



## Quarter 4 - 2020 Med Tips

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### **PRODUCT UPDATES**

**CAIRE offers Virtual Service Schools covering both LOX and Concentrator lines.**

Each class is a comprehensive program that focuses on the technical and service aspects of the CAIRE family products. Class time is divided between lecture and hands-on workshops. The seminars will help the student develop a better understanding of how liquid oxygen equipment or concentrators work, how to identify the symptoms and causes of potential problems and how to use the technical information that is available in the Technical Manuals. Registration for CAIRE's Service Schools is mandatory. Registration forms must be received two weeks prior to the start of the class in order to guarantee availability and materials.

**Concentrator Service School Topics include:**

- Concentrator hazards and safety precautions
- Principles of pressure, flow and saturation
- Functions of the major components of a portable/stationary concentrator
- Theory of operation
- Hands-on experience with the concentrators
- Set up and use of test equipment
- Troubleshooting, repair and performance verification/testing procedures with hands-on experience

**LOX Service School Topics include:**

- Liquid oxygen (LOX) hazards and safety precautions
- Principles of pressure, flow and liquid oxygen saturation
- Functions of the major components of a liquid oxygen system
- HELIOS™ system theory of operation
- Reservoir and portable filling procedures with hands-on experience
- Set up and use of test equipment

**To register for Service School, please email:**

[Techservice.global@caireinc.com](mailto:Techservice.global@caireinc.com) for USA Training or [jim.gibson@caireinc.com](mailto:jim.gibson@caireinc.com) for European Training.

## New G4 Lock Plate

There has been a material change to the 16 position G4 lock plate, PN 13095627, from Lexan Polycarbonate to aluminum 6061-T6. The new aluminum lock plate meets the torque requirements described in IEC 60601 Ed. 3.1 Clause 15.4.6.

Part number 13095627 will not change, and when current plastic parts stock is depleted use of the new aluminum lock plate will be implemented. See picture below.



Left: old plastic lock plate. Right: new aluminum lock plate.

## Freestyle® Comfort™ Battery Capacity Test

The below procedure should be used to test the full capacity of the Freestyle Comfort power cartridge:

1. Fully recharge the battery using either a Freestyle Comfort connected to AC power or a desktop charger.
2. Install the fully charged power cartridge into a Freestyle Comfort and remove any external power cords.
3. Turn the Freestyle Comfort on and enter on O2 Test Mode.
4. To enter test mode press +, +, -, -, +, -, +, - on the keypad. The entire sequence needs to be entered within 5 seconds. If a mistake is made while entering this sequence, the user must wait 5 seconds before attempting again.
5. Once in test mode the flow can be increased or decreased as usual.
6. While in test mode, the unit will pulse at a pre-programmed frequency of 20 breaths per minute.
7. Using a stopwatch or timer, record the time it takes for the Freestyle Comfort to completely shut down.
8. Take this time recorded and compare it to the full-capacity operating time of a new power cartridge in the table below. If this time is less than 50% of the full capacity of a new power cartridge, it is recommended that the battery be taken out of service. See table below:

| Battery Pack Duration Freestyle Comfort |                                      |                                                   |                                       |                                                   |
|-----------------------------------------|--------------------------------------|---------------------------------------------------|---------------------------------------|---------------------------------------------------|
| Setting                                 | New Single (8-cell) Battery Duration | Minimum Duration Time (50% of New Single Battery) | New Double (16-cell) Battery Duration | Minimum Duration Time (50% of New Double Battery) |
| 1                                       | Up to 8 hours                        | 4 hours (4:00)                                    | 16 hours                              | 8 hours (8:00)                                    |
| 2                                       | Up to 4 hours                        | 2 hours (2:00)                                    | 8 hours                               | 4 hours (4:00)                                    |
| 3                                       | Up to 3 hours                        | 1.5 hours (1:30)                                  | 6 hours                               | 3 hours (3:00)                                    |
| 4                                       | Up to 2.25 hours                     | 1.12 hours (1:07)                                 | 4.5 hours                             | 2.25 hours (2:15)                                 |
| 5                                       | Up to 2 hours                        | 1 hours (1:00)                                    | 4 hours                               | 2 hours (2:00)                                    |

**NOTE:** There are many factors that influence battery run time on Freestyle Comfort:

- Ambient temperature
  - Ambient pressure
  - Compressor hours
  - Battery age
  - Test configuration
9. To exit test mode, turn the device off or enter the test mode sequence a second time. Be sure to exit test mode before returning the unit to patient use.

The Freestyle Comfort batteries are designed to last 300 charge/discharge cycles.

### VisionAire® Power Cord Selection and Replacement Procedure

If replacing the power cord of a VisionAire device, make sure to replace it with the equivalent cord suitable to the particular unit. Units originally manufactured with a ferrite ring on the power cord must reuse the existing ferrite or order a replacement ferrite. See Table below.

