



March 2020 Med Tips

SERVICE BULLETIN - CLEANING AND DISINFECTION OF CAIRE CONCENTRATOR AND LOX EQUIPMENT

With the increase in global awareness regarding the COVID-19 virus, the Center for Disease Control (CDC) has issued guidance for infection prevention and control via the following [link](#):

Please see Service Bulletin 21494853 for the full information on this issue.

PRODUCT UPDATES

Hi Flow, Stroller, and Sprint SRV Retrofit Kit Instructions

Sprint, Stroller, and Hi Flow Stroller liquid oxygen portables have undergone a change to the flow control valve (FCV) and manifold. Customers installing the newer style FCV on existing products manufactured with the previous design will need to purchase a retrofit kit to adapt the FCV to the unit. Please refer to Service Bulletin 21368597 for the complete instructions and details on this change.

WARNING: Do not use the new FCV that does not have the SRV port without installing the entire kit.

Kit Part Number	FCV Included in Kit	Description
21371865	14812860T	Hi-Flow Stroller Service Manifold Assembly 0-15 LPM
21371866	21366017	Stroller Service Manifold Assembly 0-2 LPM
21371863	11014539T	Stroller Service Manifold Assembly 0-6 LPM
21373979	11014539T	Sprint Service Manifold Assembly 0-6 LPM
21373980	21366017	Sprint Service Manifold Assembly 0-2 LPM

Table 1 – Available Kit Options



Liberator Plumbing Consolidation Retrofit Kit Instructions

This instruction is to guide technicians on how to remove the Flow Control Valve (FCV) w/ Secondary Relief Valve (SRV) and install the replacement FCV, new economizer regulator along with your current Primary Relief Valve (PRV) and a replacement SRV. These kits are required when there is a need to replace either the economizer regulator, or the FCV as the flow control valves will no longer have an SRV port in them. Please refer to Service Bulletin 21368597 for the complete instructions and details on this change.

WARNING: Do not use the new FCV that does not have the SRV port on units manufactured prior to this design change without installing the entire kit.

KIT PART NO.	KIT DESCRIPTION	FCV P/N	SRV P/N	ECONOMIZER REGULATOR P/N
21494709	30 PSI Lib Plumbing Service Kit	21449808	21215214	21341644
21494710	65 PSI Lib Plumbing Service Kit	21449806	21215227	21341648
21494711	30 PSI Lib Plumbing Service Kit Japan	21449808	21215214	21341652
21494712	30 PSI Lib Plumbing Service Kit – 2 LPM	21494787	21215214	21341644

Table 2. Available Kit Options

New Release Eclipse 5 Power Supply

Effective September, 2019, Eclipse power supply (CAIRE PN: 21334759) has replaced the previous version (CAIRE PN: 20852326) on all newly manufactured 2-LED Eclipse 5 devices, as well as all spare power supply part kit numbers in Table 3 below. Power supply 21334759 is backwards-compatible with all previously-manufactured 2-LED and 3-LED Eclipse 5 units.

Note: Please reference Service Bulletin 21220048 when using the 3-LED power supply (PN 5941-SEQ [US], 20553100 [EU], and 20553098 [UK]) with 2-LED units as this will require label changes on the device.

30852326S	Kit, Power Supply US Cord
20852325S	Kit, Power Supply EU Cord
20852324S	Kit, Power Supply UK Cord

Table 3 – Spare Power Supply Kit PNs

Figures 1 and 2 display the different power connections between the new part number 21334759 and the previous part number 20852326. The 21334759 new style power supplies will require different power cable – see Table 4 for details of different cord part numbers. Figure 3 shows the power supply used on all previous 3-LED model Eclipse equipment.



Figure 1: Current Eclipse 5
Power Supply (PN 21334759)



Figure 2: Previous Eclipse 5
Power Supply (PN 20852326)



Figure 3: Eclipse 3 LED
Power Supply (PN 5940-SEQ)

Power Supply PN	Region	Cord only PN	Spare Power Supply Plus Cord
5940-SEQ	USA	3588-SEQ	20852326S
5940-SEQ	UK	3590-SEQ	20852324S
5940-SEQ	EU	3589-SEQ	20852325S
5940-SEQ	AUS	20669418	21334759 + 21463776
20852326	USA	4997-SEQ	20852326S
	UK	4999-SEQ	20852324S
	EU	4998-SEQ	20852325S
	AUS	21347183	21334759 + 21463776
21334759	USA	21336129	20852326S
	UK	21475874	20852324S
	EU	21336073-C4	20852325S
	AUS	21463776	21334759 + 21463776

* Use above table in conjunction with Figure 1-3 to identify cable-only part number required.

Table 4– Power Cord part numbers

Please refer to Service Bulletin PN 21464617 for more details.

Eclipse 5 IEC 80601-2-69 Oxygen Concentrator Particular Standard Compliance

Effective from December 2017, the Eclipse 5, including the AC power supply, is now IEC 60529 IP22 compliant rather than IPX1. The AC power supply has been changed to a two pronged cord type, Type II power supply. IEC 60601-1 applied part classification for the device changes from Type B to Type BF. The older Eclipse 5 units can use the new power supply. In order for the new Eclipse 5 to be used with the old power supply, the CSA labeling would need be removed from the unit. The applied part would then change from type BF to type B.

