Effective Date: September 2023

MODEL SHOWN: SSX2

ARMOUR SSX2

TECHNICAL MANUAL

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SECTION A

SAFETY INFORMATION

CAUTION: BEFORE SERVICE OR REPAIR

EagleAir® recommends, unless the user has been trained to perform routine service and/or repairs, that all service and/or repairs be done by an EagleAir® Authorized Sales & Service Distributor.

WARNING

HAZARDOUS VAPORS can cause severe nausea, fainting or death. Compressed air from this air compressor may contain poisonous Carbon Monoxide. Always use the compressor in a well ventilated area. Use properly approved respirator mask when used in conjunction with the machine.

HAZARDOUS VOLTAGE can cause severe injury or death. Always disconnect the power supply before doing any maintenance or repair work. Always connect the power supply to a properly grounded electrical circuit with the specified voltage and fuse protection. Never use the compressor in the rain, in a wet area or near an explosive atmosphere.

FLAMMABLE VAPORS can cause a fire or an explosion, and result in severe injury or death. Sparks from the motor's electrical contacts can ignite flammable vapors from gasoline, natural gas, or solvents. Do not operate the air compressor in any areas where explosive or flammable vapors or liquids may exist.

EXPLOSION can occur, compressed air has great force. Over-pressurizing the air system can cause the air system to rupture or EXPLODE, and result in injury or death. Change in the air system structure will cause the air system to weaken and can cause the air system to rupture or explode, and result in severe injury or death. Air Pressure beyond design limits can cause the air system to rupture or explode, and result in severe injury or death. Improper use of air attachments can cause an explosion, and result in severe injury or death. The air system is protected from over*pressurizing by safety valves. **DO NOT REMOVE, MAKE ADJUSTMENTS, OR SUBSTITUTIONS FOR THESE VALVES.** Occasionally pull the ring on the safety valve to make sure that the valve operates freely. If the valve is stuck or does not operate smoothly, it must be replaced immediately. Never drill into, weld to, or change the air system in any manner. Drain water/condensate from the air system daily or before each use. Pressure switch/un-loader valve operation is related to the motor horsepower, air system rating, and the safety valve setting.
DO NOT ATTEMPT TO ADJUST, REMOVE, OR BY-PASS THE PRESSURE SWITCHES, OR CHANGE AND MODIFY ANY PRESSURE CONTROL RELATED DEVICE.
Do not use any air attachments without determining the maximum air pressure recommended for the particular air attachment.

EYE PROTECTION is required when working with high pressure compressed air. Compressed air can propel dirt, sand, metal shavings, etc. and result in severe injury. Never point an air nozzle or air sprayer toward any part of the body, or toward another person.
Always wear safety glasses or goggles.

MOVING PARTS can cause severe injury. The electric motor air compressor models are designed to cycle automatically when the power is ON. During service or repair work, this automatic cycling can cause severe injury.
Always disconnect the power supply on electric motor models if the compressor is to be left unattended.
Always make sure that the air pressure is released from the compressor, the air system, and all air attachments before doing any maintenance or repair work. Never operate the compressor with the access panel removed.

HOT PARTS can result in severe burns if touched; air compressors, tubing & the motor get hot while running.
Never touch the bare compressor, the motor, or the discharge tubing during or shortly after operating the compressor.

SECTION B

FEATURES & DIMENSIONS

MODEL SHOWN: SSX2

ARMOUR SSX2

Breathing Air Cylinder Fill System

Standard & Optional Features

Bulk or Cascade controls with SCBA Regulator & Fill Valve

"Graphic Technology" Control Panels Group Components Logically by Function and Air Flow Direction.

UL® Certified Two SCBA Containment Design Fill Station, Subjected to Un-Announced Periodic Inspections and Meet NFPA 1901 2016 Edition Rupture Containment Requirements.

Performance-Proven "AirLock" Access Door Design and Balanced Cylinder Fill Enclosure Forward Tilt Rotation Enhances Operator Comfort.

Integrated System is Designed for Against-the-Wall Installation and Accommodates up to Four (4) Air Storage Cylinders at the Rear of Unit.

Unique, Tilt-foward Fill Station Control Panel for Unfettered Maintenance

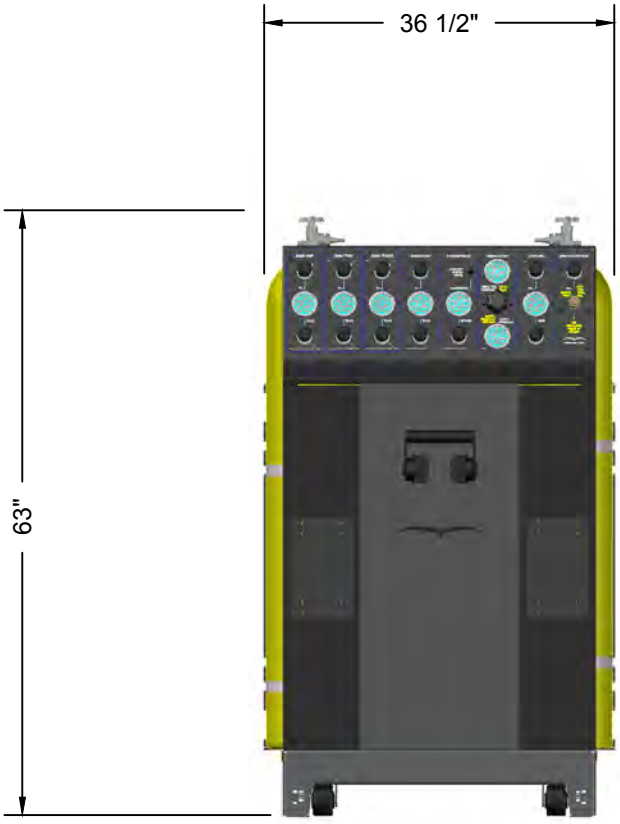
Scratch Resistant, Powder Coated, Seamless Appliance Cabinet

MODEL SHOWN: SSX2

SSX2

Breathing Air Cylinder Fill System

Dimensional Specifications

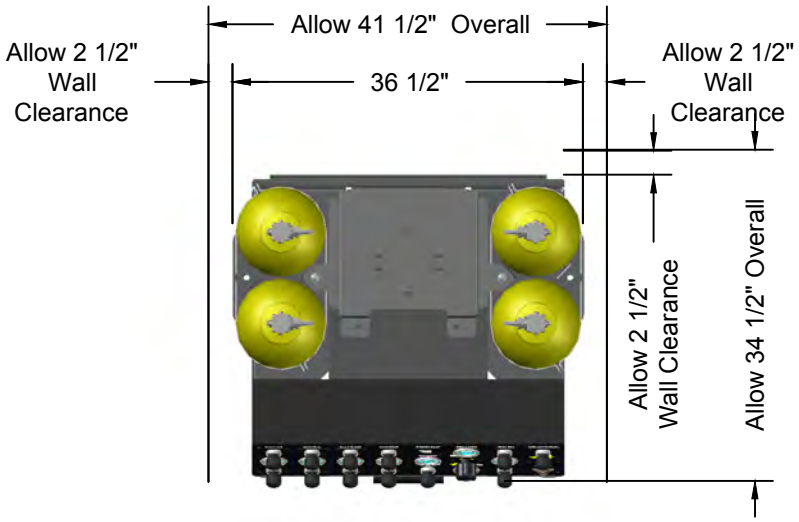


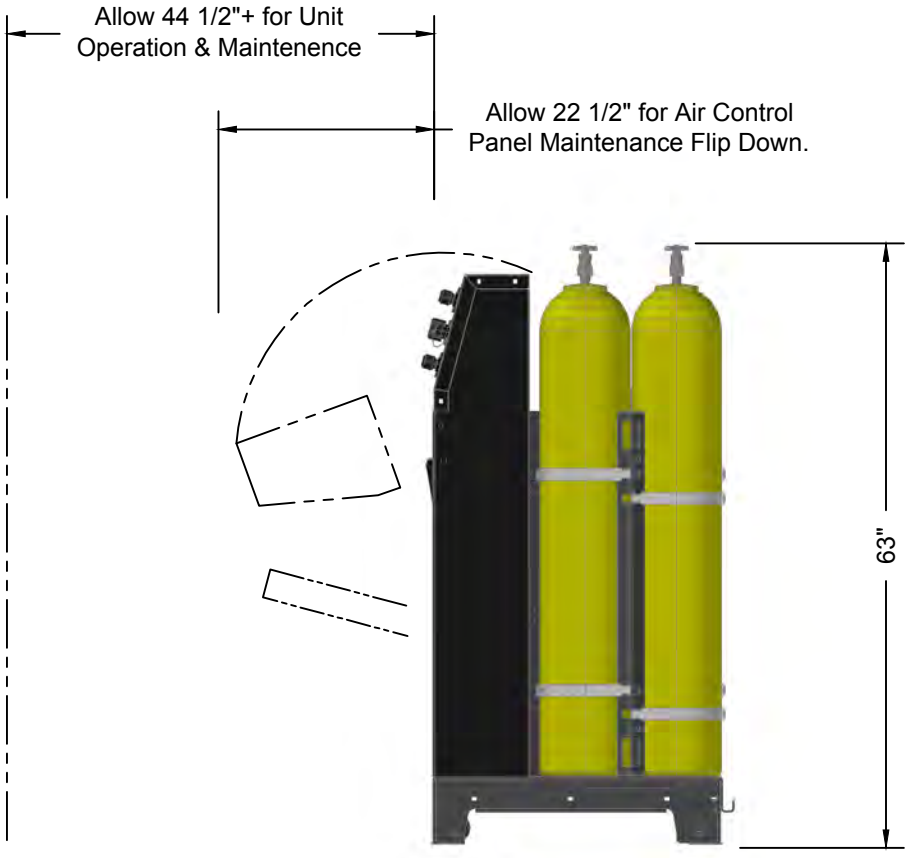
MODEL SHOWN: SSX2-S60-C4R

SSX2

Breathing Air Cylinder Fill System

Dimensional Specifications





SECTION C

INITIAL RECEIPT, SET-UP, & OPERATION

FILL STATION SCBA LOADING

As designed, the two (2) position in-line fill station is capable of filling a quantity of two (2) SCBA cylinders or a quantity one (1) 80 ft^3 3000 psig SCUBA cylinder simultaneously. Filling of SCUBA is only to be carried out in the forward most cylinder cradle/tube (i.e. the cradle/tube closest to the operator when initially opening the fill station containment door). Attempting to fill a SCUBA cylinder in the rear cylinder cradle/tube will result in the fill station bucket assembly jamming when attempting to rotate the fill station containment door open or closed.

During SCBA & SCUBA filling operations care should be take so as not to kink and/or otherwise stress the hose end connection and its associated fill adapter. Kinking of the hose may result in internal damage to the hose laminations and cause air migration out through the hoses' protective covering. This may cause leaks at the fitting interface where the hose end fittings are crimped to the hose.

The following figures (1 & 2) show the improper way of making SCBA connections prior to SCBA filling operations. As can be seen in figure 1 the weight of the SCBA bottle is being supported by the fill adapter when in the forward most cradle/tube. This is due to the SCBA cylinder that is being filled being too short for the fill cradle/tube, and therefore when the door is rotated up to the closed position the SCBA slips down into the cradle/tube and comes to rest on the fill adapter. In figure 2 the SCBA fill adapter is made up to the SCBA cylinder then the "slack" from the fill adapter hose is pushed back down into the fill adapter mounting/retaining grommet. When the door is closed while in this orientation, stress is put on the base of the adapter fitting where it is crimped to the hose. This leads to the hose kinking due to the weight of the SCBA cylinder "hanging" from the adapter assembly because the SCBA cylinder is too short for the cradle/tube.

