. Click on the Download button for SimplyGo/SimplyFlo Data Recovery Tool.



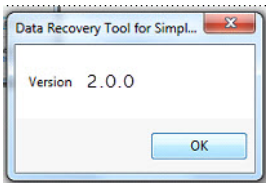
5. When the following prompt appears select the *Save* Button.
6. Save the program to the location of your choice on your PC.
7. When the download is complete the following prompt will appear. Select the *Run* button.



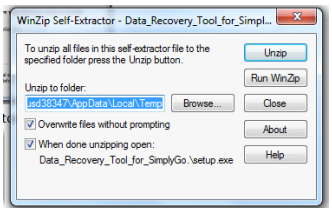
8. If the following screen appears select the *Run* button.



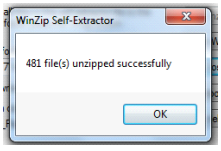
9. Select the Ok button.



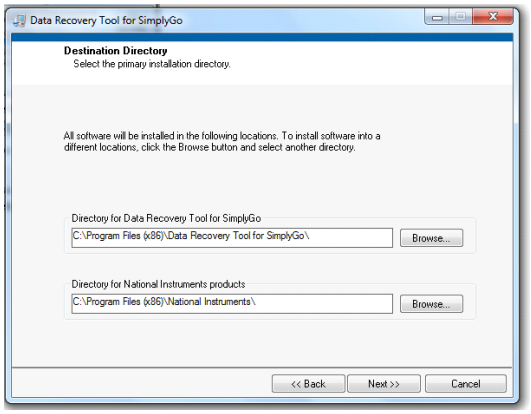
10. When prompted select the Unzip button.



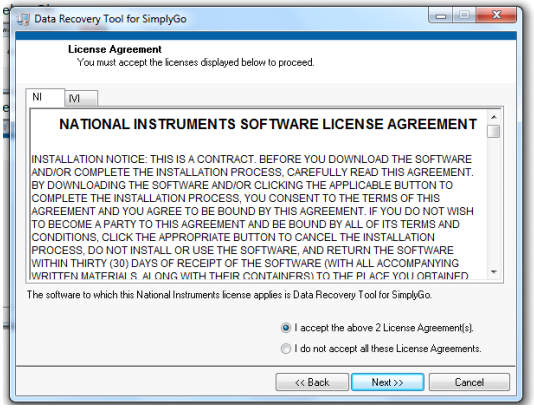
11. Select Ok.



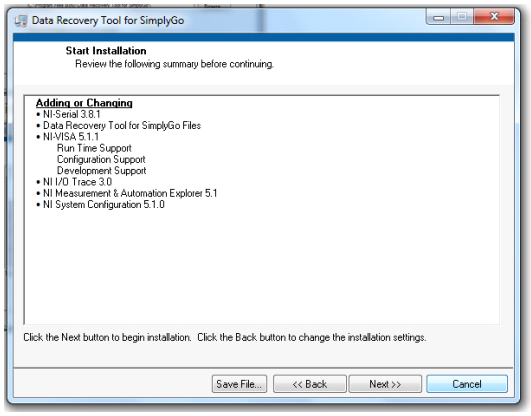
12. Select the Next button.



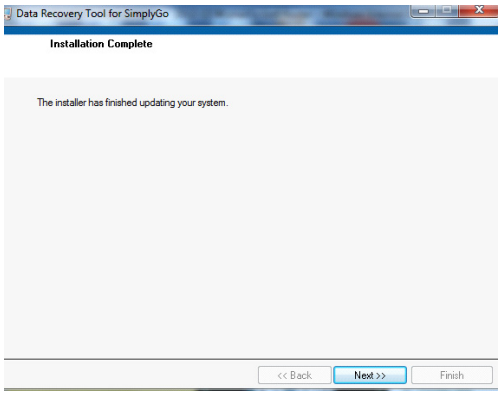
13. Click the “I Accept button”, then click Next.



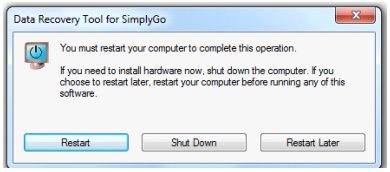
14. The following screen will appear, click Next.



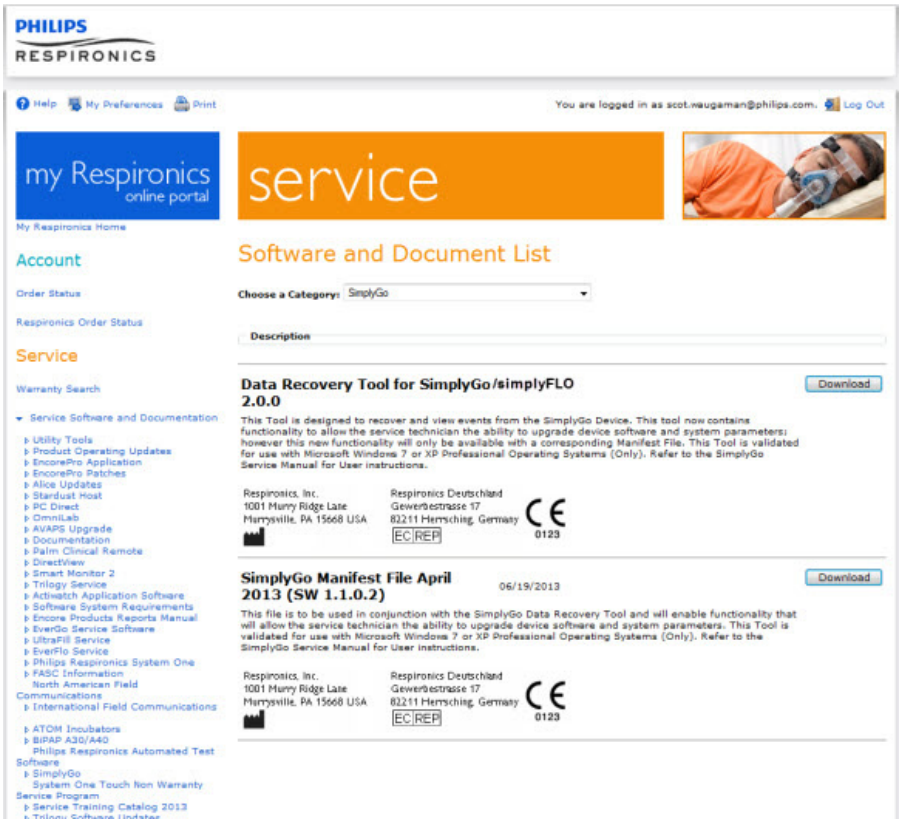
15. The following prompt will appear, select the Next button.



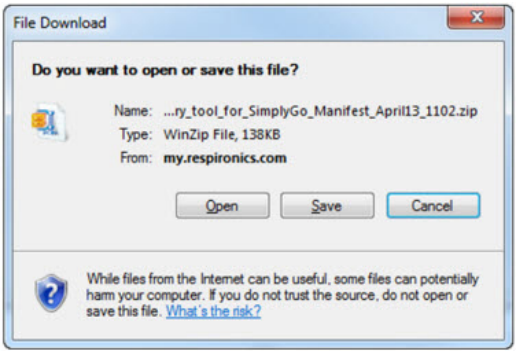
16. You will then receive the following prompt, Select Restart Later.



17. Click on the Download button for SimplyGo/SimplyFlo Manifest File.



18. Select *Open*.



19. Ensure that the files are unzipped to the same destination folder as the SimplyGo/SimplyFlo Data Recover Tool was installed to. The devault file location is C:\Program Files (x86)\Data Recovery Tool for SimplyGo\
20. Restart the PC.

21. After the system is restarted, click on the following Icon, located on the Desktop, to properly install the FTDI drivers.

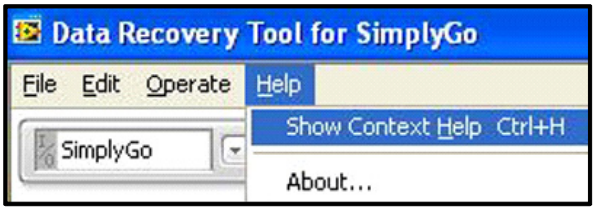
22. Double Click the icon on your desktop to open.

5.3.3 COMMUNICATION PORT SETTINGS

1. Once the Communication Port has been assigned/ established to communicate with the SimplyGo, locate the My Computer Icon either on the computer Desktop, or through Windows start menu.
2. Using the mouse, right “click” on My Computer and select Properties.
3. Select the Hardware tab and then the Device Manager button.
4. Select the Ports drop down arrow, locate and right “click” the USB serial port, and select Properties.
5. Select the Port Settings tab and then select the Advanced button.
6. Locate and select the Latency Timer drop down arrow and select a setting of 2.
7. Select the Ok button when applicable while closing all windows.
8. In the Data Recovery Tool communication port window, select the drop down arrow and select Refresh. This concludes adjusting the Port setting.

5.3.4 CONTEXT HELP

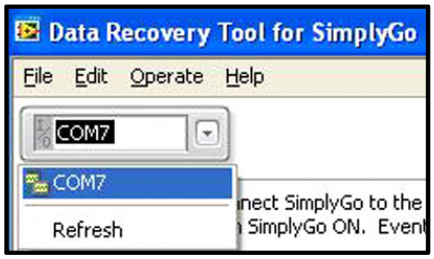
The SimplyGo/SimplyFlo Data Recovery Tool application is designed with a Context Help function to describe specific features throughout the Tool. When the application has been launched, Context Help can be accessed by either selecting Help at the tool bar header or selecting (Ctrl+H) on the keyboard. When the mouse cursor hovers or idles over a feature, a description is populated in the Context Help display window.



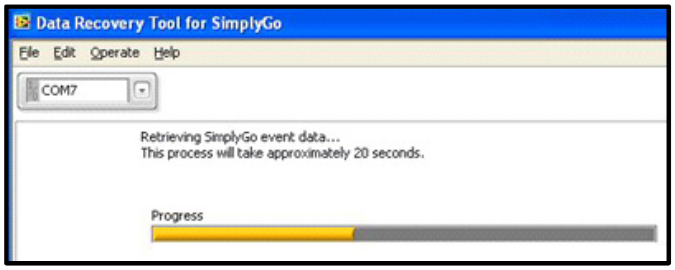
5.3.5 PROCEDURE FOR USE

1. Start the application by selecting the SimplyGo Data Recovery Tool Icon on the computer Desktop or from the computer All Programs list.
2. Connect the USB Interface Cable, provided in the Oxygen Interface Hardware Kit, between the Communication Module and the Computer USB port.
3. Connect the MiniDIN Interface Cable, provided in the Hardware Kit, to the Communication Module.
4. Select the communication port drop down arrow on the Data Recovery Tool Software window and select Refresh.

5. Once again select the drop down arrow and select the COM port which was just populated.

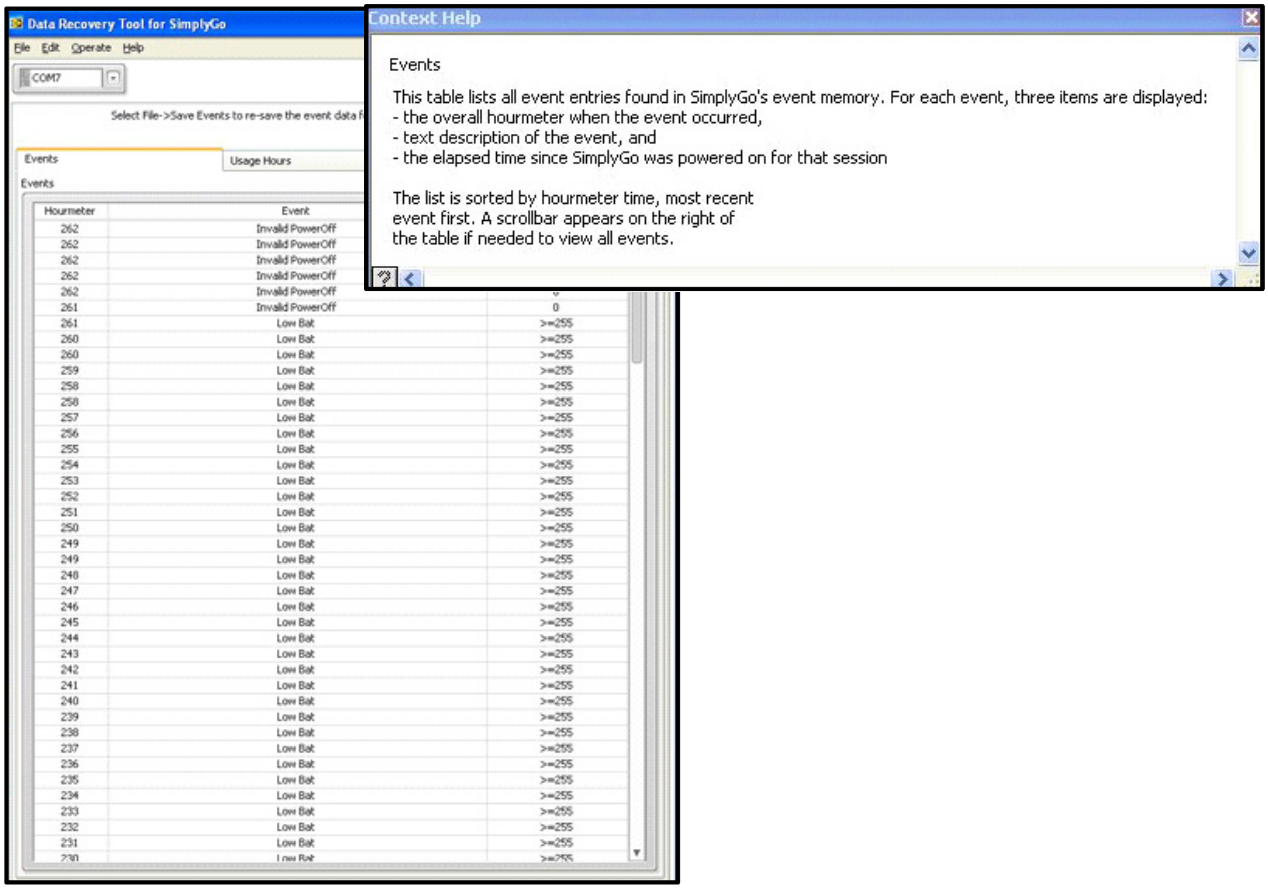


6. This is the communication port that the Computer has assigned to communicate with the SimplyGo or SimplyFlo. Refer to the Communication Port Settings, if you are using the assigned port for the first time.
7. Remove the SimplyGo/SimplyFlo Communication Cover from the rear of the device to access the miniDIN connector.
8. Align and carefully connect the miniDIN Interface Cable connector to the SimplyGo/SimplyFlo connector.
9. If connected to a SimplyGo, verify a charged battery is inserted in the SimplyGo, or a known good battery with the SimplyGo Power Supply connected between the SimplyGo and a specified AC power source. If connected to a SimplyFlo, connect the SimplyFlo to an AC power source.
10. Turn on the SimplyGo/SimplyFlo.
11. The Software will automatically begin recovering the Event data from the SimplyGo/SimplyFlo.



12. The Event data will then be displayed and a (Save as) display window will also appear. If desired, the event data can be saved at this point or can be saved by selecting the File menu from the Tool bar header at any point after closing the (Save as) window as long as the device is not turned off

and the application is still running. The following is an illustration of the Events page and the Context Help description of the features on the page:



13.The Software tool provides two additional pages: Usage Hours, and Real time, which can be viewed by selecting the appropriate tabs.

- The Usage Hours displays information on how the device was being used by listed settings charted during Day and Night Modes. The following is an Illustration of the Usage Hours page with the Context Help description of the Day Mode table:

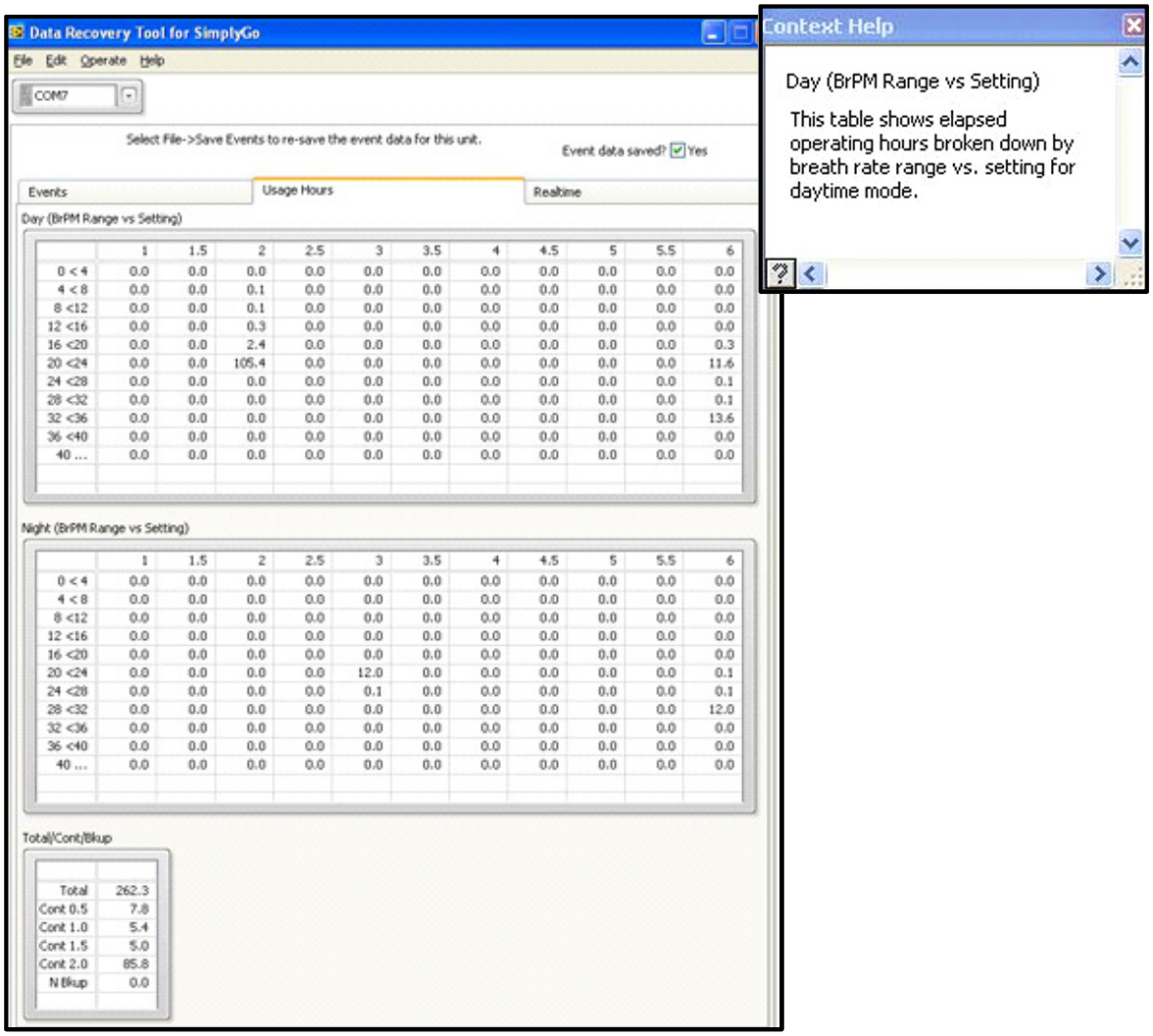


FIGURE 5-1: USAGE HOURS

- The Real time page provides the opportunity to monitor system parameters while the SimplyGo/ SimplyFlo is in operation.
- The alarm indicators shown while viewing this screen are only for CURRENT conditions, while the event table shows past alarm conditions.
- Again use the Context Help function for a description of each Indicator. The following is an illustration of the Real time page and the Context Help description of the Pressure gauge:

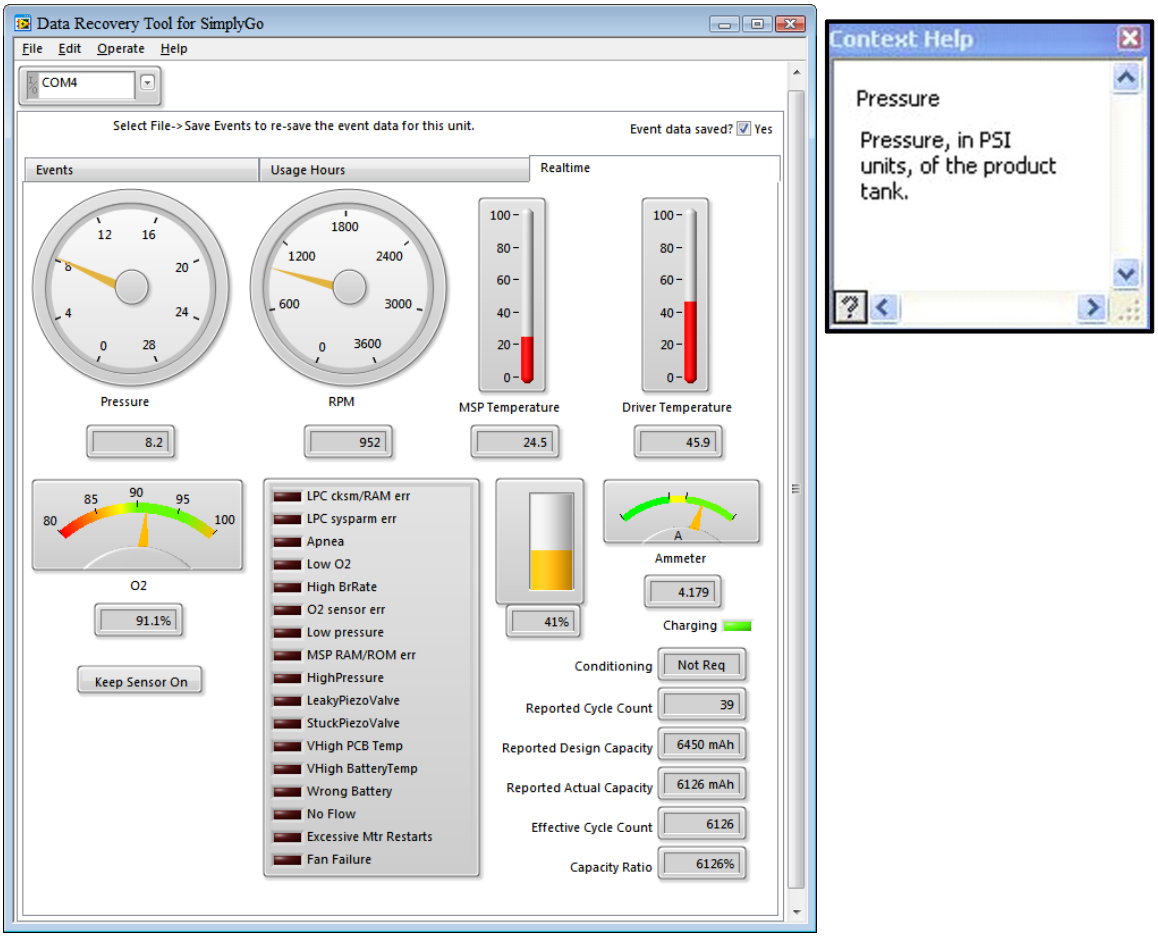


FIGURE 5-2: REAL TIME

5.3.6 SIMPLYGO/SIMPLYFLO TROUBLESHOOTING

PROBLEM / EVENT CODE	POSSIBLE CAUSE	RECOMMENDED ACTIONS
Device Won't Turn On	• *SimplyGo Battery is depleted*	• *Use the AC or DC power cords to operate the device (with the battery inserted) to recharge the battery.*
	• *SimplyGo Battery is not installed correctly.*	• *Remove the battery and re-install it correctly.*
	• *Power button not pressed twice*	• *Press the power button twice.*
SimplyGo Will Not Trigger A Pulse Of Oxygen	• *SimplyGo is not turned on.*	• *Press the power button twice.*
	• *Cannula tubing is kinked or twisted.*	• *Make sure the tubing is connected properly to the oxygen outlet port and that it is free of any obstruction.*
Oxygen Not At Full Concentration	• *Device is warming up*	• *Wait 10 minutes for the device to deliver oxygen at the prescribed concentration.*
Low O2 Concentration	• *Leaks* • *Air Inlet Filter* • *Faulty Compressor* • *Defective process valves* • *Faulty Sieve Canister*	• *Check the spine using snoop leak detector and replace if necessary.* • *Ensure all tubing is properly connected.* • *Remove Inlet Filter, operate device. If concentration increases replace filter.* • *Verify and Replace the compressor* • *Check valve connections or replace the defective valve* • *Replace both sieve canisters if needed.*
SimplyGo High Breath Rate Exceeded	• *User caused event*	• *Normal event - no action necessary*
Low O2 Sensor failure	• *Main PCA*	• *Replace the Main PCA*
Low Pressure failure	• *Leak and tubing connections,* • *Compressor sieve canister connections* • *Spine leaks* • *Faulty Product Tank*	• *Using Real time data with a setting of Pulse 1 in Demo mode, check the pressure to ensure it is above 4.* • *Check compressor RPM and abnormal compressor noise.* • *Using snoop leak detector check for leaks in the spine.* • *Replace Product Tank*
Hard Inter processor packet transmission Hardware failure	• *Main PCA*	• *Replace the Main PCA*
RAM Hardware failure at power on	• *Main PCA*	• *Replace the Main PCA*

PROBLEM / EVENT CODE	POSSIBLE CAUSE	RECOMMENDED ACTIONS
ROM Hardware failure at power on	• *Main PCA*	• *Replace the Main PCA*
System parameter Hardware failure at power on	• *Main PCA*	• *Replace the Main PCA*
Motor re-start	• *Compressor*	• *Compressor and Main PCA*
SimplyGo Inhibit Battery Charging	• *High Temperature*	• *Allow the unit to cool off* • *Real Time temp Driver above 75° C* • *Battery Temp above 58° C*
SimplyGo Re-enable Battery Charging	• *The unit charges the battery*	• *Allow the unit to cool to below 74° C and allow the battery to cool below 58° C*
High PCB temperature	• *High MSP Temp*	• *Confirm real time reading for the temperature.* • *Restricted air flow* • *Check fan*
SimplyGo High Battery Temperature	• *High ambient Temperature or defective battery*	• *Replace the battery if defective.* • *Allow the unit to cool off below 58° C*
SimplyGo Low Battery Declared	• *Unit was not plugged in to recharge*	• *Recharge the battery/ defective charger*
SimplyGo Battery Depleted Declared	• *Defective battery*	• *Replace the battery*
SimplyGo Power Off Due To Low Battery	• *Low power level*	• *Plug in the unit or defective battery*
SimplyGo Invalid power down	• *Unplugged from the wall AC*	• *Turn the unit off first then unplug the unit from AC Power.*
Watchdog Occurred	• *Unit will power off and start running when power is restored*	• *Timers need to reset* • *Invalid power off*
High O2 Sensor failure	• *Main PCA*	• *Replace the Main PCA*
Cooling Fan Failure	• *Fan connection or Fan Issue*	• *Check Fan Connections* • *Replace the fan*
Entered the backup state when in Night Time mode	• *No Breath detected*	• *Normal event*
No Flow (Kinked cannula) Alarm	• *Kinked Cannula* • *Kinked internal tubing*	• *Straighten the Cannula* • *Replace internal tubing as needed*
Delivery Valve Leak Failure	• *Bad Delivery Valve*	• *Replace the Delivery Valve*
Delivery Valve Stuck Failure	• *Bad Delivery Valve*	• *Replace the Delivery Valve*

PROBLEM / EVENT CODE	POSSIBLE CAUSE	RECOMMENDED ACTIONS
High Pressure failure	• *Check for kinked tubing* • *Check Patient Filter for obstructions* • *Main PCA*	• *Use Real time data and confirm Event Code* • *Remove Obstructions, replace Patient Filter* • *Replace Main PCA*
Excessive Number of Motor Restarts Failure	• *Compressor* • *Wire connections to the Hall effect sensor*	• *Check the connections* • *Replace the compressor*
Power Off Due To No Breathing for 30 minutes in Day Time mode	• *Power off*	• *Normal event*
Power Off Due To a Technical Failure	• *Main PCA* • *Valves* • *Fan*	• *Replace the Main PCA* • *Check wire connections*

This page intentionally blank.

CHAPTER 6: MAINTENANCE

6.0 CHAPTER OVERVIEW

This section describes scheduled and routine maintenance procedures. Normal routine maintenance involves periodic checking, cleaning, and or replacing the following items as necessary:

- Cabinet cleaning
- LPM flow setting to the prescribed level
- Oxygen concentration level

6.1 CABINET

Commensurate with hospital or homecare policies, Respironics recommends cleaning the cabinet and inspecting for damage as necessary.

WARNING

To avoid electrical shock, do not remove the SimplyGo and SimplyFlo covers. The covers should only be removed by authorized service personnel. Do not apply liquid directly to the covers. Do not use alcohol, solvents, polishes or any oily substances on the device, as they are flammable.

CAUTION

Do not allow liquids into any of the controls, the interior of the case, or the oxygen tubing connector. If this occurs, contact your home care provider for assistance.

The exterior cover of the device should be cleaned as needed:

1. Turn the device off and disconnect from the power source before cleaning.
2. Clean the device exterior using a damp cloth with a mild household cleaner and wipe it dry. Or, if you use medical disinfectants, be sure to follow the manufacturer's instructions. For disinfection, Philips Respironics recommends the following:

   - Discide Ultra Towelettes: Manufacture - Palmero, www.palmerohealth.com (or equivalent)

6.2 FLOW SETTING

Commensurate with hospital or homecare policies, Respironics recommends verifying the patient flow setting as necessary. Refer to the Testing section for more detailed instructions on how to check the flow setting.

6.3 OXYGEN CONCENTRATION VERIFICATION

Commensurate with hospital or homecare policies, Respironics recommends verifying the oxygen concentration level per homecare provider's policy. Refer to the Testing section for more detailed instructions on how to check the oxygen concentration level.

6.4 COMPRESSOR

Respironics does not require routine maintenance SimplyGo or SimplyFlo Oxygen Concentrator compressor.

6.5 SIMPLYGO/SIMPLYFLO OXYGEN CONCENTRATOR MAINTENANCE RECORD

MODEL NUMBER	SERIAL NUMBER

DATE PURCHASED

DATE/HOURS/LPM *(Record at Each Check)*	OXYGEN CONCENTRATION *(Check Level)*

CABINET *(Clean and Inspect as Necessary)*	FLOW SETTING *(Check Setting)*

This page intentionally blank.

CHAPTER 7: REPAIR & REPLACEMENT

7.0 CHAPTER OVERVIEW

This chapter illustrates the replacement procedures for each of the available Repair Kits for the SimplyGo Portable Oxygen Concentrator and SimplyFlo Transportable Oxygen Concentrator.

For technical assistance or replacement part ordering information, contact Respironics Product Support.

USA and Canada

Phone: 1-800-345-6443

Fax: 1-800-866-0245

International

Phone: 1-724-387-4000

Fax: 1-724-387-5012

Visit Philips Respironics Home Page on the World Wide Web at:

www.philips.com

NOTE

When removing the spine assembly from the Front and Rear Enclosures, the Front Enclosure can be used to seat the spine assembly while performing replacement activities for parts assembled to the spine assembly.