Please refer to Service Bulletin PN 21220048 for more details.

Helpful Hints & FAQs

Sprint and Stroller Cases

Q: Where I can find the case PN for the Sprint or the Stroller?

A: The case PN for the Sprint and the Stroller is listed on the first page of the parts list and is called SERVICE CASE ASSY. These include the front, the back and the bottom cover and it is a pre-assembled part. Individual items cannot be ordered.

Description	Sprint SF	Sprint TF	Stroller SF	Stroller TF
Service Case Assy - Blue - G4	14037285	14037285	14015570	14015570
Service Case Assy - Light Gray - G4	14037293	14037293	14015588	14015588
Service Case Assy - Dark Gray - G4	14037277	14037277	14015561	14015561
Service Case Assy - Blue - G4 - Wide			14015617	14015617
Service Case Assy - Light Gray - G4 - Wide			14015596	14015596
Service Case Assy - Dark Gray - G4 - Wide			14015609	14015609

Table 5 – Sprint/Stroller Case PNs

Q: What is the difference between the wide and the narrow case assembly?

A: The narrow case assembly is used for G3 model Strollers. All later models use the wide case assembly.

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. 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: 21494853

RELEASE DATE: March 13, 2020

MODEL: CAIRE Concentrator and Liquid Oxygen (LOX) Equipment

ISSUE: Cleaning and Disinfection of CAIRE Concentrator and LOX Equipment

NOTES: With the increase in global awareness regarding the COVID-19 virus, the Center for Disease Control (CDC) has issued guidance for infection prevention and control via the following link: https://www.cdc.gov/coronavirus/2019-ncov/infection-control/control-recommendations.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fhcp%2Finfection-control.html.

In section 10 of this guidance, the CDC recommends the following: “All non-dedicated, non-disposable medical equipment used for patient care should be cleaned and disinfected according to manufacturer’s instructions and facility policies”.

Based on this guidance, CAIRE Inc. is providing the following links to the surface cleaning/disinfection processes for each of the current CAIRE manufactured products (NOTE: If the CAIRE product is not in the list below, please contact the CAIRE Technical Service team at techservice.global@caireinc.com for information). The information provided via the links listed below is also available in the Product Technical/Service Manual for each of these products. CAIRE advises the healthcare/homecare provider to pay special attention to the recommendations for surface cleaning/disinfection and cleaning or replacement of filters.

Per the World Health Organization (WHO), it is not known at this time how long the virus that causes COVID-19 survives on surfaces. In the event the healthcare/homecare provider has used a CAIRE product for a patient infected with the COVID-19 virus, CAIRE does recommend that the healthcare/homecare provider follow any additional guidelines issued by the CDC and WHO related to disinfection and/or device quarantine. The links to these websites are <https://www.who.int/> and <https://www.cdc.gov/>.

FreeStyle Comfort Portable Oxygen Concentrator:

http://files.caireinc.com/MN233-F_FS_Comfort_TSM_Final_web.pdf

FreeStyle 3 and 5 Portable Oxygen Concentrators:

http://files.caireinc.com/MN220-1_B_FS_F5_Combo_Service_Man_1_web.pdf

Focus Portable Oxygen Concentrator:

<http://files.caireinc.com/MN171-1-C.pdf>

Eclipse 5 Transportable Oxygen Concentrator:

http://files.caireinc.com/TechMan_PartsLists_ServiceBull/20631679.pdf

Companion 5 Stationary Oxygen Concentrator:

http://files.caireinc.com/14940837_F_Companion_5_Conc_TSM_9_web.pdf

VisionAire Stationary Oxygen Concentrator:

<http://files.caireinc.com/MN138-1-K.pdf>

NewLife Elite and Intensity Oxygen Concentrators:

http://files.caireinc.com/MN240-1_C_NewLife_Family_TechManual_web.pdf

Liberator Liquid Oxygen Reservoir:

http://files.caireinc.com/13350704-K_7.pdf

Stroller and Sprint Liquid Oxygen Portable:

http://files.caireinc.com/10662631_N_sprint_stroller_TSM_5.pdf

Hi Flow Stroller Liquid Oxygen Portable:

<http://files.caireinc.com/HI%20FLOW%20STROLLER%20SERVICE%20MANUAL.pdf>

Spirit Liquid Oxygen Portable:

http://files.caireinc.com/11805120_H_3_web.pdf

HELiOS Liquid Oxygen Reservoir:

http://files.caireinc.com/14883289_G_Helios_Res_TSM_1.pdf

HELiOS Liquid Oxygen Portable:

http://files.caireinc.com/Helios_portable_TSM_20562190_D.pdf

Companion Liquid Oxygen Reservoir:

<http://files.caireinc.com/Companion%20Reservoir%20TSM%2020559263%20E%207.pdf>

Companion Liquid Oxygen Portable:

<http://files.caireinc.com/20562220-C.pdf>

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: 21368597

RELEASE DATE: January 1, 2020

REVISION DATE: February 10, 2020

MODEL: Hi Flow, Stroller, and Sprint

ISSUE: Hi Flow, Stroller, and Sprint SRV Retrofit Kit Instructions

NOTES: This instruction is to guide technicians how to remove the SRV mounting from the FCV on meter Sprints and Strollers. This was a plumbing consolidation for the Sprint and Stroller Models that have capacitance meters. This will also streamline the 30PSI Secondary Relief Valves. These kits are required for the Sprint, Stroller, or Hi Flow Strollers with meters in the event that there is a need to replace the Flow Control Valve as these will no longer have the SRV port in them.