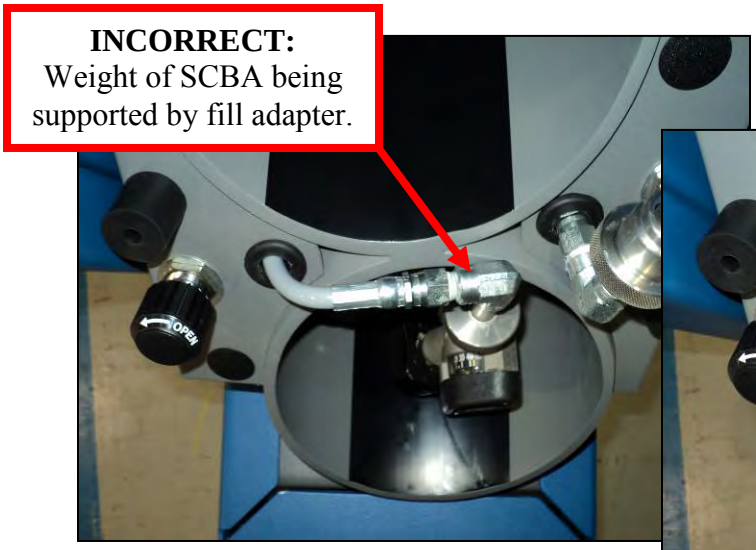


Figure 1 – Incorrect Filling

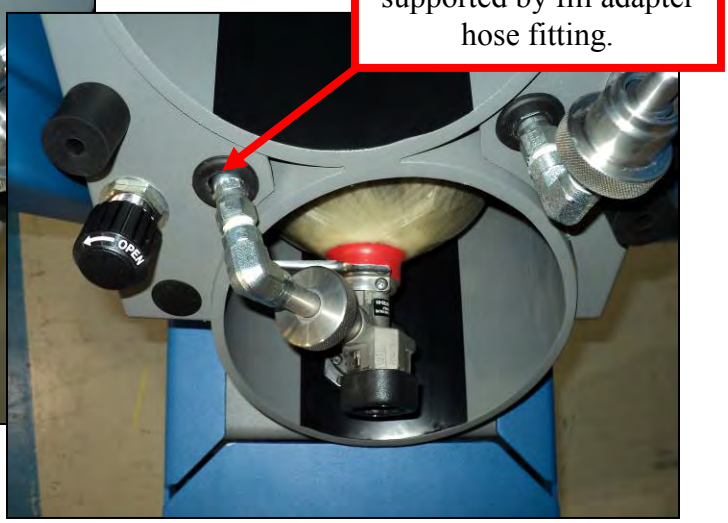


Figure 2 – Incorrect Filling

Repeated occurrences of the improper adapter connections previously depicted may eventually lead to failure of the fill adapter hose or loosening of the fill adapter at the interface with the SCBA service valve connection during filling operations.

Figure 3 presented below depicts the proper orientation of the fill adapters when connected to SCBA cylinders in a fill station. Beyond making the proper connections, it is also paramount that the SCBA cylinders are NOT permitted to "hang" in any fashion from fill adapters or otherwise stress the fill adapter fittings during filling operations. In the event a SCBA cylinder is too short for the cradle/tube in which it is intended to be filled, spacer blocks fashioned from locally available PVC pipe or a formed aluminum spacer set (figure 4, PN: ACC-SPACERKIT) should be utilized to support the SCBA cylinder from the bottom, therefore elevating the SCBA cylinder so that the issues depicted previously in figures 1 & 2 do not occur. Caution should be taken in selecting the spacer length so that it does not cause the SCBA service valve to make contact or otherwise jam against the inside roof portion of the containment box when opening or closing the fill station containment door.

Figure 3 – Properly Supported SCBAs

ACC-SPACERKIT-CSSX
Provides multiple spacers for various SCBA cylinder lengths.

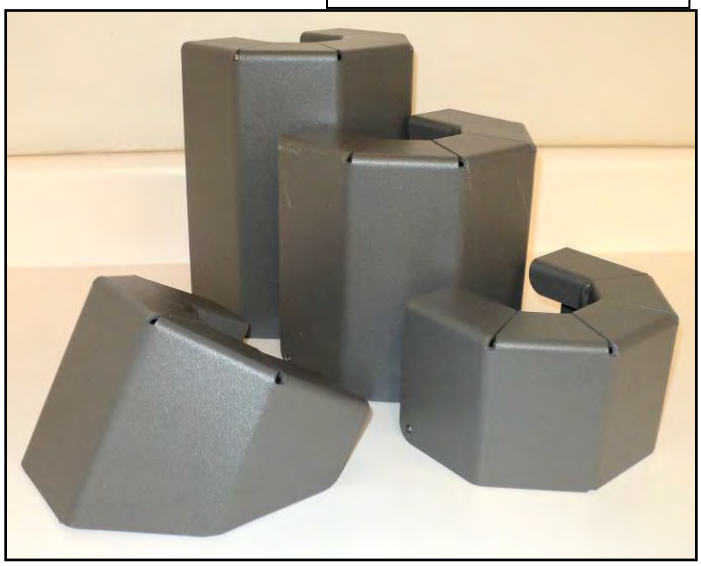
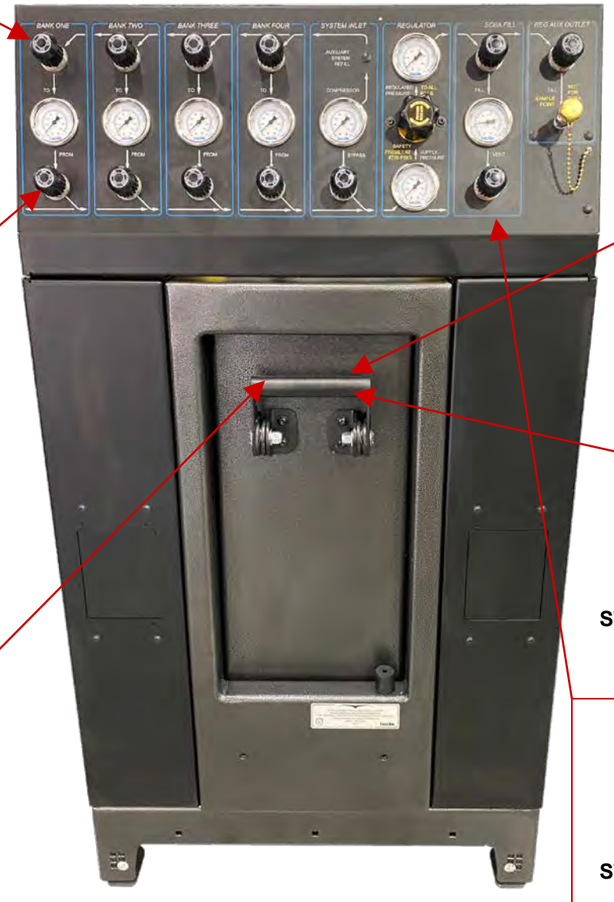


Figure 4 – "ACC-SPACERKIT-CSSX"

SSX2



“TO” BANK 1 VALVE

“TO” BANK 2 VALVE

STEP 1 : Fill the breathing air storage banks with approved breathing air compressor by opening the “TO” valve for Bank 1 & 2 etc. (Note: Fill only one bank at a time to prevent storage equalization)

“FROM” BANK 1 VALVE

STEP 2: Open one of the “from” valves on the cascade panel to provide supply air to the SCBA/SCUBA regulator. Adjust regulator to the desired filling pressure for the SCBA cylinder(s) to be filled. (Note: This step also provides air to the pilot air regulator which is necessary for proper fill station containment door operation.)

STEP 3 : Open containment fill enclosure by clicking handle down. Pull out on Containment Door and allow to swing to the open position.

STEP 8: Close the door to the containment fill enclosure by clicking up on the handle and rotating the door upright

ISOLATION VALVE

STEP 4: Slide SCBA into tube. 1 or 2 cylinders can be filled at a time.

STEP 5: Attach fill whip to cylinder or cylinders

STEP 6: Open service valve on cylinder

STEP 7: Open isolation valves for SCBA tanks to be filled

FILL VALVE

STEP 9: Open the FILL Valve slowly to begin pressurizing SCBA cylinder(s)

BLEED VALVE

“FROM” BANK 1 VALVE

STEP 10: When SCBA fill pressure equals Bank 1 pressure:

- **Close “From Bank 1” valve.**
- **Open “From Bank 2” valve**
- **When Bank 2 pressure equals fill pressure, close Bank 2 “From Bank 2” Valve etc. until filling operations are completed**
- **If all storage banks are utilized and the desired fill pressure has not been reached. Open the storage bypass valve and turn on the compressor. This allows air to flow directly to the regulator**

: Removal of filled SCBA cylinder(s):

- **Close SCBA Fill Valve**
- **Open fill station door**
- **Close service valve on SCBA cylinder(s)**
- **Open bleed valve on control panel (Lower Right Corner)**
- **Unscrew fill whip(s) from SCBA cylinder(s).**
- **Slide SCBA cylinder(s) from Containment tube**
- **Repeat steps 2~10 for the next SCBA/SCUBA cylinder(s) to be filled.**

OPERATING INSTRUCTIONS FOR a SSX2 CASCADE BREATHING AIR STORAGE FILL CONTROLS

INITIAL SETTINGS FOR CONTROL PANEL:

- ✓ Regulator ..... 0 PSI
- ✓ SCBA Fill Valves ..... CLOSED
- ✓ Bleed Valve ..... CLOSED
- ✓ Storage "TO" Valves ..... CLOSED
- ✓ Storage "FROM" Valves ..... CLOSED
- ✓ Storage Bypass Valve ..... CLOSED
- ✓ Fill Whip Isolation Valves* ..... CLOSED
- ✓ Regulated or Unregulated Auxiliary Outlet Valve ..... CLOSED

* Located inside containment box of fill station

TO FILL STORAGE:

1. Insure that all controls are in their initial positions as described above.
2. Start air flow to the fill station from a qualified breathing air Compressor/Purifier.
3. Open the storage "TO" valve for the cascade bank to be filled. When the cascade bank gauge indicates full (Typically 4500 PSI or 6000 PSI depending on storage and compressor maximum pressure ratings) filling is complete. Close the "TO" valve for the storage bank you have just filled. If desired, continue filling remaining storage banks in same manner until all storage has been filled.
4. Turn off the breathing air compressor used for filling storage or allow it to go into standby mode if so equipped.

TO LOAD SCBA BOTTLES:

1. Verify that all controls are in their initial positions as described above.
2. Open the "FROM" valve for one of the cascade banks on the control panel.
3. Verify storage pressure is above the desired fill pressure of the SCBA/SCUBA bottles being filled by referring to the supply pressure gauge on the fill control panel.
4. Turn the regulator clockwise to the desired fill pressure as indicated by the regulated pressure gauge on the control panel.
   Note: For fill stations having cascade storage this step is required for proper operation of the AirLOCK containment door of the fill station.
5. Click down on the door handle and allow the door to lower from its initial position behind the outer containment door frame.
6. Pull outward on the door handle and allow to the door to rotate out towards the operator and come to a dampened stop when filly open.
7. Note the pressure reading on the pilot air pressure gauge located on the inside roof of the containment box. This reading should be approximately 120 PSI +/- 20 PSI (See: AirLOCK Containment Door Trouble Shooting & Adjustment" section of this manual if pilot air pressure not within the specified range).

8. Load the SCBA or SCUBA cylinders into the fill tubes.
   Note: The fill stations are designed to hold SCBA cylinders. If smaller cylinders are to be filled, use a piece of wood blocking or PVC pipe inside the fill tubes below the shorter bottles to prevent the fill whips from being kinked.
9. Attach the CGA connection on the end of the fill whip(s) inside the containment area of the fill station to the cylinder(s) to be filled.
10. Open the isolation valves for the fill whips that are attached to SCBA or SCUBA cylinders to be filled only. The isolation valve(s) for any empty fill position(s) must remain closed during filling operations.
11. Open the individual service valves for the SCBA or SCUBA cylinder(s) to be filled.
12. Click up on the door handle and rotate the door to its upright position and allow the containment door to fully raise to its closed/trapped position behind the containment door frame.

CAUTION!!

Before continuing to filling instructions for SCBA or SCUBA cylinders check hydrostatic and working pressures of the cylinders to be filled. If the SCBA or SCUBA cylinder is out of certification DO NOT ATTEMPT TO FILL.

TO FILL SCBA/SCUBA CYLINDERS FROM BREATHING AIR STORAGE:

1. Verify that all controls are in their initial positions as described above.
2. Follow the previous instructions for the loading of SCBA or SCUBA cylinders into the fill station.
3. Open the "FROM" valve on the control panel for one of the cascade banks.
   NOTE: Be sure that the pressure of the cascade bank chosen is higher than the pressure you desire to fill to. If not select another storage bank to draw from or see the previous section on filling breathing air storage.
4. Adjust the regulator on the control panel to the desired fill pressure by turning the regulator know clockwise to increase pressure or counter clockwise to decrease pressure. This may be observed on the regulated pressure gauge. Set the regulated pressure as dictated by the maximum working pressure of the SCBA or SCUBA cylinders being filled.
5. Start air flow to the SCBA or SCUBA cylinders by slowly opening the SCBA fill valve located on the control panel.
6. Filling operations are complete when the SCBA pressure gauge on the control panel indicates the maximum pressure rating for the cylinders being filled.
7. Close the "FROM" valve on the control panel for the cascade bank used in filling operations.
8. Close the SCBA fill valve located on the control panel
9. Open the containment door as described previously in the section on loading SCBA or SCUBA cylinders.
10. Close the individual service valves for the SCBA or SCUBA cylinders that have just been filled.
11. Open the bleed valve on the control panel and allow the SCBA pressure to go to 0 PSI.
12. Remove the CGA fittings on the fill whips from the cylinders that have just been filled.
13. Close the isolation valves for the fill whips located inside the containment area of the fill station.
14. Return the containment door to the closed position.