7.1 MAIN PCA CONNECTIONS LOCATIONS

Use the pictures below to help identify the connections that need removed or installed during each replacement section. For clarity purposes all connections and assemblies have been removed from the Main PCA.

For SimplyFlo Main PCA, omit connections J1, J3, and J17.

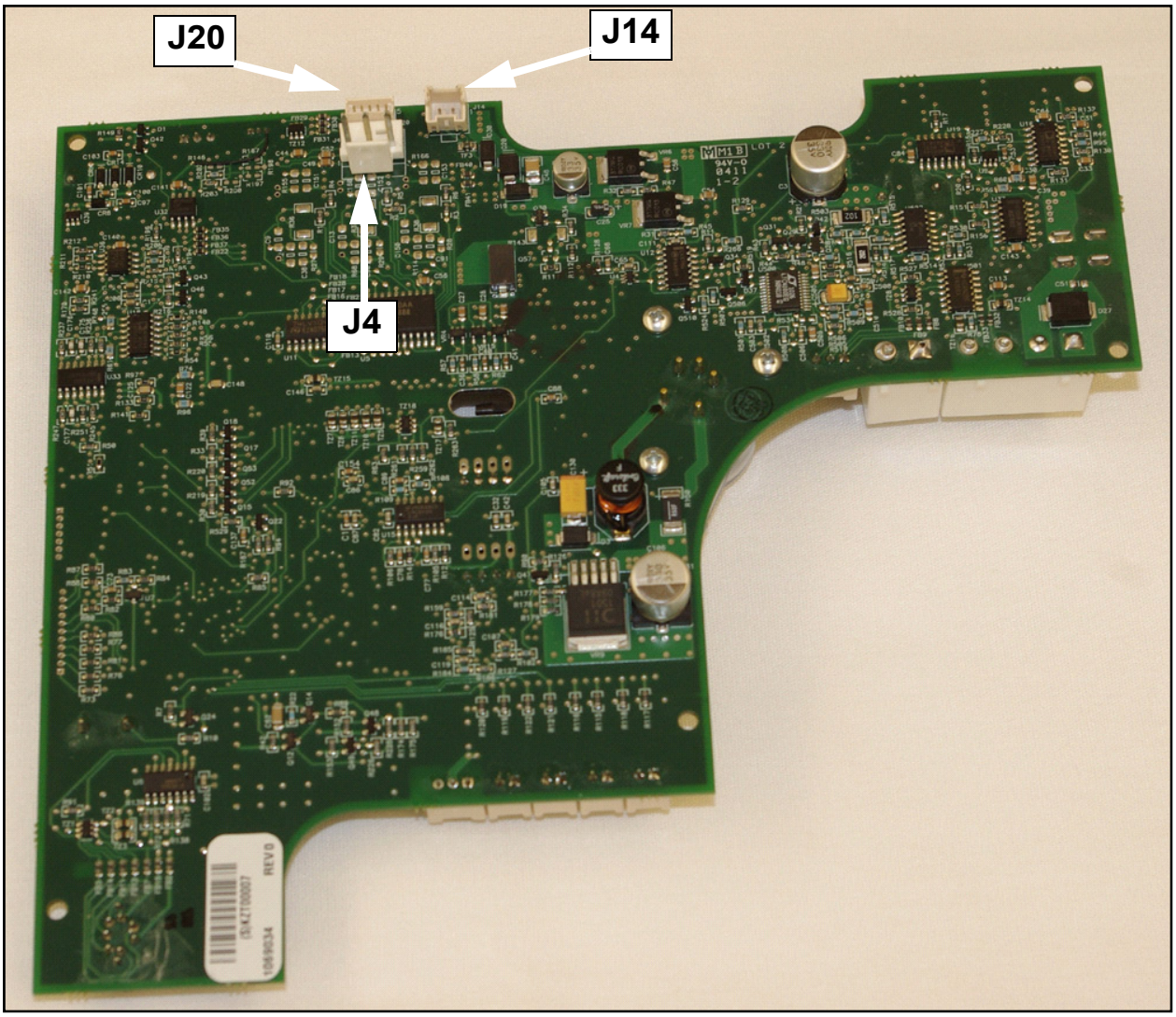


FIGURE 7-1REAR SIDE CONNECTIONS

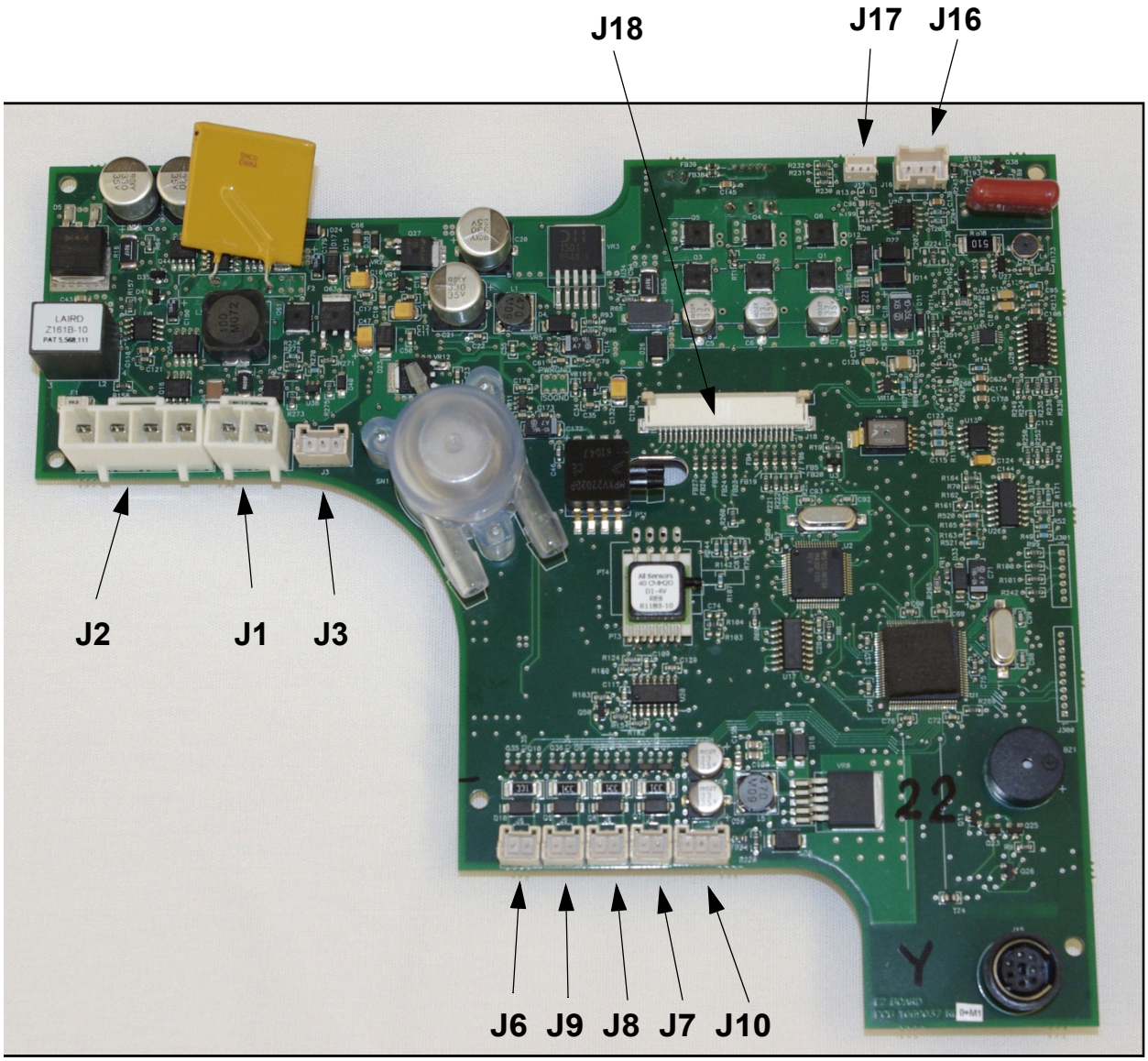
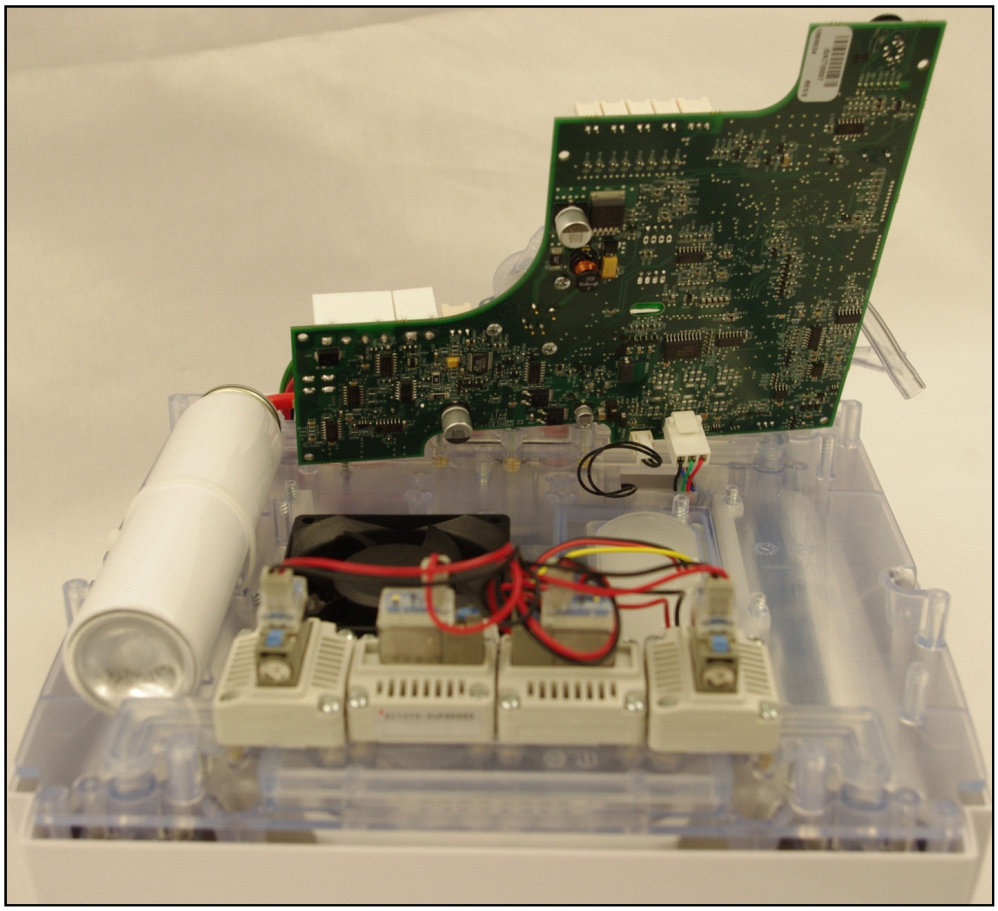


FIGURE 7-2: FRONT SIDE MAIN PCA CONNECTIONS

NOTE

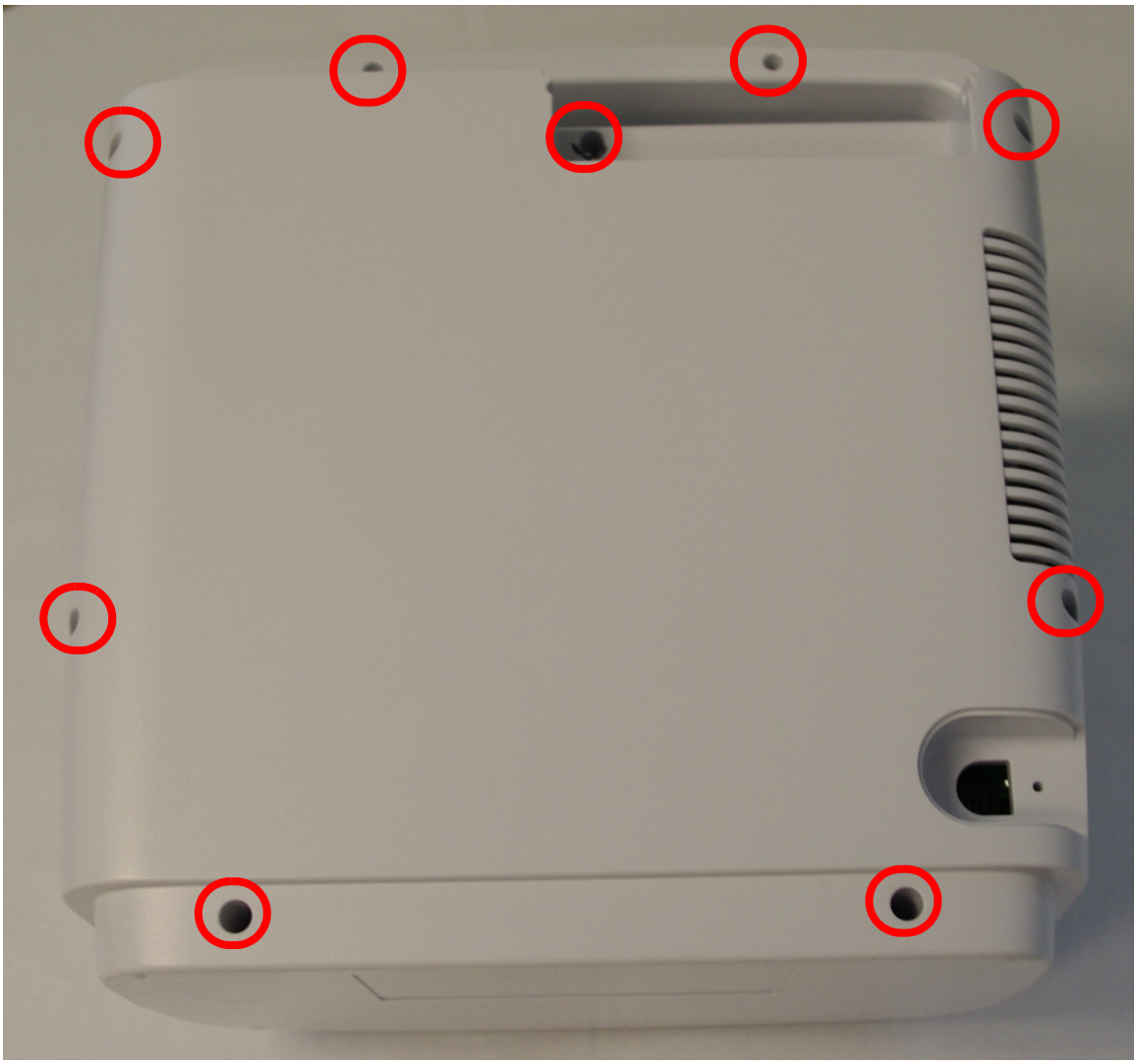
When it is required to disconnect the Compressor or Balance Valve connections, it is recommended that you partially remove the Main PCA to access the connections to avoid any damage that may occur when removing and reinstalling them from the compressor side of the device.



7.2 REAR ENCLOSURE REPLACEMENT

Removal:

1. For SimplyGo, remove the Battery if inserted.
2. Remove the nine screws securing the Rear Enclosure to the Spine Assembly.



3. Adjust the device so the handle is facing you and the battery compartment is facing up.
4. Gently separate the Rear Enclosure from the front enclosure. For SimplyGo, you will expose the battery wire harnesses.
5. For SimplyGo, disconnect the Battery Wire Harness from J1 and J3 on the Main PCA.

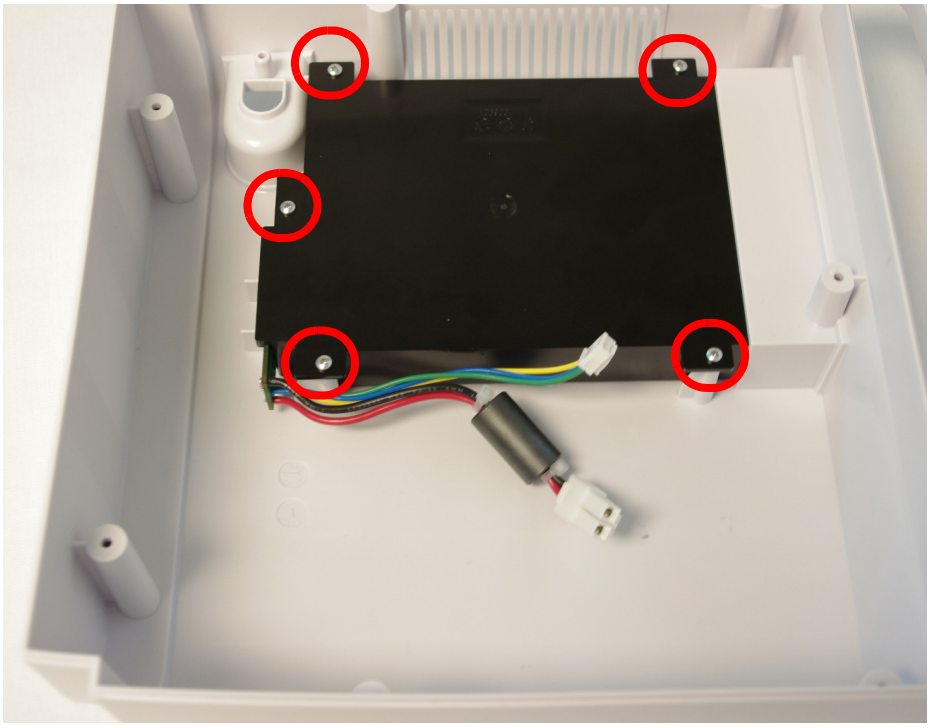
Installation: (for item identification, refer to removal instructions above)

1. For SimplyGo, connect the Battery Wire Harness to J1 and J3 on the Main PCA.
2. Carefully press the Rear Enclosure to the Front Enclosure. Ensure you do not kink any tubing or pinch any wiring.
3. Secure the Rear Enclosure with the nine screws.

7.3 SIMPLYGO BATTERY CONNECTION PCA/ BATTERY ENCLOSURE REPLACEMENT

Removal:

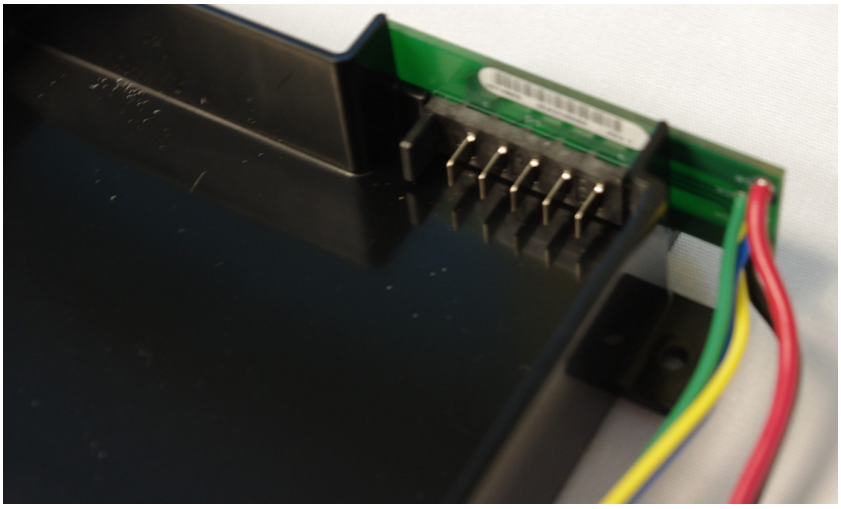
1. Remove the Rear Enclosure.
2. Remove the 5 screws securing the Battery Enclosure to the Rear Enclosure.



3. Remove the Battery PCA from the Battery Enclosure.

Installation: (for item identification, refer to removal instructions above)

1. Place the Battery Connection PCA into the Battery Enclosure.

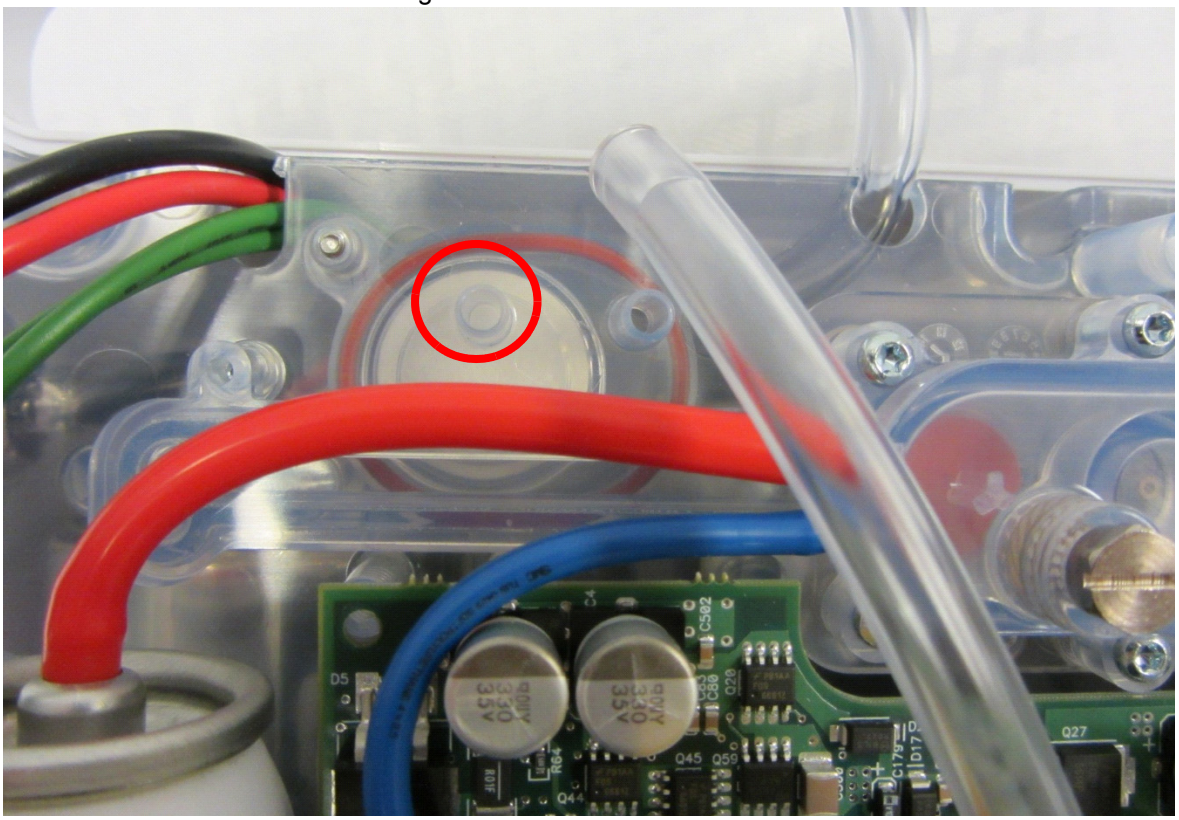


2. Connect the Battery Enclosure to the Rear Enclosure by tightening the 5 screws.
3. Install the Rear Enclosure.

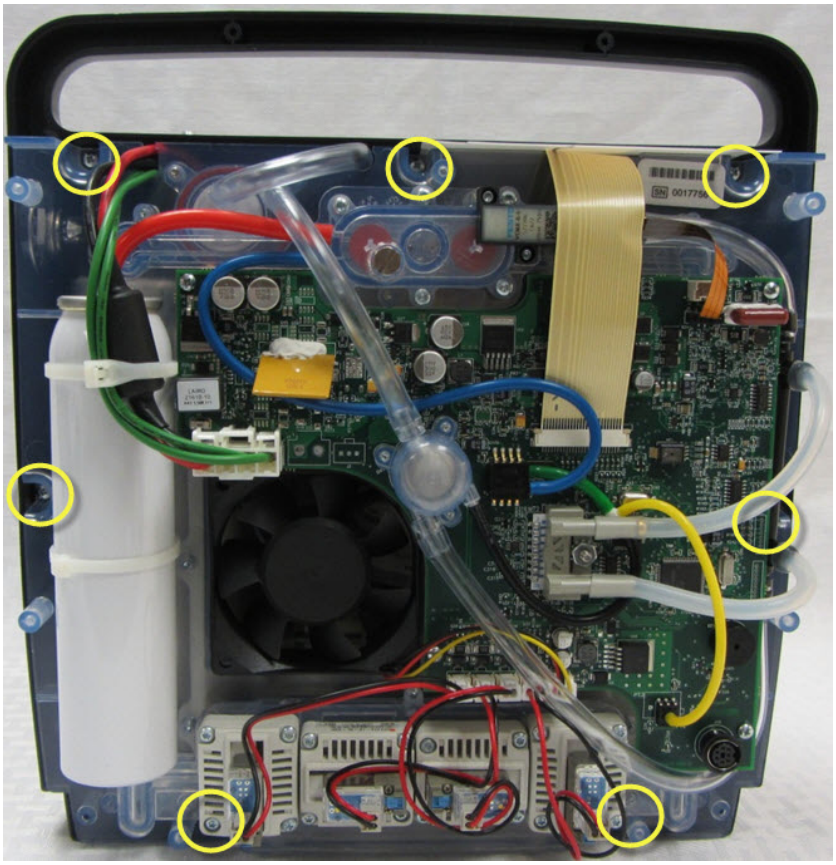
7.4 FRONT ENCLOSURE REPLACEMENT

Removal:

1. Remove the Rear Enclosure.
2. Remove the Anti-Satic Shield.
3. Remove the Power Harness from J2 on Main PCA.
4. Push open the locking tab and disconnect the display ribbon cable from J18 on the Main PCA.
5. Remove Patient Outlet tubing from Patient Filter.



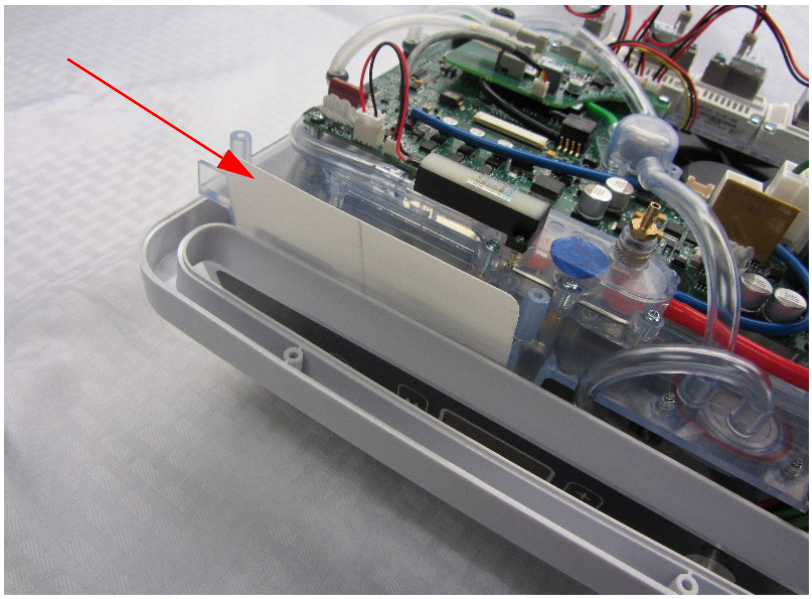
6. Remove the 7 screws securing the Spine Assembly to the Front Enclosure and remove the Front Enclosure.



Installation: (for item identification, refer to removal instructions above)

1. Connect the Front Enclosure to the spine assembly by tightening the 7 screws to 6 in.-lbs.
2. Connect the Patient Outlet Tubing to the Patient Filter.
3. Connect the display ribbon cable to J18 on the Main PCA.
4. Connect the Power Harness to J2 on the Main PCA.

5. Install the Anti-Static Shield.

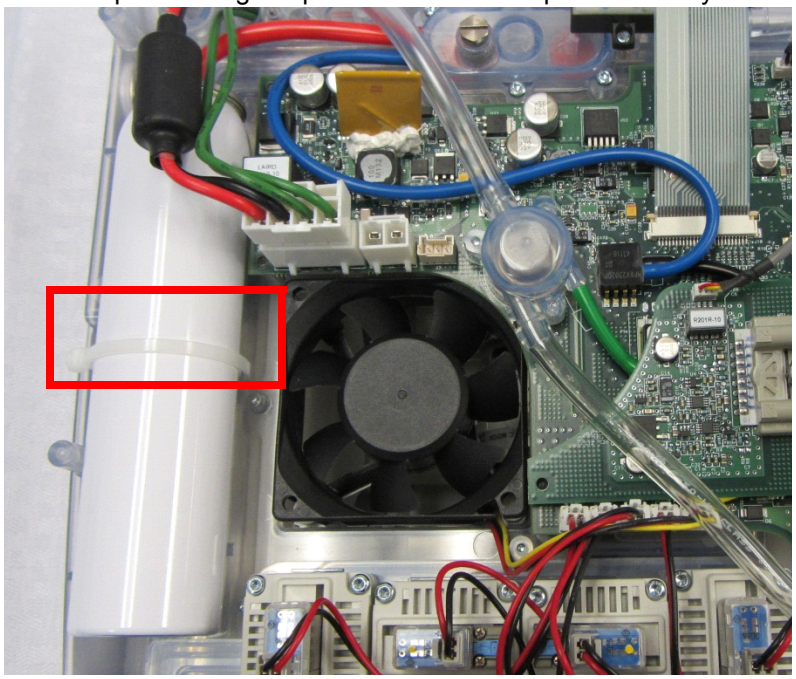


6. Install the Rear Enclosure.

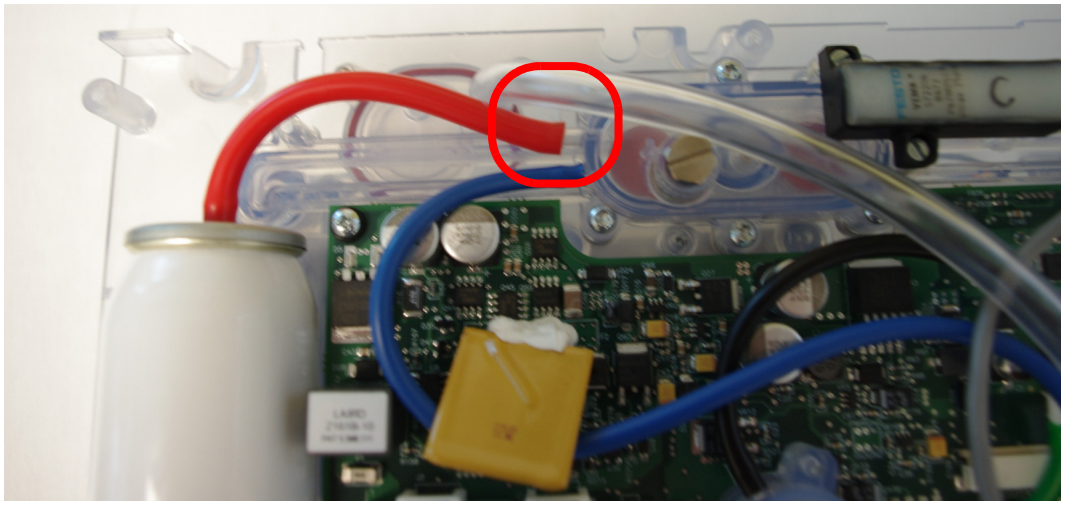
7.5 PRODUCT TANK REPLACEMENT

Removal:

1. Remove the Rear Enclosure.
2. Cut the two tie wraps securing the product tank to the spine assembly.

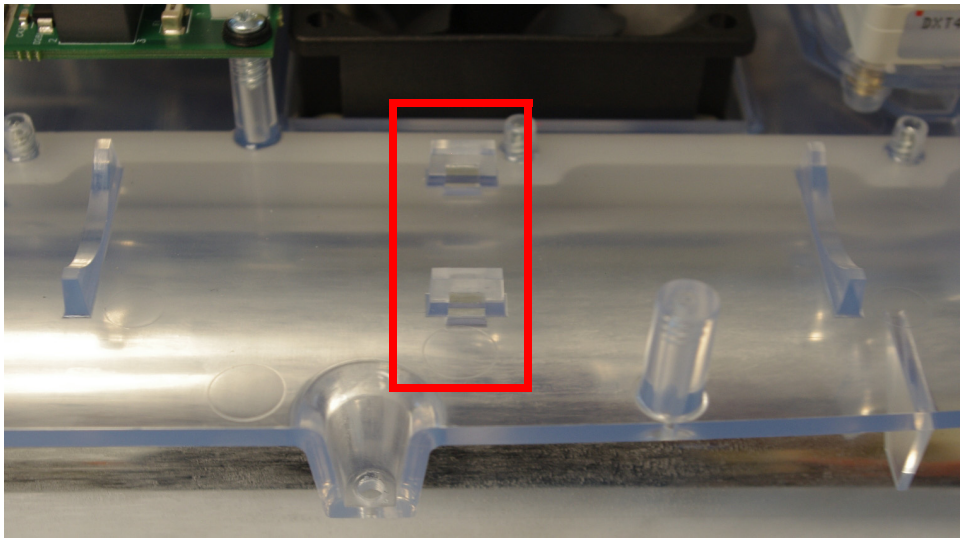


3. Disconnect the product tank tube from the Check Valve housing.



Installation: (for item identification, refer to removal instructions above)

1. Connect the product tank tube to the Check Valve housing.
2. Slide the tie wrap through the two slots on the spine assembly.



