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# CAIRE®

*A Chart Industries Company*

AirSep®  SeQual®

[www.CAIREmedical.com](http://www.CAIREmedical.com)

## Med Tips

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July 2013

### PRODUCT INFORMATION

#### **C500: Unit is Discontinued**

As of August 2012, CAIRE has discontinued the production of the Companion 500 portable liquid oxygen unit. This unit was primarily sold on the European market.

The CAIRE Sprint has all of the same flow rate capabilities as the Companion 500 and can be used as a direct replacement for customers that are used to the functions of the Companion 500.

#### **AirSep Warranty Changes**

Recently, the AirSep POC and Stationary accessories warranty policy has been revised. This warranty revision will be very similar to the coverage our SeQual customers

will be very similar to the coverage our repeat customers are familiar with. This revision affects accessories that are purchased for these concentrators. The warranty coverage of the POC or Stationary remains unchanged.

All AirSep POC accessories that ship standard with the unit are now covered under a **1 year** accessory warranty. These standard accessories include the following: AC Power Supply, DC Power Supply, Shoulder Straps, Belt Straps, POC cases, Accessory Bags, and cables that would normally ship with a new unit. This warranty will apply to standard accessories if they are purchased with a unit or if they are purchased individually.

Power cartridges and batteries will be covered under a **1 year** warranty as well.

All other parts or optional accessories will be covered under a **90 day** warranty. This includes parts for stationary concentrators as well such as compressor assemblies.

### **Liquids Used to Clean Outside of CAIRE Concentrators**

As a reminder, liquids should not be directly applied to the outside of any oxygen concentrator, particularly in the areas of the on/off switch, hour meter, and circuit breaker. Liquid ingress directly into an electrical component in any device may cause an electric short, and as a result, a safety hazard. A damp cloth may be used, but ensure that liquids do not come into contact with electrical components.

For more detailed instructions on proper cleaning, please review the product specific User and Service Manual located at [www.cairemedical.com](http://www.cairemedical.com).

### **HELPFUL HINTS / FAQs**

#### **LOX Parts Lists on Website**

CAIRE has consolidated and published the full parts list for all of the liquid oxygen portable and stationary units. The following link can be used to access the parts lists on the CAIRE website. From the main home page highlight "Support" with your cursor and click on "Parts List" in the drop down menu.

The documents located on this page contain a complete exploded diagram and breakdown of the components as well as service part numbers listed for each one.

This page can be accessed by clicking the link below:  
[http://www.cairemedical.com/Support/Parts\\_List.aspx](http://www.cairemedical.com/Support/Parts_List.aspx)

The screenshot shows the CAIRE website's 'Parts List' page. The page has a blue header with the CAIRE logo and 'A Chart Industries Company' text. Below the header is a navigation menu with links for Home, Products, Support, SeQual, AirSep, About Care, Contact CAIRE, and Events. The main content area is titled 'Parts List' and includes a search bar and a language selection dropdown. The page is organized into sections for various CAIRE products, each with a sub-section for 'Parts List'. The sections include: AirSep FreeStyle & FreeStyle 5, Companion 1000 & 1000T, Companion 21, 31 & 41 Reservoirs, Eclipse 3 Concentrator, HELIOS Portables, HELIOS Reservoirs, H Flow Stroker, and Liberator Reservoirs. Each section contains a table with columns for Part Number, Description, and Language.

Part Number	Description	Language
20679336	FreeStyle Parts List	English
20569185	C1000 Parts List	English
20569186	C100T Parts List	English
20569187	Companion 21 & 41 Parts List—USA	English
20571788	Companion 21 & 41 Parts List—Europe	English
20674397	Eclipse 3 Parts List	English
14875756	H50 Parts List	English
14875781	H300 Parts List	English
14901993	H30 & H90 Parts List	English
14884673	H Flow Stroker Parts List	English
13740884	Liberator Family Reservoirs Parts List	English

## LOX Evaporation Rates

Liquid oxygen is continuously evaporating into a gas at a very slow rate inside all CAIRE portable and stationary units. This rate of evaporation is commonly referred to as the NER meaning Normal Evaporation Rate. This number indicates the loss of oxygen in a 24 hour period in either weight (lb/day or kg/day) or volume (L/day). While a liquid oxygen unit remains off or unused, the liquid inside boils and expands into a gas. This gas will cause a pressure buildup until it reaches the setting of the primary relief valve. The primary relief valve will activate to release the excess pressure keeping the reservoir at a stable pressure. The recommended procedure for calculating the NER is as follows:

1. Ensure the unit has been thoroughly leak tested and that its relief valves are operating to specification.

- Refer to the current technical manual for your unit to obtain the pressure relief valve test procedures.
2. Fill the CAIRE unit from a properly saturated liquid oxygen source.
  3. Allow the unit to sit undisturbed for 1-2 hours after filling with its flow control valve in the off position. This time will allow the unit to stabilize at the primary relief valve pressure.
  4. Record the initial weight (W1) of the unit and the time (T1) that this is measured.
  5. Allow the unit to sit undisturbed for a minimum of 5-6 hours with its flow control valve in the off position. (Larger units like the C1000, Stroller and Reservoirs can be left undisturbed for 15 hours or more)
  6. Record the final weight (W2) of the unit and the time (T2) that this weight was measured.
  7. Calculate the NER in the unit of weight per day using the formula below. The result will be an NER in either lbs/day or kg/day.
    1.  $NER = \{24 + (W1 - W2)\} / (T1 - T2)$
  8. Refer to the current technical manual for the NER of the unit that has been tested. Verify that your calculated NER is within the acceptable range.