WARNING: Do not use the new FCV that does not have the SRV port without installing the entire kit.

Table 1. Available Kit Options

Kit Part Number	FCV Included in Kit	Description
21371865	14812860T	Service Manifold Assembly 0-15 LPM
21371866	21366017	Service Manifold Assembly 0-2 LPM
21371863	11014539T	Service Manifold Assembly 0-6 LPM
21373979	11014539T	Sprint Service Manifold Assembly 0-6 LPM
21373980	21366017	Sprint Service Manifold Assembly 0-2 LPM

Tools Required:

- Phillips Head #1
- 3/8 Wrench
- 9/16 Wrench
- ½ Wrench
- 7/64 T-handle Allen Wrench
- Soldering Iron
- Heat gun
- Teflon tape
- 80-90 in/lb Torque Wrench

Table 2. Parts Included in Stroller Hi-Flow kit PN 21371865

Part Number	Description
14812860T	FCV 20PSI 0-15 LPM G4 PORT
21237266	MANIFOLD TEE, 3/16 MPI
CA404841	FITTING FEEDTHRU
B-775068-00	FERRULE,3/16" TUBE, BRASS
21360363	HARNESS ASSY STR G4 PVC
B-778827-00	BAG CLEAR POLY 9X12X.002"
21368597	SPRINT STROLLER SRV INST
CA406704	PULL WIRE TOOL
11370584	INSULATION COLLAR
13095635	Solder .032" Dia., 3% Flux Tel.001Lb.

Table 3. Parts Included in Stroller Pediatric kit PN 21371866

Part Number	Description
21366017	FCV 20PSI 0-2 LPM V2 PORT TPED
21237266	MANIFOLD TEE, 3/16 MPI
CA404841	FITTING FEEDTHRU
B-775068-00	FERRULE,3/16" TUBE, BRASS
21360363	HARNESS ASSY STR G4 PVC
B-778827-00	BAG CLEAR POLY 9X12X.002"
21368597	SPRINT STROLLER SRV INST
CA406704	PULL WIRE TOOL
11370584	INSULATION COLLAR
13095635	Solder .032" Dia., 3% Flux Tel.001Lb.

Table 4. Parts Included in Stroller Standard Flow kit PN 21371863

Part Number	Description
11014539T	FCV 20PSI 0-6 LPM G3 PORT TPED
21237266	MANIFOLD TEE, 3/16 MPI
CA404841	FITTING FEEDTHRU
B-775068-00	FERRULE,3/16" TUBE, BRASS
21360363	HARNESS ASSY STR G4 PVC
B-778827-00	BAG CLEAR POLY 9X12X.002"
21368597	SPRINT STROLLER SRV INST
CA406704	PULL WIRE TOOL
11370584	INSULATION COLLAR
13095635	Solder .032" Dia., 3% Flux Tel.001Lb.

Table 5. Parts Included in Sprint kit PN 21373979

Part Number	Description
11014539T	FCV 20PSI 0-6 LPM G3 PORT TPED
21385560	STREET TEE
B-778827-00	BAG CLEAR POLY 9X12X.002"
21368597	SPRINT STROLLER SRV INST
11370584	INSULATION COLLAR

Table 6. Parts Included in Sprint kit PN 21373980

Part Number	Description
21366017	FCV 20PSI 0-2 LPM V2 PORT TPED
21385560	STREET TEE
B-778827-00	BAG CLEAR POLY 9X12X.002"
21368597	SPRINT STROLLER SRV INST
11370584	INSULATION COLLAR

1. **Procedure A:** Sprint Retrofit PN 21373979 & 21373980

Caution: *The unit must be empty, warm and vented before starting procedure.*

- 1.1 Remove the condensation pad cover from the bottom of the unit.
- 1.2 Remove (2) screws from bottom assembly as shown.

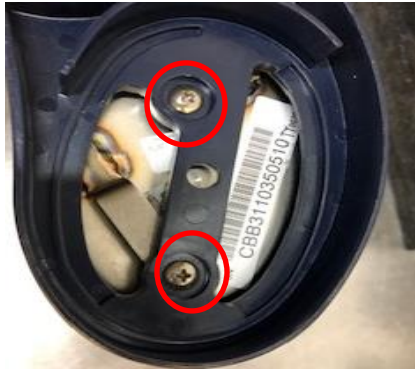


Figure 1.2

- 1.3 Remove the strap from the unit if attached. Remove the knob and decal from the Flow Control Valve (FCV). Remove the dome cover then remove the three screws as shown.