TO FILL SCBA/SCUBA CYLINDERS DIRECTLY FROM COMPRESSOR:

1. Verify that all controls are in their initial positions as described above.
2. Follow the previous instructions for the loading of SCBA or SCUBA cylinders into the fill station.
3. Start air flow to the fill station from a qualified breathing air Compressor/Purifier.
4. Slowly open the bypass valve located on the control panel.
5. Observe the supply pressure gauge reading climb as pressure from the compressor builds in the system.
6. Adjust the regulator on the control panel to the desired fill pressure by turning the regulator know clockwise to increase pressure or counter clockwise to decrease pressure. This may be observed on the regulated pressure gauge. Set the regulated pressure as dictated by the maximum working pressure of the SCBA or SCUBA cylinders being filled.
7. Start air flow to the SCBA or SCUBA cylinders by slowly opening the SCBA fill valve located on the control panel.
8. Filling operations are complete when the SCBA pressure gauge on the control panel indicates the maximum pressure rating for the cylinders being filled.
9. Close the bypass valve located on the control panel.
10. Close the SCBA fill valve located on the control panel
11. Open the containment door as described previously in the section on loading SCBA or SCUBA cylinders.
12. Close the individual service valves for the SCBA or SCUBA cylinders that have just been filled.
13. Open the bleed valve on the control panel and allow the SCBA pressure to go to 0 PSI.
14. Remove the CGA fittings on the fill whips from the cylinders that have just been filled.
15. Close the isolation valves for the fill whips located inside the containment area of the fill station.
16. Return the containment door to the closed position.

USING THE FILL STATION AUXILIARY OUTLET CONNECTION:

This fill station is equipped with an additional auxiliary outlet on the front control panel of the unit. This auxiliary outlet connection is intended for use in filling remote (ie. truck mounted…etc.) breathing air storage systems. The auxiliary outlet is NOT intended to for use in filling SCBA or SCUBA cylinders in an “un-contained” environment. Filling of SCBA or SCUBA cylinders with the auxiliary outlet could lead to serious injury and or death in the event a cylinder rupture should occur while not contained within the fill station.

Depending on how the unit was ordered the auxiliary outlet will be either regulated or un-regulated. See the plumbing and instrumentation diagram in the rear of this manual to determine which style is present:

1. **<u>Using the Auxiliary Regulated Outlet</u>:**

    a. Attach charging whip from regulated auxiliary outlet connection (CGA 347 connection) on the control panel to the breathing air storage system requiring to be topped off.
    b. Open the "FROM" valve on the control panel for one of the cascade banks. *<u>NOTE</u>: Be sure that the pressure of the cascade bank chosen is higher than the pressure you desire to fill to. If not select another storage bank to draw from or follow the previous instructions for filling storage or for filling directly from a compressor.*
    c. Set the regulated pressure as described previously using either the breathing air cascade banks or from the compressor directly from the instructions for filling SCBA or SCUBA cylinders.
    d. Open the service valve for the storage system to be filled.
    e. Slowly open the regulated auxiliary fill valve on the control panel.
    f. When the storage system being filled has reached its maximum working pressure filling operations are complete.
    g. Close the service valve for the storage system that was filled.
    h. Close the "FROM" valve on the control panel for the cascade bank used in filling operations.
    i. Close the regulated auxiliary fill valve on the control panel.
    j. Bleed off the pressure from the charging whip used to link the fill station to the remote storage that has been filled and remove.

2. **<u>Using the Auxiliary Un-Regulated Outlet</u>:**

    <u>Note</u>: The un-regulated auxiliary outlet pressure is determined by the pressure being supplied to the fill station. (ie. if drawing down from the breathing air storage system the pressure at the auxiliary outlet will match the pressure of the storage system or if drawing directly from a compressor the final fill pressure will match that of the maximum working pressure of the compressor being used in the system)

    a. Attach charging whip from un-regulated auxiliary outlet connection (CGA 677 connection) on the control panel to the breathing air storage system requiring to be topped off.
    b. Open the service valve for the storage system to be filled.
    c. Open the "FROM" valve on the control panel for one of the cascade banks. *<u>NOTE</u>: Be sure that the pressure of the cascade bank chosen is higher than the pressure you desire to fill to. If not select another storage bank to draw from or follow the previous instructions for filling storage or for filling directly from a compressor.*
    d. Slowly open the un-regulated auxiliary fill valve on the control panel.
    e. When the storage system being filled has reached its maximum working pressure filling operations are complete.
    f. Close the service valve for the storage system that was filled.
    g. Close the "FROM" valve on the control panel for the cascade bank used in filling operations.
    h. Close the un-regulated auxiliary fill valve on the control panel.
    i. Bleed off the pressure from the charging whip used to link the fill station to the remote storage that has been filled and remove.

OPERATING INSTRUCTIONS FOR The SSX2 EQUIPPED WITH BULK BREATHING AIR STORAGE FILL CONTROLS

INITIAL SETTINGS FOR CONTROL PANEL:

- ✓ Regulator ..... 0 PSI
- ✓ SCBA Fill Valves ..... CLOSED
- ✓ Bleed Valves ..... CLOSED
- ✓ Storage Fill Valve ..... CLOSED
- ✓ Fill Whip Isolation Valves* ..... CLOSED
- ✓ Regulated or Unregulated Auxiliary Outlet Valve ..... CLOSED

* Located inside containment box of fill station

TO FILL STORAGE:

1. Insure that all controls are in their initial positions as described above.
2. Start air flow to the fill station from a qualified breathing air Compressor/Purifier.
3. Open the storage fill valve on the operating panel when the supply gauge indicates full (Typically 4500 PSI or 6000 PSI depending on storage and compressor maximum pressure ratings.) close the storage fill valve.
4. Turn off the breathing air compressor used for filling storage or allow it to go into standby mode if so equipped.

LOADING SCBA/SCUBA BOTTLES:

1. Verify that all controls are in their initial positions as described above.
2. Verify storage pressure is above the desired fill pressure of the SCBA/SCUBA bottles being filled by referring to the supply pressure gauge on the fill control panel.
3. Turn the regulator clockwise to the desired fill pressure as indicated by the regulated pressure gauge on the control panel.
   Note: For fill stations having bulk storage this step is required for proper operation of the AirLOCK containment door of the fill station.
4. Click down on the door handle and allow the door to lower from its initial position behind the outer containment door frame.
5. Pull outward on the door handle and allow to the door to rotate out towards the operator and come to a dampened stop when filly open.
6. Note the pressure reading on the pilot air pressure gauge located on the inside roof of the containment box. This reading should be approximately 120 PSI +/- 20 PSI (See: AirLOCK Containment Door Trouble Shooting & Adjustment" section of this manual if pilot air pressure not within the specified range).
7. Load the SCBA or SCUBA cylinders into the fill tubes.
   Note: The fill stations are designed to hold SCBA cylinders. If smaller cylinders are to be filled, use a piece of wood blocking or PVC pipe inside the fill tubes below the shorter bottles to prevent the fill whips from being kinked.
8. Attach the CGA connection on the end of the fill whip(s) inside the containment area of the fill station to the cylinder(s) to be filled.

9. Open the isolation valves for the fill whips that are attached to SCBA or SCUBA cylinders to be filled only. The isolation valve(s) for any empty fill position(s) must remain closed during filling operations.
10. Open the individual service valves for the SCBA or SCUBA cylinder(s) to be filled.
11. Click up on the door handle and rotate the door to its upright position and allow the containment door to fully raise to its closed/trapped position behind the containment door frame.

CAUTION!!

Before continuing to filling instructions for SCBA or SCUBA cylinders check hydrostatic and working pressures of the cylinders to be filled. If the SCBA or SCUBA cylinder is out of certification DO NOT ATTEMPT TO FILL.

TO FILL SCBA/SCUBA CYLINDERS FROM BREATHING AIR STORAGE:

1. Verify that all controls are in their initial positions as described above.
2. Follow the previous instructions for the loading of SCBA or SCUBA cylinders into the fill station.
3. Adjust the regulator on the control panel to the desired fill pressure by turning the regulator know clockwise to increase pressure or counter clockwise to decrease pressure. This may be observed on the regulated pressure gauge. Set the regulated pressure as dictated by the maximum working pressure of the SCBA or SCUBA cylinders being filled.

   Note: If the supply gauge pressure is lower than the desired fill pressure refer to the previous section on filling breathing air storage or continue on to the next section which describes SCBA or SCUBA filling directly from a qualified breathing air compressor.
4. Start air flow to the SCBA or SCUBA cylinders by slowly opening the SCBA fill valve located on the control panel.
5. Filling operations are complete when the SCBA pressure gauge on the control panel indicates the maximum pressure rating for the cylinders being filled.
6. Close the SCBA fill valve located on the control panel
7. Open the containment door as described previously in the section on loading SCBA or SCUBA cylinders.
8. Close the individual service valves for the SCBA or SCUBA cylinders that have just been filled.
9. Open the bleed valve on the control panel and allow the SCBA pressure to go to 0 PSI.
10. Remove the CGA fittings on the fill whips from the cylinders that have just been filled.
11. Close the isolation valves for the fill whips located inside the containment area of the fill station.
12. Return the containment door to the closed position.

TO FILL SCBA/SCUBA CYLINDERS DIRECTLY FROM COMPRESSOR:

1. Verify that all controls are in their initial positions as described above.
2. Follow the previous instructions for the loading of SCBA or SCUBA cylinders into the fill station.
3. Start air flow to the fill station from a qualified breathing air Compressor/Purifier.
4. Observe the supply pressure gauge reading climb as pressure from the compressor builds in the system.
5. Adjust the regulator on the control panel to the desired fill pressure by turning the regulator know clockwise to increase pressure or counter clockwise to decrease pressure. This may be observed on the regulated pressure gauge. Set the regulated pressure as dictated by the maximum working pressure of the SCBA or SCUBA cylinders being filled.
6. Start air flow to the SCBA or SCUBA cylinders by slowly opening the SCBA fill valve located on the control panel.
7. Filling operations are complete when the SCBA pressure gauge on the control panel indicates the maximum pressure rating for the cylinders being filled.
8. Close the SCBA fill valve located on the control panel
9. Open the containment door as described previously in the section on loading SCBA or SCUBA cylinders.
10. Close the individual service valves for the SCBA or SCUBA cylinders that have just been filled.
11. Open the bleed valve on the control panel and allow the SCBA pressure to go to 0 PSI.
12. Remove the CGA fittings on the fill whips from the cylinders that have just been filled.
13. Close the isolation valves for the fill whips located inside the containment area of the fill station.
14. Return the containment door to the closed position.

USING THE FILL STATION AUXILIARY OUTLET CONNECTION:

This fill station is equipped with an additional auxiliary outlet on the front control panel of the unit. This auxiliary outlet connection is intended for use in filling remote (ie. truck mounted…etc.) breathing air storage systems. The auxiliary outlet is NOT intended to for use in filling SCBA or SCUBA cylinders in an “un-contained” environment. Filling of SCBA or SCUBA cylinders with the auxiliary outlet could lead to serious injury and or death in the event a cylinder rupture should occur while not contained within the fill station.

Depending on how the unit was ordered the auxiliary outlet will be either regulated or un-regulated. See the plumbing and instrumentation diagram in the rear of this manual to determine which style is present:

1. Using the Auxiliary Regulated Outlet:

a. Attach charging whip from regulated auxiliary outlet connection (CGA 347 connection) on the control panel to the breathing air storage system requiring to be topped off.
b. Set the regulated pressure as described previously using either the breathing air storage banks or from the compressor directly from the instructions for filling SCBA or SCUBA cylinders.
c. Open the service valve for the storage system to be filled.
d. Slowly open the regulated auxiliary fill valve on the control panel.
e. When the storage system being filled has reached its maximum working pressure filling operations are complete.

f. Close the service valve for the storage system that was filled.
g. Close the regulated auxiliary fill valve on the control panel.
h. Bleed off the pressure from the charging whip used to link the fill station to the remote storage that has been filled and remove.

