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## Med Tips

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**July, 2011**

### PRODUCT INFORMATION

#### HELiOS Universal Reservoir Relief/Economizer Valve

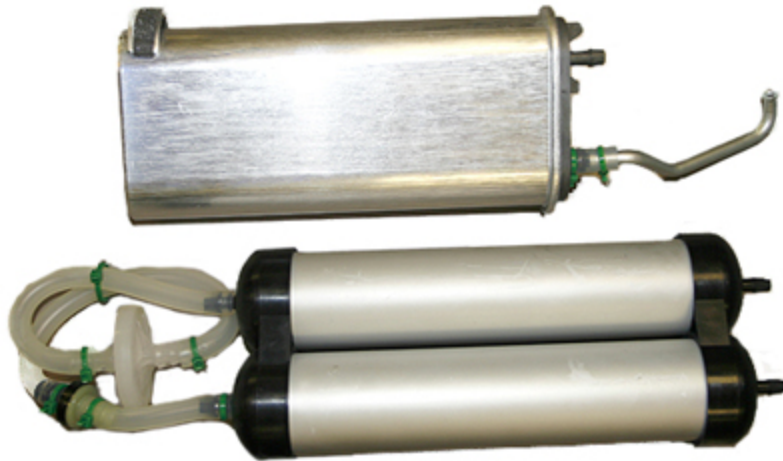
The operating pressures have been lowered slightly on the HELiOS Universal relief/economizer valve (#B-702105-00) to comply with DOT regulations.

The primary relief valve now opens between 23-25 psi (1.59-1.72 bar) and the economizer valve now opens between 21-23 psi (1.45-1.59 bar). Effective immediately, all new reservoirs and replacement R/E valves will have these specifications.

Please see attached Service Bulletin for more detailed information by following this link: [CAIRE Service Bulletin: Road Relief Valve.](#)

#### SeQual Eclipse 3 New Product Tank & HEPA Filter

SeQual Eclipse 3 concentrators manufactured in 2011 contain a newly designed product holding tank and HEPA filter. The new tank (top) will be made of stainless steel and the input from the ATF assembly to the new tank will be made by an aluminum pipe rather than silicone tubing.



ATF Holding Tank and HEPA Filter  
Top Tank: 2011; Bottom Tank: 2006-2010

The new style of HEPA filter is attached to a dock and threaded internally into the product holding tank. It is recommended that this new HEPA filter be changed once annually (or more frequently if needed) as part of preventative maintenance on the Eclipse. A replacement HEPA filter for these units can be ordered using part number #9765-SEQ. This HEPA filter is only compatible with units containing the new product tank.



HEPA Filter Being Attached



Replacement HEPA Filter Parts  
New 9765-SEQ (left); Old 6986-SEQ (right)

### Liberator Dust Caps



Liberator Dust  
Cap

Newly designed dust caps are now being used on top-fill Liberators with push-on male fill connectors. The new caps will provide added security that liquid oxygen will not spray when the cap is pressed down on the fill connector.

Below is a list of updated part numbers for ordering replacement dust caps.

TOP FILL QDV STYLE	OLD PART NUMBER	NEW PART NUMBER
Puritan Bennett (PB) CryoPal	CA005571	15075347S
Taema	11939734	15075355S

### HELiOS Reservoirs Umbrella Seal

The material of the umbrella seal on all HELiOS Reservoirs has been changed from Neoprene to Silicone. The silicone umbrella seal is more robust and has a lower operating temperature range. Continue to use part number #10025090 to order new umbrella seal.

### SeQual Eclipse Preventative Maintenance Kit

Preventative Maintenance (PM) is required to be performed annually on all Eclipse portable concentrators. It should be performed more frequently if the operating conditions and environment warrant. PM consists of replacing the air inlet filter, the internal HEPA filter and compressor intake filter, and the 9-volt battery. CAIRE offers a preventative maintenance kit which contains all of the items necessary for PM:

- Air Inlet Filter (x2)
- Compressor Intake Filter · HEPA Filter · 9-Volt Battery
- Foam Adhesive Pad
- Zip-Ties (x10)

To encourage annual preventative maintenance, this kit is now available at the reduced price of \$24.50/€19.60. Proper preventative maintenance procedures will help improve the performance of the Eclipse.

### HELPFUL HINTS / FAQs

#### Eclipse Hour Meter

Use the following procedures to access the hour meter on the SeQual Eclipse:

##### ***Eclipse 1 (Model 1000):***

1. Plug the Eclipse in to an AC or DC power source and turn it off.
2. Press and hold the no smoking symbol and the + key simultaneously.



Eclipse 1 Front Panel

3. Release both keys when the green and yellow lights flash. Provider mode is now accessed.
4. Press the + key repeatedly to begin scrolling through a series of numbers on the screen.
5. Continue pressing the + key until a 2-digit number beginning with a "1" appears. Record the second digit of this number. (Example - If the screen displays "15" record the number 5).
6. Press the + key again to display a 2-digit number beginning with a "2". Record the second digit of this number.
7. Press the + key again to display a 2-digit number beginning with a "3". Record the second digit of this number.
8. Press the + key again to display a 2-digit number beginning with a "4". Record the second digit of this number.
9. Press the + key again to display a 2-digit number beginning with a "5". Record the second digit of this number.
10. The list of digits recorded corresponds to the 5-digit hour meter.