Figure 1.3

- 1.4 After screws are removed, pull the top cover off the unit and pull out the assembled bottle.
- 1.5 Use a Phillips head screw driver #1 to remove screws from the top of the FCV locking plate to release the FCV from bracket. Use a 3/8" Wrench to remove the fitting from the bottom of the FCV.

Note: Save the Secondary Relief Valve (SRV) from the old FCV for step 1.7



Figure 1.5

- 1.6 Slide the new FCV back through the bracket and reattach the fitting to the new FCV with the 3/8" wrench. Attach the locking plate back on top of FCV with the 2 screws using a Phillips head screw driver #1.

- 1.7 Remove the Secondary Relief Valve (SRV) from the FCV with a 9/16 Wrench (make sure threads are clean) and attach to the Street Tee fitting (PN 21385560), torque SRV to 80-90 in/lb when reinstalling. Remove the PRV from the plumbing with a ½ Wrench, clean off threads, apply new Teflon tape leaving the 1st thread bare, and attach to the Street Tee fitting.

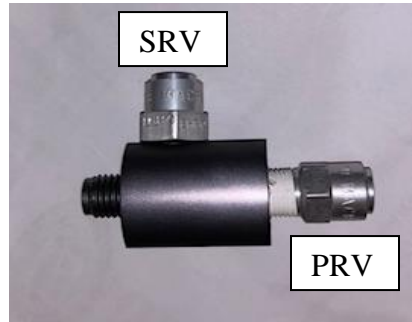


Figure 1.7

- 1.8 Attach Street Tee fitting PN 21385560 to plumbing where the PRV was removed. See Figure 1.8 A for Side Fill and Figure 1.8 B for Top Fill.



Figure 1.8 A



Figure 1.8 B

- 1.9 After assembly is complete with the new FCV and Street Tee fitting, the bottle can be put back into casing and assembled back together.
2. **Procedure B:** Hi FLOW and Stroller Retrofit PN 21371863, 21371865, and 21371866.
- Caution:** *The unit must be empty, warm and vented before starting procedure.*
- 2.1 Follow steps from Procedure A 1.1 through 1.5.
- Note:** For HI FLOW, remove from casing and continue to step 1.5 from Procedure A.
- Note:** Save the SRV from the old FCV for step 2.2
- 2.2 Assemble the SRV onto the Manifold Tee (PN 21237266), which will come with Fitting Feedthru (PN CA404841) and Ferrule (PN B-775068-00) already attached, tighten to 80-90 in.-LB. The wire harness assembly will be threaded through the Manifold Tee by the red wire. Manifold tee assembly will be needed in step 2.6.
- Note:** Feed the red wire through. Do not pull on the wire or it could strip the insulation of the wire.

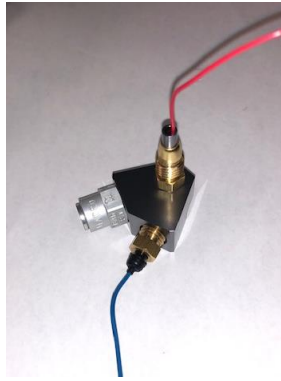


Figure 2.2

- 2.3 Disconnect the meter wire harness and remove the (2) mounting screws from the meter.
- 2.4 Remove the (3) screws on the bracket and lift the bracket from the manifold.
 - 2.4.1 For Top fill, remove fitting 1 with a $\frac{1}{2}$ Wrench and fitting 2 with a $\frac{9}{16}$ Wrench from the plumbing as seen in figure below.
 - 2.4.2 For Side fill, remove fitting 1.

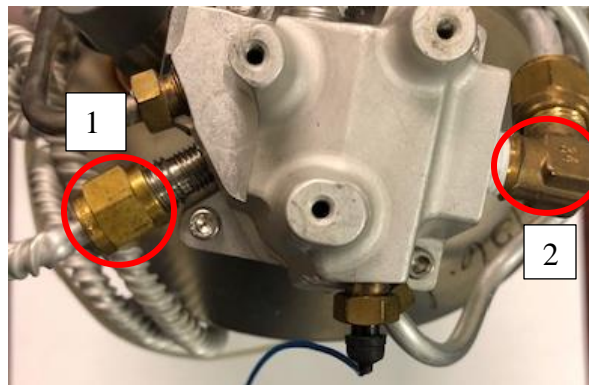


Figure 2.4

- 2.5 Remove (4) screws from the top of the manifold with a hex key wrench.
- 2.6 Remove the manifold assembly from the Dewar.
- 2.7 Remove the $\frac{1}{4}$ " wide heat shrink insulation collar and unsolder the wire from the probe.
- 2.8 Solder the Pull Wire CA406704 to the end of the Probe Wire. This wire will be used as a tool to pull the wire harness through the heat shield.

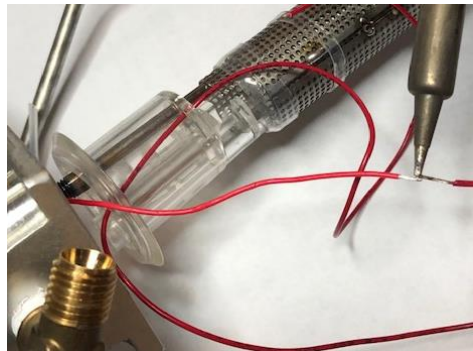


Figure 2.8

- 2.9 Remove the fitting on the manifold with the red and blue wire harness using a $\frac{3}{8}$ Wrench. As the fitting is removed from the manifold, the pull wire will also be pulled through the heat shield and manifold.