3. Place the Product Tank into the Spine assembly and tighten down with the tie wrap.
4. Secure the primary power wire to the product tank using the second tie wrap.
5. Install the Rear Enclosure.

7.6 EXHAUST VALVE/PRESSURE (FILL) VALVE REPLACEMENT

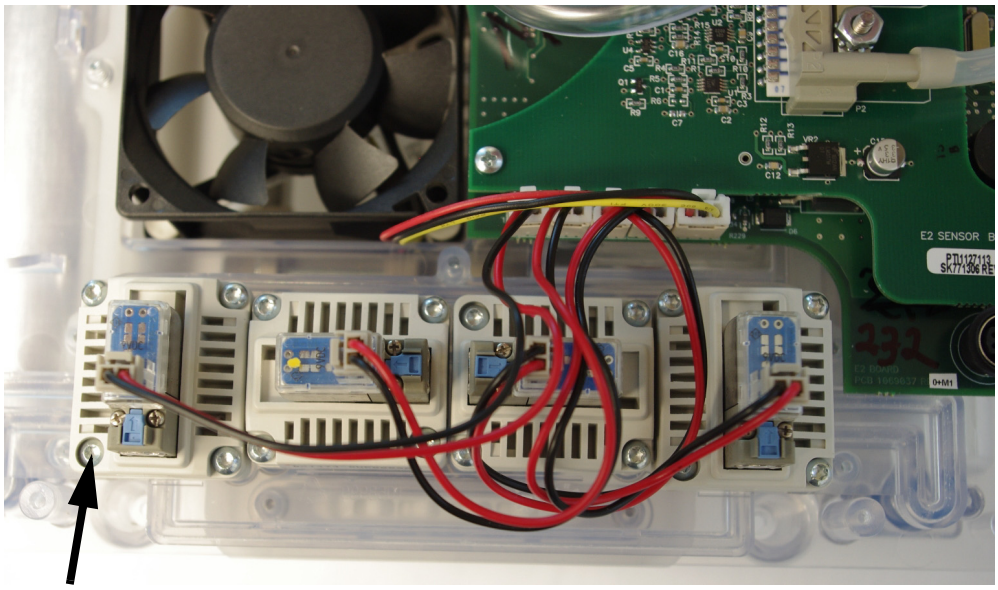
Removal:

1. Remove the Rear Enclosure.

NOTE

The Outer Valves are the Pressure (Fill) Valves and the inner valves are the Exhaust Valves (Marked w/ Yellow dot). Proper orientation of the valve is required.

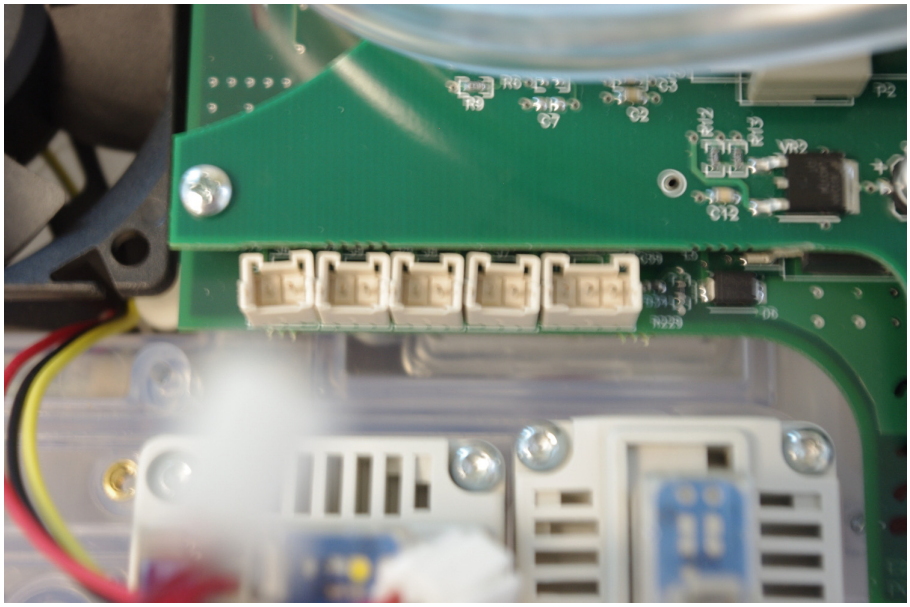
2. For Exhaust Valve (yellow dot) replacement, remove wire harness from location J9 or J8 on the Main PCA and for Pressure (Fill) Valve replacement, remove wire harness from location J6 and J7 on the Main PCA.



3. Remove the four T10 Torx screws securing the valve(s) to the spine assembly.

Installation: (for item identification, refer to removal instructions above)

1. Connect the Valve to the to the Spine Assembly by tightening the four Torx screws.
2. Connect the wire harness to the proper location on the Main PCA.

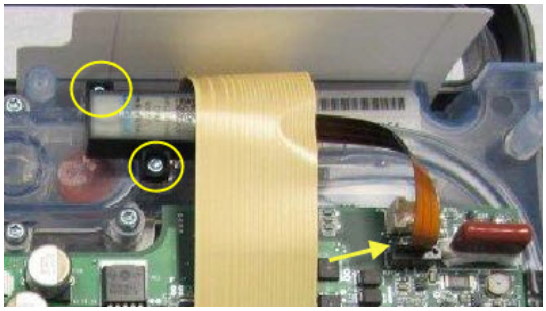


3. Install the Rear Enclosure.

7.7 PATIENT DELIVERY VALVE REPLACEMENT

Removal:

1. Remove the Rear Enclosure.
2. Disconnect the Patient Delivery Valve from J16 on the Main PCA.
3. Remove the two screws securing the Patient Delivery Valve to the Check Valve Assembly.



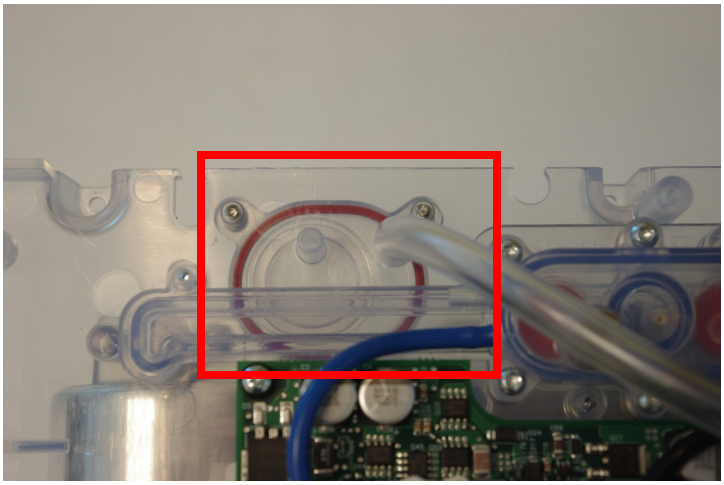
Installation: (for item identification, refer to removal instructions above)

1. Ensure that the two O-rings are installed on the bottom of the Patient Delivery Valve and secure the Patient Delivery Valve to the Check Valve Assembly using the two screws.
2. Connect the Patient Delivery Valve wire harness to J16 on the Main PCA.
3. Install the Rear Enclosure.

7.8 MAIN PCA ASSEMBLY REPLACEMENT

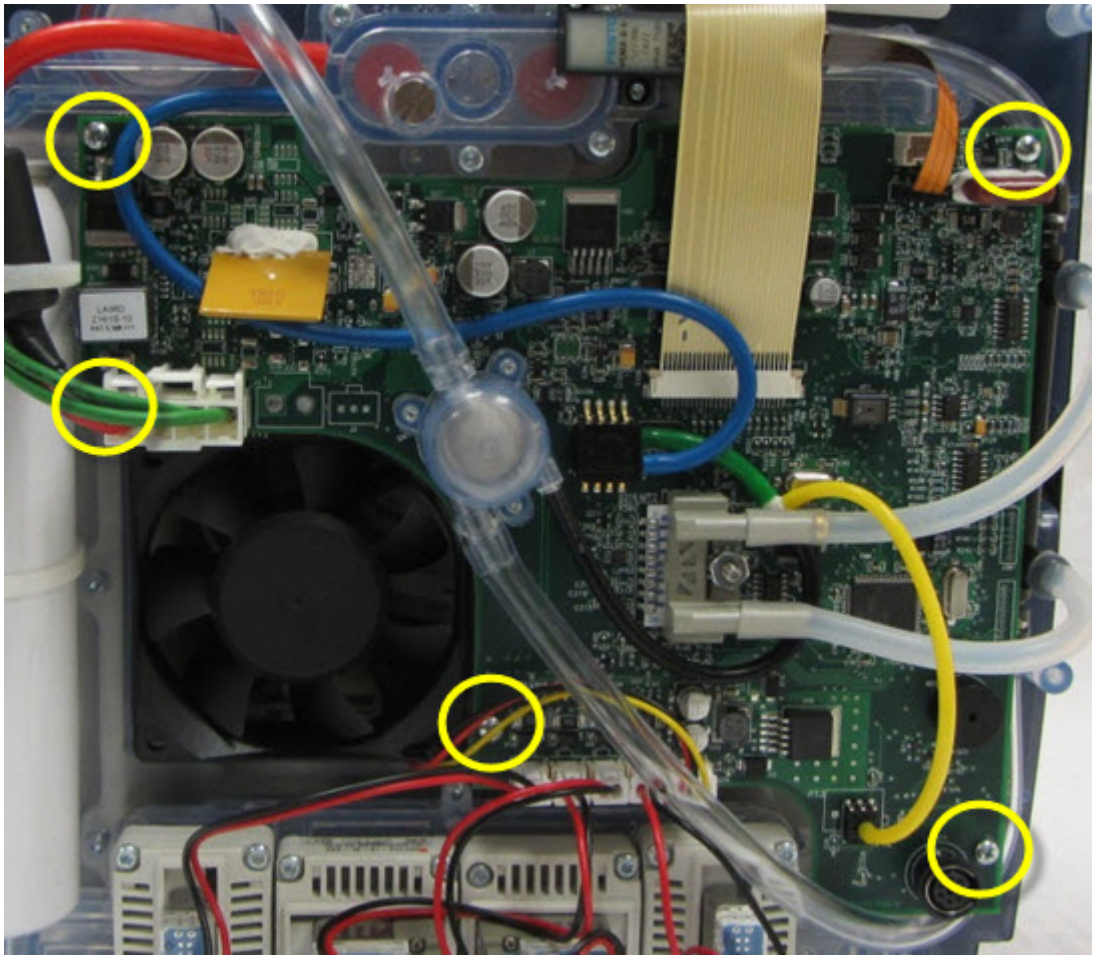
Removal:

1. Remove the Rear Enclosure.
2. Disconnect the pressure tubing from the Check Valve Assembly.
3. Disconnect the flow tubing from the Check Valve Assembly
4. Disconnect the patient outlet tubing from the Patient Filter Inlet Port.



5. Disconnect the Display Ribbon Cable from J18.
6. Disconnect the four valve wire harnesses from J6, J7, J8, J9 on the Main PCA.
7. Disconnect the Fan wire harness from J10 on the Main PCA.
8. Disconnect the Patient Deliver Valve From J16.

9. Remove the 5 philips screws securing the Main PCA Assembly to the spine assembly.



10. Disconnect the Sieve Bed Balance Valve from J14 on the Main PCA. This connection can be found on the rear side of the Main PCA.
11. Disconnect the Compressor wire harnesses from J20 and J4 on the Main PCA. These connections can be found on the rear side of the Main PCA.

Installation: (for item identification, refer to removal instructions above)

1. Connect the Compressor wire harnesses to J20 and J4 on the Main PCA. These connections are found on the rear of the Main PCA.
2. Connect the Sieve Bed Balance Valve to J14 on the Main PCA. This connection can be found on the rear side of the Main PCA.
3. Connect the Patient Delivery Valve Wire harness to J16 on the Main PCA.
4. Connect the Fan wire harness to J10 on the Main PCA.
5. Connect the four valve wire harnesses to J6, J7, J8, and J9 on the Main PCA.
6. Connect the flow tubing to the Check Valve Assembly.
7. Connect the pressure tubing to the Check Valve Assembly.
8. Connect the patient outlet tubing to the Patient Filter Inlet Port.
9. Connect the Display Ribbon Cable to PCA J18.
10. Install the Rear Enclosure.

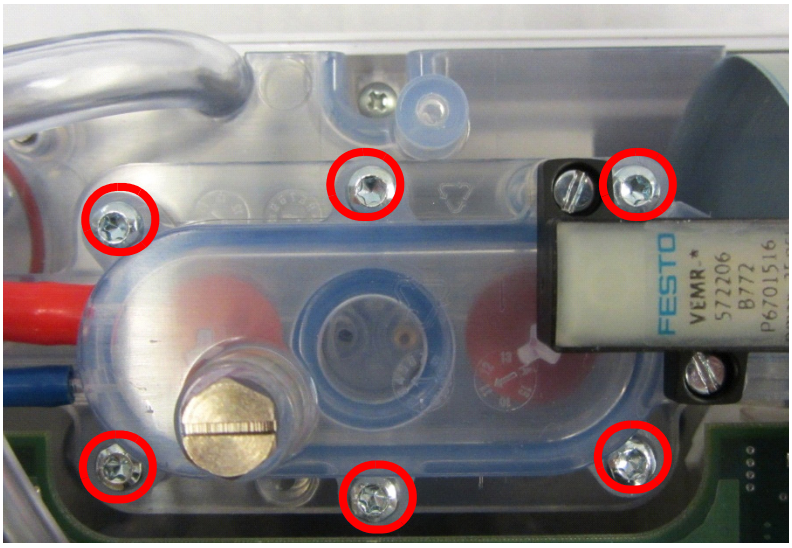
7.9 CHECK VALVE / GASKET REPLACEMENT

Removal:

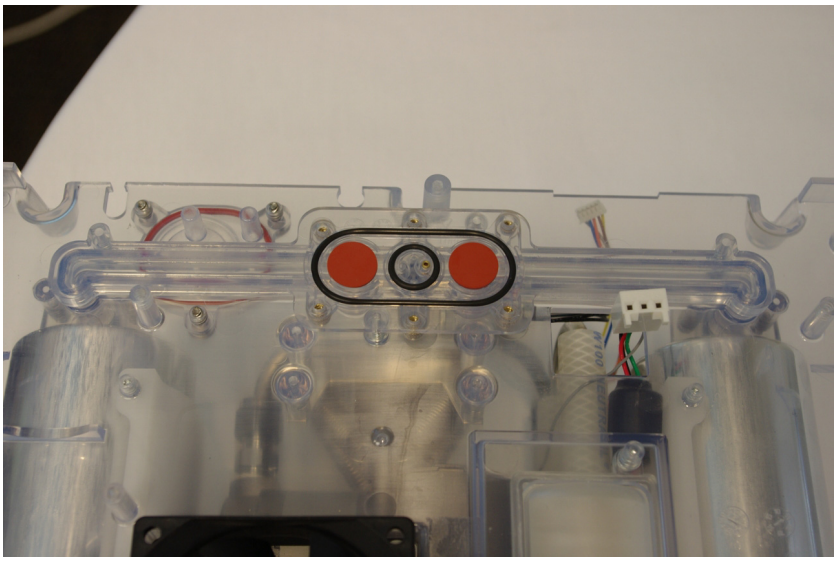
1. Remove the Rear Enclosure.

CAUTION
Do not remove the two flat head screws that secure the Patient Delivery Valve.

2. Remove the 6 T9 Torx screws.



3. Remove the Check Valve and Gaskets from the spine assembly.



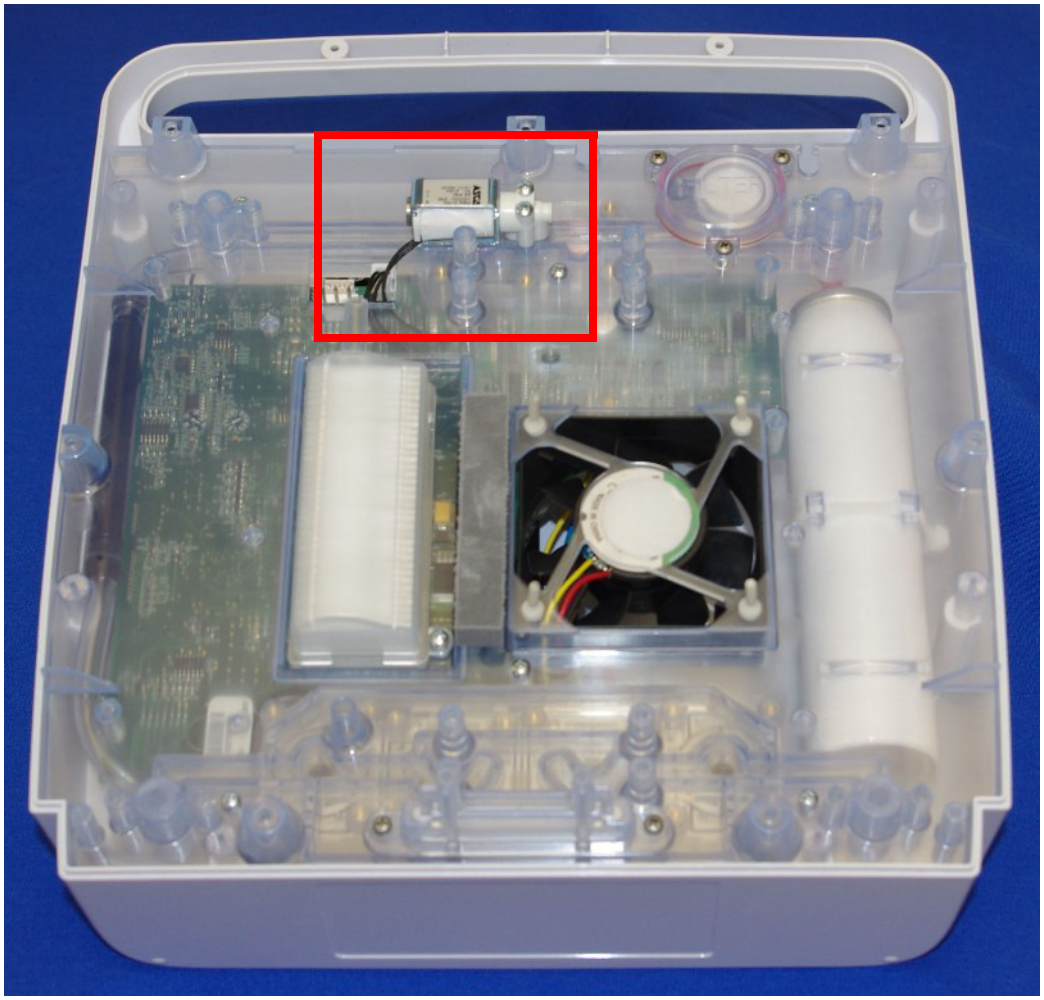
Installation: (for item identification, refer to removal instructions above)

1. Install the Check Valves, O-rings, and gasket in the spine assembly.
2. Secure the check valve housing to the spine assembly by tightening the 6 T9 Torx screws.
3. Install the Rear Enclosure.

7.10 SIEVE BED BALANCE VALVE REPLACEMENT

Removal:

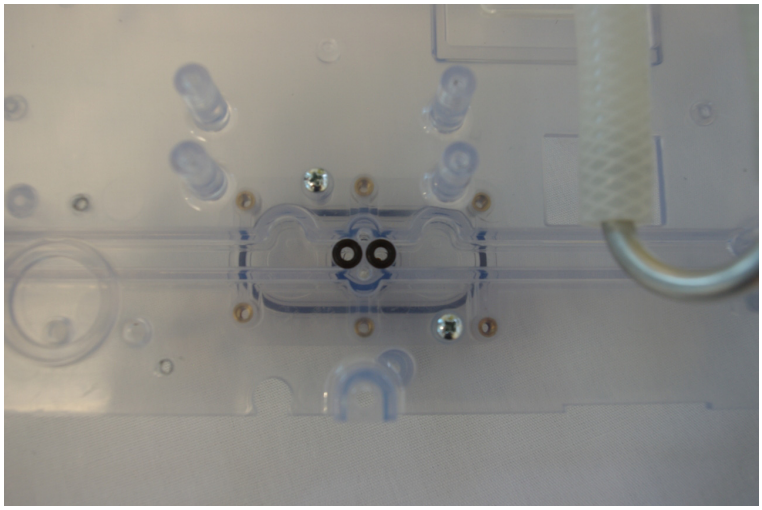
1. Remove the Rear Enclosure.
2. Remove the Front Enclosure.
3. Remove the wire harness from J14 on the Main PCA.



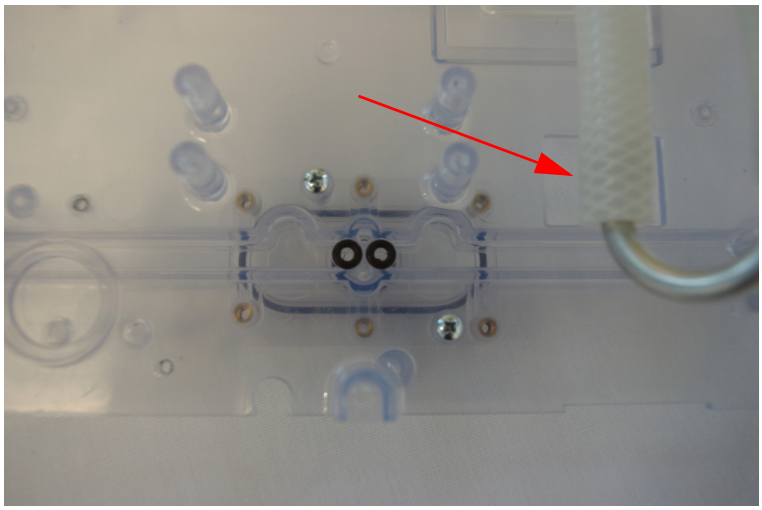
4. Remove the two screws that secure the Sieve Bed Balance Valve to the spine assembly.

Installation: (for item identification, refer to removal instructions above)

1. Place the two o-rings into the spine assembly.



2. Install the Sieve Bed Balance Valve with wire harness towards the opening in the spine assembly.
3. Secure the Sieve Bed Balance Valve to the spine assembly by tightening the two screws.
4. Thread the wire harness through the hole in the spine assembly and connect it to J14 on the Main PCA.



5. Install the Front Enclosure.
6. Install the Rear Enclosure.

7.11 COMPRESSOR COVER REPLACEMENT

Removal:

1. Remove the Rear Enclosure.
2. Remove the Front Enclosure.
3. Remove the Sieve Canisters to gain access to the Compressor Cover screws.
4. Remove the six philips screws that secure the compressor cover to the spine assembly.

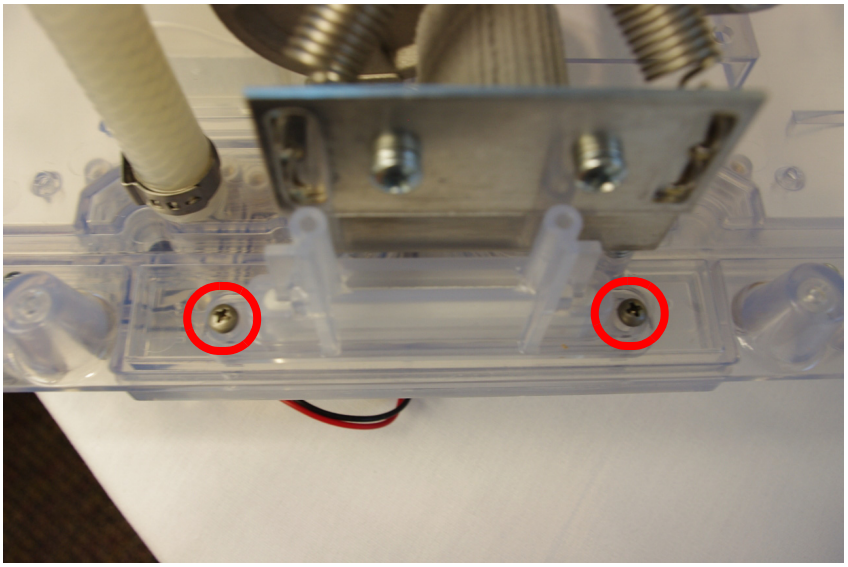
Installation: (for item identification, refer to removal instructions above)

1. Place the Compressor Cover over the Compressor in the spine assembly.
2. Secure the Compressor Cover to the spine assembly by securing the six screws.
3. Reinstall the Sieve Canisters.
4. Install the Front Enclosure.
5. Install the Rear Enclosure.

7.12 EXHAUST MUFFLER ASSEMBLY REPLACEMENT

Removal:

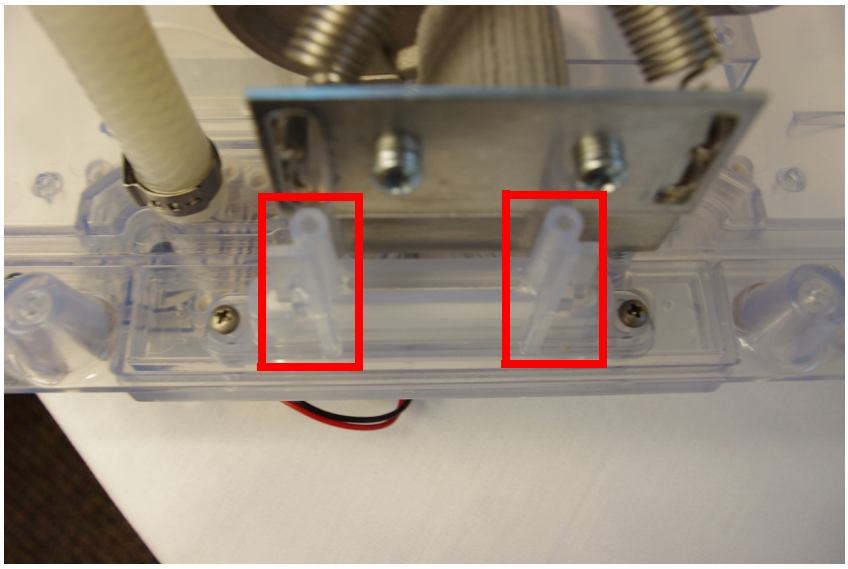
1. Remove the Rear Enclosure.
2. Remove the Front Enclosure.
3. Remove the Compressor Cover.
4. Remove the two philips screws securing the Muffler to the Spine.



5. Remove the Exhaust Muffler and the Gasket.

Installation: (for item identification, refer to removal instructions above)

1. Place the gasket into the slot on the spine assembly.
2. Place the Exhaust Muffler Assembly into the spine assembly with the posts oriented away from the compressor.



3. Secure the Muffler to the spine assembly by tightening the three screws.
4. Install the Compressor Cover.
5. Install the Front Enclosure.
6. Install the Rear Enclosure.

7.13 SIEVE CANISTER REPLACEMENT

Removal:

1. Remove the Rear Enclosure.
2. Remove the Front Enclosure.
3. Remove the four philips screws securing the Sieve Canister to the spine assembly.
4. Remove the Canister and two O-rings.

Installation: (for item identification, refer to removal instructions above)

WARNING

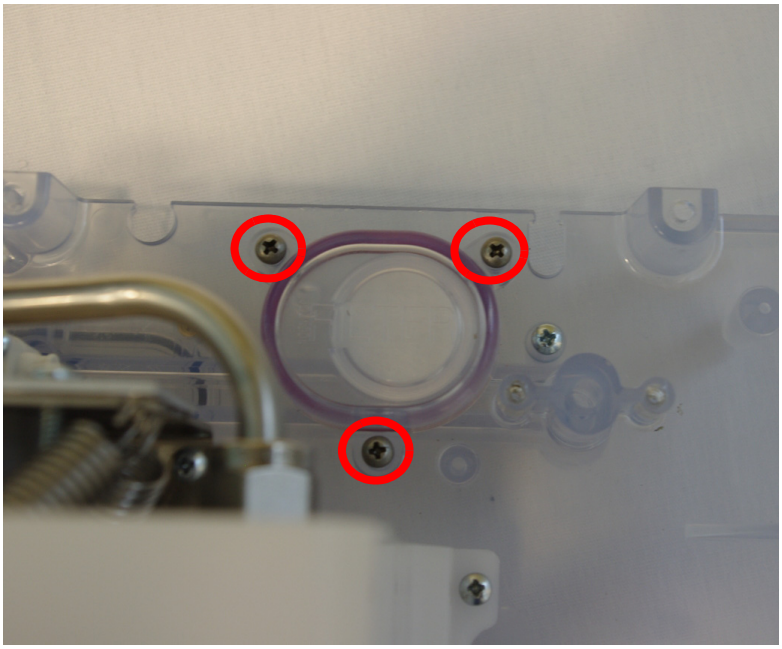
The top of the sieve canister must point toward the Patient Filter. The top of the Sieve Canister can be identified by having a spring under the clear plastic.

1. Insert the two new O-rings into position on the canister.
2. Secure the Sieve Canister to the spine assembly by tightening the four screws.
3. Install the Front Enclosure.
4. Install the Rear Enclosure.