### Eclipse Will Not Turn On

**Q:** My Eclipse will not turn on. It has a solid red light on top and will not respond when the power button is pressed. What can I do to get it to turn on again?

**A:** If the Eclipse has shut down in this manner, the first thing to do is reset the concentrator. To reset the Eclipse, disconnect the power cartridge (battery) from the back of the Eclipse and disconnect any external power cord from the side of the Eclipse. When this is done, the red light will turn off and the screen will go blank. Wait approximately 20 seconds with no power connected to the Eclipse.

Next, check the power connections to verify that the external power supply is connected securely. Reconnect the power supply to the side of the Eclipse and listen for the device to beep for a few seconds indicating that it has been plugged in. If this beep is not heard, perform the following checks.

1. Check to see if the power supply is plugged into a working power outlet.
2. Check that the cable connection from the wall into the power supply is secure. Since this can disconnect, be sure that the cord is fully inserted into the power supply.
3. If all of the connections are correct, check that the power supply has a green LED illuminated on the front. This indicates proper operation.



Attempt to power on the Eclipse by holding the power button for 2-3 seconds. If the machine does power back on, allow it to completely warm up until only green light is on. Re-install the power cartridge and monitor operation.

If the unit does not turn back on, please contact Technical Service as further troubleshooting may be necessary.

### **Eclipse Desktop Charger Operation**

**Q:** How long does it take to charge an Eclipse battery in the desktop charger?

**A:** It takes approximately 3 hours to charge a battery from an empty to full state.

**Q:** How do you tell when the battery is fully charged in the desktop charger?

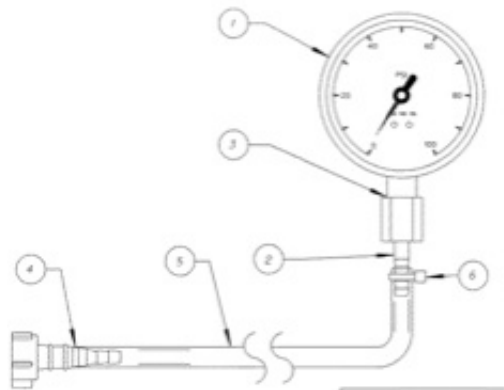
**A:** When the battery is charging, the green light will flash. When the battery is fully charged, the green light will remain illuminated continuously.



## ACCESSORIES

### LOX Test Pressure Gauge

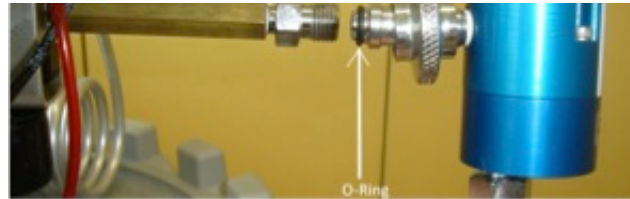
CAIRE offers a test pressure gauge assembly for LOX units. The pressure gauge assembly is an essential part of function testing for units and can be used to check the output pressure of both reservoirs and portables. It is also used to monitor pressure while filling reservoirs that do not have a built-in internal pressure gauge. The test pressure gauge assembly may be ordered using part number #B-701732-00. This part number contains a 0-6.9 bar (0-100 psi) pressure gauge connected to oxygen tubing and a DISS adaptor.



### HELiOS External FCV O-Ring

The O-Ring for the HELiOS external flow control valve is available as a spare part. This item can be ordered using part number #10012008.





## SERVICE SCHOOLS & TRADESHOWS

**Mark Your Calendars for our Upcoming 2013 Service Schools!**

### USA

**Concentrator Training: September 10, 11, 12 in Buffalo, NY**

**LOX Training: September 17 & 18 in Buffalo NY**

\*\*Buffalo trainings include a tour of the manufacturing facility for AirSep products.

**Concentrator Training: November 5, 6, 7 in Ball Ground, GA**

**LOX Training: November 12 & 13 in Ball Ground, GA**

\*\*Ball Ground trainings include a tour of our CAIRE and SeQual manufacturing facility.

For additional details and registration information about these trainings, please visit the ["Events & Service Schools"](#) tab of our website.

### Europe

**German LOX Product Training: July 3 & 4 in Wuppertal, Germany**

**French LOX Product Training: September 11 & 12 in Fonsorbes, France**

**French Concentrator Training: September 24, 25, 26 in Fonsorbes, France**

**German Concentrator Training: October 8, 9, 10 in Wuppertal, Germany**

**Italian LOX Product Training: October 9 & 10 in Padova, Italy**

To register or request more information on the 2013 European trainings, please contact [Jim Gibson](#).

### Tradeshows

**TRADESHOWS**

This month we will be attending the following tradeshow. We would love for you to stop by our booth!

**VADMEC**

July 31-August 1  
Norfolk, VA

**FHCA**

August 5-6  
Hollywood, FL

**GAMES & ADMEA Convention**

August 25-27  
Pine Mountain, GA

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