**Example:** The screen displayed the numbers 11, 22, 36, 45, 54 in sequence. The number of hours on this Eclipse would be 12,654.

**Eclipse 2 & 3 (Model 1000A & 1000B):**

1. Plug the Eclipse in to an AC or DC power source or connect a charged battery cartridge.
2. Turn the Eclipse on.
3. Press the no-smoking symbol to enter the provider menu.



Eclipse 2 &amp; 3 Front Panel

4. Continue pressing the no-smoking button repeatedly to scroll through the menu options until the screen reads "H= xxxxx.x" or "HRS xxxxx.x" (Eclipse 3). The numbers displayed are the hour meter.

## ACCESSORIES

### Fingertip Pulse Oximeter

CAIRE offers a fingertip pulse-ox that is ordered using part number #7568-SEQ. It contains a color LED display screen that shows blood oxygen saturation levels (SpO<sub>2</sub>), pulse rate, and a pulse bar. The pulse-ox is shown below and operates using AAA batteries.



Pulse Oximeter

### Dual-Lumen Cannulas

A dual-lumen cannula contains two connection ports and is used to deliver oxygen on conserving devices. One connection port is used for sensing when a patient breathes in, and the other port is used to deliver the oxygen.

The HELiOS H300 & H850 portable units and the OxiClip PC-20 are the only CAIRE products that utilize a dual-lumen cannula.

There are three different options of dual-lumen cannulas available. The first option has sense and delivery in separate nostrils. When using this style cannula, the patient will only receive oxygen flow in one nostril. The other options have sense and delivery in both nostrils. When using this style cannula, the patient will receive oxygen flow in both nostrils. The nasal prongs in these cannulas are either split or contain concentric tubes.

The table below shows the three different styles of dual lumen cannulas available and provides part number for ordering various lengths. Please work with your provider to determine which cannula is best for the patient.

### **Sense & Delivery in Separate Nostrils**



4 ft (0.9 m): #B-701931-00  
7 ft (2.1 m): #B-701930-00

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### **Sense & Delivery in Both Nostrils**



5 ft (1.5 m): #6-778058-00  
7 ft (2.1 m): #6-778057-00



5 ft (1.5 m): #10035468  
7 ft (2.1 m): #10035467

**SERVICE SCHOOLS & TRADESHOWS**

## **Service Schools**

### **LOX Technical Training in English**

July 12 & 13  
Wokingham, UK

### **LOX Technical Training in German**

September 6 & 7  
Wuppertal, Germany

### **Concentrator Technical Training in English**

September 6 & 7  
Ball Ground, Georgia

### **LOX Technical Training in English**

(US Customer Training)  
September 13 & 14th  
Ball Ground, Georgia

### **LOX Technical Training in Italian**

(Italian Customer Training)  
September 14 & 15  
Padova, Italy

### **Concentrator Technical Training in English**

October 4 & 5  
Wuppertal, Germany

### **LOX Technical Training in French**

October 12 & 13  
Toulouse, France

### **Eclipse Technical Training in Spanish**

October 19 & 20  
Toulouse, France

### **Concentrator Technical Training in English**

November 9 & 10  
Wuppertal, Germany

### **LOX Technical Training in French**

November 15 & 16  
Toulouse, France

### **LOX Technical Training in English**

December 6 & 7  
Ball Ground, Georgia

### **Concentrator Technical Training in English**

December 13 & 14  
Ball Ground, Georgia

### **Concentrator Technical Training in French**

December 14 & 15  
Wuppertal, Germany

For more information on the European trainings, please contact Jim Gibson at [jim.gibson@chart-ind.com](mailto:jim.gibson@chart-ind.com).

## **Tradeshows**

We'll also be present at the following tradeshows, so feel free to stop at



our booth:

**ERS**

September 24th - September 28th  
Amsterdam, Netherlands

**MedTrade**

October 25th - October 27th  
Atlanta, Georgia

**Medica**

November 16th - November 19th  
Dusseldorf, Germany

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# *SERVICE BULLETIN*

PN: 15087719

**DATE:** 7/7/2011  
**MODELS:** HELiOS Universal Reservoirs  
**ISSUE:** Road Relief Valve Kit Now Available  
**WHEN:** Immediately  
**PART #:** 15076032

**NOTES:**

This bulletin concerns the issue of properly transporting full HELiOS Universal reservoirs while maintaining U.S. Department of Transportation compliance.

Liquid oxygen is designated as a “hazardous material” for the purposes of transportation by the DOT and is governed by Title 49 of the Code of Federal Regulations, Hazardous Materials Regulations (HMR). HMR Section 172.101 regulates liquid oxygen and requires it to be transported in code vessels complying with either 173.316 (liquid cylinders) or 173.318 (cargo tanks).