7.14 PATIENT FILTER & PATIENT FILTER COVER REPLACEMENT

Removal:

1. Remove the Rear Enclosure.
2. Remove the Front Enclosure.
3. Remove the three screws that secure the Patient Filter Cover to the spine assembly.



4. Remove the Patient Filter Cover from the Spine Assembly.
5. Remove and discard the old filter.

Installation: (for item identification, refer to removal instructions above)

1. Install a new patient filter.
2. Install the Patient Filter Cover over the Patient Filter in the spine assembly.
3. Secure the Patient Filter Cover to the spine assembly by tightening the three screws.
4. Install the Front Enclosure.
5. Install the Rear Enclosure.

7.15 COMPRESSOR REPLACEMENT

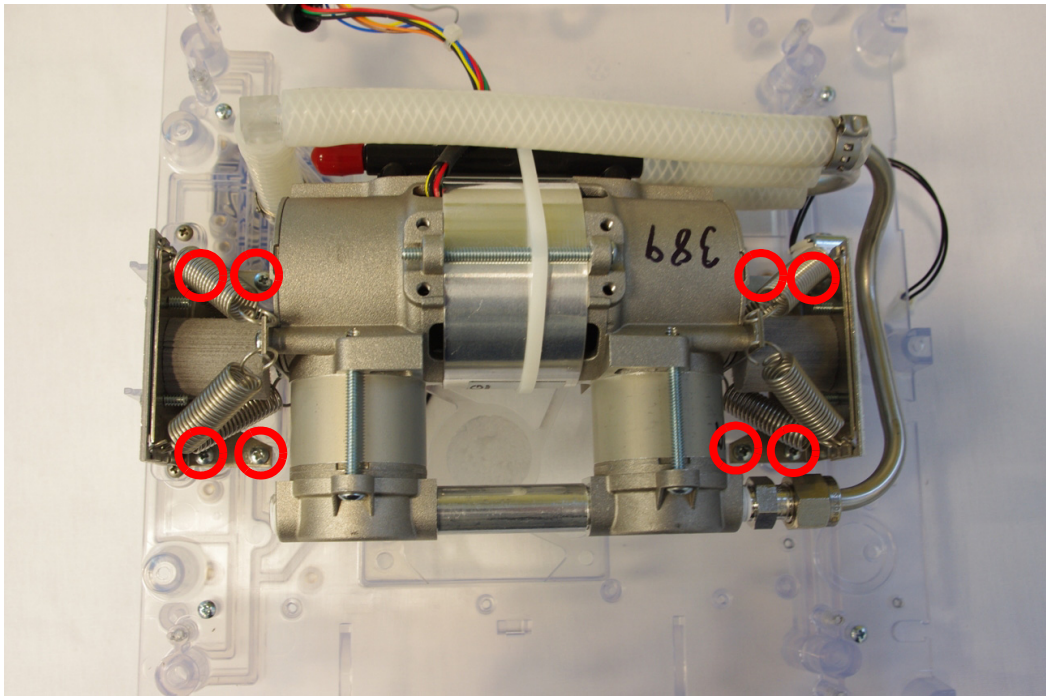
NOTE

For SimplyGo, if replacing a Moog compressor with a Shinano compressor, ensure to perform the Compressor Upgrade Programming Procedure after installation procedure. (page 7-32)
The Moog brand motor can be seen through the device's fan as shown below.

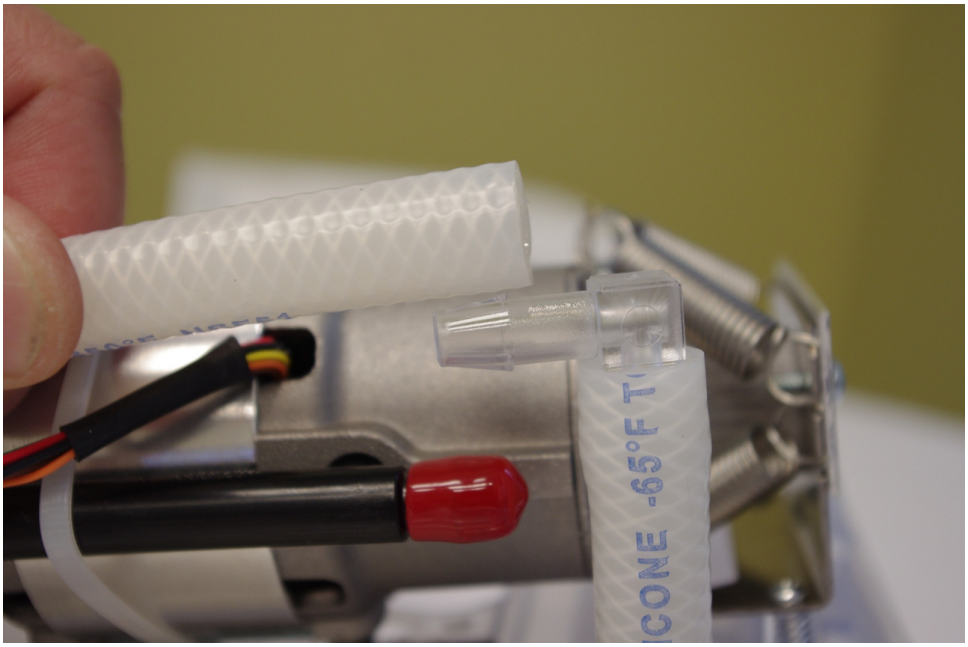
Removal:

1. Remove the Rear Enclosure.
2. Remove the Front Enclosure.
3. Remove both of the Sieve Canisters.
4. Remove the Compressor Cover.

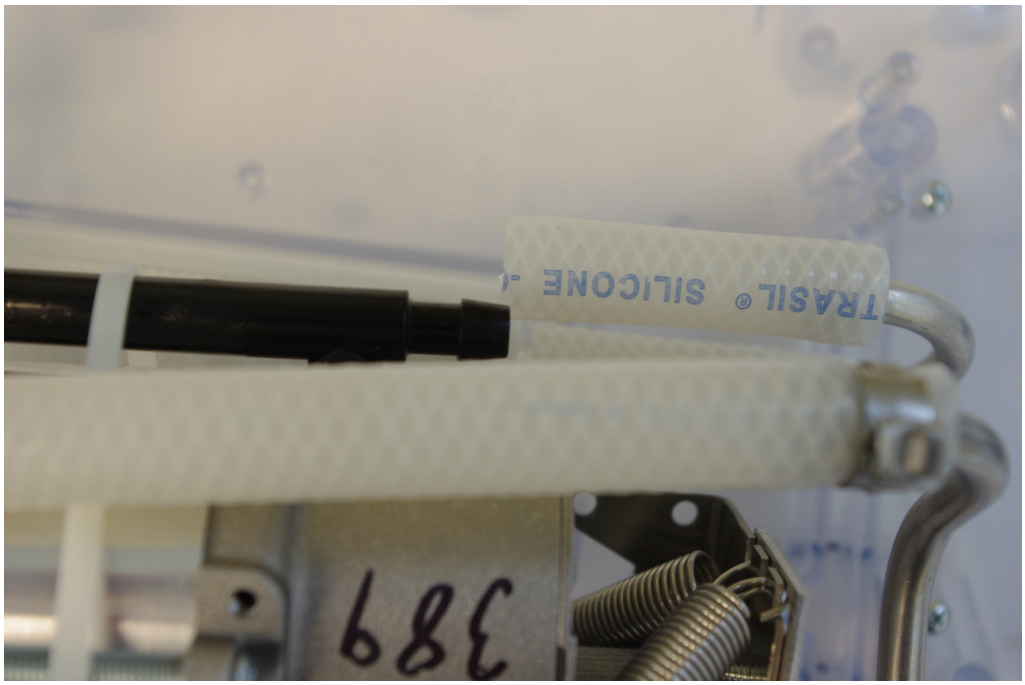
5. Remove the four screws that secure the Compressor mount to the spine assembly. Repeat for second Compressor mount.



6. Remove the Compressor Outlet hose from the valve hose elbow.



7. Remove the intake hose from the Compressor intake manifold.



8. Disconnect the Compressor power and Hall Effect sensor connections from the Main PCA.
9. Remove the Compressor from Spine Assembly.

Installation: (for item identification, refer to removal instructions above)

NOTE

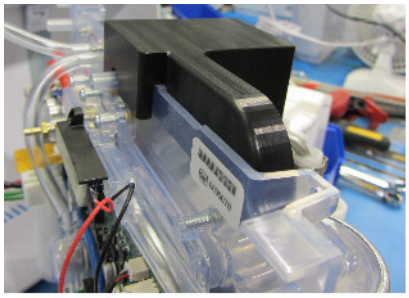
It is recommended to use the Compressor Alignment Tool (Respironics Part Number: 1102513) any time a technician is installing a compressor.

1. Place the compressor into the spine assembly.
2. Connect the Compressor power and Hall Effect sensor connections to the Main PCA.
3. Connect the intake hose to the Compressor intake manifold.
4. Connect the Compressor outlet hose to the valve hose elbow.
5. Secure the Compressor mount bracket to the spine assembly by tightening the four screws. Repeat this process for the second Compressor mount bracket.

NOTE

The springs will have to be stretched out to align the holes in the mounting bracket wit the holes on the spine assembly.

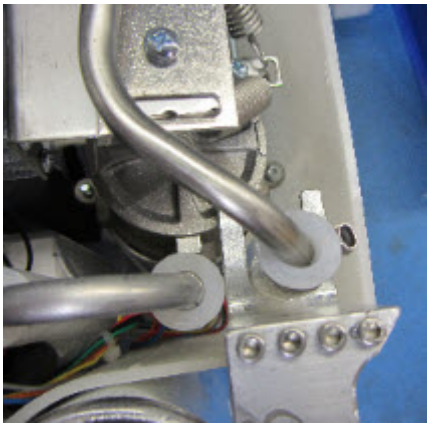
6. Install the Compressor Cover.
7. Install the Sieve Canisters.
8. With the SimplyGo sitting in the upright position, place the Alignment jig on top of the spine.



9. Loosen the outlet tube using two wrenches and then allow the metal tube to sit in the jig.

10. Tighten the clamp to finish the connection at the other end of the metal outlet tube.
11. Slide the Alignment jig off the unit and set it aside.

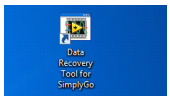
12. Before the unit is completely reassembled use the Compressor tube gauge to ensure proper spacing between the tubes. The tubes should only just touch the gauge when the tubes are aligned correctly.



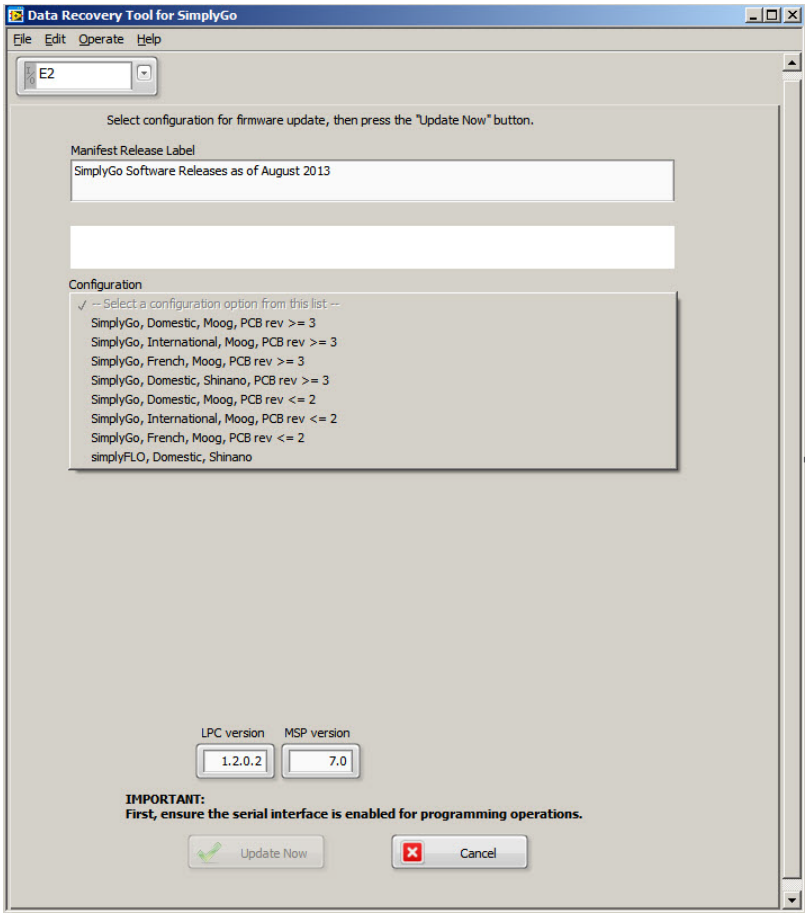
13. Install the Front Enclosure.
14. Install the Rear Enclosure.

SimplyGo Compressor Upgrade Programming Procedure

1. Download and install the SimplyGo/SimplyFlo Data Recovery Tool and Manifest File. Follow the procedure outlined in Chapter 5.3 sections 5.3.1 through 5.3.3.
2. Open the Data Recovery Tool application by double clicking on the icon below.



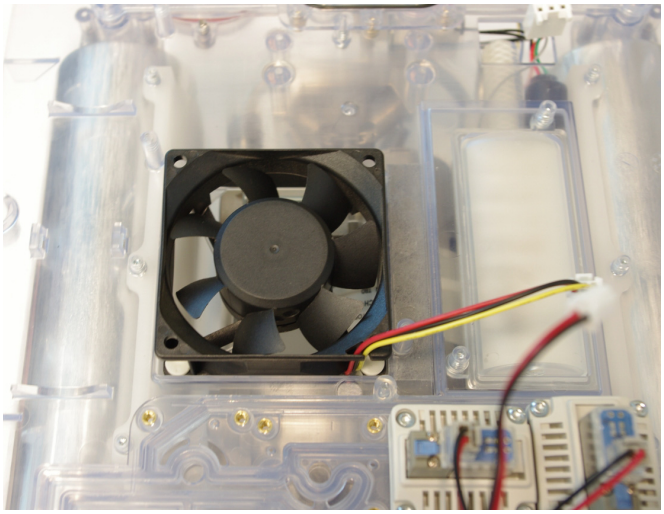
3. Select the appropriate configuration and select *Update Now*.



7.16 FAN REPLACEMENT

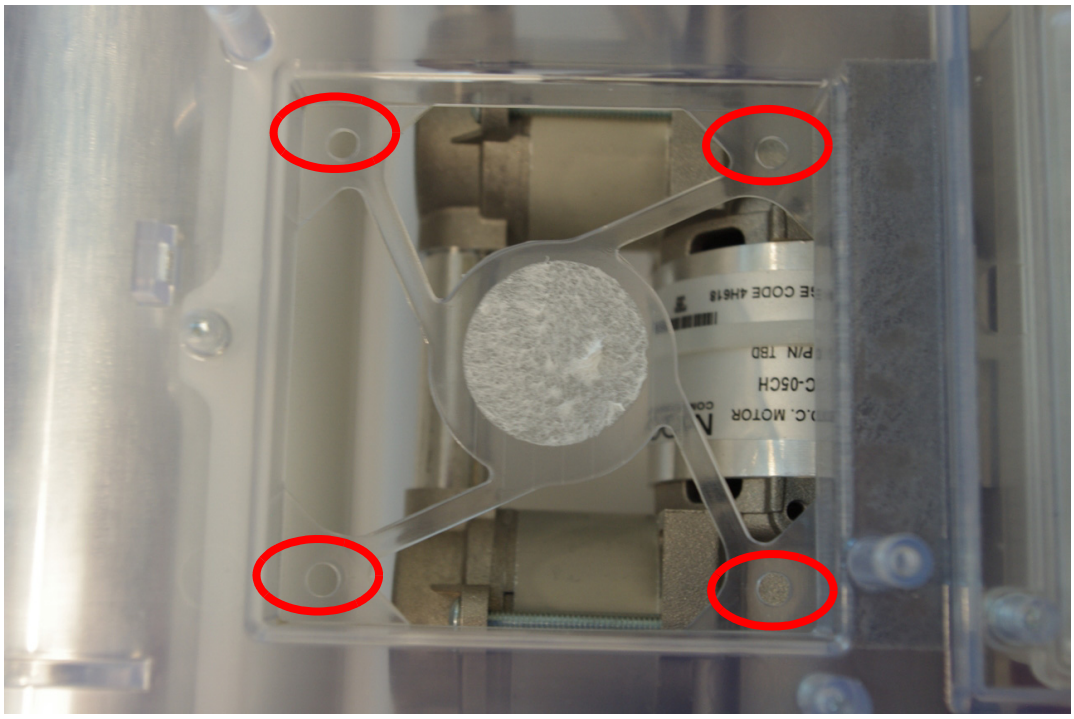
Removal:

1. Remove Rear Enclosure.
2. Remove the Front Enclosure.
3. Remove the Main PCA Assembly.
4. Remove the Sieve Canisters.
5. Remove the Compressor Cover.
6. Pull the Fan straight up and out of the cavity in the spine assembly. The Fan is mounted to the spine assembly with adhesive along with four rubber mounts. Once removed clean and remove any adhesive residual from the spine assembly.



Installation: (for item identification, refer to removal instructions above)

1. With the wire harness oriented towards the inlet filter and next to the Inlet Filer, align the four rubber mounts with the four holes in the spine assembly.

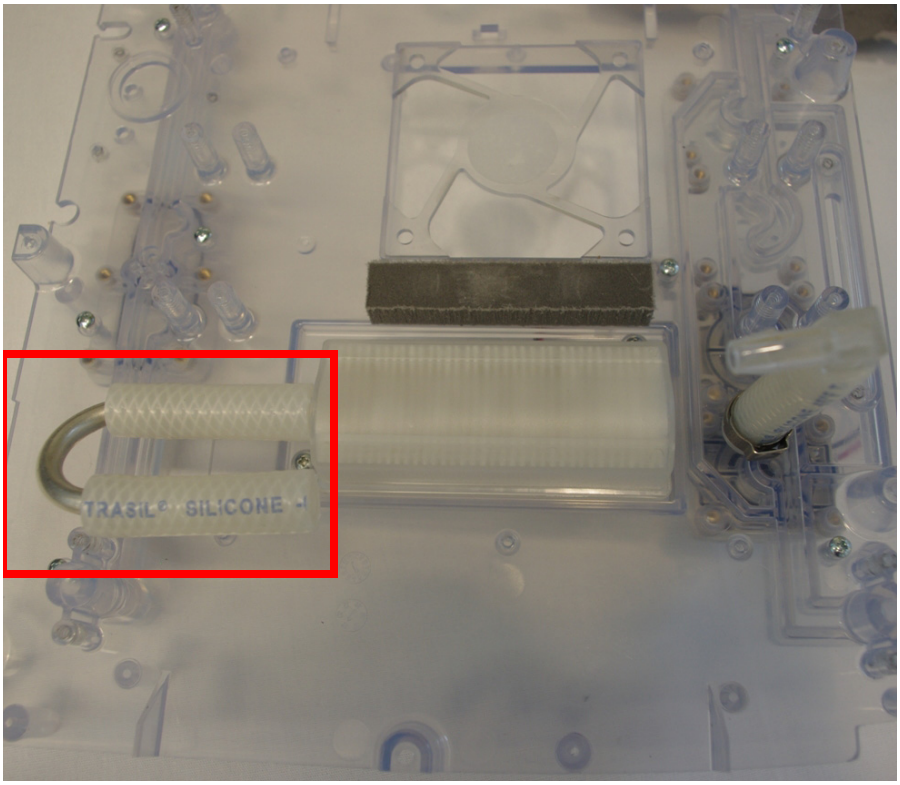


2. Push the rubber mounts completely through the holes in the spine assembly to lock the fan assembly in place. If the rubber mounts do not go through the holes grab the rubber mounts with your finger and pull until it is completely through the hole.
3. Install the Compressor Cover.
4. Install the Sieve Canisters.
5. Install the Main PCA Assembly.
6. Install the Front Enclosure.
7. Install the Rear Enclosure.

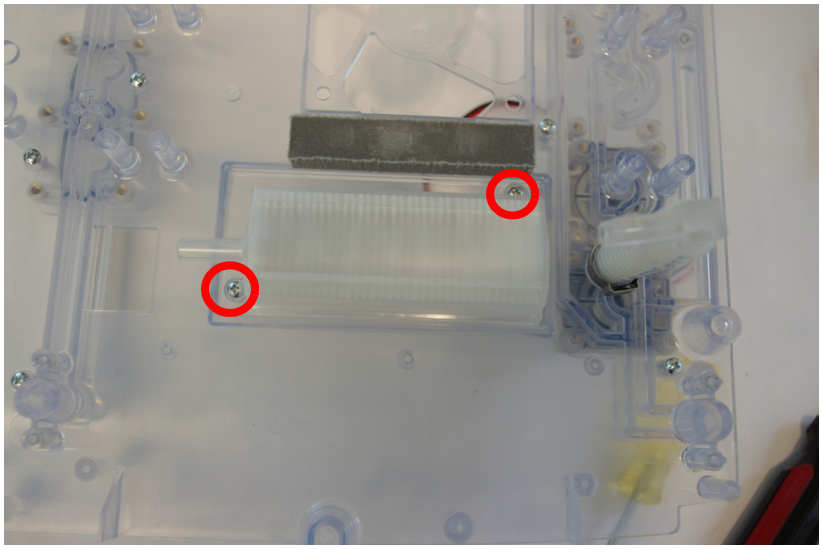
7.17 INLET FILTER REPLACEMENT

Removal:

1. Remove Rear Enclosure.
2. Remove Front Enclosure.
3. Remove Sieve Bed.
4. Remove Compressor Cover.
5. Remove Compressor.
6. Remove Inlet Hose from the Inlet Filter.



7. Remove the two philips screws securing the Inlet Filter to the Spine.



8. Remove the Inlet filter from the Spine.

Installation: (for item identification, refer to removal instructions above)

1. Place the Inlet Filter into the cavity of the spine assembly.
2. Secure the Inlet Filter to the spine assembly by securing the two screws to 6 in.-lbs.
3. Connect the Inlet Hose to the Inlet Filter.
4. Install the Compressor.
5. Install the Compressor Cover.
6. Install the Sieve Bed.
7. Install the Front Enclosure.
8. Install the Rear Enclosure.

7.18 LOSS OF POWER ALARM REPLACEMENT

Removal:

1. Remove the Data Port Cover
2. Remove the Power Loss Alarm

Installation: (for item identification, refer to removal instructions above)

1. Install the Loss of Power Alarm
2. Install the Data Port Cover

This page intentionally left blank.

CHAPTER 8: REPAIR KITS

8.0 CHAPTER OVERVIEW

This chapter illustrates the names and components for each of the repair kits for the SimplyGo Portable Oxygen Concentrator and SimplyFlo Transportable Oxygen Concentrator. For technical assistance or replacement part ordering information, contact Respironics Product Support.

USA and Canada

Phone: 1-800-345-6443
Fax: 1-800-866-0245
Email: service@respironics.com

International

Phone: 1-724-387-4000
Fax: 1-800-387-5012

Visit the Philips Respironics Home Page on the World Wide Web at:

www.philips.com

8.1 SIMPLYGO/SIMPLYFLO REPAIR KIT REFERENCE TABLE

NOTE

For kits with multiple part number listings, refer to the individual page to ensure proper ordering.

If the below Repair Kit Name does not reflect SimplyGo or SimplyFlo, the kit is identical for both models.

PART NUMBER(S)	REPAIR KIT NAME	PAGE IDENTIFIER
1101935	Anti-Static Shield Kit	8 - 25
1094739	SimplyGo Battery Connection PCA Repair Kit	8 - 22
1096641	SimplyGo Battery Enclosure Repair Kit	8 - 23
1095226	Canula Barb Repair Kit	8 - 22
1093284	Check Valve / Gasket Repair Kit	8 - 9
1095227	SimplyGo Communication Cover Repair Kit	8 - 24
1111082	SimplyFlo Communication Cover Repair Kit	8 - 24
1094702	Compressor Cover Repair Kit	8 - 12
1101698	SimplyGo Compressor Mounting Hardware Kit	8 - 14
1111083	SimplyFlo Compressor Mounting Hardware Kit	8 - 14
1111084	Compressor Repair Kit	8 - 13
1094707	SimplyGo Compressor Tubing Kit	8 - 19
1111085	SimplyFlo Compressor Tubing Kit	8 - 14
1094706	Exhaust Muffler Repair Kit	8 - 19
1093280	Exhaust Valve Repair Kit	8 - 7
1095249	Fan Repair Kit	8 - 16
1093278	SimplyGo Front Enclosure Repair Kit	8 - 6
1111086	SimplyFlo Front Enclosure Repair Kit	8 - 6
1093442	SimplyGo Hardware Repair Kit	8 - 24
1111087	SimplyFlo Hardware Repair Kit	8 - 24
1095248	Inlet Filter Repair Kit	8 - 15
1102520	SimplyGo Main PCA Assembly Repair Kit	8 - 5
1111557	SimplyFlo Main PCA Assembly Repair Kit	8 - 5
1097625	SimplyGo Packaging Kit	8 - 25
1112306	SimplyFlo Packaging Kit	8 - 25
1095250	Patient Filter Cover Repair Kit	8 - 18
1094705	Patient Filter Repair Kit	8 - 17
1099454	SimplyGo Patient Delivery Valve Kit	8 - 23

1111406	*SimplyFlo Patient Delivery Valve Kit*	*8 - 23*
1093282	*Pressure (Fill) Valve Repair Kit*	*8 - 8*
1093285	*Product Tank Repair Kit*	*8 - 10*
1093266	*SimplyGo Rear Enclosure Repair Kit*	*8 - 4*
1111407	*SimplyFlo Rear Enclosure Repair Kit*	*8 - 4*
1093283	*Sieve Bed Balance Valve Repair Kit*	*8 - 8*
1093443	*Sieve Canister Repair Kit*	*8 - 11*
1094738	*Spine Repair Kit*	*8 - 21*
1093441	*SimplyGo Tubing Repair Kit*	*8 - 24*
1111448	*SimplyFlo Tubing Repair Kit*	*8 - 24*
1111449	*SimplyFlo Loss of Power Alarm PCA Kit*	*8 - 25*
1068987	*SimplyGo AC Power Cord*	*N/A*
1082661	*SimplyFlo AC Power Cord*	*N/A*

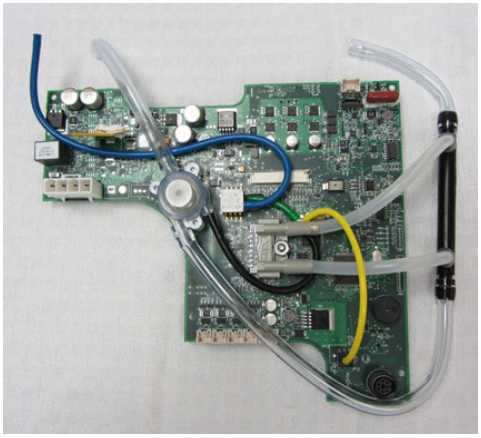
8.2 REAR ENCLOSURE REPAIR KIT

SIMPLYGO PART NUMBER: 1093266
Tools Required
Phillips Screwdriver

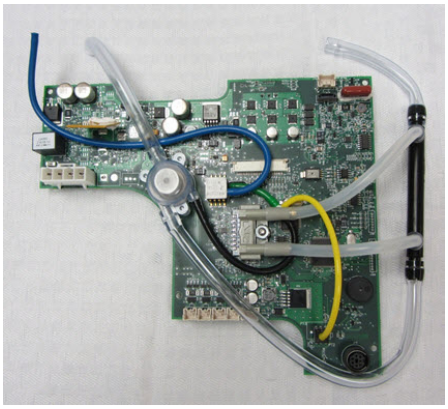
SIMPLYFLO PART NUMBER: 1111407
Tools Required
Phillips Screwdriver