- 2.10 Unsolder the Pull Wire from the removed probe wire and re-solder it to the manifold tee assembly.
- 2.11 The manifold tee assembly will be threaded through the hole that the wire harness was removed from. Tighten it finger tight and then 1 flat more.
NOTE: Only spin the brass nut on the manifold tee when tightening, not the whole body.
- 2.12 After using the Pull Wire to pull the harness assembly through the heat shield, it can be unsoldered. The harness will now be slid through the new 1/4" wide heat shrink insulation collar, and soldered back to the probe. Heat shrink the insulation collar (PN11370584) to support the wire. Add fitting back under the manifold tee. Tighten it finger tight plus 1 flat. See below for completed manifold.

Note: Be sure to not have any solder material touch the inner probe. This will affect the capacitance.

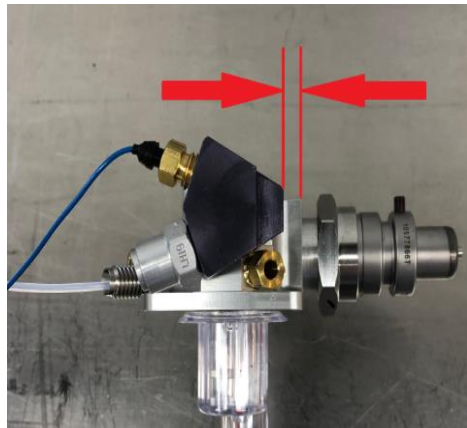


Figure 2.12.1



Figure 2.12.2

- 2.13 Insert manifold back into the bottle and secure with (4) screws using the T-handle. Reattach fittings from step 2.4. Reattach the bracket (see Figure 2.13.1) and meter (see Figure 2.13.2).



Figure 2.13.1



Figure 2.13.2

- 2.14 Insert the new FCV into the bracket; attach locking plate on the top of FCV and fitting to bottom of FCV. Tighten it finger tight plus 1 flat.



Figure 2.10

- 2.15 Reassemble casing and add flow control decal and knob to FCV.
- 2.16 Test Capacitance and leak check.
- 2.17 Recalibrate meter.

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: 21494713

RELEASE DATE: March 18, 2020

MODEL: Liberator® Liquid Oxygen Reservoir

ISSUE: Liberator Plumbing Consolidation Retrofit Kit Instructions

NOTES: This instruction is to guide technicians on how to remove the Flow Control Valve (FCV) w/ Secondary Relief Valve (SRV) and install the replacement FCV, new economizer regulator along with your current Primary Relief Valve (PRV) and a replacement SRV. These kits are required when there is a need to replace either the economizer regulator, or the FCV as the flow control valves will no longer have an SRV port in them.

WARNING: Do not use the new FCV that does not have the SRV port on units manufactured prior to this design change without installing the entire kit.

Table 1. Available Kit Options

KIT PART NO.	KIT DESCRIPTION	FCV P/N	SRV P/N	ECONOMIZER REGULATOR P/N
21494709	30 PSI Lib Plumbing Service Kit	21449808	21215214	21341644
21494710	65 PSI Lib Plumbing Service Kit	21449806	21215227	21341648
21494711	30 PSI Lib Plumbing Service Kit Japan	21449808	21215214	21341652
21494712	30 PSI Lib Plumbing Service Kit – 2 LPM	21494787	21215214	21341644

Tools Required:

- 9/16" Open End Wrench
- Phillips Head #1
- Torque Wrench (inch lbs)
- 11/16" Open End Wrench

Table 2. Parts Included in 30 PSI Lib Plumbing Service Kit P/N 21494709

PART NUMBER	DESCRIPTION
21449808	FCV 20PSI 0-15 LPM G4 BASE
21215214	RV 9/16-20UNF 30PSI TPED
21341644	REGULATOR 20PSI ECON
21494713	Liberator Service Bulletin / Instruction

Table 3. Parts Included in 65 PSI Lib Plumbing Service Kit P/N 21494710

PART NUMBER	DESCRIPTION
21449806	FCV 50PSI 0-15 LPM G4 BASE
21215227	RV 9/16-20UNF 65PSI TPED
21341648	REG ECON 50PSI
21494713	Liberator Service Bulletin / Instruction

Table 4. Parts Included in 30 PSI Lib Plumbing Service Kit Japan P/N 21494711

PART NUMBER	DESCRIPTION
21449808	FCV 20PSI 0-15 LPM G4 BASE
21215214	RV 9/16-20UNF 30PSI TPED
21341652	REGULATOR 20PSI ECON W/ PRV-SRV CODED
21494713	Liberator Service Bulletin / Instruction

Table 5. Parts Included in 30 PSI Lib Plumbing Service Kit – 2LPM P/N 21494712

PART NUMBER	DESCRIPTION
21494787	FCV 20PSI 0-2 LPM V2 BASE TPED
21215214	RV 9/16-20UNF 30PSI TPED
21341644	REGULATOR 20PSI ECON W/PRV-SRV PORT
21494713	Liberator Service Bulletin / Instruction

1. Retrofit Kit Procedure:

Caution: The unit must be empty, warm and vented before starting procedure.