2. <u>Using the Auxiliary Un-Regulated Outlet</u>:

<u>Note</u>: The un-regulated auxiliary outlet pressure is determined by the pressure being supplied to the fill station. (ie. if drawing down from the breathing air storage system the pressure at the auxiliary outlet will match the pressure of the storage system or if drawing directly from a compressor the final fill pressure will match that of the maximum working pressure of the compressor being used in the system)

a. Attach charging whip from un-regulated auxiliary outlet connection (CGA 677 connection) on the control panel to the breathing air storage system requiring to be topped off.
b. Open the service valve for the storage system to be filled.
c. Slowly open the un-regulated auxiliary fill valve on the control panel.
d. When the storage system being filled has reached its maximum working pressure filling operations are complete.
e. Close the service valve for the storage system that was filled.
f. Close the un-regulated auxiliary fill valve on the control panel.
g. Bleed off the pressure from the charging whip used to link the fill station to the remote storage that has been filled and remove.

SECTION D

GENERAL MAINTENANCE

Cartridge Check Valve Rebuild Instructions

EagleAir Inc. recommends that all high pressure cartridge check valves (PN: 32708562B) be inspected and or rebuilt if necessary after every 200 hours of compressor operation or once per year. Failure to do so may reduce the effective life span of the purification cartridges associated with the breathing air purification system and also prevent the compressor drain system from operating correctly. Below you will find the instructions for a basic check valve rebuild.

1. Locate and remove (if necessary*) the check valve(s) to be rebuilt. For visual representation of a high pressure check valve see Figure 1.

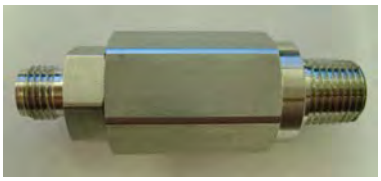


Figure 1

* SAE tube fitting may be removed from check valve assembly in place and valve internals removed from body without necessitating the complete removal of the check valve assembly from its plumbed position

2. With the check valve(s) to be rebuilt removed from the unit or partially dis-assembled in place
3. (i.e. SAE fitting removed as described in Step 1 notes). Disassemble the check valve by securing the large hex portion of the check valve body in a bench vise, or if being rebuilt in place support with 7/8" wrench and then using an 11/16" wrench or socket remove the 9/16" SAE tube fitting portion of the check valve assembly, if not already removed, which allows access to the valve internals (i.e. Nylon spacer washer and check valve cartridge) (Figure 2). With nylon spacer washer removed, the check valve cartridge may be extracted from the valve body by threading the check valve cartridge removal tool (PN: 32708562B-TOOL) onto the exposed threaded stem portion of the check valve cartridge (Figure 3). Direction of air flow is from threaded stem to slotted face on opposite side as indicated by engraved arrow on side of cartridge.

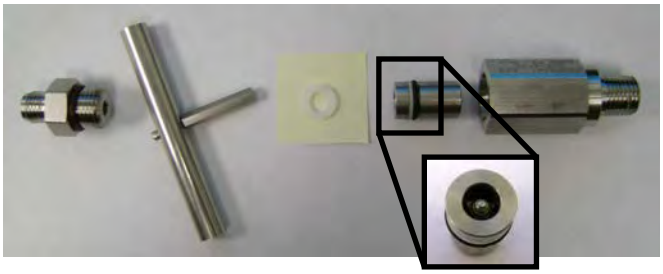


Figure 2

Figure 3

4. If the cartridge check valve is just being cleaned the check valve minor overhaul kit (PN: 32708562B-MINKT) should be utilized (Figure 4) which includes replacement SAE fitting o-ring, cartridge valve o-ring and split backup ring and nylon spacer washer. If a complete rebuild of the valve is required the major overhaul kit (PN: 32708562B-MAJKT) should be utilized (Figure 5) which includes a new check valve cartridge, o-ring for SAE fitting, and nylon spacer washer. During re-assembly a thin layer of super -o lube (PN: 32721789) should be applied to the check valve cartridge o-ring & split backup ring to facilitate ease of re-assembly.

Figure 4

Figure 5

Safety Valve Rebuild Instructions

Safety valves (or pressure relief valves) are utilized on EagleAIR™ equipment to prevent over pressurization of both compressor systems as well as SCBA/SCUBA containment filling stations. Below you will find step by step procedures for both rebuilding and the re-setting of the 300 to 6000 PSI safety valve utilized on all current EagleAIR™ equipment.

1. Locate and remove the safety valve from the unit while ensuring that the system in question has been bled to zero (0) PSI. For a visual representation of the safety valve see figure 1. wording

figure 1

2. With the safety valve located and removed from the unit, use a 5/16" hex key to remove the large adjustment screw, lock nut, spring, spring guide and poppet (figure 2). While disassembling, inspect the sealing edge of the poppet for scratches prior to setting it to the side. In addition to inspecting the sealing edge of the poppet, also inspect the surface of the safety valve seat (o-ring) to insure no particulate matter is embedded in the seat. In the event there is material embedded the seat, it may be removed by using a large flat edge screwdriver and backing out the poppet guide and then using a thin blunt object pushing the seat and seat washer out from the ¼" NPT side through to the location the poppet guide was previously backed out from. As the seat is removed be careful not to misplace the seat washer

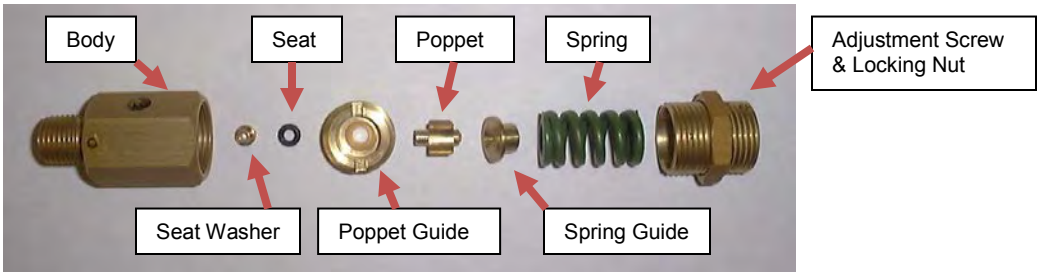


figure 2

3. With the safety valve totally disassembled, replace the O-ring seat if it has been cut or otherwise damaged as well as the poppet and spring guide (All of which are included in the safety valve rebuild kit which can be seen in figure 3; Kit Part #: 32708604-RBK).

figure 3

4. Re-assemble in opposite order.

5. With the safety valve reassembled and re-installed, adjustments to set pressure may be made by rotating the large adjustment screw clockwise to increase the set pressure above the final desired set pressure. Next bring the system pressure up to the desired relief valve set pressure and then back off the large adjustment screw until at the desired set point. Tighten the locking nut (figure 2) then cycle the system pressure once or twice to insure the safety valve opens at the desired set point pressure. Repeat step 5 as necessary.

Reducing Regulator Adjustment Instructions

Pressure reducing regulators are utilized to provide low pressure air for such tasks as drain block valve operation and air stream sampling for CO monitoring equipment on compressor units and providing supply air for containment door operation and pneumatic accessories on filling stations. In the event the reducing regulator (or pilot air pressure regulator) comes out of adjustment or a new regulator has been installed, the following instructions are provided for resetting the regulator to the desired pressure.

1. Locate the reducing regulator as pictured in figure 1.

figure 1

2. The reducing regulator is adjusted by loosening the locking nut and then rotating the regulator “cap” counter-clockwise (loosening cap) to increase the regulator outlet pressure or by rotating the “cap” clockwise (tightening cap) to reduce the regulator outlet pressure.

3. Once the desired set point pressure has been achieved retighten the locking nut and continue operation as normal.

***NOTE*: In the event the reducing regulator begins functioning incorrectly or erratically due to normal wear or external damage it should be serviced by an experienced technician familiar with high pressure components. Contact your local distributor for further assistance.**

Line Valve/Panel Mount Valve Rebuild Instructions

The following instruction are rebuilding a 6000 PSI line valve or panel mount valve:

1. A panel mount valve or line valve may be rebuilt in place. Insure that all plumbing in the circuit containing the valve to be rebuilt has been bled down to zero (0) PSI prior to moving on to the following steps. For a visual representation of the panel mount valve see Figure 1.

Figure 1

2. To disassemble, remove the black top plug in the valve hand wheel and using a straight edge screwdriver remove the valve stem nut/spring retainer. Remove the hand wheel from the valve body. Using an 11/16" wrench or deep well socket remove the bonnet allowing access to the valve internals (see Figure 2). Remove the valve stem, plug, copper gasket and Teflon packing rings.

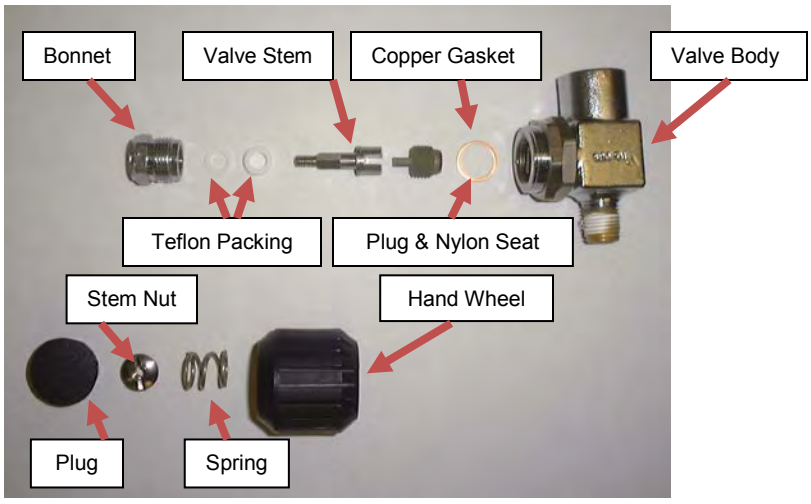


Figure 2

3. With the valve totally disassembled, replace the Teflon packing, plug and copper gasket as included in the rebuild kit (Figure 3, Part #: 32733925) and reassemble in reverse order. Contact your local EagleAIR™ Distributor or EagleAir Inc. directly with any questions.

Figure 3

SCBA/SCUBA Fill Regulator Adjustment Instructions

The SCBA/SCUBA fill regulator is used as the primary means of reducing the supplied air pressure from a breathing air compressor or breathing air storage arrangement to the maximum working pressure of the SCBA or SCUBA cylinder(s) to be filled in the containment fill station. The SCBA/SCUBA fill regulator is a self venting regulator that will "vent" off excess pressure when reducing the regulated pressure from a previously higher set point. This venting will be audible and should not be mistaken for improper operation. Below you will find basic operating instructions.

1. Locate the regulator as pictured in figures 1 & 2.

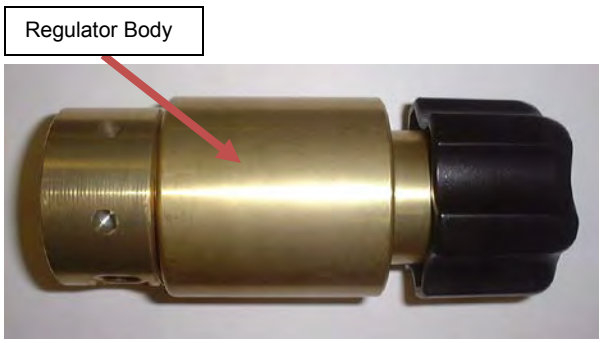


figure 1

figure 2

2. The regulator is adjusted by pushing in on the knob while rotating the regulator knob (figure 2) clockwise to increase the regulator outlet pressure or counter clockwise to reduce the regulator outlet pressure.

3. Once the desired set point pressure has been achieved as viewed on the regulated outlet pressure gauge on the fill control panel. filling operations may commence.