There are only two possible exceptions to the requirement for using coded vessels.

- 1) It can be transported in non-code vessels covered by a Special Permit or, in accordance with Section 173.320.
- 2) It can be transported in non-code vessels if during transportation the pressure in the vessel does not exceed 25.3 psig.

\*For Canadian Customers, Please reference Standard B340-02 which requires a pressure no greater than 25.2 PSIA

**NOTE: Existing HELiOS Universal reservoirs are considered non-code vessels and have 26 psig primary relief valves.**

Curbside filling activities involving the use of a cargo tank do not require transportation of non-code vessels filled with liquid oxygen. Therefore, HELiOS Universal reservoirs used in this manner fall outside the scope of the DOT HMR requirements.

HELiOS Universal reservoirs built before May 8, 2011 transported to customers filled with oxygen ("milk canning") are not in compliance with DOT HMR.

In order to maintain compliance with DOT HMR requirements for existing HELiOS Universal Reservoirs during transportation, a "Road Relief" valve set at 24 psig must be installed on each unit being transported while filled with liquid oxygen (See Figure #1). The "Road Relief" assembly can be ordered via CAIRE Customer Service at 1-800-482-2473 for a cost of \$49.95. This assembly includes a redesigned vent restrictor orifice and an easily removable relief valve. When the HELiOS Universal reservoir is filled and transported in this "milk-canning" manner, the vent valve body must be opened while in transport, thus relieving the pressure in the vessel down to the 24 psig setpoint of the Road Relief valve.

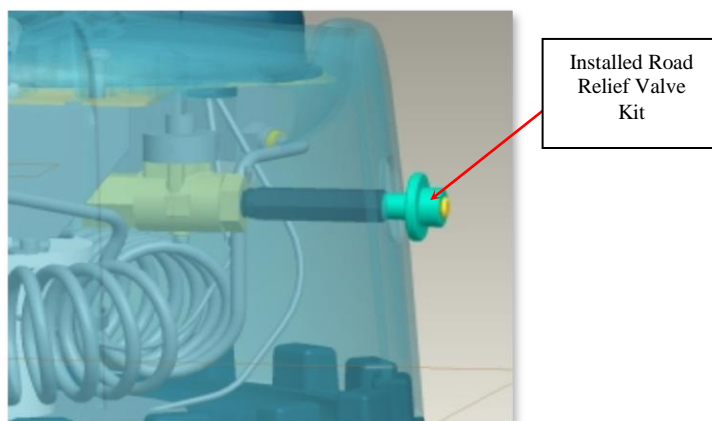


Figure #1

**NOTE: New HELiOS Universal Reservoirs, manufactured after May 6, 2011, are now set at 24 psig to address any possible compliance issues with DOT HMR requirements for the practice of milk canning. Units manufactured before this date that have been adjusted by CAIRE prior to shipping to customers can be identified by a CAIRE label on the pressure gauge glass (See Figure #2) and a small indelible ink "dot" on the label on the R/E valve (See Figure #3).**



Figure #2



Figure #3

**Installation Instructions for HELiOS  
Universal Reservoir Road Relief Valve Kit**

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**Kit contents:**

Part Number	Description	Quantity
15067911	U36/U46 ROAD RELIEF ADAPTER	1
15067929	U36/U46 ROAD RELIEF VALVE	1
15076999	INSTRUCTION SHEET ROAD RELIEF	1
B-778827-00	POLYBAG, 9"x12"x.002" THICK	1

**Product Descriptions:**

U36/U46 ROAD RELIEF ADAPTER



Figure #4

U36/U46 ROAD RELIEF VALVE



Figure #5

ROAD RELIEF VALVE ASSEMBLY



Figure #6

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**INSTALLATION:**

**Tools required:**

9/16" Deep Well Socket  
Applicable Ratchet

**1.0 Vent Valve Outlet Orifice Installation**

1.1 Attach 9/16" deep well socket on current vent valve outlet orifice and turn counter-clockwise to remove current orifice



Figure #7

1.2 Begin threading the extended Road Relief adapter by hand into vent valve body in a clock wise manner



Figure #8

1.3 Use 9/16" deep well socket to tighten Road Relief adapter to vent valve body



Figure #9

**INSTALLATION (continued) :**

**2.0 Road Relief Valve Installation**

2.1 Thread Road Relief valve onto extended Road Relief adapter in a clock wise manner



Figure #10

2.2 Installation is complete

**NOTE: The Road Relief Valve must removed from the reservoir prior to the filling process of the reservoir.**



Figure #11

**NOTE:** The operation of HELiOS Universal reservoirs at 26 psig is **ONLY** a transportation issue, **NOT A SAFETY ISSUE.**

**HELP SOURCE:**

Caire Technical Service 1.800.482.2473  
[www.cairemedical.com](http://www.cairemedical.com)

END OF BULLETIN