1.1. Remove Top Shroud using Phillips Head #1 Screwdriver.

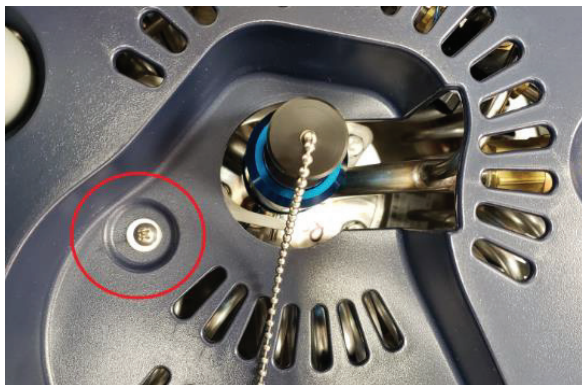


Figure 1.1

1.2. Remove Flow Control Valve Knob, and remove Flow Control Valve warming coil connection using 9/16" Open End Wrench.
(Note: Retain Flow Control Valve Knob)

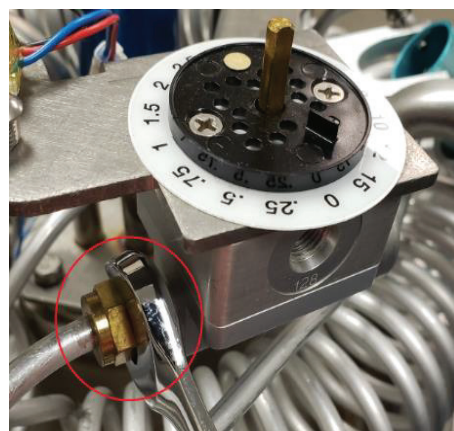
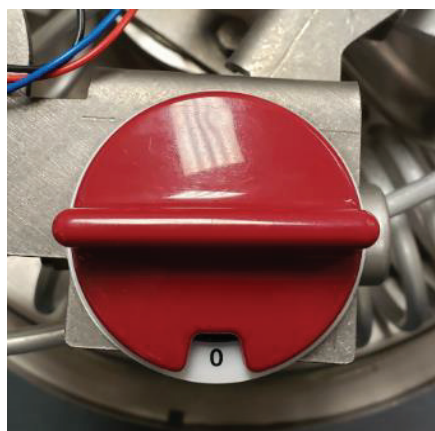


Figure 1.2

1.3. Remove (2x) screws from Locking Plate, then remove the Flow Control Valve.
(Note: Retain Locking Plate, Flow Control Decal, and Screws. Discard Flow Control Valve/SRV)

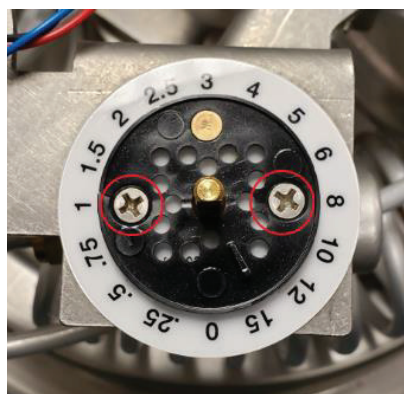


Figure 1.3

- 1.4. Install new Flow Control Valve, Flow Control Decal, and Locking Plate, using the (2x) Locking Plate Screws to hold the Flow Control Valve secure. Reconnect Flow Control Valve warming coil connection. Reinstall the Flow Control Knob.
(Note: If changing from a 15 LPM FCV to a 2 LPM FCV or vice versa, the appropriate setting decal will need to be ordered separately and installed along with the replacement FCV at this step)

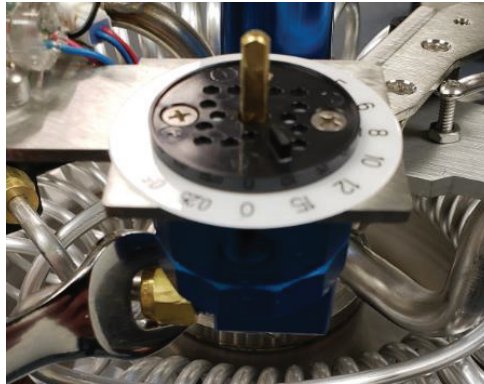


Figure 1.4

- 1.5. Remove Economizer Valve assembly using 9/16" Open End Wrench to loosen the three coil connections. Remove Primary Relief Valve from Economizer.
(Note: Retain Primary Relief Valve, discard Economizer Assembly)

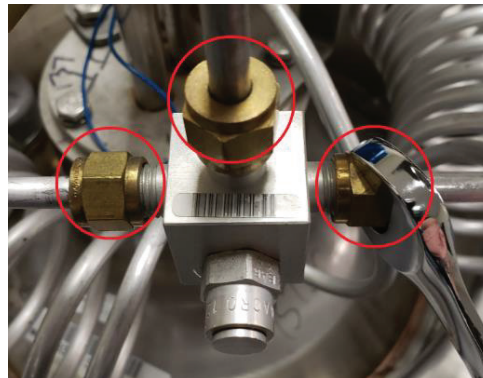


Figure 1.5

- 1.6. Install the new Secondary Relief Valve (using 11/16" Wrench) and the retained Primary Relief Valve (using 9/16" Wrench) onto the new Economizer.
SRV torque value = 180 +/- 18 inch pounds, PRV torque value = 80-90 inch pounds.
Install Economizer Assembly, tightening the 3 coil connections.



