

September 2020 Med Tips

Don't miss out on our upcoming Virtual Service Schools!

CAIRE Service School Training Webinars

October/November 2020

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.

Training Dates	Type	Language	Location	Registration by
October 5-7	Concentrator	English	Ball Ground, GA USA	14 September
October 8-9	LOX	English	Ball Ground, GA USA	14 September
October 14-15	LOX	German	Langenfeld, Germany	30 September
October 20-21	LOX	Italian	Padova, Italy	06 October
November 3-4	LOX	French	Toulouse, France	20 October

Table 1 - Details of upcoming training.

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

Please submit your registrations forms no later than the dates in Table 1 above.

To register for Service Schools, please email:

Techservice.global@caireinc.com for USA Training or jim.gibson@caireinc.com for European Training.

PRODUCT UPDATES

Liberator Reservoir Service Manifold Assembly

To reduce inventory and streamline the spare parts order process, CAIRE, Inc will obsolete the Side Fill and Top Fill Liberator service manifold assemblies. The Dual Fill assembly will remain as the provided service item. This will also provide distributors better versatility for filling all CAIRE liquid portable units.

Table 2 below details the current Dual Fill service part numbers required for the various Liberator models.

PN	Description	Model
20583547	MANF WLDMT L20 G3/G4 DF SVCE	Liberator 20
20583578	MANF WLDMT L30 G3/G4 DF SVCE	Liberator 30
20583577	MANF WLDMT L37 G3/G4 DF SVCE	Liberator 37
20583576	MANF WLDMT L45 G3/G4 DF SVCE	Liberator 45
20583576	MANF WLDMT L45 G3/G4 DF SVCE	Liberator 60

Table 2: Service Manifold Part Numbers

Please refer to Service Bulletin PN 21495409 for more details.

Helpful Hints & FAQs

FreeStyle Comfort Troubleshooting Guide

1. Customer Complaint: Unit not powering on.

Instruct the patient to follow the steps below to verify device operation before scheduling a driver to pick up the equipment or requesting the patient send the device back to you:

- a. Connect the battery (whether charged or not). See **Figure 1a**.
- b. Plug the unit into AC power. See **Figure 1b**.
- c. Turn on the unit to ensure that it operates on AC power normally.
- d. If the unit does operate, turn it off and allow the battery to charge to 100%.
(This can take approximately 3.5 hours for a single battery and 6 hours for the double battery.)
- e. Next, remove AC power and start the unit up on battery power to ensure it operates on battery power also.



Figure 1a



Figure 1b

2. Other alarms that can be cleared in the field:

- **Low Battery Warning or Shutdown (alarm codes 0x0100 or 0x0010):** Recharge battery
- **Breath Rate Exceeded (alarm code 0x0200):** Ensure user is breathing normally. Ensure fans or other airflow disturbances are not over-triggering the unit.
- **Battery or Case High or Low Temp (alarm codes 0x1000, 0x0001, 0x0002):** Allow unit to cool/warm to room temp. Ensure vents are free of blockages.

Note: These alarms should be tested thoroughly before returning to CAIRE for repairs as they are related to environment and/or battery charge level.

Note: Alarm codes 0008, 0100, 0010, 0200, 0001, 0002 and 1000 all indicate either abnormal running environment for the device or normal low battery.

Testing the Comfort

Whenever a unit is returned from a patient, perform the following steps to determine if the device is suitable to put back into the field or in need of further testing:

1. Attach battery
2. Plug into AC power
3. Allow battery to charge fully
4. Turn on and put unit into test mode (to enter test mode press +, -, -, +, -, +, -)
5. Attach calibrated O₂ analyzer
6. Record O₂ measurement after 5 mins.
7. Record any alarms displayed on the screen. See technical manual for addressing the various alarm codes.



Units producing O2 concentration within specification (per the manual) and displaying no alarm codes can be returned to service (test mode displays 0000 for the alarm code when the device is functioning normally).

Please refer to Service Bulletin PN 21438614 for more details.