8.3 MAIN PCA ASSEMBLY REPAIR KIT

SIMPLYGO PART NUMBER: 1102520
Tools Required
Phillips Screwdriver



SIMPLYFLO PART NUMBER: 1111557
Tools Required
Phillips Screwdriver



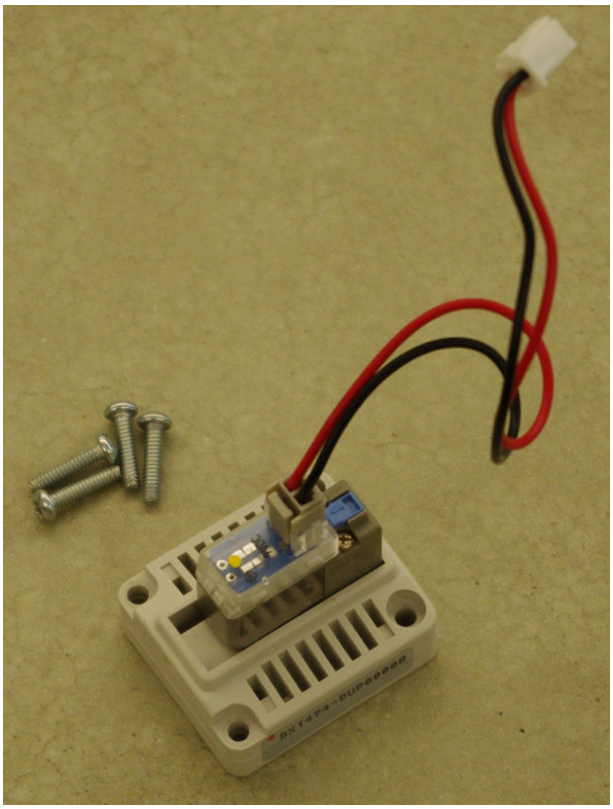
8.4 FRONT ENCLOSURE REPAIR KIT

SIMPLYGO PART NUMBER: 1093278
Tools Required
Phillips Screwdriver

SIMPLYFLO PART NUMBER: 1111086
Tools Required
Phillips Screwdriver

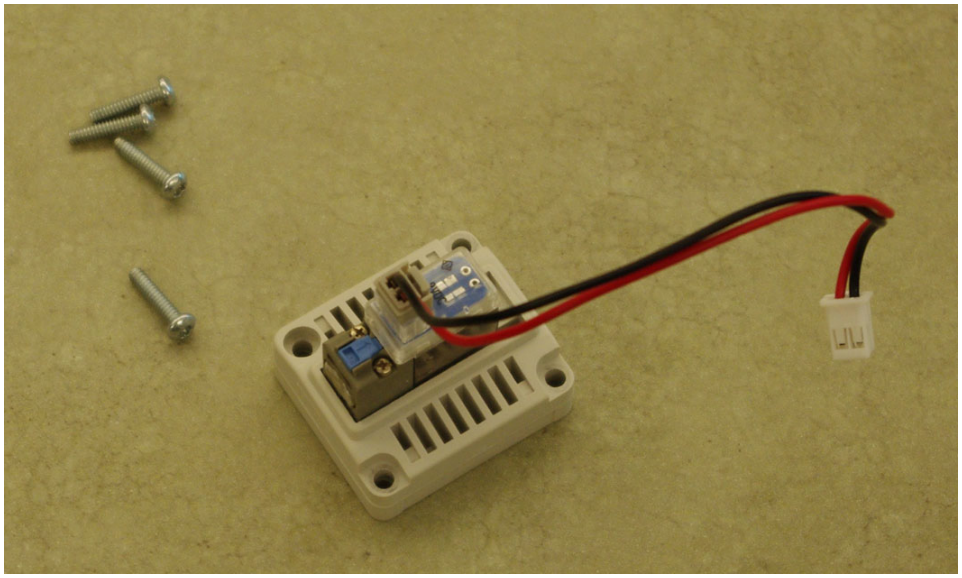
8.5 EXHAUST VALVE REPAIR KIT

PART NUMBER: 1093280
Tools Required
Phillips Screwdriver



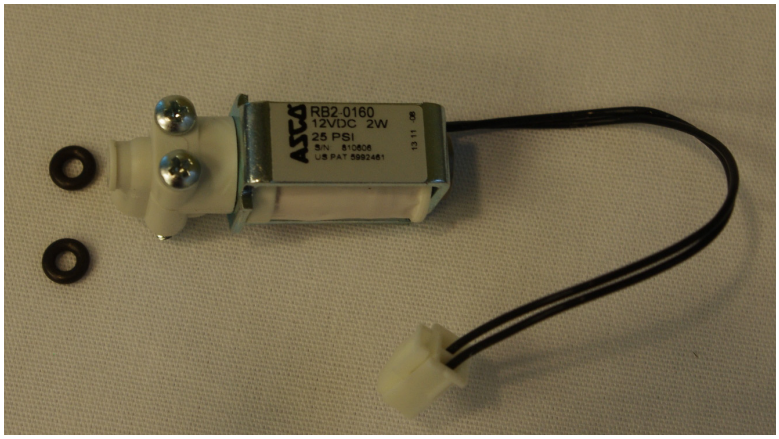
8.6 PRESSURE (FILL) VALVE REPAIR KIT

PART NUMBER: 1093282
Tools Required
Phillips Screwdriver



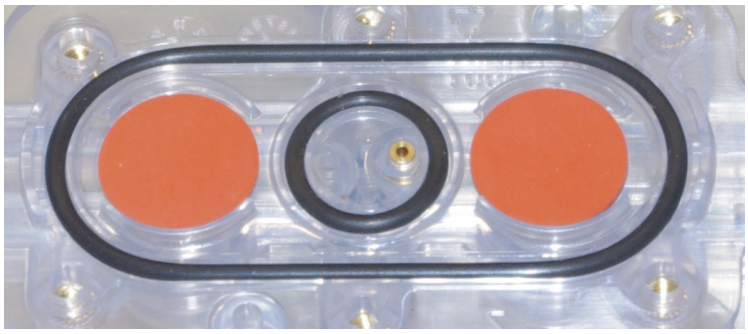
8.7 SIEVE BED BALANCE VALVE REPAIR KIT

PART NUMBER: 1093283
Tools Required
Phillips Screwdriver



8.8 CHECK VALVE / GASKET REPAIR KIT

PART NUMBER: 1093284
Tools Required
Phillips Screwdriver



8.9 PRODUCT TANK REPAIR KIT

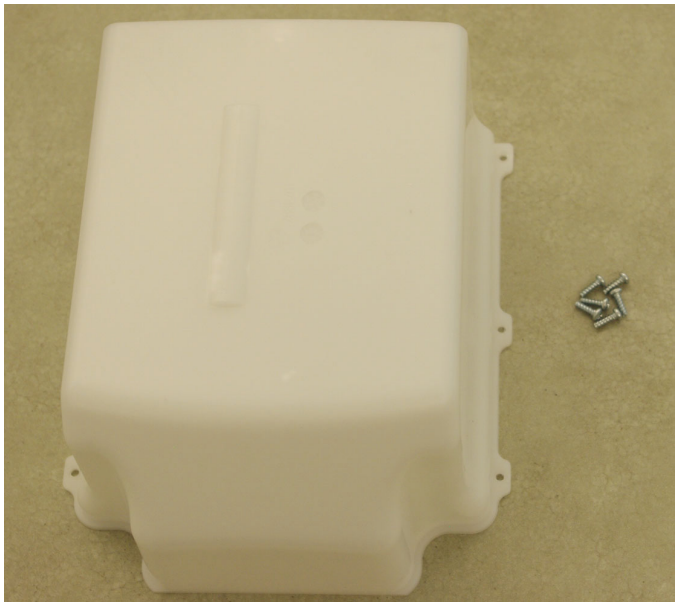
PART NUMBER: 1093285
Tools Required
Phillips Screwdriver

8.10 SIEVE CANISTER REPAIR KIT

PART NUMBER: 1093443
Tools Required
Phillips Screwdriver

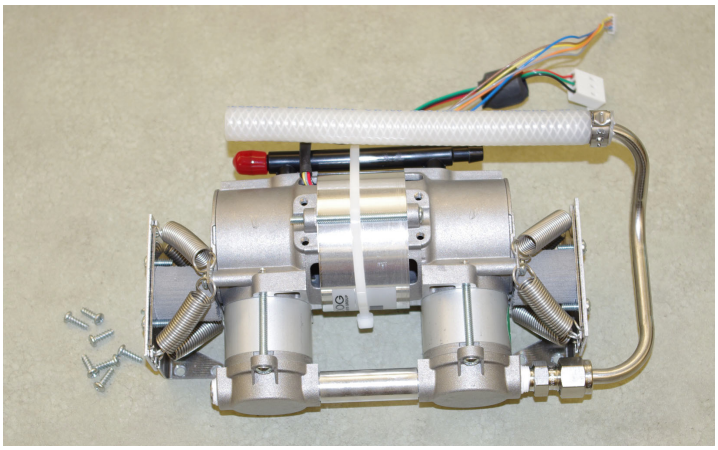
8.11 COMPRESSOR COVER REPAIR KIT

PART NUMBER: 1094702
Tools Required
Phillips Screwdriver



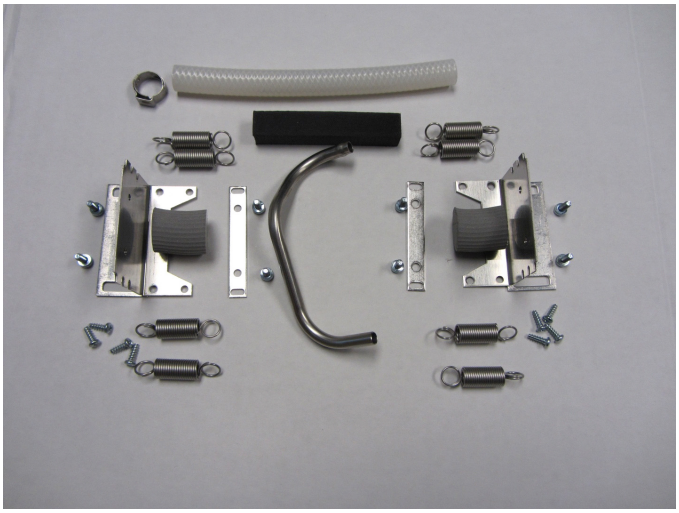
8.12 COMPRESSOR REPAIR KIT

PART NUMBER: 1111084
Tools Required
Phillips Screwdriver

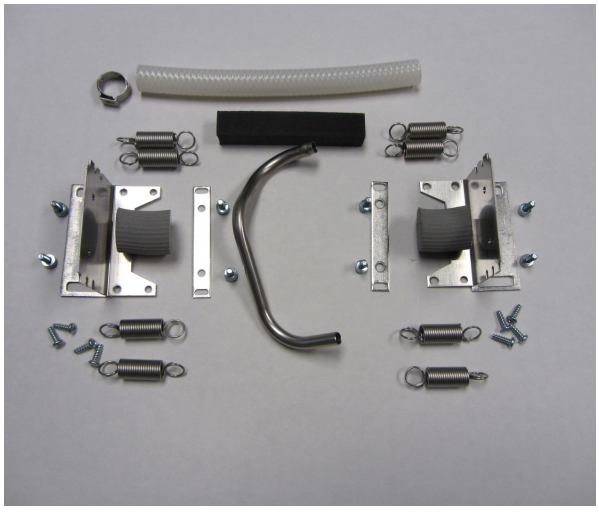


8.13 COMPRESSOR MOUNTING HARDWARE KIT

SIMPLYGO PART NUMBER: 1101698
Tools Required
Phillips Screwdriver

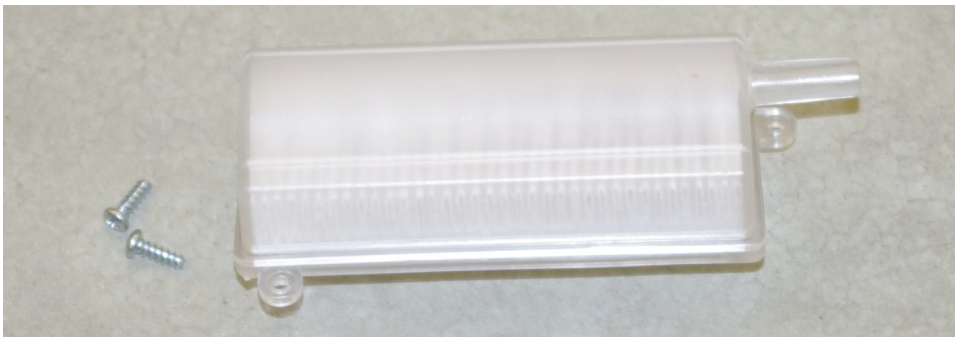


SIMPLYFLO PART NUMBER: 1111083
Tools Required
Phillips Screwdriver



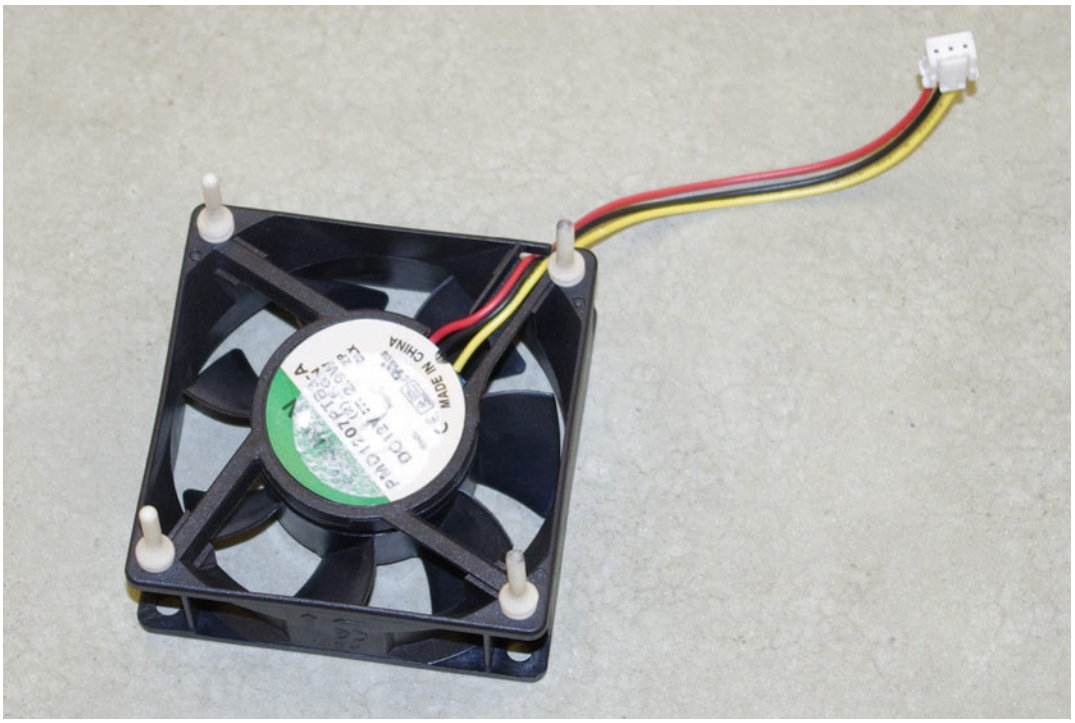
8.14 INLET FILTER REPAIR KIT

PART NUMBER: 1095248
Tools Required
Phillips Screwdriver



8.15 FAN REPAIR KIT

PART NUMBER: 1095249
Tools Required
Phillips Screwdriver



8.16 PATIENT FILTER REPAIR KIT

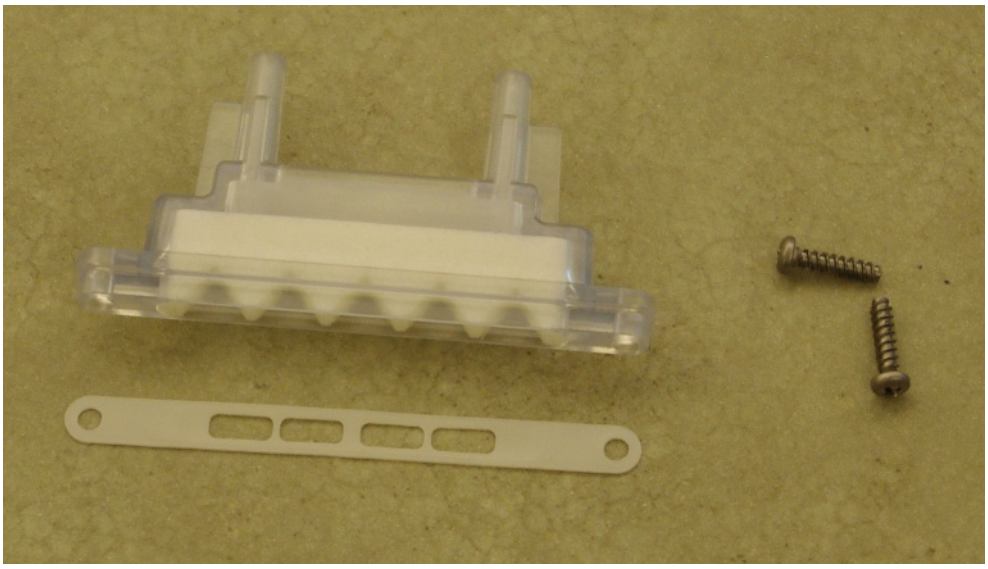
PART NUMBER: 1094705
Tools Required
Phillips Screwdriver

8.17 PATIENT FILTER COVER REPAIR KIT

PART NUMBER: 1095250
Tools Required
Phillips Screwdriver

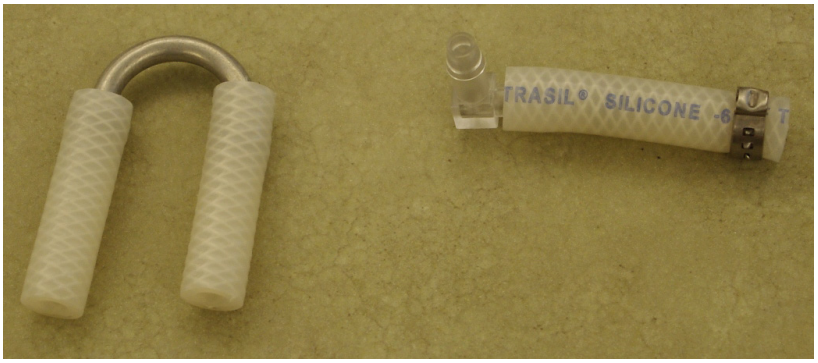
8.18 EXHAUST MUFFLER REPAIR KIT

PART NUMBER: 1094706
Tools Required
Phillips Screwdriver



8.19 COMPRESSOR TUBING KIT

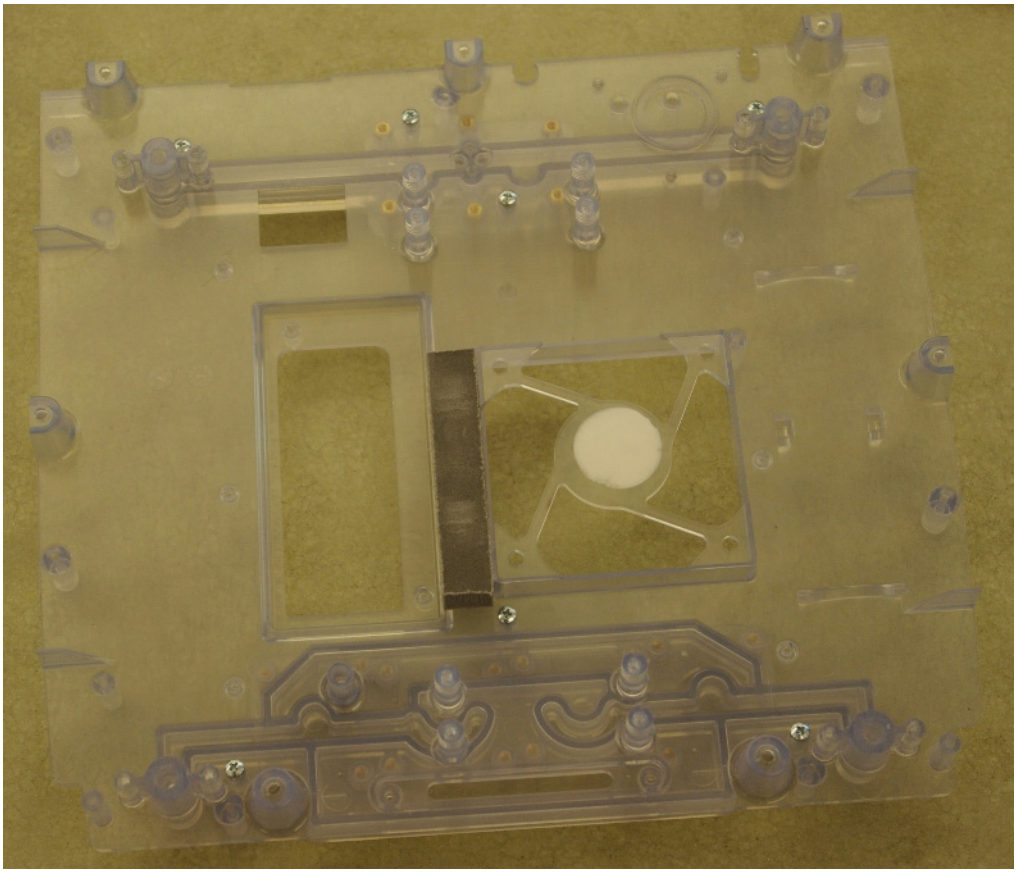
SIMPLYGO PART NUMBER: 1094707
Tools Required
Phillips Screwdriver



SIMPLYFLO PART NUMBER: 1111085
Tools Required
Phillips Screwdriver

8.20 SPINE REPAIR KIT

PART NUMBER: 1094738
Tools Required
Phillips Screwdriver

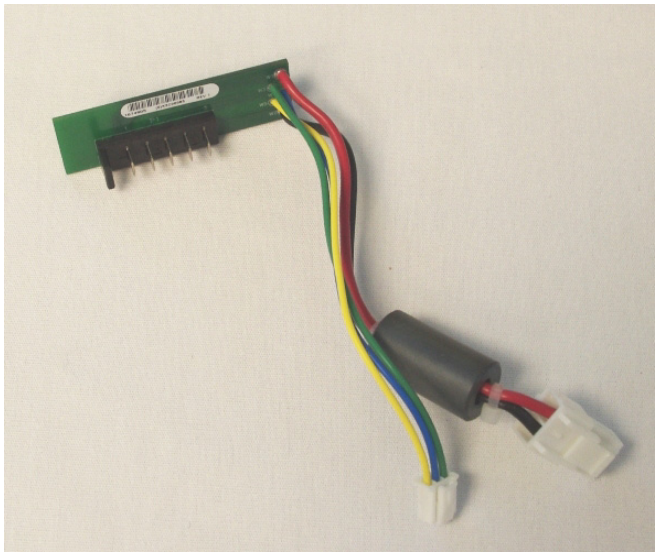


8.21 CANULA BARB REPAIR KIT

PART NUMBER: 1095226
Tools Required
Phillips Screwdriver

8.22 BATTERY CONNECTION PCA REPAIR KIT

SIMPLYGO PART NUMBER: 1094739
Tools Required
Phillips Screwdriver

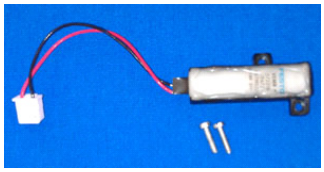


8.23 BATTERY ENCLOSURE REPAIR KIT

SIMPLYGO PART NUMBER:1096641
Tools Required
Phillips Screwdriver

8.24 PATIENT DELIVERY VALVE KIT

SIMPLYGO PART NUMBER: 1099454
Tools Required
Phillips Screwdriver



SIMPLYFLO PART NUMBER: 1111406
Tools Required
Phillips Screwdriver

8.25 COMMUNICATION COVER REPAIR KIT

SIMPLYGO PART NUMBER: 1095227
Tools Required
Phillips Screwdriver

SIMPLYFLO PART NUMBER: 1111082
Tools Required
Phillips Screwdriver

8.26 TUBING REPAIR KIT

SIMPLYGO PART NUMBER: 1093441
Tools Required
Phillips Screwdriver

SIMPLYFLO PART NUMBER: 1111448
Tools Required
Phillips Screwdriver

8.27 HARDWARE REPAIR KIT

SIMPLYGO PART NUMBER: 1093442
Tools Required
Phillips Screwdriver

SIMPLYFLO PART NUMBER: 1111087
Tools Required
Phillips Screwdriver

8.28 ANTI-STATIC SHIELD KIT

PART NUMBER: 1101935
Tools Required
Phillips Screwdriver

8.29 PACKAGING KIT

SIMPLYGO PART NUMBER: 1097625
Tools Required
NA

SIMPLYFLO PART NUMBER: 1112306
Tools Required
NA

8.30 SIMPLYFLO LOSS OF POWER ALARM PCA KIT

SIMPLYFLO PART NUMBER: 1111449
Tools Required
Phillips Screwdriver

This page intentionally blank.

CHAPTER 9: TESTING

9.0 CHAPTER OVERVIEW

This chapter details the necessary procedures to perform testing procedures on the SimplyGo Portable Oxygen Concentrator and the SimplyFlo Transportable Oxygen Concentrator.

9.1 SIMPLYGO FINAL TESTING PROCEDURE

9.1.1 REQUIRED EQUIPMENT

- Oxygen Analyzer (PRI P/N 1027705) or equivalent
- Pulsemeter - (Valley Inspired Pulse Meter (http://www.inspiredrc.com/pulsemeter.html, Part Number: Pulsemeter))
- Continuous Flow meter - Cole-Parmer Hand-held Flowmeter, PM2.20XY (Catalog Number: WU-32500-80)
- O2 Enrichment Port Adapter - (Philips Respironics Part Number: 312710)
- Test Orifice Cap - (www.caplugs.com, Part Number: EC-14) or equivalent
- Oxygen Interface Hardware Kit (Respironics Part Number: 1073499)
- Computer with Microsoft Windows 7 (32 bit) or XP (32 bit) operating systems only
- Current version of the Data Recovery Tool for SimplyGo (my.respironics.com)
- Current version of the SimplyGo Manifest File (my.respironics.com)

9.1.2 PROCEDURE

IMPORTANT NOTE

If a Main PCA, Sieve Bed, Compressor, or Process Valve has been replaced, perform the Final Test Procedure and then the Balancing Procedure in that order.

If any other repair has been completed, perform only the Final Test Procedure.

If performing the Final Test and Balancing, use the Final Test and Balancing Data Sheet.
If performing the Final Test only, use the Final Test Data Sheet.

NOTE

For software download and installation instructions, perform all steps in Section 5.3.2 through 5.3.4 of this manual.

1. Verify that a battery is properly installed in the SimplyGo.
2. Connect the AC Power Supply to an AC power source.

3. Connect the AC Power Supply output connector to the SimplyGo power input connector and listen closely to verify that the cooling fan turns on. Record results.

NOTE

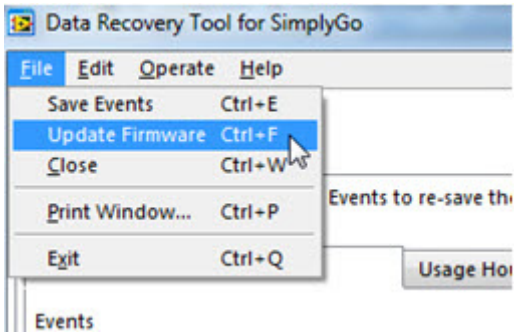
The fan may continue to run if the battery requires charging but will stop if the battery does not require charging. This is normal operation.

4. Connect the Pulsemeter tubing to the patient cannula connector.

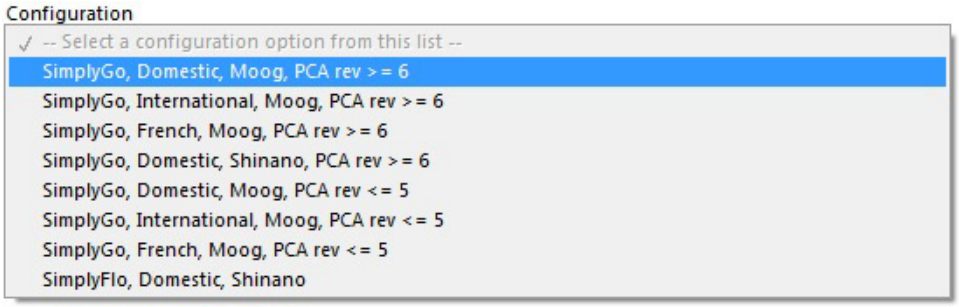
5. Launch the SimplyGo Data Recovery Tool by double clicking on the icon shown below.

6. Ensure the device is connected to the computer via the communication cable
7. Turn the device on by performing the following steps:
8. Press the Power button
9. Wait for the LCD screen to light
10. Press the Power button a second time
11. The data recovery tool should now detect the device and begin downloading the data
12. Once the data has been downloaded, proceed to the code loading option.
13. Document the device model number, PCA revision and motor type in the Test Data Sheet. These values will be needed to select the appropriate software and parameters to load.
14. Load the appropriate software and parameters for the device configuration you have.

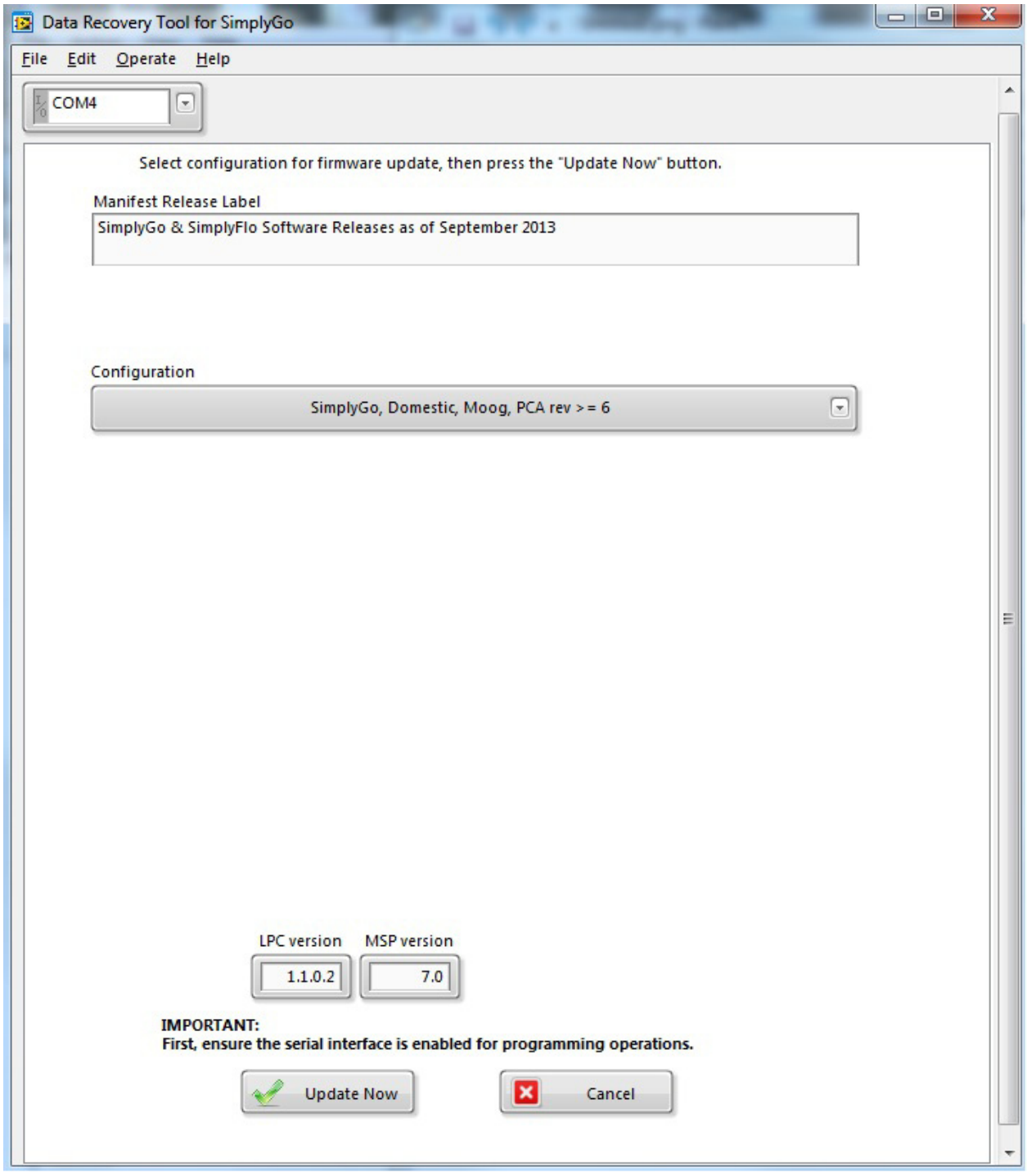
15. From the SimplyGo Data Recovery Tool File → Update Firmware menu option.



16. Based on values recorded in step 13, select the appropriate configuration option from the drop down list.



17. Make sure the serial interface is enabled for programming, then select ‘Update Now’ button.



18. Once the device has completed the code load and rebooted proceed to step 19.

IMPORTANT NOTE

Do NOT turn the device off/on during the programming.
When programming is complete, the device will reboot.

19. The data recovery tool should now detect the device and begin downloading the data
    a. Verify the correct LPC software version was loaded. The Usage Hours Tab will indicate which software version is to be installed.
20. Put the device in Demo mode by clicking the Demo mode check box on the Real Time Data tab
21. Verify that the word DEMO appears on the LCD screen
22. Select Pulse Mode and a setting of 2.0
23. Verify that the Battery symbol appears in the display window. Record results
24. Verify that the External Power Status symbol appears in the display window. Record results.
25. Observe the Pulsemeter and verify that the SimplyGo is automatically triggering breaths. Record results.
26. Verify that the Pulse Symbol appears in the display window when a pulse is triggered. Record results.
27. Block the Pulsemeter exhaust port, wait for the SimplyGo to trigger a breath and observe the reading on the Pulsemeter scale. Immediately unblock the exhaust port to exhaust the Pulsemeter and block it again before the next pulse. Perform this for the next 6 consecutive pulses and record the results on the SimplyGo Pulse Flow Measurements Worksheet to calculate the Average. Record the Average reading on the Final Test Data Sheet.
28. Select Pulse Mode and a setting of 6.0. Repeat step 27.
29. Select Sleep Mode
30. Perform step 27 for a setting of 2.0.
31. Perform step 27 for a setting of 6.0.
32. Disconnect the Pulsemeter from the patient cannula connector.
33. Select Continuous Mode and a setting of 0.5.
34. Remove the Pulsemeter tubing from the pulsemeter and connect one end of the tubing to the bottom of the flowmeter.