Figure 1.6

- 1.7. Perform leak check.
1.8. Reinstall Top Shroud and screw.

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: 21464617

RELEASE DATE: September 3, 2019

REVISION DATE(S): September 23, 2019 (Rev B)
February 01, 2020 (Rev C)

MODEL: SeQual® Eclipse 5®

ISSUE: New Release Eclipse 5 Power Supply

NOTES: Effective September 2019 Eclipse power supply (CAIRE PN:21334759) will replace the previous version (CAIRE PN: 20852326) on all newly manufactured 2-LED Eclipse 5 devices as well as all spare power supply part kit numbers in Table 1 below.

Table 1: Spare Power Supply Kit PNs

20852326S	Kit, Power Supply US Cord
20852325S	Kit, Power Supply EU Cord
20852324S	Kit, Power Supply UK Cord

Power supply 21334759 is backwards compatible with all previously manufactured 2-LED and 3-LED Eclipse 5 units.

Note: Please reference Service Bulletin [21220048](#) when using the 3-LED power supply kit PN 5941-SEQ (US), 20553100 (EU), and 20553098 (UK)) with 2-LED units as this will require label changes on the device.

Figures 1 and 2 display the different power connections between the new part number 21334759 and the previous part number 20852326. The 21334759 new style power supplies will require different power cable – see Table 2 for details of different cord part numbers.



Figure 1: Current Eclipse 5 power supply (PN 21334759)



Figure 2: Previous Eclipse 5 power supply (PN 20852326)

Figure 3 displays the power supply connection for use on the 3-LED version Eclipse models. These part numbers are obsolete, replaced by the power supply kits listed above.



Figure 3: Eclipse 3-LED Power Supply (PN 5940-SEQ)

Table 2: – Power Cord part numbers

Power Supply PN	Region	Cord only PN	Spare Power Supply Plus Cord
5940-SEQ	USA	3588-SEQ	20852326S
5940-SEQ	UK	3590-SEQ	20852324S
5940-SEQ	EU	3589-SEQ	20852325S
5940-SEQ	AUS	20669418	21334759 + 21463776
20852326	USA	4997-SEQ	20852326S
	UK	4999-SEQ	20852324S
	EU	4998-SEQ	20852325S
	AUS	21347183	21334759 + 21463776
21334759	USA	21336129	20852326S
	UK	21475874	20852324S
	EU	21336073-C4	20852325S
	AUS	21463776	21334759 + 21463776

*Use above table in conjunction with Figure 1-3 to identify cable only part number required.

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: 21220048

RELEASE DATE: October 31, 2017

REVISION DATES: July 30, 2018 (Rev B), March 05, 2019 (Rev C)