***WARNING*: Never set the SCBA/SCUBA fill regulator outlet pressure above the maximum working pressure of the cylinders being filled.**

***NOTE*: In the event the regulator begins functioning incorrectly or erratically due to normal wear or external damage it should be serviced by an experienced technician familiar with high pressure components. Contact your local distributor for further assistance.**

SECTION E

TROUBLE SHOOTING

Fill Station Trouble Shooting Guide

SYMPTOM	POSSIBLE CONDITION	TEST FOR CONDITION	REMEDY	NOTES	ASSOCIATED ITEMS
SCBA/SCUBA cylinder not Filling	Pilot regulator outlet pressure not between 100 ~150 PSI	Check pilot air pressure gauge inside cabinet and verify pressure (figure 1 in Containment Door Trouble Shooting & Adjustment)	Adjust pilot air pressure regulator (See Operation & Service section)	Insure supply pressure as shown on the "Supply" pressure gauge is at or above 1000 PSI and that the SCBA/SCUBA fill regulator is set above 1000 PSI	
	Containment door interlock valve associated with the door being fully extended (or raised) behind fill station door frame not being actuated correctly	Check clearance through upper inspection port (figure 6 in Containment Door Trouble Shooting & Adjustment) is approximately 1/4" ~ 1/2"	Make ½ turn clockwise adjustments to the right side adjustment screw located on the "end" of the containment door	See Containment Door Trouble Shooting & Adjustment **Section II** for detailed instructions (visual indicator: figure 5)	
		If above is within adjustment proceed to remedy to right	Make ½ turn counter clockwise adjustments to the left side adjustment screw located on the "end" of the containment door	See Above	If unit fills after performing adjustment outlined above, do NOT make this adjustment
	High pressure interlock valve not being actuated	Verify low pressure pilot air pressure is present at valve, with containment door closed for filling, by removing flexible tubing from fitting on interlock valve	Check flexible tubing lines for kinks if no air at flexible tubing	Contact EagleAIR™ Distributor if this step and all previous steps have been ruled out as symptom causes	
			Re-build/Replace high pressure interlock valve if air present but valve not operating		
Containment door raises (extends) in outward loading position	Ball actuator on containment door interlock valve damaged.	Inspect ball actuator. Ball should move freely. (location indicator: figure 4 of Containment Door Trouble Shooting & Adjustment)	Replace ball actuator if damaged		Containment door damper strut should also be replaced
Containment door not raising (extending) to full extent	Interlock valve associated with containment door being fully upright (or vertical) not being actuated correctly	Door begins to raise (extend) when pushed against	Make ½ turn clockwise adjustments to adjustment screw located below containment door	See Containment Door Trouble Shooting & Adjustment **Section II** (visual indicator: figure 3)	
	Interlock valve being actuated but containment door "dragging" on inside of the containment box door frame	Door begins to raise (extend) but stops and door handle must be pulled up on to completely close	Make ½ turn counter clockwise adjustments to adjustment screw located below containment door		
Audible air leak directly behind left side of containment door handle	Door handle not properly actuating roller assembly on door handle position interlock valve correctly	Audible leak detected with door handle in "clicked" closed position	Tighten Door handle bolts If leak persists shift door handle to operators left	See Containment Door Trouble Shooting & Adjustment **Section II** for detailed instructions (visual indicator: figure 2)	
		Audible leak detected with door handle in "clicked" open position	Tighten door handle bolts If leak persists shift door handle to operators right		
Audible air leak from SCBA/SCUBA regulator	Regulator is venting down stream pressure when adjusting from high to low pressure	Vents only while adjusting	None – normal operation		
	Worn vent seat inside of regulator	Back off regulator and re-adjust (See Operation & Service section for instructions)	Contact EagleAIR™ distributor to rebuild regulator	Rebuilding of high pressure regulators should be carried out by an experienced individual	
Audible venting of air behind control panel near SCBA fill valve	SCBA/SCUBA fill regulator set point above 4850 PSI factory set point of safety valve	See "Regulated Pressure" gauge on panel and verify if above 4850 PSI	Adjust regulator below 4850 PSI	Rebuild or replace safety valve (See Operation & Service section) if regulator is set correctly but safety valve continues venting	
Audible air leak behind fill control panel (Other than above)	Fitting, piping and/or hose connection leaking	Pressurize air control panel and locate leak using audible clues or leak detection fluid	Contact EagleAIR™ distributor to rebuild leaking component	Re-taping and resetting of nut and ferrule type tube fittings should be carried out by an experienced individual	

AIRLOCK DOOR

TROUBLE SHOOTING & ADJUSTMENT

The following instructions are to serve as a guide to the proper containment door operation for stationary

SECTION I:

1. In order for the AirLOCK containment door to function properly (Raising and Lowering), the unit must be supplied with pilot air pressure of approximately 125 PSI +/- 25 PSI. This may be verified by visually inspecting the pilot air pressure gauge located within the containment box of the fill station* (figure 1). The pilot air supply pressure necessary for the containment door to operate correctly is typically supplied by the breathing air storage system associated with the cylinder refill system.

figure 1

* In the event the AirLOCK containment door is not operating at all it may be manually overridden by pushing directly down on the containment door handle and pulling outward on the handle towards the operator.

2. In the event the pilot air pressure gauge (figure 1) does not read approximately 125 PSI, check the following:
    a. That the breathing air storage system associated with the fill station is pressurized at or above 1000 PSI* and that the regulated pressure gauge on the primary air control panel is reading over 125 PSI.
        i. If the breathing air storage system is not pressurized at or above 1000 PSI:
            1. See the section in this manual related to filling breathing air storage prior to moving to the next step.
        ii. If the regulated pressure gauge on the primary air control panel is not reading over 125 PSI but breathing air storage is reading at or above 1000 PSI perform the following:
            1. For breathing air storage arranged for cascade filling:
                a. For units equipped with “TO” and “FROM” cascade control valves open the “FROM” valve for an individual cascade bank with a pressure reading at or greater than 1000 PSI. Next set the primary regulator on control panel to approximately 125 PSI by rotating the regulator knob clockwise to increase the regulated pressure or counter-clockwise to decrease the regulated pressure. Re-check the pilot air pressure gauge and verify a pressure reading of approximately 125 PSI.

* References to 1000 PSI storage is relative, the AirLOCK door requires minimum of 125 PSI @ regulated pressure gauge to operate correctly.

b. For units equipped with single valve cascade controls open the "BANK #?" valve for any individual cascade bank with a pressure reading at or greater than 1000 PSI. Next set the primary regulator on the control panel to approximately 125 PSI by rotating the regulator knob clockwise to increase the regulated pressure or counter-clockwise to decrease the regulated pressure. Re-check the pilot air pressure gauge and verify a pressure reading of approximately 125 PSI.

2. For breathing air storage arranged for bulk filling:
   a. Verify that storage supply pressure is at or greater than 1000 PSI. Set the primary regulator on the control panel to approximately 125 PSI by rotating the regulator knob clockwise to increase the regulated pressure or counter-clockwise to decrease the regulated pressure. Re-check the pilot air pressure gauge and verify a pressure reading of approximately 125 PSI.

Upon completing the above steps relative to the system on hand, cycle the AirLOCK door handle by clicking up and down on the handle several times in order to insure proper pressurization of the door lift and safety interlock plumbing. If, however upon completion of the previous steps, the containment door is still not raising and lowering correctly contact your local distributor and/or Eagle Compressors Inc. directly for further assistance.

SECTION II:

The previous steps dealt with the AirLOCK door not raising and lowering properly. The following steps, though still related to the proper operation of the containment door, are also intended to help identify any problems associated with the filling operations due to improper mechanical actuation of the internal valving associated with the safety interlock system.

The safety interlock system is designed to prevent SCBA/SCUBA cylinder filling while the containment door is in the open position. This system consists of three (3) valves that require individual actuation in order for filling operations to occur. The first valve acted upon when attempting to open the containment door is a 3-way valve associated with the door handle position, the second is a 3-way valve associated with the position of the containment door: raised or lowered and the third is a 2-way valve associated with the position of the containment door: vertical position (closed for filling) or horizontal position (open for loading).

Inaccurate actuation of the any of the three valves previously mentioned will result in filling operations being cut short or not to occur at all. Adjustments to how those valves are operated/triggered are as follows:

1. With the pilot air pressure verified to be within the 125 PSI +/- 25 PSI range, normal door operation (raising & lowering) should occur when the door handle is "clicked" from the closed to open position. If however the door handle is in the clicked open position and a slight audible continuous air leak is detected or the containment door does not raise or lower correctly the 3-way valve associated with the door handle position may not be actuated completely. To correct this perform the following checks:

   a. Check the two main door handle bolts that are used to affix to the door handle to its mounting brackets. These bolts may work loose over time with heavy usage, thus allowing the door handle to "shift" from its factory settings and allow for the door handle

position valve to not actuate completely causing an audible air leak when the door is in the clicked open position.

b. If the door handle bolts described in step “a” where found to be tight and the audible leak persists, loosen the four (4) door handle bracket bolts (figure 2) slightly and gently shift the entire door handle assembly to the operator’s right while viewed from directly in front of the unit.

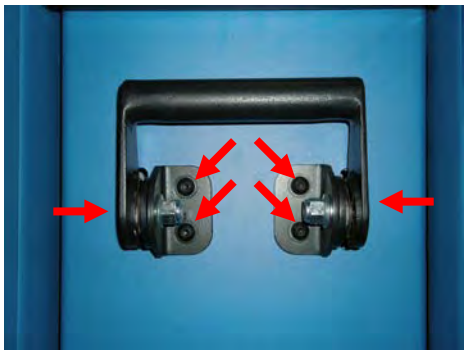


figure 2

c. With the door handle assembly shifted to the right, re-tighten the four (4) door handle bracket bolts loosened in step (a).
d. Operate the containment door as normal to verify that the air leak has ceased.

In addition to the interlock valve associated with containment door handle position, the two remaining interlock valves are related to the physical position of the door (ie. if the door is raised and trapped behind the door frame in the filling position and/or if the door is in the horizontal position for loading…). Proper actuation of these valves is necessary for normal filling operations to occur and the following instructions are to ensure that these valves are being properly actuated.

With the door in the open position for loading SCBA/SCUBA cylinders the second valve to be actuated when the door handle is clicked to the closed position and the door assembly is rotated to the upright position is a 2-way valve which when actuated allows air to dump from the air actuator used to lower the containment door from the fully raised position*. The door will not raise to its fully “trapped” position behind the door frame if this valve is not fully actuated. Therefore, if problems with the door not raising completely and/or slowly raising and lowering are occurring the following steps may be taken to correct the problem:

2. When looking directly at the fill station from the front locate the small adjustment holes on the front surface of the fill station door frame directly below the containment door (figure 3, next page) and remove the set screws located at these locations with a 3/16” hex key.

figure 3

a. If the containment door will not rise when rotated to the vertical position, insert a small regular screwdriver into the left adjustment location where the set screw was removed previously and make ½ turn clockwise adjustments to the internal adjustment screw. Rotate the door assembly to the upright position after each adjustment until the door begins to raise and lower correctly. Skip to step "C".
b. If the containment door is lowering and raising slowly, it may be “dragging” on the inside surface of the upper door frame. Normal factory settings allow for approximately 1/16 to 1/8” “play” from front to back when the door is in the upright position. To adjust remove the set screws from the locations indicated in step 2 and make ½ turn counter clockwise adjustments to the internal adjustment screws on both the right & left side until the door begins to raise and lower correctly and re-install and tighten the set screws.
NOTE: the right side adjustment acts as a "stop" to prevent damage to the ball actuator portion of the interlock valve on the left side of the unit.
c. With the door now raising after completion of step "A", adjust the internal adjustment screw on the right side of the unit. Make small clockwise adjustments until the first indication of resistance is met. Operate door handle to insure door is raising and lowering correctly. Re-install both set screws removed in step 2. This adjustment sets the internal door stop that prevents damage to the left side interlock valve. The system is designed so that the left side interlock ball actuator contacts its contact plate slightly before the door stop plate is contacted on the right side, therefore allowing for proper actuation of the door assembly but preventing damage to the interlock ball actuator in the event the door is slammed closed.

NOTE: Of the three valves associated with proper door operation and SCBA/SCUBA filling, the 2-way valve associated with the door’s vertical position is the most susceptible to damage from improper operation do to “slamming” of the door to the vertical upright position after SCBA/SCUBA cylinder loading. Figure 4 indicates the physical location of this interlock valve and inspection for damage may be done by simply clicking up and down on the door handle with the door open fully for SCBA/SCUBA loading. If the door begins to raise or lower while operating the door handle, the ball actuator associated with the interlock valve has most likely been damaged. This may be verified by physically pushing in on the ball actuator illustrated in figure 4 (next page). If there is no movement or the actuator housing appears to be damaged, the ball actuator MUST be replaced to prevent non-containment filling operations from occurring. Contact your local distributor for replacement parts.