35. Connect the flowmeter to the patient cannula connector.

36. Holding the Flowmeter in the vertical position above the SimplyGo, observe the Flowmeter scale and record the reading on the Test results sheet.
37. Repeat step 36 for a setting of 2.0 continuous flow.
38. Disconnect the Flowmeter from the patient cannula connector.
39. Connect a calibrated O2 Analyzer to the Patient Cannula connector as shown below

IMPORTANT NOTE

If performing both the Final Test and Balancing Procedure, DO NOT perform step 40 a and b. Continue directly to the Balancing Procedure.

40. Perform steps a and b.
    a. Let the device run for at least 10 minutes on 2 LPM continuous flow. Record the results of the O2 purity from the O2 Analyzer and the internal O2 sensor (Real Time Data Screen) on the test data sheet.

b. Let the device run for at least 10 minutes on 0.5 LPM continuous flow. Record the results of the O2 purity from the O2 Analyzer and the internal O2 sensor on the test data sheet.

41. Verify the functionality of the control panel buttons. Then turn the device off and listen for three audible tones signifying the device turning off. Record results on the test data sheets.
42. If the SimplyGo fails testing, turn the unit completely off and retest the unit.
43. If the unit fails a second time refer to the trouble shooting section of the Service Manual.
44. Complete all the required information on the test data sheet and save the test data sheet in accordance with your facility test record storage requirements.

NOTE
If performing the Final Test and Balance Test due to the replacement of either the Main PCA, Sieve Bed, Compressor, or Process Valve, perform the Balance Test.

Balancing Procedure

Perform only if a Main PCA, Sieve Bed, Compressor, or Process Valve has been replaced.

NOTE
Power the device ON

1. Set the device to a setting of 0.5 in continuous mode.

2. Before using the “Learn Pressure Bal” command verify the O2 factors are 1.00. If they are not then reset the O2 factors by clicking the reset button.
   a. On the Usage Hours Tab click the “Learn Pressure Bal” check box. The device screen changes to 2 LPM continuous.
   b. Let the device run for 15 minutes then record the results of the O2 purity from the O2 Analyzer and the internal O2 sensor on the test data sheet.

NOTE

An uncapped “T” fitting should be added upstream of the analyzer if testing the O2 purity in a pulse mode setting.
Without a “T” fitting some analyzers can indicate an erroneous low oxygen concentration value.

3. Allow the device to continue running the automated “Learn Pressure Bal” test. This portion of the test will take approximately 80 minutes. The unit will shut down when this portion of the test is complete.
4. Record the four O_2 purities displayed on the screen onto the Test Data Sheet prior to turning the device back on.
5. Record the O2 factors shown on the Usage Data tab.
6. Turn the device back on.
7. The data recovery tool should now detect the device and begin downloading the data.
8. If any of the O2 Factors exceed 1.25, troubleshoot and repair the device. Once resolved, reset the O2 Factors via the Reset O2 factors button on the Usage Data tab of the data recovery tool and repeat the Balancing Procedure.
9. Verify the functionality of the control panel buttons. Then turn the device off and listen for three audible tones signifying the device turning off. Record results on the test data sheets.
10. If the SimplyGo fails testing, turn the unit completely off and retest the unit.
11. If the unit fails a second time refer to the trouble shooting section of the Service Manual.

9.2 SIMPLYGO FINAL TEST DATA SHEET

SIMPLYGO FINAL TEST DATA SHEET

SERIAL NUMBER _____*MDL NUMBER*_____

PCA REVISION **(>=6 or <= 5)**_____ *MOTOR TYPE (MOOG OR SHINANO)*_____

*RA# (IF APPLICABLE)*_____

STEP NUMBER/PROCEDURE	READING	SPECIFICATION	PASS OR FAIL
Step 3/ Fan Starts		*Fan Start*	*PASS / FAIL*
Step 23 / Verify Battery Symbol		*Battery Symbol is displayed*	*PASS / FAIL*
Step 24/ Verify External Power Status Symbol		*External Power status displayed*	*PASS / FAIL*
Step 25 / Verify SimplyGo Automatically triggers pulse after startup			*PASS / FAIL*
Step 26 / Verify Pulse Symbol		*Pulse Symbol is dis-*	*PASS / FAIL*
Step 27 / Verify Pulse Mode Flow Readings	*Reading @ Setting 2.0, _____ml*	*24 ml +/- 4 ml*	*PASS / FAIL*
Step 28 / Verify Pulse Mode Flow Readings	*Reading @ Setting 6.0, _____ml*	*72 ml +/- 10.8 ml*	*PASS / FAIL*
Step 30 / Verify Sleep Mode Pulse Flow Readings	*Reading @ Setting 2.0, _____ml*	*25 ml +/- 4 ml*	*PASS / FAIL*
Step 31 / Verify Sleep Mode Pulse Flow Readings	*Reading @ Setting 6.0, _____ml*	*75 ml +/- 11.25 ml*	*PASS / FAIL*
Step 36 / Verify Continuous Flow Readings	*Reading @ Setting 0.5, _____LPM*	*0.500 +/- 0.150 LPM*	*PASS / FAIL*
Step 37 / Verify Continuous Flow Readings	*Reading @ Setting 2.0, _____LPM*	*2.000 +/- 0.300 LPM*	*PASS / FAIL*
Step 40 / O2 Purity	*a.* Internal Setting 2.0 _____%O2 a. External Setting 2.0 _____%O2 *b.* Internal Setting 0.5 _____%O2 b. External Setting 0.5 _____%O2	*All readings are 87%-96%* *Respective readings are within 3% of each other*	*PASS / FAIL* *PASS / FAIL*
Step 41/ Verify the control panel functions and unit beeps		*All buttons function & Audible Beep is heard*	*PASS / FAIL*

Note: *All information on this data sheet should be entered in the correct location after the associated test was completed. The data sheet must be signed and dated by the technician preforming the tests. Leave unused sections blank and circle "Pass or Fail"*

Operator (Print): _____ Signature: _____ Date: _____

9.3 SIMPLYGO PULSE FLOW MEASUREMENTS WORKSHEET

SIMPLYGO PULSE FLOW MEASUREMENTS WORKSHEET

Serial Number_____ Model Number_____

MEASUREMENTS @ PULSE MODE SETTING OF 2.0		MEASUREMENTS @ PULSE MODE SETTING OF 6.0		MEASUREMENTS @ SLEEP MODE PULSE SETTING OF 2.0		MEASUREMENTS @ SLEEP MODE PULSE SETTING OF 6.0	
1.		*1.*		*1.*		*1.*	
2.		*2.*		*2.*		*2.*	
3.		*3.*		*3.*		*3.*	
4.		*4.*		*4.*		*4.*	
5.		*5.*		*5.*		*5.*	
6.		*6.*		*6.*		*6.*	
Calculating the Average		*Calculating the Average*		*Calculating the Average*		*Calculating the Average*	
1.	*Add the 6 measurements and record the*	*1.*	*Add the 6 measurements and record the*	*1.*	*Add the 6 measurements and record the*	*1.*	*Add the 6 measurements and record the*
2.	_ *ml*	*2.*	_ *ml*	*2.*	_ *ml*	*2.*	_ *ml*
3.	*Divide the SUM by 6 and record the average below*	*3.*	*Divide the SUM by 6 and record the average below*	*3.*	*Divide the SUM by 6 and record the average below*	*3.*	*Divide the SUM by 6 and record the average below*
4.	_ *ml*	*4.*	_ *ml*	*4.*	_ *ml*	*4.*	_ *ml*

9.4 SIMPLYGO FINAL TEST AND BALANCING PROCEDURE DATA SHEET

SimplyGo Final Test and Balancing Data Sheet

SERIAL NUMBER _____**MDL NUMBER**_____PCA Revision (>=6 or <= 5)_____

Motor Type (Moog or Shinano)_____RA#(if applicable)_____

Final Test Data Sheet

STEP NUMBER/PROCEDURE	READING	SPECIFICATION	RESULTS PASS OR FAIL
Step 3 / Fan Starts		*Fan Starts*	*PASS / FAIL*
***Step 23 / Verify Battery* Symbol**		*Battery symbol is displayed*	*PASS / FAIL*
***Step 24/ Verify External* Power Status Symbol**		*External power status displayed*	*PASS / FAIL*
Step 25 / Verify SimplyGo Automatically triggers pulse after startup			*PASS / FAIL*
Step 26 / Verify Pulse Symbol		*Pulse symbol is displayed*	*PASS / FAIL*
***Step 27 / Verify Pulse Mode* Flow Readings**	Reading @ Setting 2.0,_____ ml	*24 ml +/- 4 ml*	*PASS / FAIL*
***Step 28 / Verify Pulse Mode* Flow Readings**	*Reading @ Setting 6.0, _____ml*	*72 ml +/- 10.8 ml*	*PASS / FAIL*
***Step 30 / Verify Sleep Mode* Pulse Flow Readings**	*Reading @ Setting 2.0, _____ml*	*25 ml +/- 4 ml*	*PASS / FAIL*
***Step 31 / Verify Sleep Mode* Pulse Flow Readings**	*Reading @ Setting 6.0, _____ml*	*75 ml +/- 11.25 ml*	*PASS / FAIL*
***Step 36 / Verify Continuous* Flow Readings**	*Reading @ Setting 0.5, _____LPM*	*0.500 +/- 0.150 LPM*	*PASS / FAIL*
***Step 37 / Verify Continuous* Flow Readings**	*Reading @ Setting 2.0, _____LPM*	*2.000 +/- 0.300 LPM*	*PASS / FAIL*

Balancing Procedure Test Data Sheet

Balancing Procedure Step 2/ O2 Purity	a. Internal Reading @ Setting 2.0,_____%O2 *b. External Reading @ Setting 2.0,_____%O2*	*All readings are 87%- 96%* *Respective readings are within 3% of each other*	*PASS / FAIL*
Balancing Procedure Step 4 / (4) O2 Purities		All readings > 87%	*PASS / FAIL*
Balancing Procedure Step 5 / Verify O2 Factors	*O2 Factor* _____ *O2 Factor* _____ *O2 Factor* _____	*All <1.25*	*PASS / FAIL*
Step 9 / Verify the control panel functions and unit beeps		*All buttons function & Audible Beep is heard*	*PASS / FAIL*

Note: *All information on this data sheet should be entered in the correct location after the associated test was completed. The data sheet must be signed and dated by the technician preforming the tests. Leave unused sections blank and circle "Pass or Fail"*

Operator (Print): _____ Signature: _____ Date: _____

9.5 SIMPLYFLO FINAL TEST PROCEDURE

9.5.1 REQUIRED EQUIPMENT

- Oxygen Analyzer (PRI P/N 1027705) or equivalent
- Continuous Flow meter - Cole-Parmer Hand-held Flowmeter, PM2.20XY (Catalog Number: WU-32500-80) or equivalent
- Oxygen Interface Hardware Kit (Respironics Part Number: 1073499)
- Computer with Microsoft Windows 7 (32/64 bit) or XP (32 bit) operating systems only
- Current version of the Data Recovery Tool for SimplyGo (my.respironics.com)
- Current version of the SimplyGo Manifest File (my.respironics.com)

IMPORTANT NOTE

If a Main PCA, Sieve Bed, Compressor, or Process Valve has been replaced, perform the Final Test Procedure and then the Balancing Procedure in that order.

If any other repair has been completed, perform only the Final Test Procedure.

If performing the Final Test and Balancing, use the Final Test and Balancing Data Sheet.
If performing the Final Test only, use the Final Test Data Sheet.

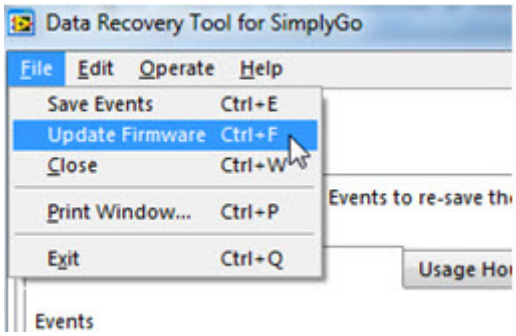
NOTE

For download and installation instructions for SimplyGo/SimplyFlo Data Recovery Tool and Manifest File, refer to the service Manual Section 5.3

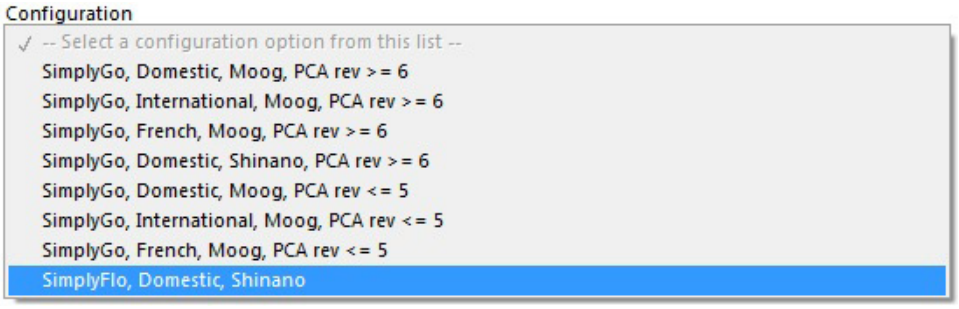
1. Connect the AC Power Supply to an AC power source.
2. Connect the AC Power Supply output connector to the SimplyFlo power input.
3. Launch the SimplyGo Data Recovery Tool by double clicking on the icon shown below.

4. Ensure the device is connected to the computer via the communication cable
5. Turn the device on by performing the following steps:
6. Press the Power button
7. Wait for the LCD screen to light
8. Press the Power button a second time
9. The data recovery tool should now detect the device and begin downloading the data
10. Once the data has been downloaded, proceed to the code loading option.

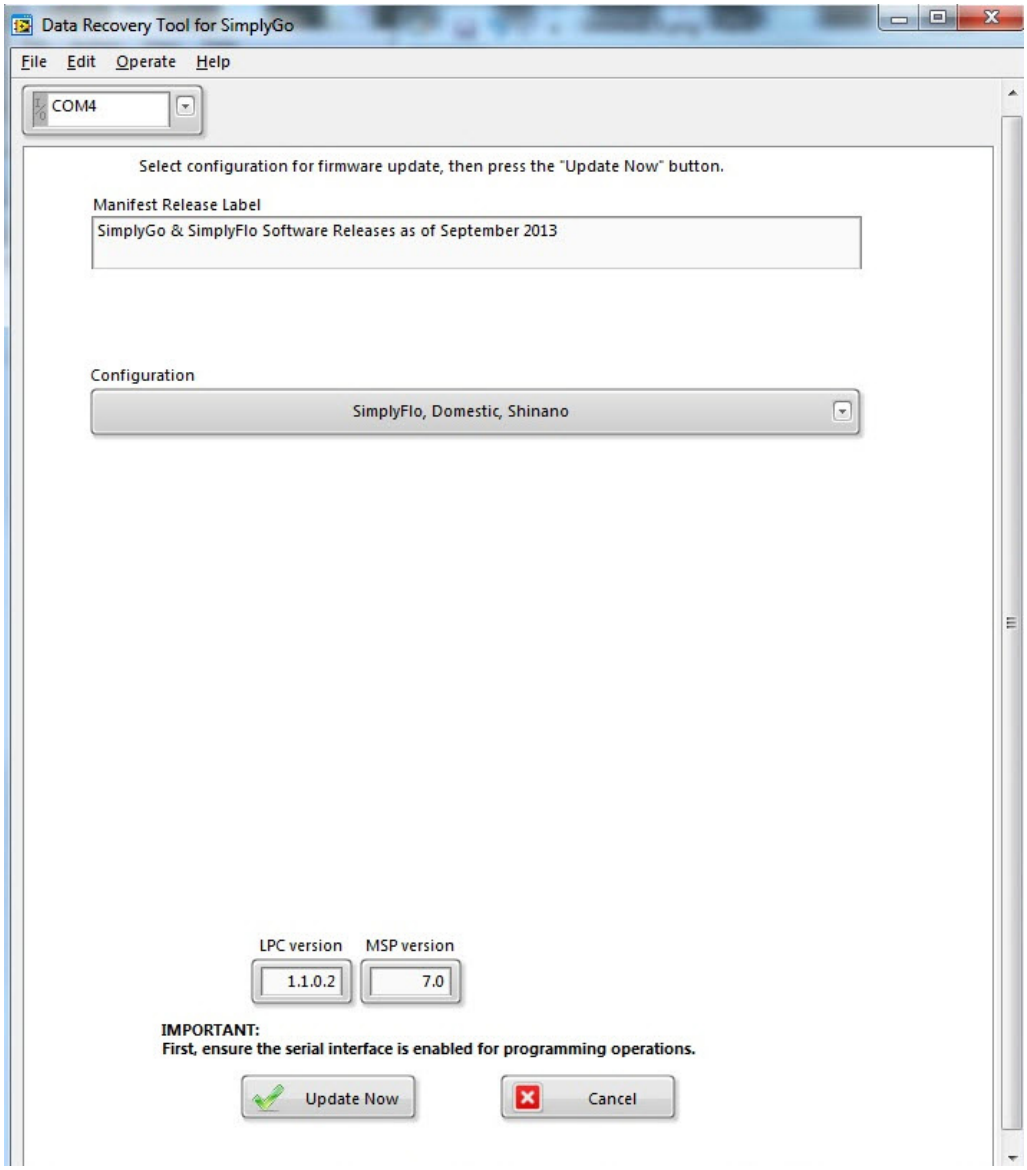
11. Document the device model number and PCA revision in the Test Data Sheet. These values will be needed to select the appropriate software and parameters to load.
12. Load the appropriate software and parameters for the device configuration you have.
13. From the SimplyGo Data Recovery Tool File → Update Firmware menu option.



14. Based on values recorded in step 11, select the appropriate configuration option from the drop down list.



15. Make sure the serial interface is enabled for programming, then select ‘Update Now’ button.



16. Once the device has completed the code load and rebooted proceed to step 17

IMPORTANT NOTE
Do NOT turn the device off/on during the programming. When programming is complete, the device will reboot.

17. The data recovery tool should now detect the device and begin downloading the data

a. Verify the correct LPC software version was loaded. The Usage Hours Tab will indicate which software version is to be installed. Refer to Data Recovery Tool screen shot shown in step 15 of this procedure.

18. Select Continuous Mode and a setting of 0.5.
19. Connect one end of a piece of 3/16" ID tubing to the bottom of the flowmeter.
20. Connect the flowmeter to the patient cannula connector.

21. Holding the flowmeter in the vertical position above the SimplyFlo, observe the flowmeter scale and record the reading on the Test results sheet
22. Repeat step 21 for a setting of 2.0 continuous flow
23. Disconnect the flowmeter from the patient cannula connector.
24. Connect a calibrated O2 Analyzer to the Patient Cannula connector as shown below.

IMPORTANT NOTE

If performing both the Final Test and Balancing Procedure, DO NOT perform step 25 a and b. Continue directly to the Balancing Procedure.

25. Perform steps a and b.
    a. Let the device run for at least 10 minutes on 2 LPM continuous flow. Record the results of the O2 purity from the O2 Analyzer and the internal O2 sensor on the test data sheet.

   b. Let the device run for at least 10 minutes on 0.5 LPM continuous flow. Record the results of the O2 purity from the O2 Analyzer and the internal O2 sensor on the test data sheet.

26. Verify the functionality of the control panel buttons. Then turn the device off and listen for three audible tones signifying the device turning off. Record results on the test data sheets.
27. Ensure loss of power alarm is installed in SimplyFlo's dataport
28. Power the device ON. Allow the device to operate for 1 minute.
29. Unplug the power supply from the running SimplyFlo.
30. Verify that the loss of power alarm is clearly audible. Record the results on the test data sheet.
31. Tilt SimplyFlo 90 degrees left or right. Verify that the alarm silences. Record the results on the test data sheet.
32. Re-connect the device to the power supply. It should power ON.
33. Allow the device to run at least 10 seconds.
34. Power the device OFF by pressing the POWER button twice.
35. Unplug the power supply. Verify the alarm does not sound. Record the results on the test data sheet.
36. If the SimplyFlo fails testing, turn the unit completely off and retest the unit.

NOTE

If performing the Final Test and Balance Test due to the replacement of either the Main PCA, Sieve Bed, Compressor, or Process Valve, perform the Balance Procedure.

Balancing Procedure

Perform only if a Main PCA, Sieve Bed, Compressor, or Process Valve has been replaced.

1. Power the device ON and set the device to a setting of 0.5 in continuous mode.
2. Before using the "Learn Pressure Bal" command verify the O2 factors are 1.00. If they are not then reset the O2 factors by clicking the reset button.
   a. On the Usage Hours Tab click the "Learn Pressure Bal" check box. The device screen changes to 2 LPM continuous.
   b. Let the device run for 15 minutes then record the results of the O2 purity from the O2 Analyzer and the internal O2 sensor on the test data sheet.

3. Allow the device to continue running the automated “Learn Pressure Bal” test. This portion of the test will take approximately 80 minutes. The unit will shut down when this portion of the test is complete.
4. Record the four O_2 purities displayed on the Real Time screen onto the Test Data Sheet prior to turning the device back on.
5. Verify the O2 factors shown on the Usage Data tab are all below 1.25 and record on Test Data Sheet.
6. Turn the device back on.
7. The data recovery tool should now detect the device and begin downloading the data.
8. If any of the O2 Factors exceed 1.25, troubleshoot and repair the device. Once resolved, reset the O2 Factors via the Reset O2 factors button on the Usage Data tab of the data recovery tool and repeat the Balancing Procedure.
9. Verify the functionality of the control panel buttons. Then turn the device off and listen for three audible tones signifying the device turning off. Record results on the test data sheets.
10. Ensure loss of power alarm is installed in SimplyFlo’s dataport
11. Power the device ON. Allow the device to operate for 1 minute.
12. Unplug the power supply from the running SimplyFlo.
13. Verify that the loss of power alarm is clearly audible. Record the results on the test data sheet.
14. Tilt SimplyFlo 90 degrees left or right. Verify that the alarm silences. Record the results on the test data sheet.
15. Re-connect the device to the power supply. It should power ON.
16. Allow the device to run at least 10 seconds.
17. Power the device OFF by pressing the POWER button twice.
18. Unplug the power supply. Verify the alarm does not sound. Record the results on the test data sheet.
19. If the SimplyFlo fails testing, turn the unit completely off and retest the unit.
20. If the unit fails a second time refer to the trouble shooting section of the Service Manual.

9.6 SIMPLYFLO FINAL TEST DATA SHEET

SIMPLYFLO FINAL TEST DATA SHEET

SERIAL NUMBER _____MDL NUMBER_____

PCA REVISION _____RA# (IF APPLICABLE)_____

STEP NUMBER/ PROCEDURE	READING	SPECIFICATION	RESULTS PASS OR FAIL
Step 21 / Verify Continuous Flow Readings	*Reading @ Setting 0.5, _____LPM*	*0.500 +/- 0.150 LPM*	*PASS / FAIL*
Step 22 / Verify Continuous Flow Readings	*Reading @ Setting 2.0, _____LPM*	*2.000 +/- 0.300 LPM*	*PASS / FAIL*
Step 25 / O2 Purity	*a. Internal Reading @ Setting 2.0,_____%O2* *a. External O2 Analyzer Reading @ Setting 2.0,_____%O2* *b. Internal Reading @ Setting 0.5,_____%O2* *b. External O2 Analyzer Reading @ Setting 0.5,_____%O2*	*All readings are 87%- 96%* *Respective readings are within 3% of each other*	*PASS / FAIL*
Step 26/ Verify the control panel functions and unit beeps		*All buttons function & Audible Beep is heard*	*PASS / FAIL*
Step 30/ Power alarm is clearly audible.		*Power alarm is clearly audible.*	*PASS / FAIL*
Step 31 / Alarm silences		*Alarm silences.*	*PASS / FAIL*
Step 35 / Alarm does not sound		*No alarm*	*PASS / FAIL*

Note: *All information on this data sheet should be entered in the correct location after the associated test was completed. The data sheet must be signed and dated by the technician preforming the tests. Leave unused sections blank and circle "Pass or Fail"*

Operator (Print): _____ Signature: _____ Date: _____

9.7 SIMPLYFLO FINAL TEST AND BALANCING TEST DATA SHEET

SIMPLYFLO FINAL TEST AND BALANCING DATA SHEET

SERIAL NUMBER _____MDL NUMBER_____

PCA REVISION _____ RA# (IF APPLICABLE)_____

Final Test Data Sheet

STEP NUMBER/ PROCEDURE	READING	SPECIFICATION	RESULTS PASS OR FAIL
Step 21 / Verify Continuous Flow Readings	*Reading @ Setting 0.5, _____LPM*	*0.500 +/- 0.150 LPM*	*PASS / FAIL*
Step 22 / Verify Continuous Flow Readings	*Reading @ Setting 2.0, _____LPM*	*2.000 +/- 0.300 LPM*	*PASS / FAIL*

Balancing Procedure Test Data Sheet

Balancing Procedure Step 2/ O2 Purity	*a. Internal Reading @ Setting 2.0, _____%O2* *b. External Reading @ Setting 2.0, _____%O2*	*All readings are 87%- 96%* *Respective readings are within 3% of each other*	*PASS / FAIL*
Balancing Procedure Step 4 / (4) O2 Purities	*O2 Purity_____* *O2 Purity_____* *O2 Purity_____* *O2 Purity_____*	*All readings > 87%*	*PASS / FAIL*
Balancing Procedure Step 5 / Verify O2 Factors	*O2 Factor_____* *O2 Factor_____* *O2 Factor_____*	*All < 1.25*	*PASS / FAIL*
Step 9 / Verify the control panel functions and unit beeps		*All buttons function & Audible Beep is heard*	*PASS / FAIL*
Step 13/ Power alarm is clearly audible.		*Power alarm is clearly audible.*	*PASS / FAIL*
Step 14 / Alarm silences		*Alarm silences.*	*PASS / FAIL*
Step 18 / Alarm does not sound		*No alarm*	*PASS / FAIL*

Note: *All information on this data sheet should be entered in the correct location after the associated test was completed. The data sheet must be signed and dated by the technician preforming the tests. Leave unused sections blank and circle "Pass or Fail"*

Operator (Print): _____ Signature: _____ Date: _____

This page intentionally blank.

CHAPTER 10: TOOLS & EQUIPMENT

10.0 CHAPTER OVERVIEW

This chapter details the necessary hand tools and supplies for troubleshooting, testing, and repairing the SimplyGo Portable Oxygen Concentrator.

10.1 COMMON HAND TOOLS

- Philips head Screwdriver
- T9 Torx Driver
- Needle Nose Pliers
- Small flat head screwdriver
- Crimp Tool

10.2 EQUIPMENT

- Oxygen Analyzer
- Pulse Meter
- Continuous Flow Meter
- Pressure Tubing
- O2 Enrichment Port Adapter
- Test Orifice Cap
- Computer with Microsoft Windows 7 (32/64 bit) or XP (32 bit) operating systems only
- Oxygen Interface Hardware Kit (Respironics Part Number: 1073499)

10.3 SUPPLIES

- Cleaning Cloth
- Mild Detergent
- Leak Detector

10.4 ACCEPTABLE TEST EQUIPMENT

- MX300 Portable Oxygen Monitor (Philips Respironics Part Number: 1027705)
- Valley Inspired Pulse Meter (http://www.inspiredrc.com/pulsemeter.html, Part Number: Pulsemeter)
- Cole-Parmer Hand-held Flowmeter, PM2.20XY (Catalog Number: WU-32500-80)
- Size 3/16 I.D, Length 1-2 feet tubing (Provided with Pulsemeter)
- O2 Enrichment Port (Philips Respironics Part Number: 312710)
- Test Orifice Cap (www.caplugs.com, Part Number: EC-14)

10.4.1 ACCEPTABLE OPTIONS

- Any Oxygen Analyzer with a Range of 100% Oxygen and an Accuracy of +/- 2% of full scale
- Any Continuous Volumetric Flow Meter with a Range of 0-2.5 LPM and an Accuracy of +/- 0.2% LPM
- Any Pressure Tubing measuring 1-2 Feet and having an I.D. of 3/16”

CHAPTER 11: SCHEMATICS

11.0 SCHEMATICS STATEMENT

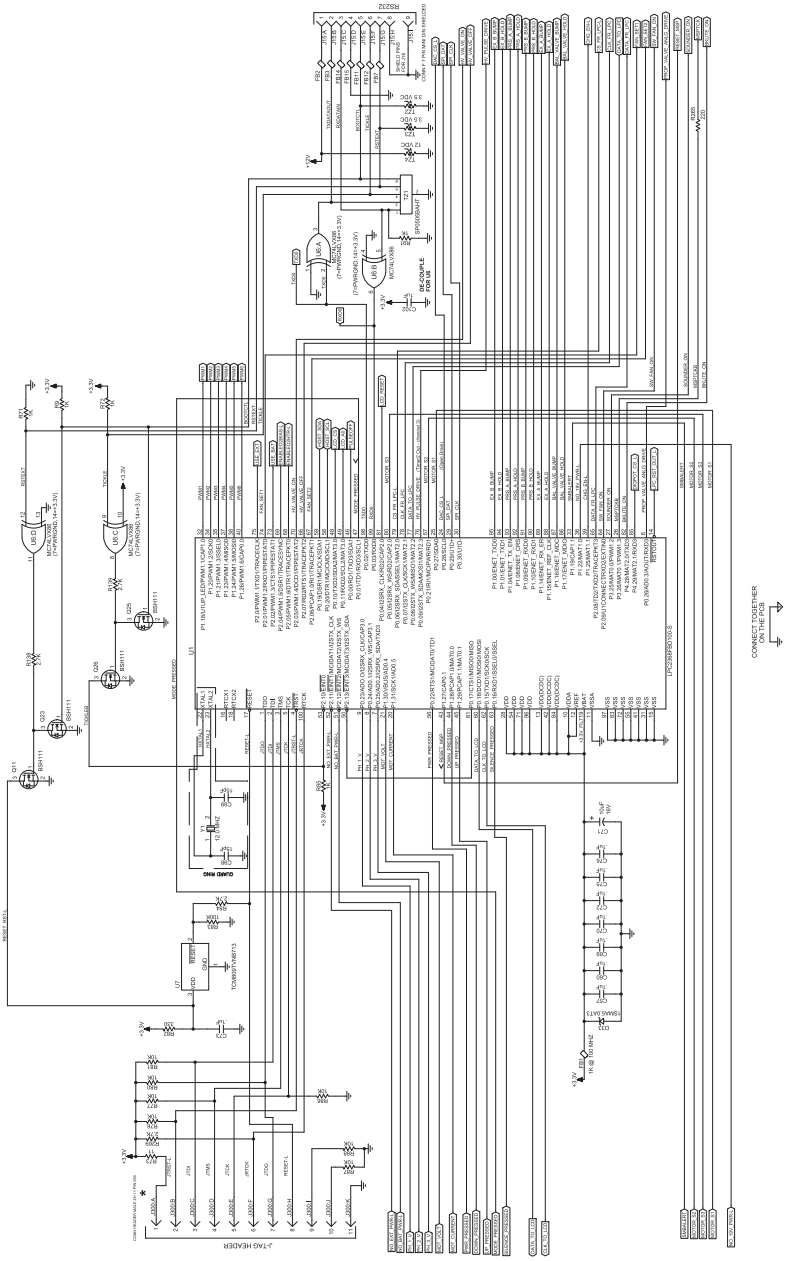
Schematics are supplied with this manual in direct support of the sale and purchase of this product.