CONTACT: For technical questions or concerns, contact Technical Service:

USA: 800-482-2473

techservice.global@caireinc.com

Europe: +44 (0) 118 936 7060

techservice.global@caireinc.com

For ordering information or general inquires, contact Customer Service:

USA: 800-482-2473

customerservice.usa@caireinc.com

Europe: +44 (0) 118 936 7060

customerservice.europe@caireinc.com

© Copyright 2020 CAIRE Inc. All Rights Reserved. CAIRE Inc. reserves the right to discontinue its products, or change the prices, materials, equipment, quality, descriptions, specifications and/or processes to its products at any time without prior notice and with no further obligation or consequence. All rights not expressly stated herein are reserved by us, as applicable.

Please consult the applicable product instructions for use for product indications, contraindications, warnings, precautions, and detailed safety information.



SERVICE BULLETIN

PN: 21495409

RELEASE DATE: August 8, 2020

MODEL: Liberator® Reservoir

ISSUE: Liberator Reservoir Service Manifold Assembly

NOTES: To reduce inventory and streamline the spare parts order process, CAIRE, Inc will obsolete the Side Fill and Top Fill Liberator service manifold assemblies. The Dual Fill assembly will remain as the provided service item. This will also provide distributors better versatility for filling all CAIRE liquid portable units.

Each Dual Fill service manifold will include:

For Top Fill Reservoirs: PN 20802161 Cap Brass 15/16” Hex and P/N CA404828 Hex Coupler O-Ring for plugging the side fill port

For Side Fill Reservoirs: PN 10566446 QDV Hex Plug w/o O-Ring for plugging the top fill port.

Table 1 below contains the current Dual Fill service part numbers required for the Liberator. Figure 1 below for referenced Top Fill and Side Fill parts.

Table 1: Service Manifold Part Numbers

PN	Description	Model
20583547	MANF WLDMT L20 G3/G4 DF SVCE	Liberator 20
20583578	MANF WLDMT L30 G3/G4 DF SVCE	Liberator 30
20583577	MANF WLDMT L37 G3/G4 DF SVCE	Liberator 37
20583576	MANF WLDMT L45 G3/G4 DF SVCE	Liberator 45
20583576	MANF WLDMT L45 G3/G4 DF SVCE	Liberator 60

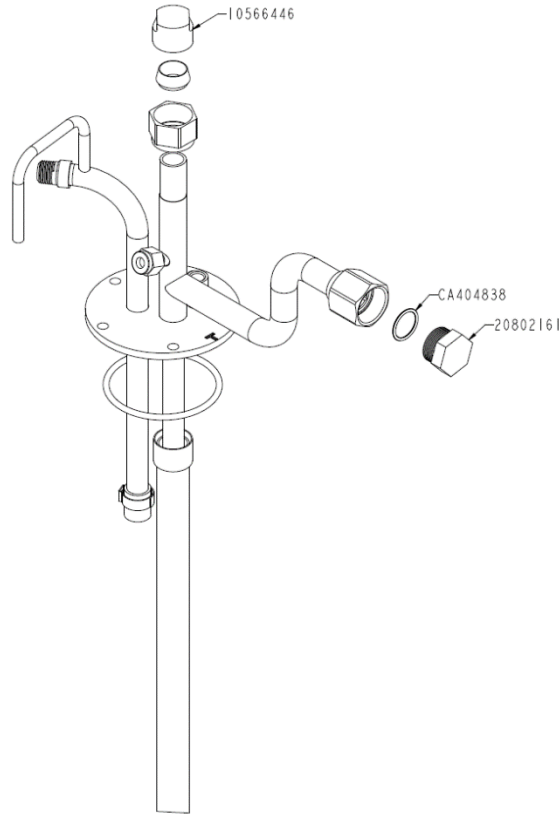


Figure 1: Service Manifold Assembly

CONTACT: For technical questions or concerns, contact Technical Service:

USA: 800-482-2473

techservice.global@caireinc.com

Europe: +44 (0) 118 936 7060

techservice.global@caireinc.com

For ordering information or general inquiries, contact Customer Service:

USA: 800-482-2473

customerservice.usa@caireinc.com

Europe: +44 (0) 118 936 7060

customerservice.europe@caireinc.com

Copyright © 2020 CAIRE Inc. CAIRE Inc. reserves the right to discontinue its products, or change the prices, materials, equipment, quality, descriptions, specifications and/or processes to its products at any time without prior notice and with no further obligation or consequence. All rights not expressly stated herein are reserved by us, as applicable.