| MAIN BOARD                                              | REGION | CORD       | FERRITE    |
|---------------------------------------------------------|--------|------------|------------|
| CB016<br>CIRCUIT BOARD<br>VISIONAIRE 3 LED 60601 MDD V2 | USA    | NA         | NA         |
|                                                         | EU     | CD001-13   | MI275-1    |
|                                                         | UK     | CD001-17   | MI275-1    |
|                                                         | AUS    | NA         | NA         |
|                                                         | CHINA  | NA         | NA         |
| CB078<br>CIRCUIT BOARD, ASSY,MAIN,<br>VISIONAIRE 1 LED  | USA    | CD038-12   | NOT NEEDED |
|                                                         | EU     | CD038-13   | NOT NEEDED |
|                                                         | UK     | CD038-17   | NOT NEEDED |
|                                                         | AUS    | NA         | NA         |
|                                                         | CHINA  | CD037-2    | 21110498   |
| CB151<br>CIRCUIT BOARD, MAIN,<br>VISIONAIRE 1 LED       | USA    | CD011-13S  | MI275-1    |
|                                                         | EU     | CD011-4    | MI275-1    |
|                                                         | UK     | CD011-18   | MI275-1    |
|                                                         | AUS    | 21153269-1 | MI275-1    |

|                                                  |       |            |         |
|--------------------------------------------------|-------|------------|---------|
|                                                  | CHINA | 21153269-1 | MI275-1 |
| CB102<br>CIRCUIT BOARD,MAIN,<br>VISIONAIRE 1 LED | USA   | CD011-13S  | MI275-1 |
|                                                  | EU    | CD011-4    | MI275-1 |
|                                                  | UK    | CD011-18   | MI275-1 |
|                                                  | AUS   | 21153269-1 | MI275-1 |
|                                                  | CHINA | 21153269-1 | MI275-1 |

Please refer to Service Bulletin PN 21495507.

## Companion 5™ Flowmeter Outlet Pressure Test

CAIRE utilizes the new style flowmeter (21494452) on the 3rd Edition Companion 5 models. The previous style Companion 5 models will still use Flowmeter 15063266. A new version of the Companion 5 concentrator is being released that is compliant to IEC 60601-1 edition 3.1 and IEC 60601-1-2 4th edition.

Units produced as of July 2020 for China and Europe will use flowmeter 21494452 to be compliant to IEC 60601-1 edition 3.1 and IEC 60601-1-2 4th edition. Units produced prior to July 2020 use flowmeter 15063266. These changes do not apply to 120 V models of the Companion 5. See below.



PN:15063266



PN:21494452

Two different flowmeter styles for the Companion 5.

Please refer to Service Bulletin PN 21495524.

### LOX QDV Cleaning Kit PN 21484987

It is extremely important to wipe dry the fill connectors on the liquid oxygen equipment prior to the commencement of any fill. The scope of this kit is to clean moisture off the QDVs to reduce the occurrence of them freezing open from water turning to ice and not allowing the poppet to close. See pictures below.



Cleaning kit PN 21484987

Please refer to Instruction PN 21486583.

### Travel Power Adapter

Portable concentrators power supplies are rated for universal voltages but require various power cords depending on the location. Using the Travel Power Adapter will keep you from having to carry different cords for the country you are visiting.



## Out-Of-Warranty Repair Programs

### Out-Of-Warranty Repair Programs

- Extend The Life Of Your Fleet
- No Quote Approval Process
- Rapid Turnaround
- Factory-Certified Parts
- Complete Factory Inspection



#### CAIRE-Certification Program

- Units receive a replacement or rebuilt:
  - Compressor
  - Sieve Beds
- 2-year warranty upon completion.

| Concentrator | Price |
|--------------|-------|
| Eclipse 5    | \$895 |



#### Flat Rate Repair Program

- Full inspection and replacement of necessary parts
- 1 year warranty upon completion

| Concentrator         | Price |
|----------------------|-------|
| NewLife Elite        | \$325 |
| NewLife Intensity 10 | \$650 |

The following items will no longer be offered for flat rate or CAIRE -Certification after the dates listed below.

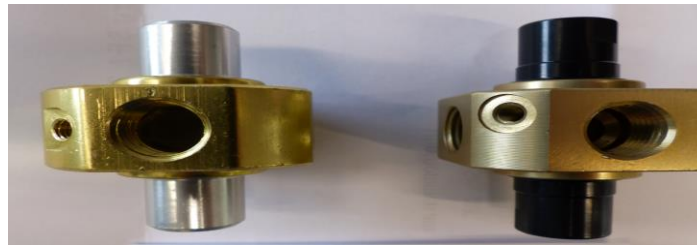
|                              |            |
|------------------------------|------------|
| Eclipse 5 (3-LED)            | 10/1/2019  |
| VisionAire 5                 | 3/31/2019  |
| Focus                        | 3/31/2019  |
| FreeStyle 3/5                | 3/31/2019  |
| NewLife Elite (1 LED)        | 12/31/2020 |
| NewLife Intensity 10 (1 LED) | 12/31/2020 |

#### CAIRE Repair Centers

- Northeast Regional Service Center - **Buffalo, NY**
- Southeast Regional Service Center - **Ball Ground, GA**
- West Regional Service Center - **San Diego, CA**

## Companion Reservoir R/E Valve Design Differences

The Relief/Economizer (R/E) valve on the Companion Reservoir may vary in design when ordered; this difference is only a supplier difference and does not affect the performance or the specifications of the valve. The difference is the thread for the level gauge high-pressure tube barb is slightly on the side. The part number remains the same: 10002368. See the picture below for the parts currently being sold.



**Current in Service parts**

## Liquid Oxygen Time Use Chart

The Liquid Oxygen time use chart has been updated to include the pediatric flow duration for all our products that use pediatric flow control valves. Please do not hesitate to download the file from our web site

The file can be downloaded at: <http://files.caireinc.com/CutSheets-Lit/ML-LOX0007.pdf>

**CONTACT:**

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