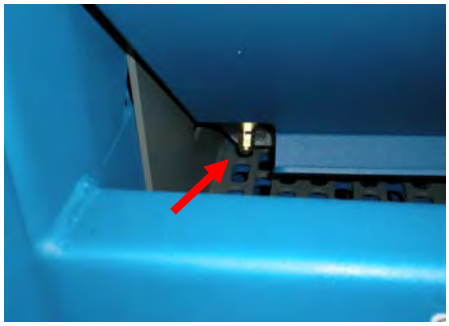


figure 4

3. When the door handle is in the clicked closed position, the containment door is fully raised to the filling position and cylinder filling operations do not occur when the filling instructions are followed the third valve associated with the safety interlock system may not be fully actuated. To correct this:
    a. Open the door to its fully open position (cylinder loading position) and remove the black plugs located on the top surface of the containment doors outer shell (figure 5). With a small straight screwdriver make ½ turn clockwise adjustments to the internal adjustment screw on the right side only. Close the door and verify that proper cylinder filling resumes. If large adjustments are made to the adjustment screw previously described it may be necessary to make a small adjustment to the internal adjustment screw located on the left side of the door to prevent the containment door from canting to the left or right when raising and lowering. Do not make adjustments to the left side adjustment screw exceeding those made to the right side adjustment screw or improper actuation of the interlock valve will occur. The left side adjustment screw is not involved with actuation of the interlock valve but only serves to keep the containment door square to the door frame when the door is fully raised in the cylinder filling position.
    b. Note: See warning on next page.

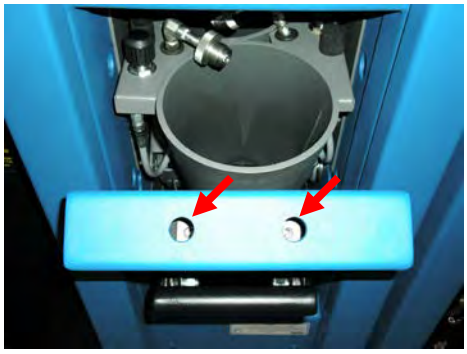
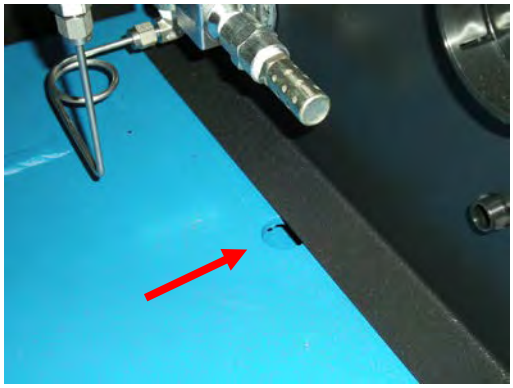


figure 5

The previously described actions will correct the majority of problems typically encountered through normal use of your containment fill station. However, if upon completion of the previous adjustment instructions, improper door operation and/or cylinder filling is still occurring contact your local distributor for further assistance.

<u>WARNING:</u> The procedures described in step 3 above will directly affect the final raised height of the containment door behind the door frame. If large clockwise adjustments are made to the set screws described in step 3 the factory preset ¼" gap between the fully raised containment door and the inside top surface of the fill station containment box (figure 6) may become out of adjustment. Therefore, further counter clockwise or clockwise adjustments of equal amounts to each set screw described in step 3 may be necessary to achieve the desired ¼" gap which may be gauged at the inspection hole located on the front top surface of the fill station containment box. (NOTE: may be located behind control panel on some units dependant on model)



SECTION F

MAJOR ASSEMBLY & PARTS GUIDE

SSX2 Fill Station
Appliance Parts Guide
Major Assembly Identification

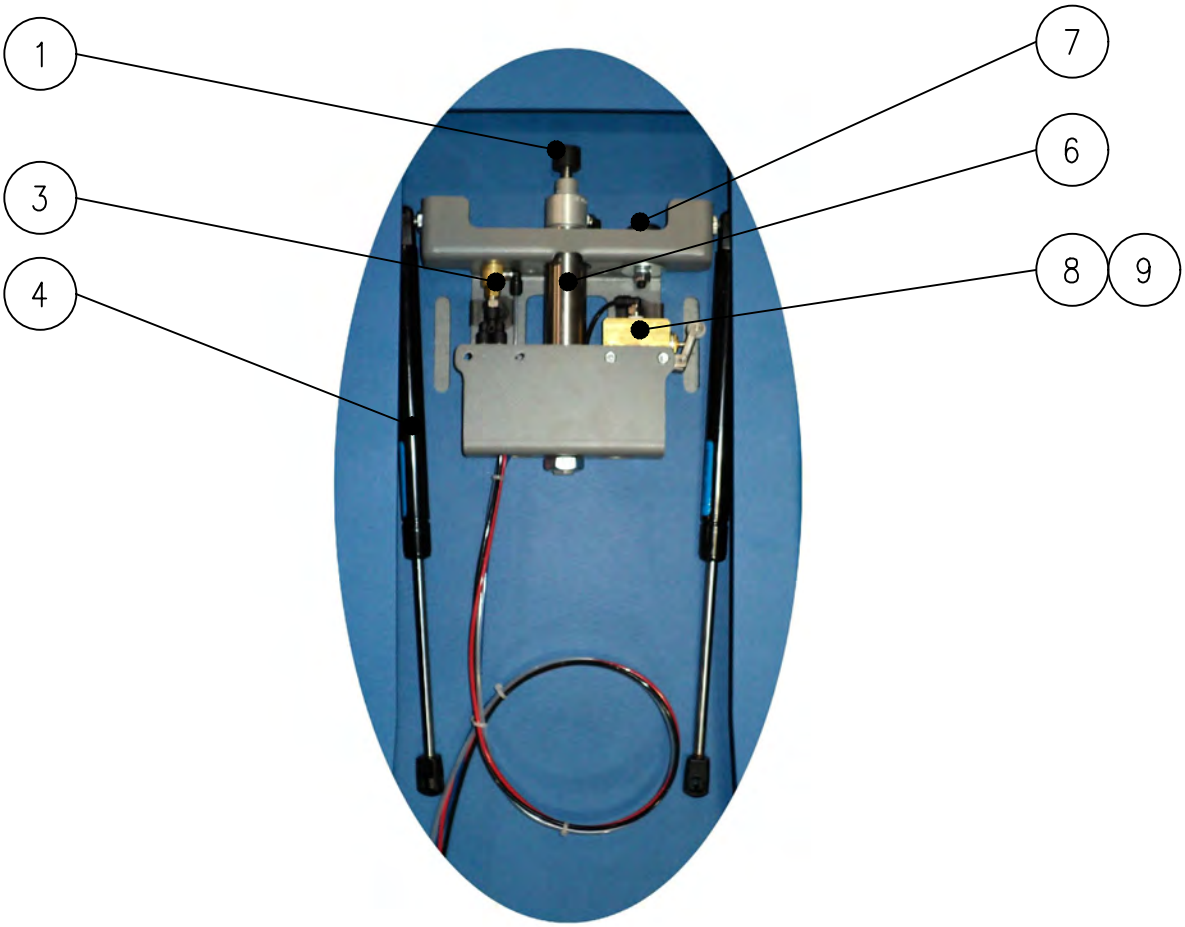
Fittings &
Connections

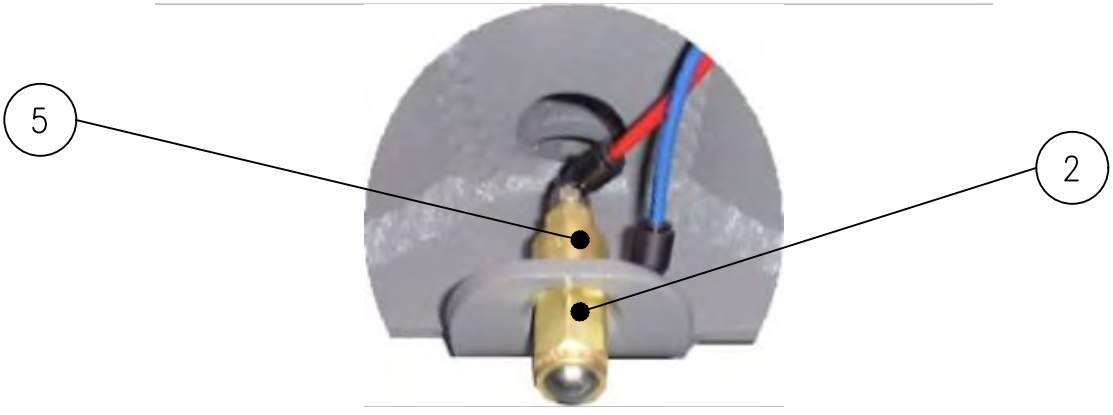
Airlock
Door Lift
Assembly

Breathing Air
Control Panel

Bucket Assembly

AirLOCK Door Lift and Safety Interlock Components





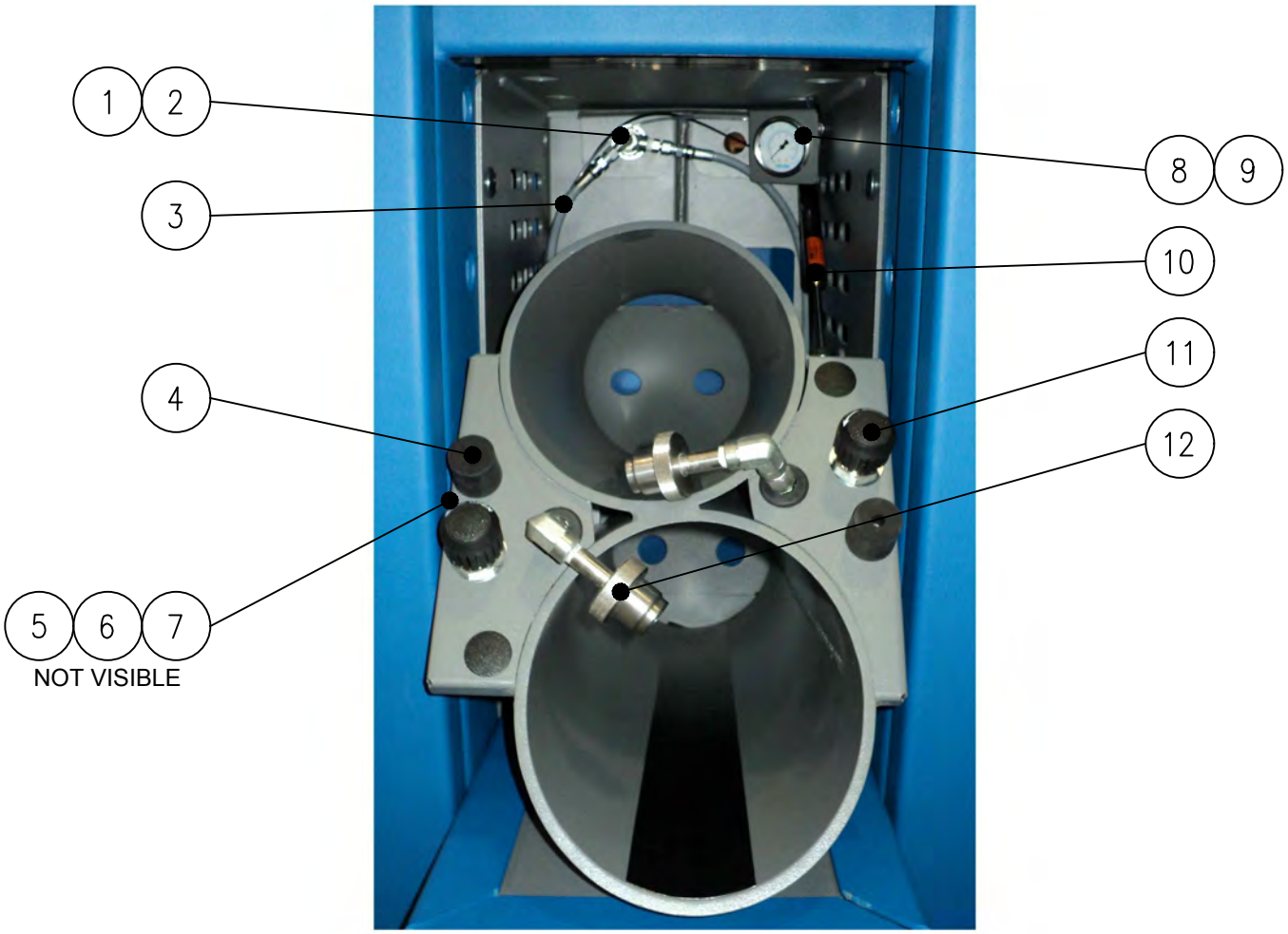
AirLOCK Door Lift and Safety Interlock Components