SERVICE BULLETIN

PN: 21438614

RELEASE DATE: July 1, 2019

MODEL: FreeStyle® Comfort®

ISSUE: FreeStyle Comfort Troubleshooting Guide

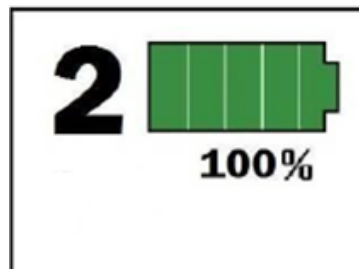
NOTES: This guide is meant to aid service technicians, delivery drivers, customer service representatives and those at medical equipment companies who interface directly with portable oxygen concentrator users using the CAIRE FreeStyle Comfort. Many device returns from patients are due to misunderstanding of device operation (such as returning a unit for low battery alarm). The following procedures and tips are meant to assist personnel and medical equipment companies with troubleshooting devices both in the field with patients and testing units in the service department.

The following procedures are meant to assist in field troubleshooting to determine if the FreeStyle Comfort unit needs to return to CAIRE for service repairs.

1) Customer Complaint: Unit not powering on.

Instruct the patient to follow the steps below to verify device operation before scheduling a driver to pick up the equipment or requesting the patient send the device back to you:

1. Connect the battery (whether charged or not)
2. Plug the unit into AC power
3. Turn on the unit to ensure that it operates on AC power normally.
4. If the unit does operate, turn it off and allow the battery to charge to 100%. (This can take approximately 3.5 hours for a single battery and 6 hours for the double battery.)
5. Next, remove AC power and start the unit up on battery power to ensure it operates on battery power also.



2) Other alarms that can be cleared in the field:

- **Low Battery Warning or Shutdown (alarm codes 0x0100 or 0x0010):** Recharge battery
- **Breath Rate Exceeded (alarm code 0x0200):** Ensure user is breathing normally. Ensure fans or other airflow disturbances are not over-tiggering the unit.
- **Battery or Case High or Low Temp (alarm codes 0x1000, 0x0001, 0x0002):** Allow unit to cool/warm to room temp. Ensure vents are free of blockages.

Note: These alarms should be tested thoroughly before returning to CAIRE for repairs as they are related to environment and/or battery charge level.

Testing the Comfort

Whenever a unit is returned from a patient, perform the following steps to determine if the device is suitable to put back into the field or in need of further testing:

1. Attach battery
2. Plug into AC power
3. Allow battery to charge fully
4. Turn on and put unit into test mode (**to enter test mode press + +, - -, +, -, +, -**)
5. Attach calibrated O2 analyzer
6. Record O2 measurement after 5 mins.
7. Record any alarms displayed on the screen. See technical manual for addressing the various alarm codes.

Note: Alarm codes 0008, 0100, 0010, 0200, 0001, 1000 all indicate either abnormal running environment for the device or normal low battery.

The unit is considered acceptable for field service after the steps above have been completed and meets specifications stated the User Manual (CAIRE PN: MN232), with no alarm codes present.

CONTACT: For technical questions or concerns, contact Technical Service:

USA: 800-482-2473

techservice.global@caireinc.com

Europe: +44 (0) 118 936 7060

techservice.global@caireinc.com

For ordering information or general inquiries, contact Customer Service:

USA: 800-482-2473

customerservice.usa@caireinc.com

Europe: +44 (0) 118 936 7060

customerservice.europe@caireinc.com

Copyright © 2019 CAIRE Inc. CAIRE Inc. reserves the right to discontinue its products, or change the prices, materials, equipment, quality, descriptions, specifications and/or processes to its products at any time without prior notice and with no further obligation or consequence. All rights not expressly stated herein are reserved by us, as applicable.

Please consult the applicable product instructions for use for product indications, contraindications, warnings, precautions, and detailed safety information.