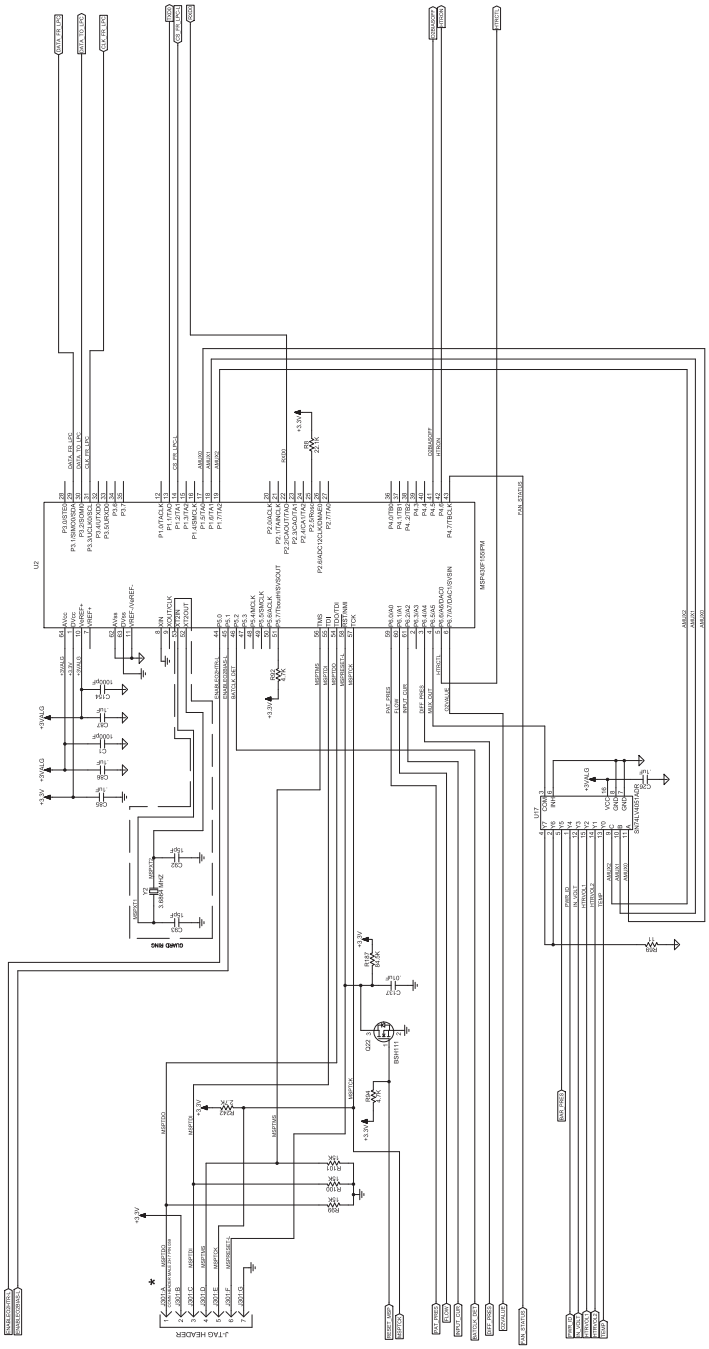
The schematics are proprietary and confidential. Do not copy the schematics or disclose them to third parties beyond the purpose for which they are intended. Patents are pending.

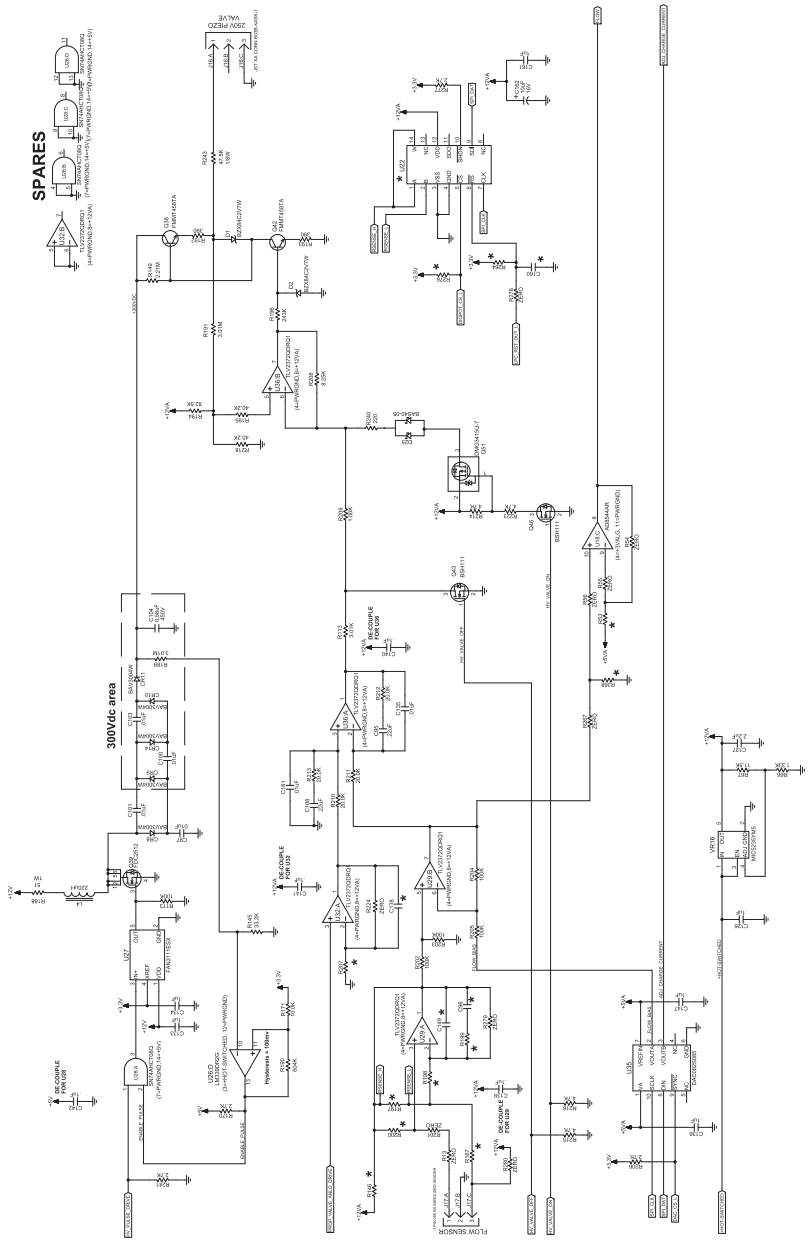
The schematics are intended to satisfy administrative requirements only. They are not intended to be used for component level testing and repair. Any changes of components could effect the reliability of the device, prohibit lot tracking of electronic components, and void warranties. Repairs and testing are supported only at the complete board level.

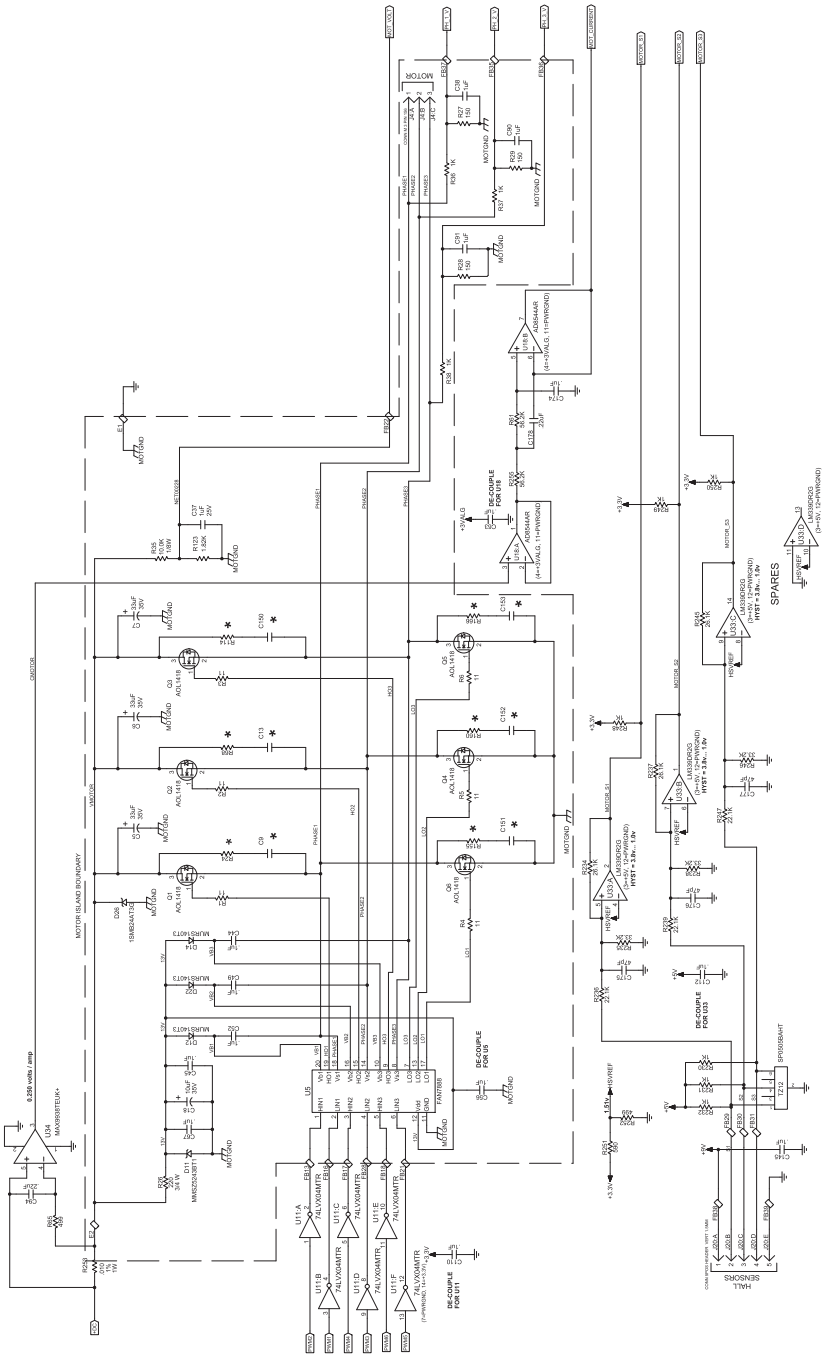
The schematics are of the revision level in effect at the time this manual was last revised. New revisions may or may not be distributed in the future.