Applicable Parts and/or Materials *			Fill Station Models (Stand Alone & Integral Units)			
ID#	Part Number:	Description:	CSSX2 (qty-1) SSX2C BlackHawkCFS	Qty. Rqrd.	CSSX2 (qty-2) SSX4C RavenCFS	Qty. Rqrd.
1	EC030946	Bumper, 3/4"ø. X 5/8", 5/16-24 Female	X	1	X	2
2	EC030229	Valve, Mini Ball Actuator	X	2	X	4
3	EC030980	Valve, 3-Way NC, 10-32NPT MAV-3	X	1	X	2
4	EC030978-30	Gas Spring, 5" Stroke at 30 lbs	X	2	X	4
5	EC030979	Valve, 2-Way NC, 10-32NPT MAV-2	X	1	X	2
6	EC030957	Double Acting Cylinder, 4" Stroke	X	1	X	2
7	EC030181	Rubber Bump, Recessed 1-1/4"H	X	1	X	2
8	32716938	Valve, Pneumatic, 4-Way	X	1	X	2
9	32716946	Roller, Pneumatic, 4-Way	X	1	X	2
NP	EC030955	Spring, SS, Wave, 2.0" Dia x 0.375" @ 90lbs	X	2	X	4
NP	66-QB04099400	Bushing, 3/4"OD x 1/2"ID x 0.813, SS	X	2	X	4

* Fitting part numbers and descriptions located in manual appendix

NP = Not Pictured

Fill Station SCBA/SCUBA Fragmentation Chamber Components



Fill Station SCBA/SCUBA Fragmentation Chamber Components

Applicable Parts and/or Materials *			Fill Station Models (Stand Alone & Integral Units)			
ID#	Part Number:	Description:	CSSX2 (qty-1) SSX2C BlackHawkCFS	Qty. Rqrd.	CSSX2 (qty-2) SSX4C RavenCFS	Qty. Rqrd.
1	66-QF0407130	Ftg, Bulkhead, 1/4"FNPT x 1/4"FNPT, All Thread, SS	X	1	X	2
2	EC031079	Nut, Jam, 1-18 UNS 2-B x 1/8" Thick	X	2	X	4
3	64-AW04051910	Fill Station Bucket Whip	X	2	X	4
4	EC030181	Bumper, Rubber, Recessed 1-1/4"	X	3	X	6
5	66-QB0403881	Axle Bearing Assembly (4 Piece Assembly)	X	2	X	4
6	EC030902	Bearing, Nylon, 1" OD x 3/4" ID	X	2	X	4
7	EC030904	Screw, Socket Head Shoulder, 3/4" x 1-1/2"	X	2	X	4
8	EC008763T	Gauge, 0 - 200 PSI, 2.5" Diameter, Panel Mount	X	1	X	2
9	EC030986	Ftg, "T" 10-32 x's 2 x 1/8"MNPT	X	1	X	2
10	EC031808	Damper Strut, 22mm Diameter, Light	X	1	X	2
11	32716904	Valve, Panel Mount, 6k PSI	X	2	X	4
NP	32733925**	Kit, Line Valve Repair 77-0100	X	1**	X	2**
12	64-AW04105410	Fill Whip Assembly for Centurion based Fill Station	X	2	X	4
NP Optional	32709933	Adapter, SCUBA Yoke, 3K PSIG	Optional	1	Optional	Up to 2

* Fitting part numbers and descriptions located in manual appendix

** Recommended on hand spare parts

NP = Not Pictured

Stainless Steel High Pressure Fittings

Part #:	Description:	List Price ($):
32734980	Ftg, Conn 3/8" Tubing x 3/8" MNPT SS	see parts book
32708703	Ftg, Conn 3/8" Tubing x 1/4" MNPT SS	see parts book
32716524	Ftg, Conn 3/8" Tubing x 1/4" FNPT SS	see parts book
32716383	Ftg, Conn 1/4" Tubing x 1/4" MNPT SS *	see parts book
32716375	Ftg, Conn 1/4" Tubing x 1/4" FNPT SS	see parts book
32732794	Ftg, Conn 1/4" Tubing x 1/8" MNPT SS	see parts book
32717209	Ftg, Conn 1/8" Tubing x 1/4" MNPT SS	see parts book
32716987	Ftg, Conn 1/8" Tubing x 1/4" FNPT SS	see parts book
32728727	Ftg, Conn 1/8" Tubing x 1/8" MNPT SS	see parts book

Part #:	Description:	List Price ($):
32728677	Ftg, El90, 3/8" Tubing x 1/4" MNPT SS	see parts book
32732786	Ftg, El90, 3/8" Tubing x 1/4" FNPT SS	see parts book
32716995	Ftg, El90, 1/4" Tubing x 1/4" MNPT SS *	see parts book
32717191	Ftg, El90, 1/4" Tubing x 1/8" MNPT SS	see parts book
32717449	Ftg, El90, 1/4" Tubing x 1/4" FNPT SS	see parts book
32732778	Ftg, El90, 1/8" Tubing x 1/4" FNPT SS	see parts book
32717431	Ftg, El90, 1/8" Tubing x 1/4" MNPT SS	see parts book
32728651	Ftg, El90, 1/8" Tubing x 1/8" MNPT SS	see parts book

Part #:	Description:	List Price ($):
EC031312	Ftg, 3/8" Tube End x 1/4" MNPT SS	see parts book
EC031222	Ftg, 1/4" Tube End x 1/4" MNPT SS *	see parts book

Part #:	Description:	List Price ($):
EC030160	Ftg, Bulkhead, 3/8" Tubing x 3/8" Tubing SS	see parts book
32734121	Ftg, Bulkhead, 3/8" Tubing x 1/4" MNPT SS	see parts book
32728735	Ftg, Bulkhead, 1/4" Tubing x 1/4" MNPT SS	see parts book
32731424	Ftg, Bulkhead, 1/4" Tubing x 1/4" FNPT SS *	see parts book
32732893	Ftg, Bulkhead, 1/4" Tubing x 1/4" Tubing SS	see parts book
32728743	Ftg, Union, 1/4Tubing x 1/4" Tubing SS	see parts book
EC031331	Ftg, Union, 5/16" Tubing x 1/4" Tubing SS	see parts book

Part #:	Description:	List Price ($):
EC031619	Ftg, Compression Nut 3/8" SS	see parts book
EC031704	Ftg, Compression Nut 5/16” SS	see parts book
EC031618	Ftg, Compression Nut 1/4" SS *	Contact Eagle
EC031617	Ftg, Compression Nut 1/8" SS	see parts book
EC031616	Ftg, Ferrule Set, 3/8" SS	see parts book
EC031703	Ftg, Ferrule Set, 5/16” SS	see parts book
EC031615	Ftg, Ferrule Set, 1/4" SS *	see parts book
EC031614	Ftg, Ferrule Set, 1/8" SS	see parts book
32732810	Ftg, Cap 1/4" Tubing SS	see parts book

* Depicted in photograph to left

Zinc Plated Steel High Pressure Fittings

Part #:	Description:	List Price ($):
32717415	Ftg, Pipe Cross, 1/4" FNPT All Ports *	see parts book

Part #:	Description:	List Price ($):
32708653	Ftg, Pipe Tee, Branch, 1/4"FNPT x 1/4" MNPT	see parts book
32707325	Ftg, Pipe Tee, 1/4" FNPT All Ports *	see parts book
32715005	Ftg, Pipe Tee, Street, 1/4" FNPT x 1/4" MNPT	see parts book

Part #:	Description:	List Price ($):
32708620	Ftg, Pipe Elbow, 1/4" MNPT	see parts book
32708646	Ftg, Pipe Elbow, 1/4" FNPT	see parts book
32708612	Ftg, Pipe Elbow, 1/4" FNPT x 1/4" MNPT *	see parts book

Part #:	Description:	List Price ($):
32708638	Ftg, Pipe Nipple, 1/4" MNPT *	see parts book
32726994	Ftg, Pipe Coupling, 1/4" FNPT	see parts book
32733156	Ftg, Pipe Coupling, 1/4" FNPT x 1/8" FNPT	see parts book
EC009492	Ftg, Bushing, 1" MNPT x 3/8" FNPT	see parts book
32717423	Ftg, Reducer, 1/2" FNPT x 1/4" MNPT	see parts book
66-QF0407130	Ftg, Bulkhead, 1/4" FNPT x 1/4" FNPT, SS	see parts book
EC031079	Nut, Jam 1-18 UNS, 2-B x1/8" Thick ^	Contact Eagle

^ For mounting of 66-QF0407130 (Qty 2 EC031079 Required)

Part #:	Description:	List Price ($):
32708661	Ftg, Pipe Plug, 1/4" MNPT Hex Head *	see parts book
95372199	Ftg, Pipe Plug, 1/8" MNPT Hex Head	see parts book

Part #:	Description:	List Price ($):
32716359	Ftg, El90, 1/4"(#4) JIC x 1/4" MNPT	see parts book
32528176	Ftg, El90, 1/4"(#4) JIC X 1/4" MNPT, Long	see parts book
32716367	Ftg, El90, 1/4"(#4) JIC x 1/4" FNPT	see parts book
32709941	Ftg, Conn, 1/4"(#4) JIC x 1/4" MNPT *	see parts book
32709982	Ftg, Conn, 1/4"(#4) JIC x 1/4" FNPT	see parts book
32732273	Ftg, Bulkhead, El90, 1/4"(#4) JIC x 1/4"(#4) JIC	see parts book
EC007167	Ftg, Bulkhead, 1/4"(#4) JIC x 1/4" MNPT	see parts book
32728123	Ftg, Cap, ¼"(#4) JIC, Zinc Plated	see parts book
EC031701	Ftg, El90, 1/4"(#4) JIC x 3/8" MNPT	see parts book

* Depicted in photograph to left

Brass Low Pressure Compression Fittings

Part #:	Description:	List Price ($):
EC000732	Ftg, Conn, 1/8" Tubing x 1/4" MNPT Brass	see parts book
32528275	Ftg, Conn, 1/8" Tubing x 1/4" FNPT Brass *	see parts book
32528259	Ftg, Conn, 1/8" Tubing x 1/8" MNPT Brass	see parts book

Brass Low Pressure Hose Barb Fittings

Part #:	Description:	List Price ($):
EC007941	Ftg, 1/2" Barb x 1/2" MNPT, Brass	Contact Eagle
32510539	Ftg, 1/2" Barb x 1/4" MNPT, Brass *	see parts book
EC000738	Ftg, El90, 1/4" Barb x 1/4" MNPT, Brass	see parts book
32503906	Ftg, 1/4" Barb x 1/4" MNPT, Brass	see parts book

Low Pressure Brass Fittings

Part #:	Description:	List Price ($):
EC030983	Ftg, 10-32, Plug, Brass *	Contact Eagle
EC030984	Ftg, Cross, 10-32 (x3) x 1/8” MNPT, Brass *	see parts book
EC030986	Ftg, Tee, 10-32 (x2) x 1/8” MNPT, Brass	see parts book
32727802	Ftg, Bush, 1/4” MNPT x 1/8” FNPT, Brass *	see parts book
32528226A	Ftg, Temp Switch Well, 1/8” MNPT	see parts book
66-QF0412920	Ftg, Cross, 1/4” M&F-NPT x 1/8” FNPT(x2)	see parts book
32727836	Ftg, Street Tee, 1/8” NPT, Brass	see parts book
EC030695	Ftg, Bulkhead, 1/4” FNPT Brass	see parts book

Low Pressure Push-In Flex Tube Fittings

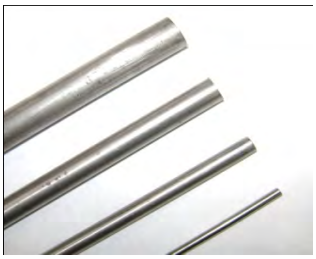
Part #:	Description:	List Price ($):
EC031239	Ftg, El90 1/8" FlexTubing x 1/4" MNPT	see parts book
EC031238	Ftg, El90, 1/8" FlexTubing x 1/8" MNPT *	see parts book
EC030982	Ftg, El90, 1/8" FlexTubing x 10-32 MUNF	see parts book
EC030981	Ftg, Conn, 1/8" FlexTubing x 10-32 MUNF	see parts book
EC031660	Ftg, Union, 1/4" FlexTubing x 1/8" FlexTubing	see parts book
EC031812	Ftg, YConn, 2 x 1/8" Push x 10-32 MUNF	see parts book