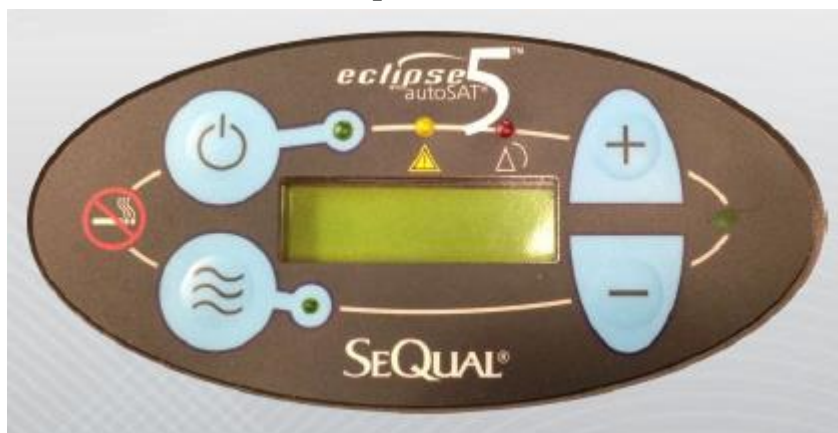
MODEL: Eclipse 5 Oxygen Concentrators

ISSUE: IEC 80601-2-69 Oxygen Concentrator Particular Standard Compliance

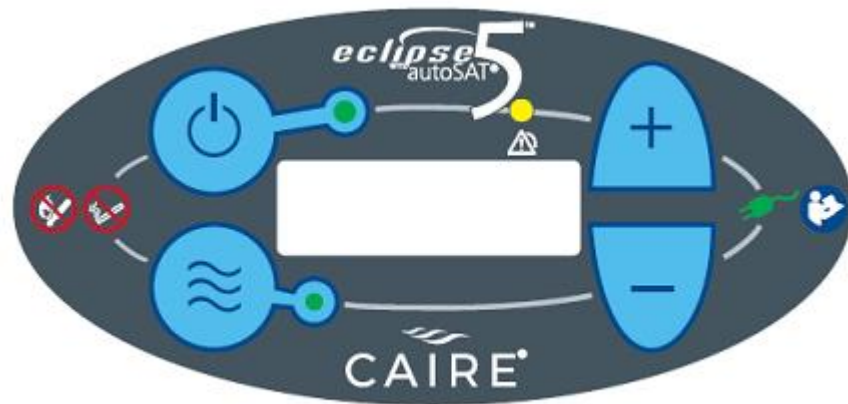
NOTES: To ensure Eclipse devices are compliant with the IEC 80601-2-69 (including IEC 60601-1 edition 3.1 and EMC IEC 60601-1-2 4th edition), coming in 2018 the Eclipse 5 will no longer have a red alarm indication. This change will be accompanied by a revised touch panel, new circuit board part number, and an updated alarm code troubleshooting tables.

The Eclipse 5, including the AC power supply, will be IEC 60529 IP22 compliant rather than IPX1. The AC power supply will be changed to a two pronged cord type, Type II power supply. IEC 60601-1 applied part classification for the device changes from Type B to Type BF. The older Eclipse 5 units can use the new power supply. In order for the new Eclipse 5 to be used with the old power supply, the CSA labeling would need be removed from the unit. The applied part would then change from type BF to type B.

Previous Eclipse 5 Touch Panel



Updated Eclipse 5 Touch Panel



New Alarm Specification Changes

With the new display panel, there will no longer be a red indication for an alarm code. The new panel will display a yellow LED, audible alarm, and an associated fault code.

This is an example of the previous alarm tables (prior to IEC 60601-1 edition 3.1 and EMC IEC 60601-1-2 4th edition compliance) with the Red Light Indicator.

CONDITION	ALARM CODE	ALARM DISPLAY	GREEN INDICATOR	YELLOW INDICATOR	RED INDICATOR	AUDIBLE ALARM
“Warming Up. Please Wait.”	4	O2 < 70%	ON	ON	ON	OFF
“Warming Up. Please Wait.”	8	O2 < 85%	ON	ON	OFF	OFF
“3.0”(or flow setting)	0	NO ALARM	ON	OFF	OFF	OFF
“Low Power Cartridge”	10	LOW BAT	ON	Flashing	OFF	2 Beeps
“Warm Power Cartridge”	2	WARM BAT	ON	Flashing	OFF	1 Beep
“Low 9V Battery”	-	-	OFF	OFF	OFF	3 Beeps on POST
“O2 Concentration < 85%”	8	O2 < 85%	OFF	Flashing	OFF	OFF
“O2 Concentration < 70%”	4	O2 < 70%	OFF	OFF	Flashing	3 Beeps
“Flow Rate Error / Blocked Flow”	20	FLOWRATE	OFF	Flashing	OFF	1 Beep
“Cannot Charge Power Cartridge”	1	CHARGER	N/A	ON	OFF	OFF
“One Wire Communication Loss”	100	ONEWIRE	N/A	Flashing	OFF	1 Beep

"No Inspiration Detected" (in Pulse Mode only)	200	P <--> C	ON	OFF	OFF	OFF
"Loss of External Power" (without charged Power Cartridge installed)	40	***** (flashing)	OFF	OFF	Flashing	ON for 5 min
"System Fault"	80	FAIL XX	OFF	OFF	ON	ON 10 seconds then silent

Updated Alarm tables (IEC 60601-1 edition 3.1 and EMC IEC 60601-1-2 4th edition compliant model).

Alarm	LCD Text	Yellow	Audio	Code
All OK, warm-up done	NO ALARM	OFF	OFF	0
No breath for 15 seconds	P <--> C	ON	1 beep 200ms, repeat after 20 seconds	200
Warm-up period (0-120 seconds after power on):	O ₂ < 85%	ON	OFF	8
One wire communication loss	ONE WIRE	ON	1 beep 200ms, repeat after 20 seconds	100
Cannot Charge Battery	CHARGER	ON	1 beep 200ms, repeat after 20 seconds	1
%O ₂ < 85%	O ₂ < 85%	ON	1 beep 200ms, repeat after 20 seconds	8
Flow rate error	FLOWRATE	ON	1 beep 200ms, repeat after 20 seconds	20
Warm battery	WARM BAT	ON	1 beep 200ms, repeat after 20 seconds	2
Low battery	LOW BAT	ON	1 beep 200ms, repeat after 20 seconds	10
Loss of power (No Battery, no external power)	*****	ON	1 beep 200ms, repeat after 20 seconds for 200 seconds	40
Malfunction	FAIL XX	ON	1 beep 200ms, repeat after 20 seconds for 200 seconds	80

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

USA: 800-482-2473
www.cairemedical.com
Europe: +44 1344 403100
www.cairemedical.com

For ordering information or general inquiries, contact Customer Service:

USA: 800-482-2473
www.cairemedical.com
Europe: +44 1344 403100
www.cairemedical.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.