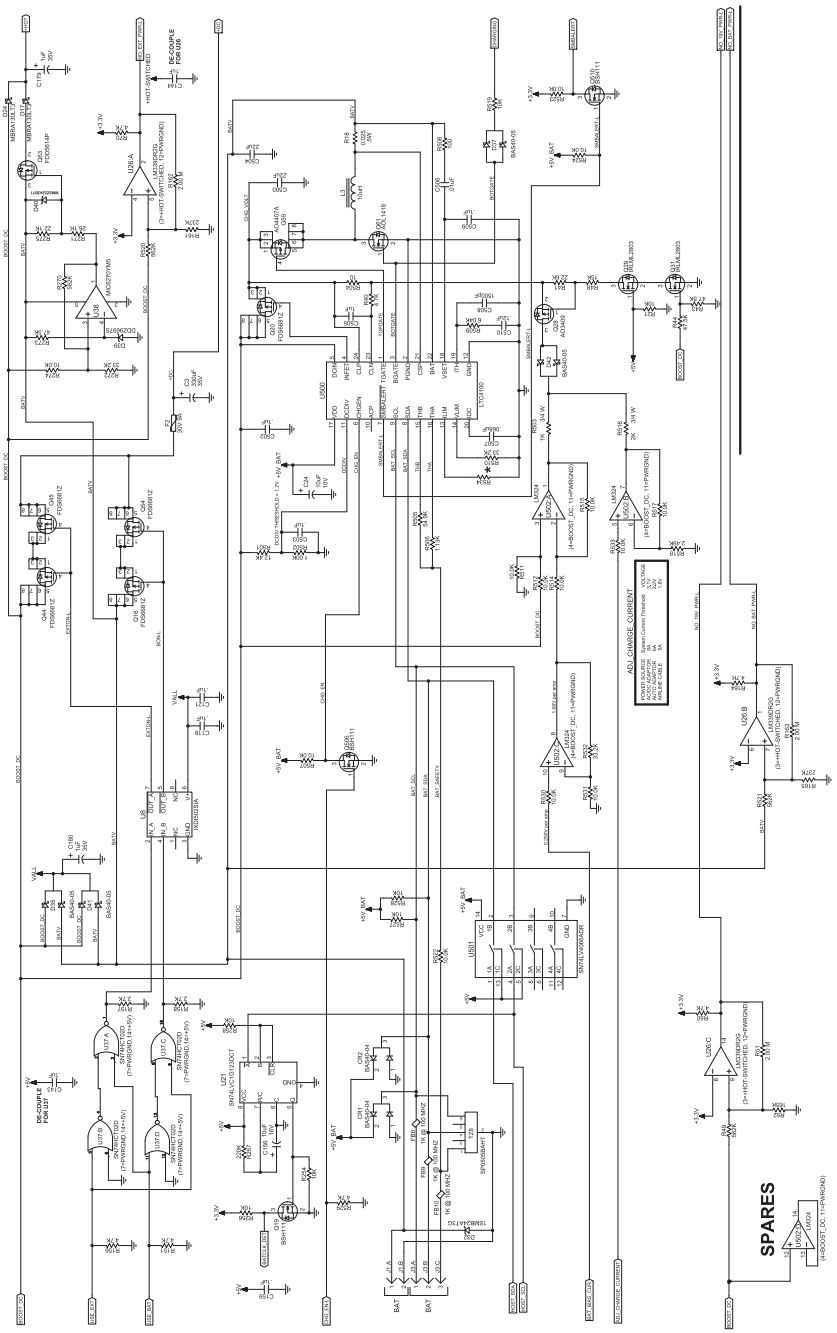
11.1 SIMPLYGO SCHEMATICS

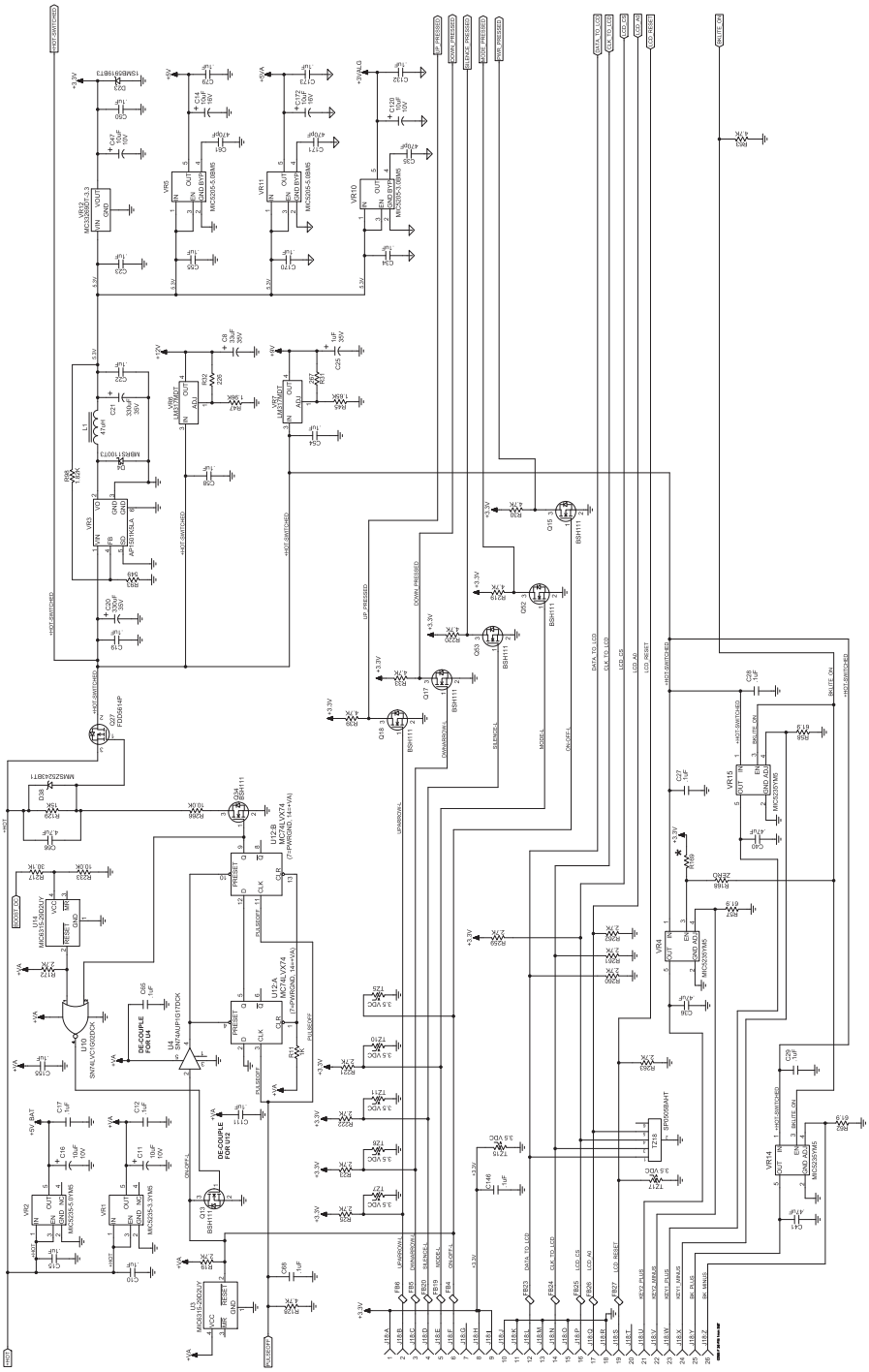


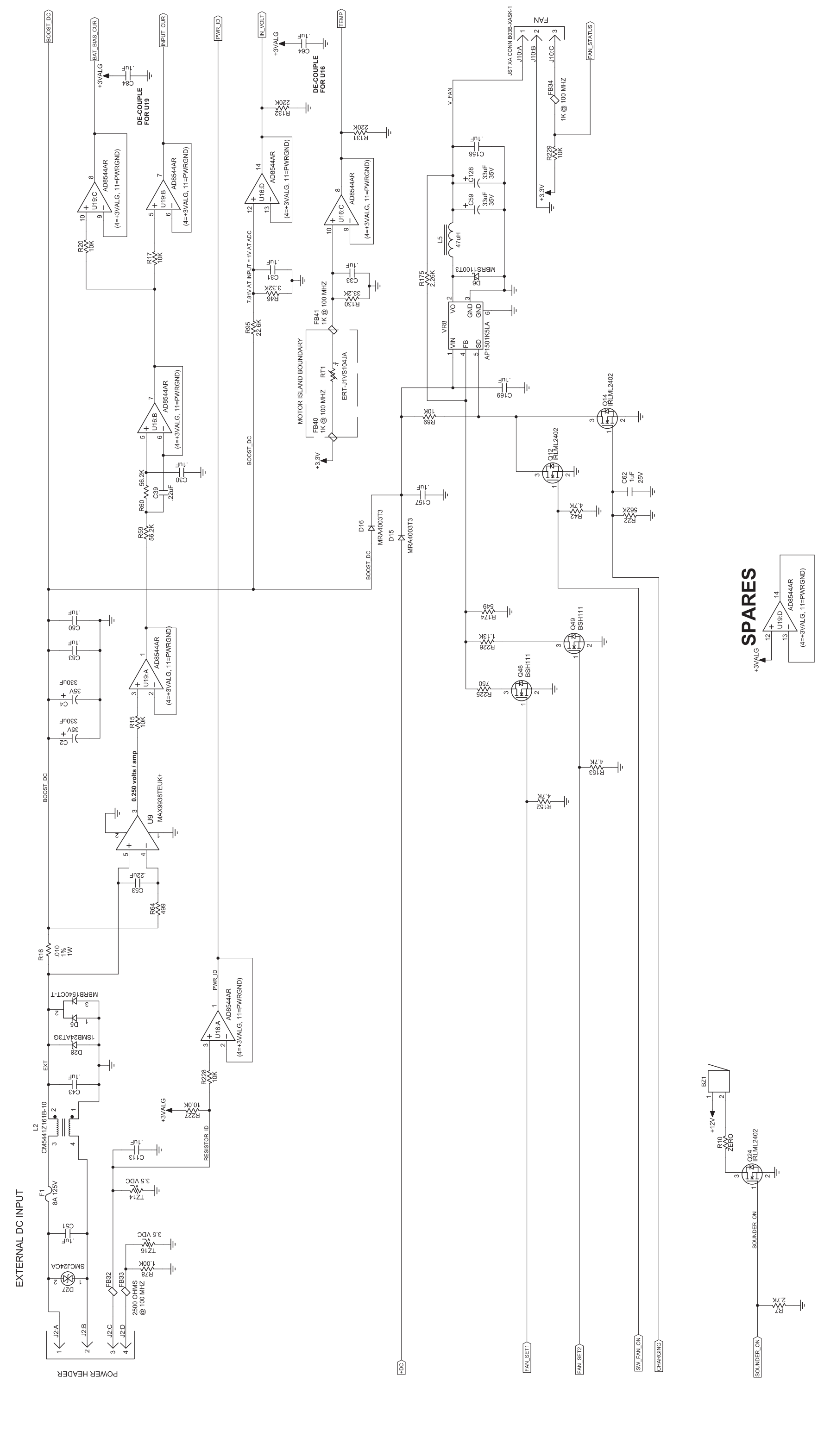


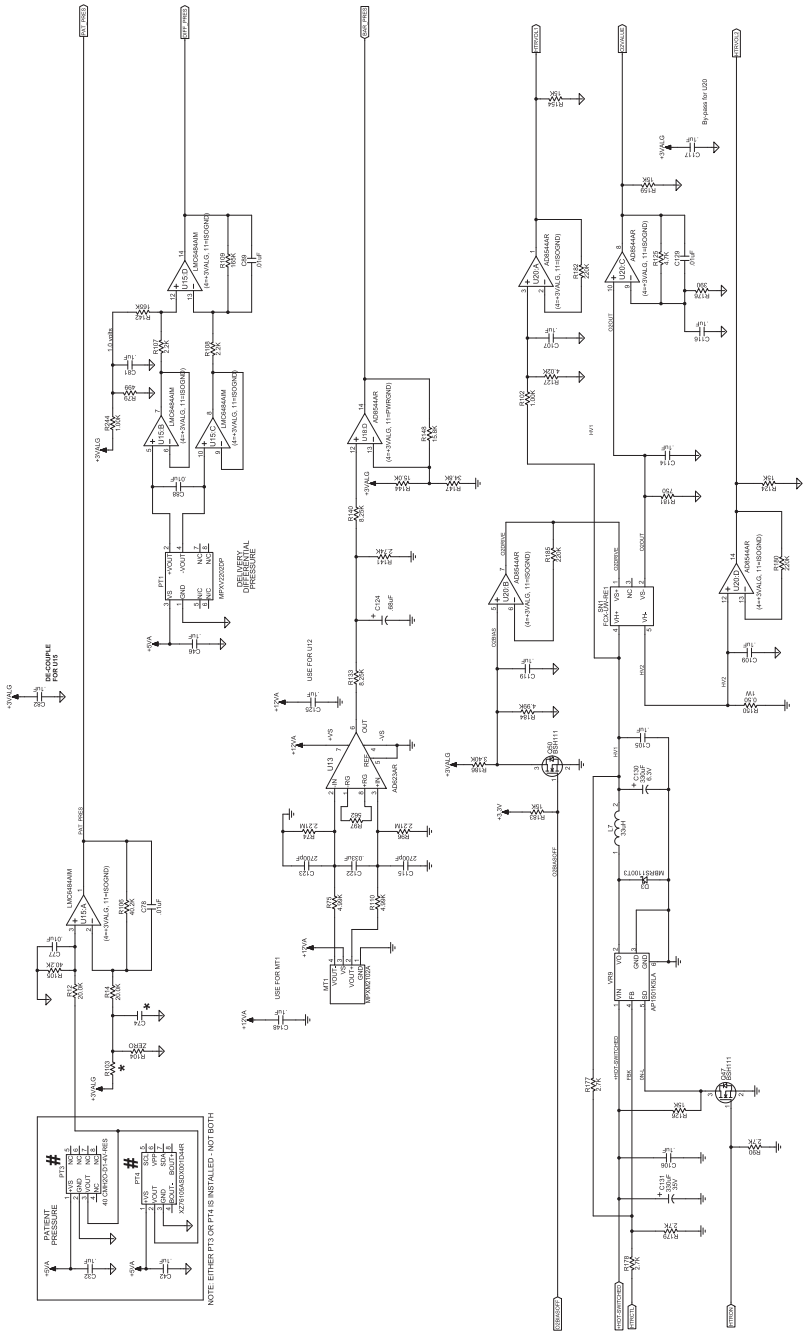

SPARES
300Vdc area
25OV PIEZO VALVE
DC-DECOUPLE FOR LDS
FLOW SENSOR

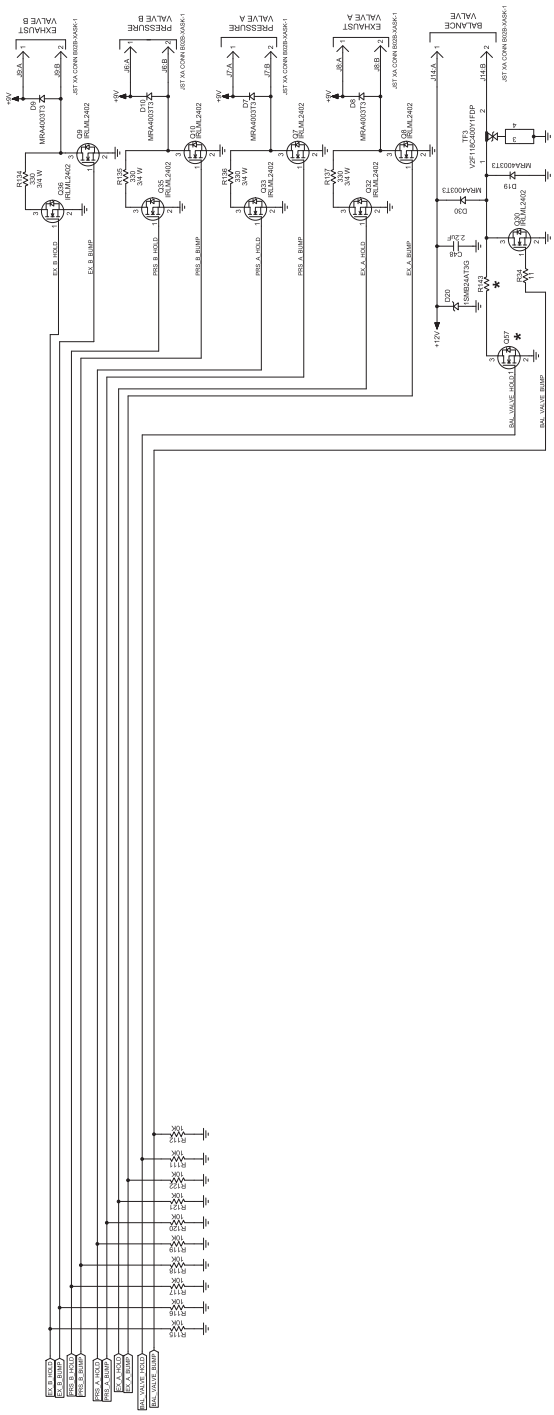



SPARES

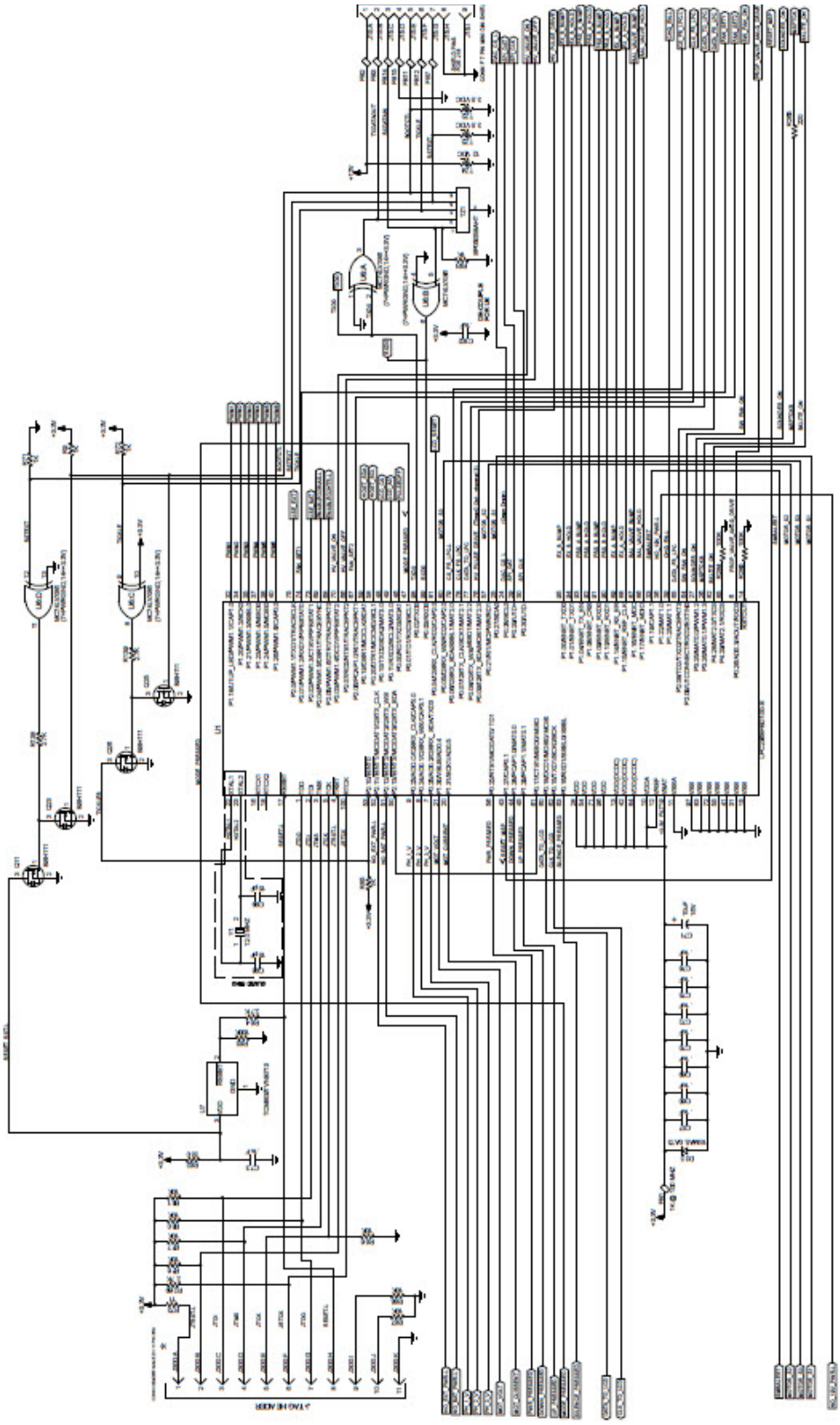


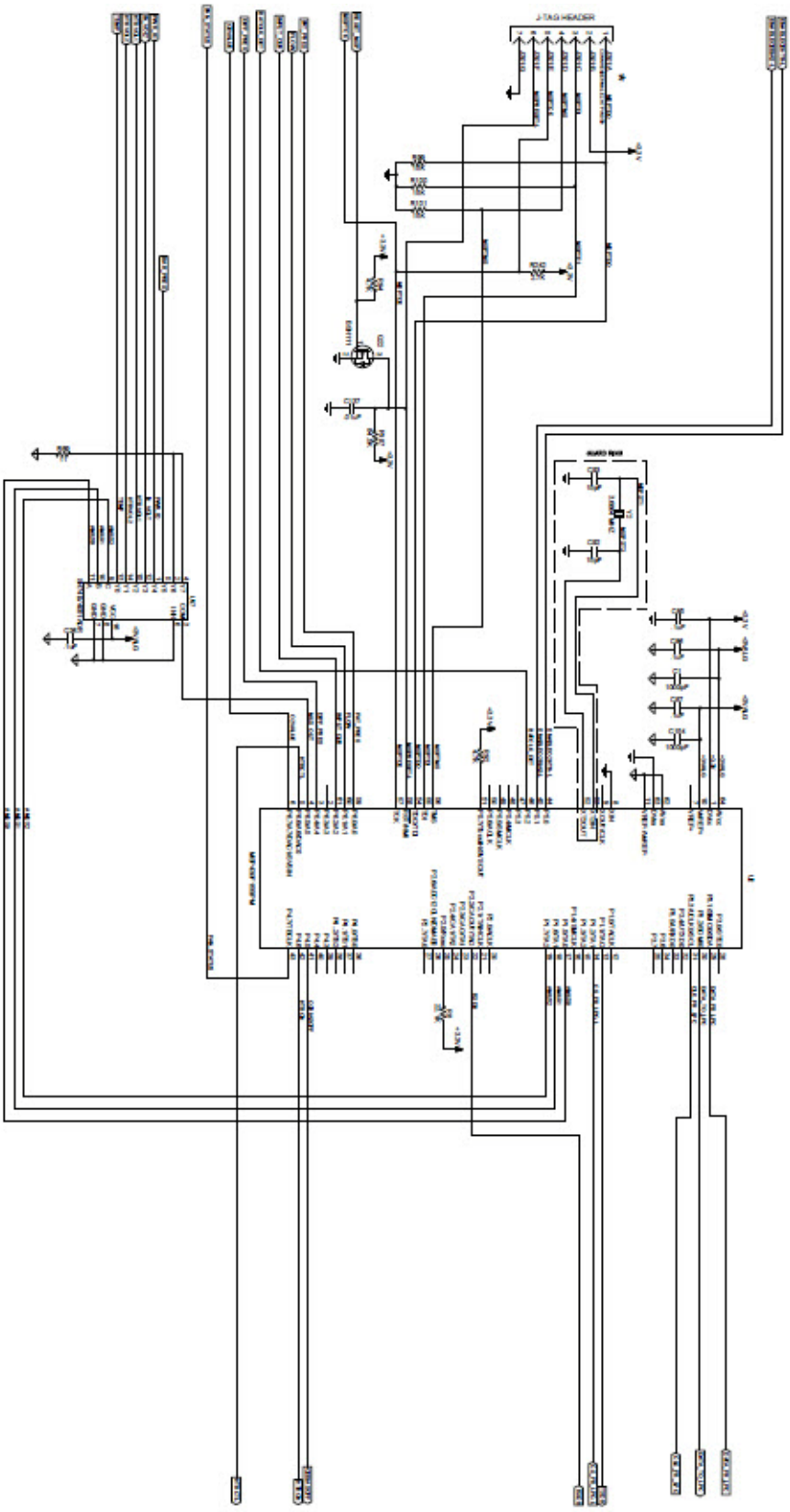

EXTERNAL DC INPUT
POWER HEADER
MOTOR ISLAND BOUNDARY
FAN
SPARES
DE-COUPLE FOR U19
DE-COUPLE FOR U16

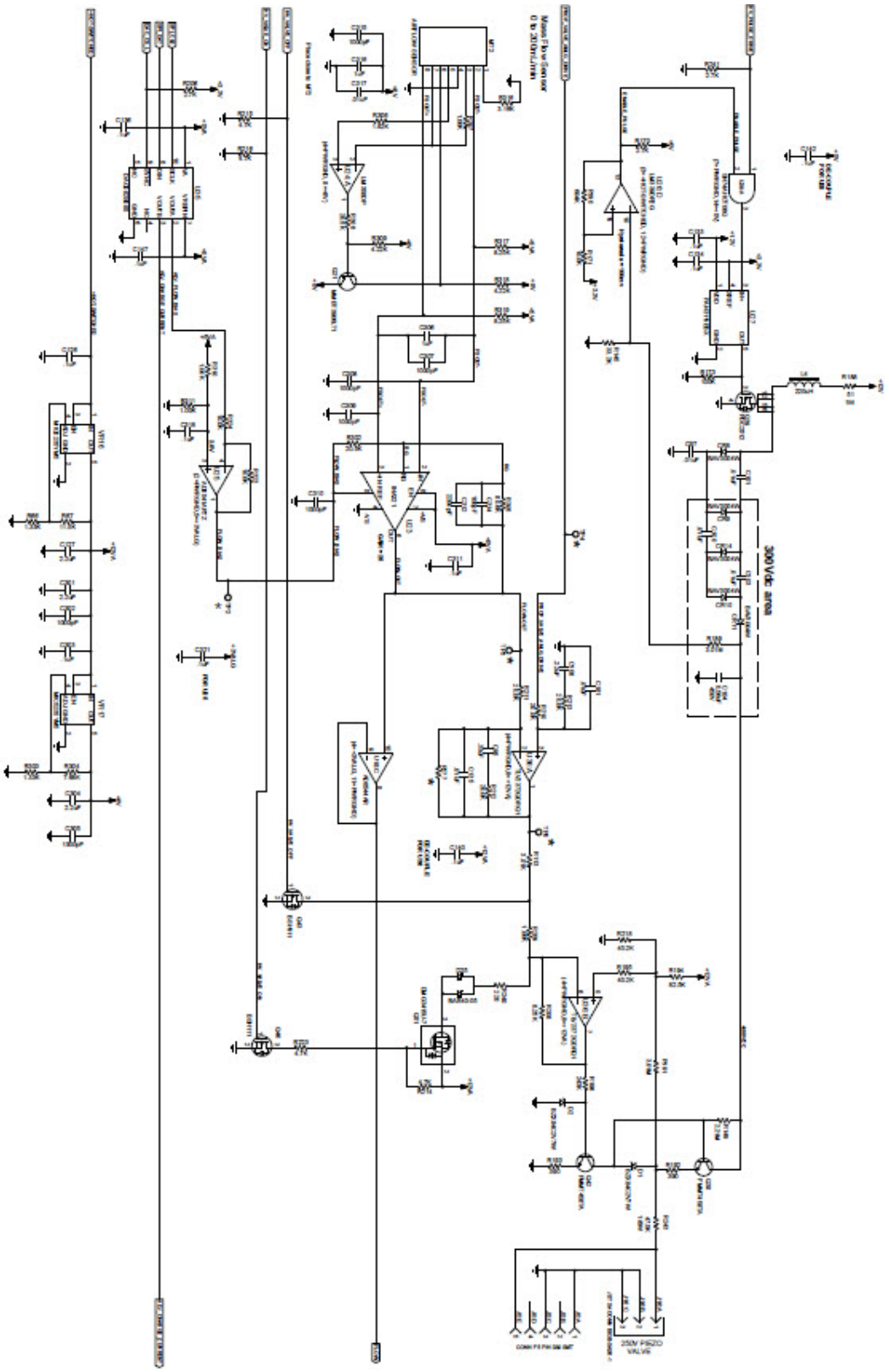


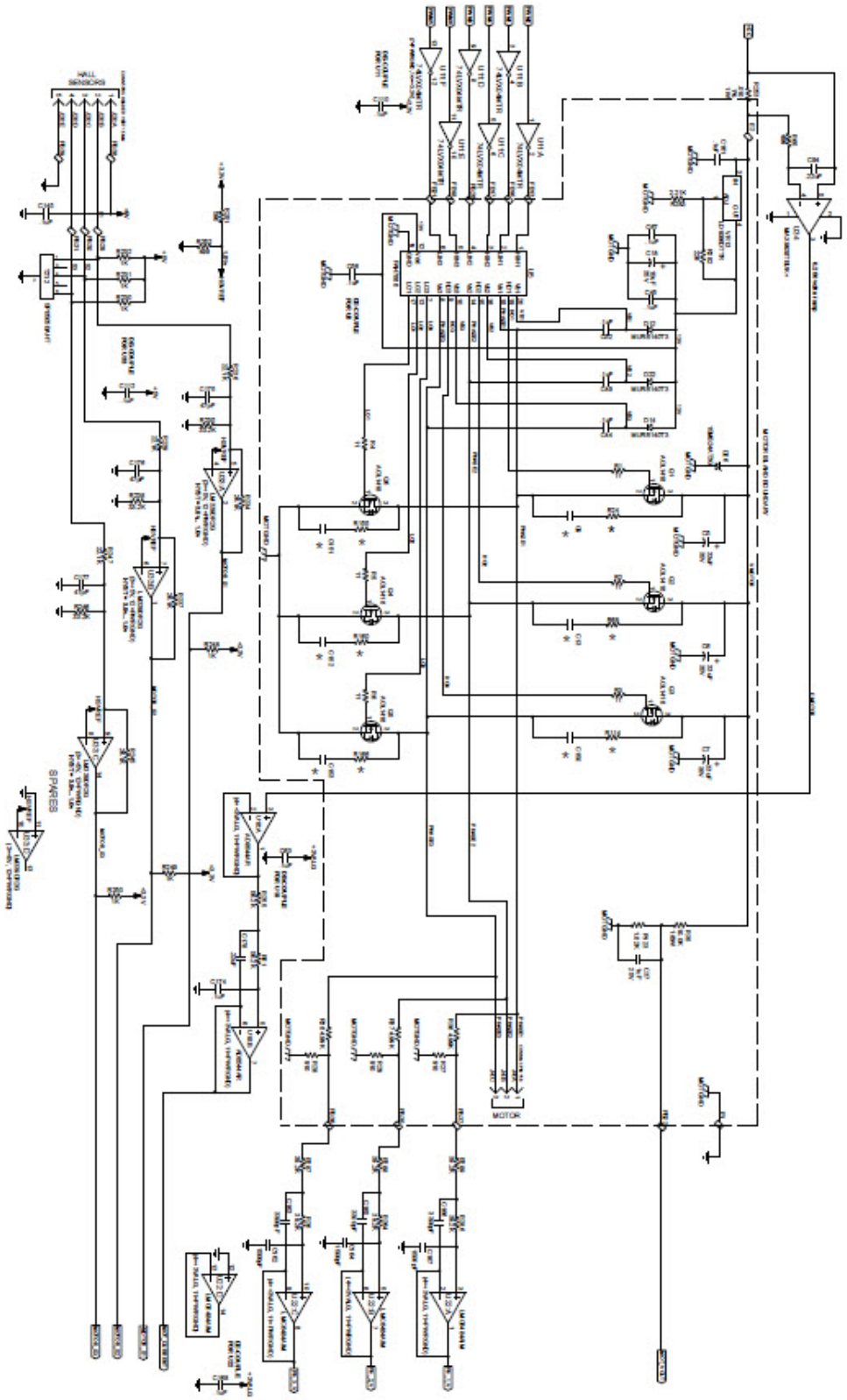

EXHAUST VALVE B
PRESSURE VALVE B
PRESSURE VALVE A
EXHAUST VALVE A
BALANCE VALVE
JST XA CONN B02B-XASK-1
MRA4003T3
IRLML2402
MBRA4003T3
EX_B_HOLD
EX_B_BUMP
PRS_B_HOLD
PRS_B_BUMP
PRS_A_HOLD
PRS_A_BUMP
EX_A_HOLD
EX_A_BUMP
BAL_VALVE_HOLD
BAL_VALVE_BUMP
+8V
+12V

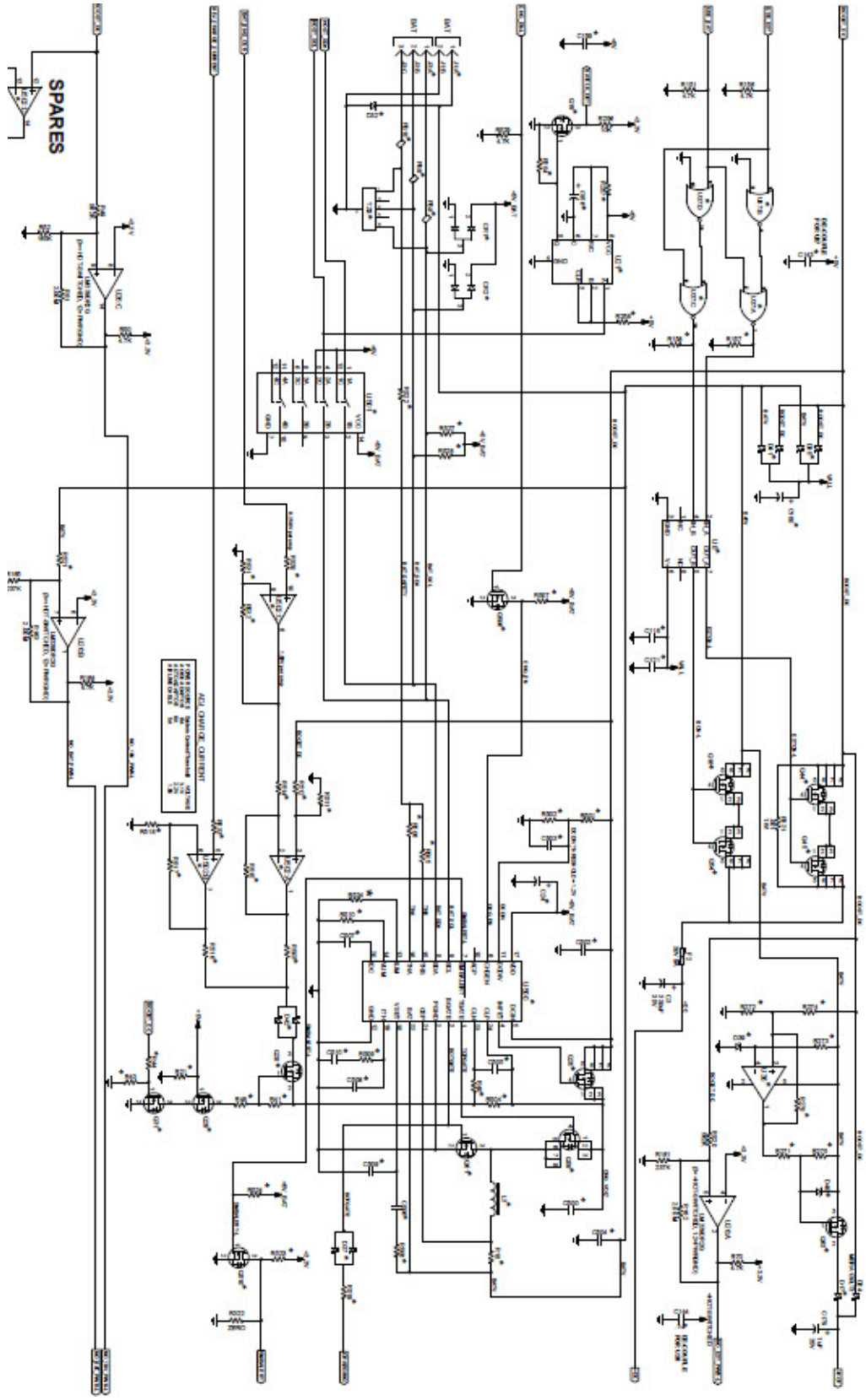
11.2 SIMPLYFLO SCHEMATICS

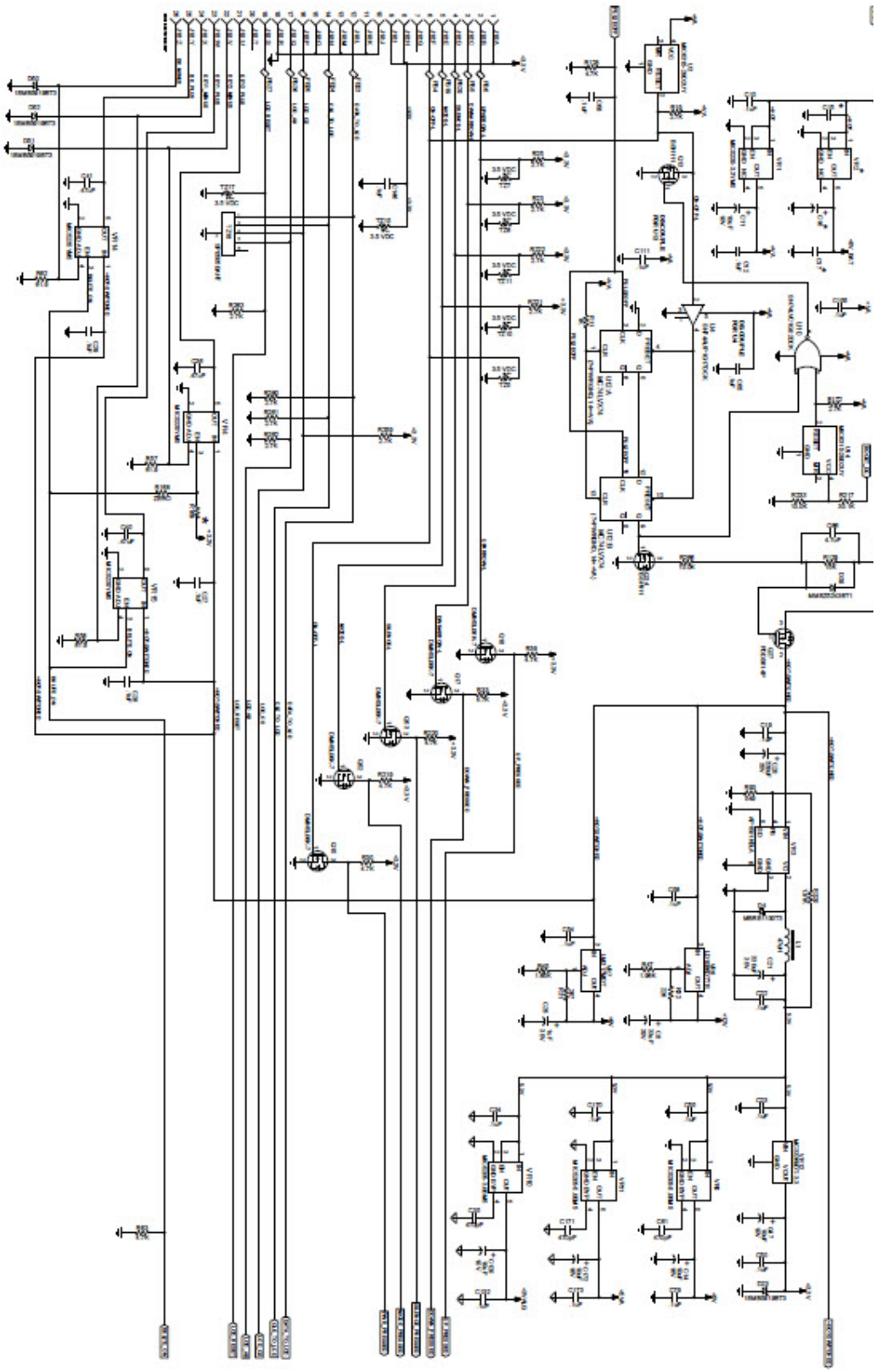


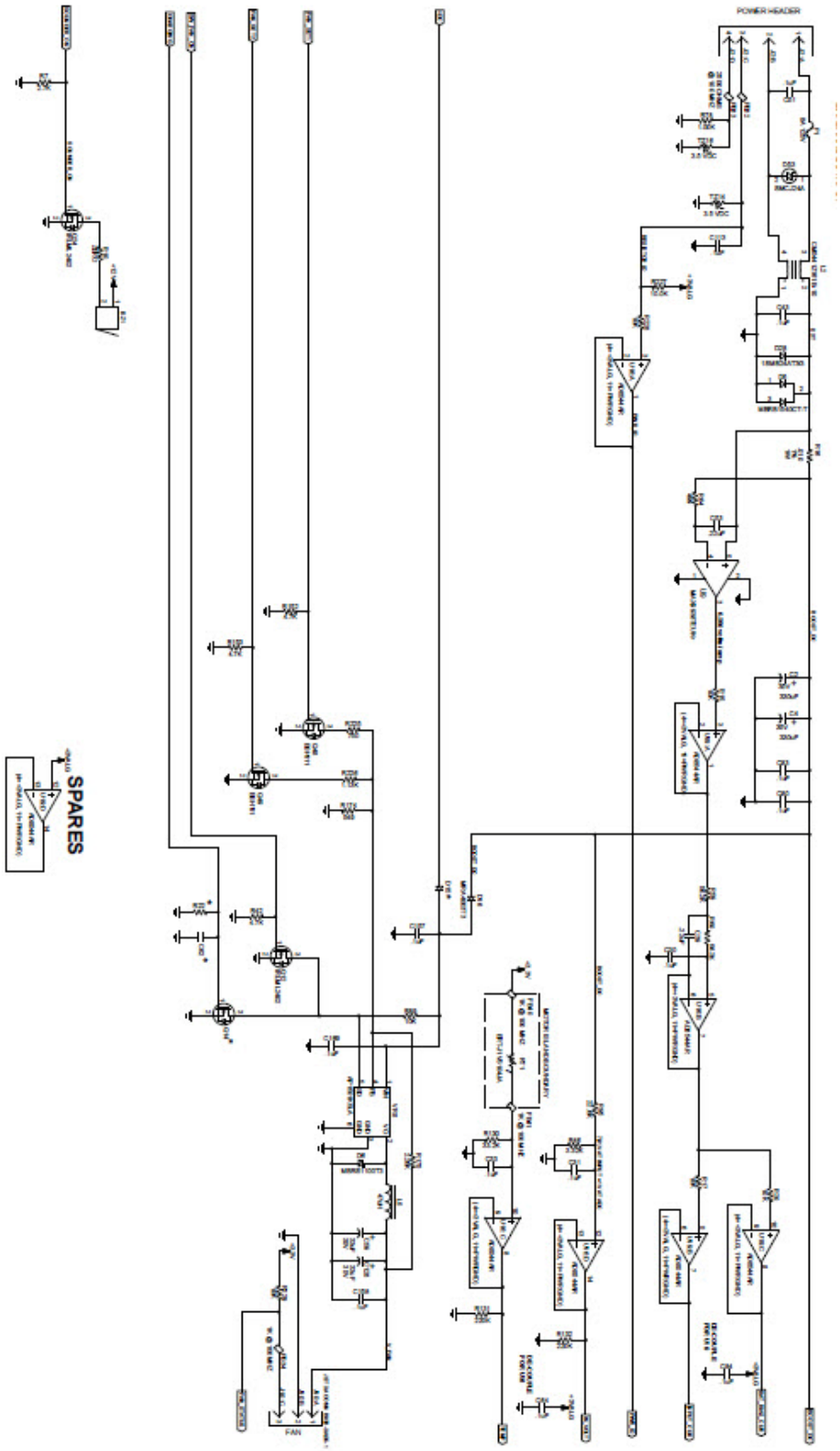


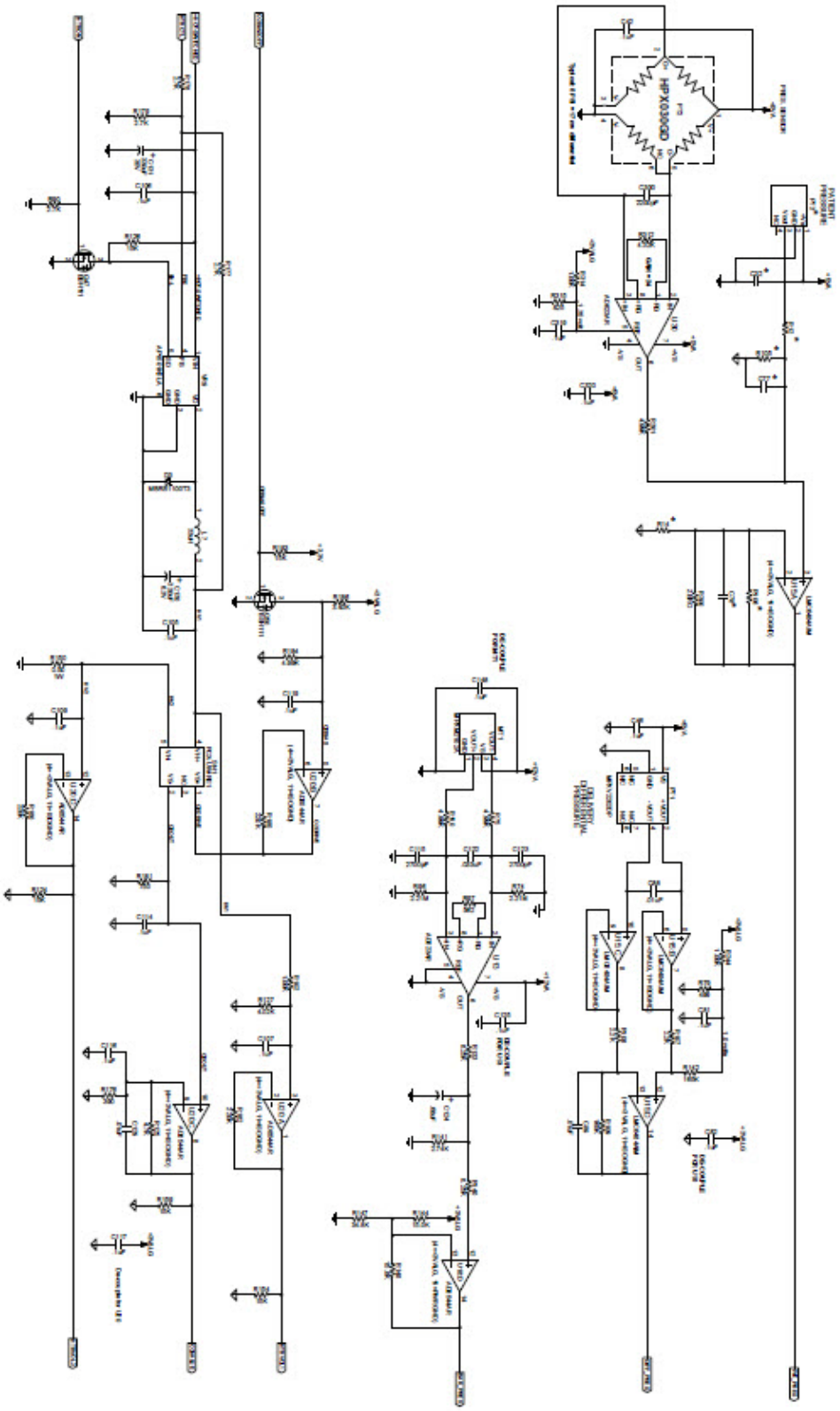


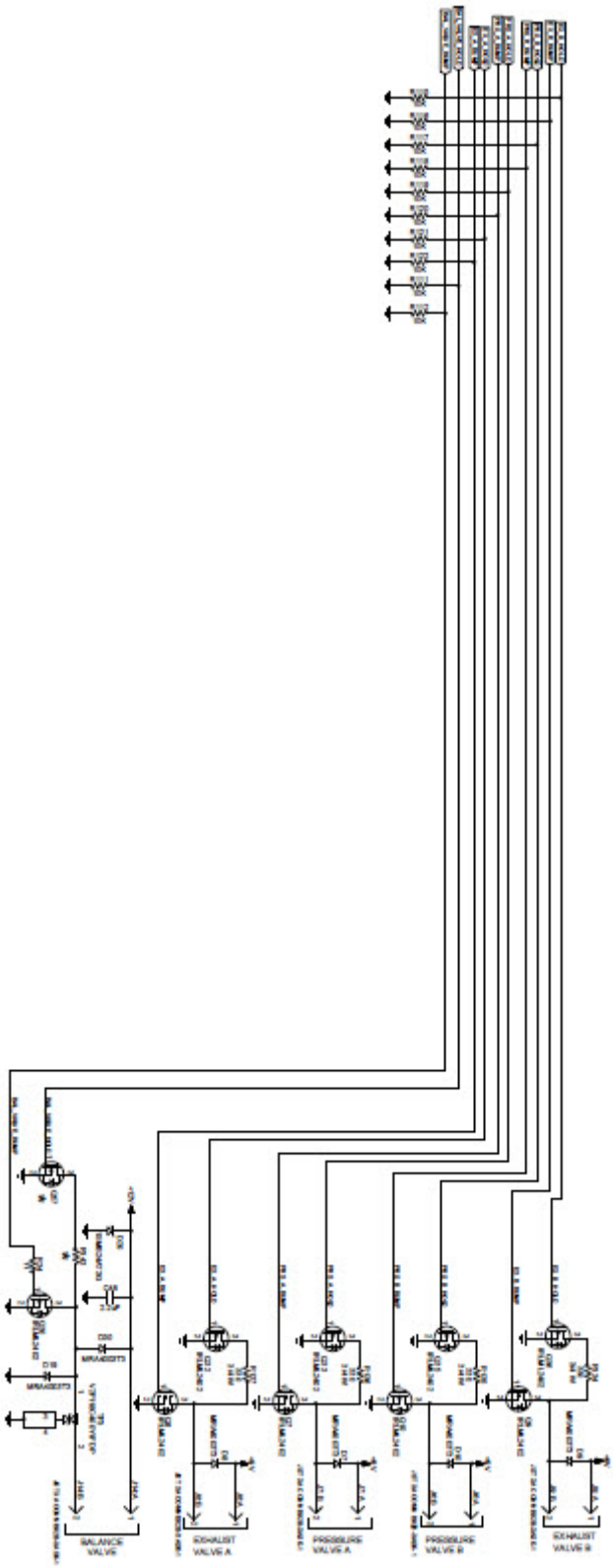



SPARES




SPARES
POWER HEADER
FAN





This page intentionally blank.

Respironics Inc.
1001 Murry Ridge Lane
Murrysville, PA 15668 USA

Respironics Deutschland
Gewerbestrasse 17
82211 Herrsching, Germany
EC REP

CE
0123

1097626, VER. 03
SJW 08/19/2013