* Depicted in photograph to left

CGA SCUBA Connections/Adaptors

Part #:	Description:	List Price ($):
32709966	Ftg, CGA347, 2-4.5K PSIG, Adapter, 1/4” MNPT *	see parts book
32709917	Ftg, CGA346, 2.2K PSIG, Nipple, 1/4” MNPT	see parts book
32709925	Ftg, CGA346, 2.2K PSIG, Hand Wheel	see parts book
32707283	Ftg, CGA702, 6K PSIG, Nut & Nipple, 1/4” MNPT	see parts book
32707242	Ftg, CGA677, 6K PSIG, Nut & Nipple, 1/4" MNPT	see parts book
32707218	Ftg, CGA347, 4.5K PSIG, Nut & Nipple, 1/4" MNPT	see parts book
32501074	Ftg, CGA346, 3K PSIG, Nut & Nipple, 1/4” MNPT	Contact Eagle
32709974	Adapter, SCUBA, 3K PSIG, 1/4” FNPT	Contact Eagle
32732109	Adapter, CGA677 to 1/4" MNPT, 6K PSIG	see parts book
32716326	Adapter, CGA347 to 1/4” FNPT, 5K PSIG	see parts book
32708711	Cap, Dust, CGA346/347 w/ Chain	see parts book
32502122/M	Cap, Dust, CGA677 w/ Chain	see parts book
32707515	Assembly, CGA346/347 to SCUBA Adapter	Contact Eagle

Tubing



Part #:	Description:	List Price ($):
32740722	Tubing, SS, 1/2” x 0.082” Wall / Ft *	Contact Eagle
32130312	Tubing, SS, 3/8” x 0.065 Wall / Ft *	see parts book
32716623	Tubing, SS, 1/4” x 0.049” Wall / Ft *	see parts book
32717167	Tubing, SS, 1/8” x 0.028” Wall / Ft *	see parts book
32528234	Tubing, Copper, 1/8” x 0.032” Wall / Ft	see parts book

Breathing Air Hose and Fittings

Part #:	Description:	List Price ($):
32749889C	Hose, 3/16”, 6K PSIG Breathing Air / Ft *	see parts book
EC030158B	Ftg, Swivel, 3/16”, 6K PSIG, 1/4" MNPT (Hose End)	see parts book
32715013C	Ftg, 3/16”, 6K PSIG, 1/4” (#4) F-JIC (Hose End)	see parts book

NOTE: End fittings must be purchased separately. Assembly labor of fittings is included in the hose price.

* Depicted in photograph to left

High Pressure SAE O-Ring Fittings

Part #:	Description:	List Price ($):
32716342	Ftg, Adapter, 1/4" FNPT x 9/16" Male SAE	see parts book
32716508	Ftg, Union, 9/16" Male SAE	see parts book
32728693	Ftg, El90, 3/8" Tubing x 9/16" Male SAE *	see parts book
95097663	O-ring, 2-014 (For SAE O-ring Fittings)	see parts book
EC032010	Ftg, #4 MJIC x 7/16-20 Male SAE O-ring Steel	see parts book
EC031999	Ftg, Straight, 1/4 Tube x 7/16-20 Male SAE O-Ring SS	see parts book
EC032011	Ftg, 1/8 Tube x Tube Stub Reducer SS	see parts book
EC032012	Ftg, Plug 7/16-20 SAE Male O-Ring Steel	see parts book
32728123	Ftg, Cap #4 JIC 37 Steel	see parts book
EC032013	Ftg, 1/4 FNPT x 7/16-20 Male SAE O-ring Steel	see parts book
EC031998	Ftg, Elbow 1/4 Tube x 9/16 Male SAE O-Ring SS	see parts book
EC032014	Ftg, Plug 9/16-18 Male SAE O-ring Steel	see parts book
EC032015	ORING -4 (7/16 -20)	see parts book
EC032016	ORING -6 (9/16 -18)	see parts book
EC032018	Ftg, #4 MJIC x 9/16-18 Male SAE O-ring Steel	see parts book
EC032018-SS	Ftg, #4 MJIC x 9/16-18 Male SAE O-ring SS	see parts book
EC031787	Ftg, Conn 1/4 Tube x 9/16 Male SAE O-ring SS	see parts book
66-QM04146842	Manifold SAE fitting ports 1.5" dia x 12.25"	see parts book

* Depicted in photograph to left

Miscellaneous Hardware, Fittings, Tools

Part #:	Description:	List Price ($):
EC030206	Hinge, Leaf, 1" Door Frame Side, SS*	see parts book
EC030207	Hinge, Leaf, 1" Door Side, SS*	see parts book
EC030995	Hinge, Leaf, 1" Door Side, SS*	Contact Eagle
EC030996	Hinge, Door Leaf, Type B 6" SS	Contact Eagle
EC030997	Hinge, Frame Leaf, 6" SS	Contact Eagle
EC030386	Hinge, Positioning, Black, Knockdown Panel*	see parts book
EC030054	Plunger, Hand Retractable	see parts book
EC030163A	Latch, Adjustable Level, Black *	see parts book
EC031638	Quad Latch Assembly, Complete (Includes: Paw, Housing, Operator)	see parts book
EC031032	Latch, Compression w/ Black Knob	see parts book

Replacement User Manuals*

Part #:	Description:	List Price ($):
EC031236-BAC	Stationary, Electric Driven Compressor Manuals**	see parts book
EC031236-ACC	Fill Station/Separate Panel/AirReel Manuals**	see parts book
EC031236-SACF	Stationary, Electric Driven Single Appliance System Manuals**	see parts book
EC031236-Ranger	Vehicle Mounted Ranger System Manuals, Electric, GenSet or Engine driven**	see parts book
EC031236-TRLR	Gas or Diesel Engine and GenSet Driven AirQuest Trailer Manuals	see parts book

*Manuals for machines manufactured prior to 2000 are no longer available.

**Digital Format Only

Recommended Tools & Miscellaneous

Part #:	Description:	List Price ($):
32721730	Tape, Teflon, 1/2" X 520"/ Roll *	see parts book
32721789	Lube, Super O-ring, 2 Oz Tube *	see parts book
EC031833	Grease, Synthetic w/ PTFE, 3oz Tube	see parts book
EC030945BLU	Touch Up Spray Paint, Blue	see parts book
EC030945RED	Touch Up Spray Paint, Red	see parts book
62-PT641613	Tool, Plug & Cartridge Removal	see parts book
32708562B-TOOL	Tool, Checkvalve Dis-Assembly	see parts book
32736662	Rubber Foot Pad, 5" x 6"	see parts book

* Depicted in photograph to left

SECTION H

NFPA 1901-2016 CERTIFICATION, SAFETY DATA SHEETS (SDS) & TANK CERTIFICATIONS (If Applicable)

CERTIFICATE OF COMPLIANCE

Certificate Number	20170921-AU5138
Report Reference	AU5138-20090112
Issue Date	2017-SEPTEMBER-21

Issued to: EAGLEAIR INC
3003 THURSTON AVE
GREENSBORO NC 27406-4516

This is to certify that representative samples of AUTOMOTIVE FIRE APPARATUS EQUIPMENT
See Addendum.

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: Standard for Automotive Fire Apparatus, NFPA 1901 (See Addendum for Edition).

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Classification Mark should be considered as being covered by UL's Classification and Follow-Up Service.

The UL Classification Mark includes: UL in a circle: with the word "CLASSIFIED" (as shown); a control number (may be alphanumeric) assigned by UL; a statement to indicate the extent of UL's evaluation of the product; and the product category name (product identity) as indicated in the appropriate UL Directory.

Look for the UL Classification Mark on the product.

William R. Carney

William R. Carney, Director, North American Certification Programs

UL LLC

CERTIFICATE OF COMPLIANCE

Certificate Number 20170921-AU5138
Report Reference AU5138-20090112
Issue Date 2017-SEPTEMBER-21

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Automotive fire equipment in accordance with NFPA 1901-2009

Model No./Name	Cylinder Type	Rated Pressure (psi)	Unit Orientation	No. of Cylinders
SWX2@ / Sidewinder	SCBA	4500	Horizontal	2
MSSX2@ / Mobile SafeStation	SCBA	4500	Vertical	2
MSSX2@ / Mobile SafeStation	SCUBA	3000	Vertical	2
MSSX3@ / Mobile SafeStation	SCBA	4500	Vertical	3
MSSX3@ / Mobile SafeStation	SCUBA	3000	Vertical	3
CSSX2@ / Centurion SafeStation	SCBA	4500	Horizontal	2
CSSX2@ / Centurion SafeStation	SCUBA	3000	Horizontal	1
SSX3@ / SafeStation	SCBA	4500	Vertical	3
SSX3@ / SafeStation	SCUBA	3000	Vertical	3
RS@ / RaptorCFS	SCBA	4500	Vertical	2
RS@ / RaptorCFS	SCUBA	3000	Vertical	2
B3@ / BaronCFS	SCBA	4500	Vertical	3
B3@ / BaronCFS	SCUBA	3000	Vertical	3

Note 1: @ - May be replaced with any alphanumeric combination per the manufacturer to specify accessories. The total number of characters for part number may vary.

Note 2: Models MSSX2@ and RS@ utilize the SafeStation – Two Position base unit.

Note 3: Models MSSX3@ and B3@ utilize the SafeStation – Three Position (in-line) base unit.

Note 4: Model CSSX2@ utilizes the Centurion (x2) SafeStation base unit.

William R. Carney

William R. Carney, Director, North American Certification Programs

UL LLC

CERTIFICATE OF COMPLIANCE

Certificate Number 20170921-AU5138
Report Reference AU5138-20090112
Issue Date 2017-SEPTEMBER-21

Automotive fire equipment in accordance with NFPA 1901-2016

Model No./Name	Cylinder Type	Rated Pressure (psi)	Unit Orientation	No. of Cylinders
CSSX2@ / Centurion SafeStation	SCBA	5500	Vertical	2
CSSX2@ / Centurion SafeStation	SCUBA	3000	Vertical	1
CSSX3@ / Centurion SafeStation	SCBA	5500	Vertical	3
CSSX3@ / Centurion SafeStation	SCUBA	3000	Vertical	2
CSSX4@ / Centurion SafeStation	SCBA	5500	Vertical	4
CSSX4@ / Centurion SafeStation	SCUBA	3000	Vertical	2
SSX2@ / SafeStation	SCBA	5500	Vertical	2
SSX2@ / SafeStation	SCUBA	3000	Vertical	1
SSX2@ / SafeStation	SCBA	5500	Vertical	2
SSX2@ / SafeStation	SCUBA	3000	Vertical	1
SSX3@ / SafeStation	SCBA	5500	Vertical	3
SSX3@ / SafeStation	SCUBA	3000	Vertical	2
SSX4@ / SafeStation	SCBA	5500	Vertical	4
SSX4@ / SafeStation	SCUBA	3000	Vertical	2
B4A@ / BaronCFS	SCBA	5500	Vertical	3
B4A@ / BaronCFS	SCUBA	3000	Vertical	2
BH@ / BlackHawkCFS	SCBA	5500	Vertical	2
BH@ / BlackHawkCFS	SCUBA	3000	Vertical	1
RV@ / RavenCFS	SCBA	5500	Vertical	4
RV@ / RavenCFS	SCUBA	3000	Vertical	2
AQ@ / AirQuestCFS	SCBA	5500	Vertical	2 or 4
AQ@ / AirQuestCFS	SCUBA	3000	Vertical	1 or 2
HA@ / HarrierCFS	SCBA	5500	Vertical	2
HA@ / HarrierCFS	SCUBA	3000	Vertical	1

Note 1: @ - May be replaced with any alphanumeric combination per the manufacturer to specify accessories. The total number of characters for part number may vary.

Note 2: Models CSSX2@, CSSX4@, SSX2@, SSX4@, BH@, RV@, AQ@, and HA@ utilize the Centurion SafeStation (CSSX2) base unit.

Note 3: Models SSX3@, B4A@, and CSSX3@ utilize the Centurion SafeStation (CSSX3) base unit - Three Position (staggered) base unit.

William R. Carney

William R. Carney, Director, North American Certification Programs

UL LLC