

# SCBA Compressor and Fill Station Operation

## Bauer Compressor

operation

switch "ON" - compressor operates automatically

switch "OFF" - compressor will not operate

cascade bank

select a cascade cylinder - at least one must be open

two, three, or all four may be open

close when finished

## NOTES

practical cascade bank capacity is approx. 50 - 1/2 hour cylinders with the compressor "OFF"

if cascade bank capacity is sufficient for cylinders to be refilled, the main compressor need not be turned "ON" - keeps the room cooler and quieter

REMEMBER - switch the main compressor "ON" when you are done so the cascade bank is replenished

pressure regulator

set at **1850 psi** for general operation with the Sierra compressor and the Eagle fill station

works well for both 2216 psi and 4500 psi cylinders

may be left at this setting (preferred)

fill station supply

#3 fill valve (on Bauer system) must be opened completely - it may be left open

## EagleAir fill station

"Storage Pressure" gauge and valve

located on the lower left

valve must be opened completely - it may be left open

gauge should agree with the #3 gauge on the Bauer system

"SCBA Fill Pressure" gauge and valve

located on the upper left

valve must be opened completely - it may be left open

gauge registers pressure available to fill cylinders

fragmentation chamber

to open

push straight down on the black bar - all the way (about 3")

while holding it down, pull the door toward you

it tilts out from the top to about 45 degrees

## EagleAir fill station - continued

### fragmentation chamber - continued

load the chamber - to fill a single cylinder

load the cylinder into the left cylinder chamber

connect the hose which originates from the right rear corner to the cylinder

ensure bleeder valve is closed

stow the hose which originates from the left rear corner in the right cylinder chamber

ensure that the flow control valve is **CLOSED**

***only this hose can be shut off***

open cylinder valve completely

NOTE: crossing the hoses left-to-right / right-to-left exposes more hose which facilitates hook up

load the chamber - to fill two cylinders

load the cylinders into the cylinder chambers

connect the hose which originates from the right rear corner to the left cylinder

ensure bleeder valve is closed

connect the hose which originates from the left rear corner to the right chamber

ensure that the flow control valve is **OPEN**

ensure bleeder valve is closed

open cylinder valve completely

close the door - ***cylinder(s) cannot be filled with the door open***

cylinder(s) are now ready for filling

## "Sierra" system

"Inlet Pressure" gauge

located on the upper right

should agree with "Storage Pressure" gauge (EagleAir - lower left)

*and* the #3 gauge on the Bauer system

"Fill Pressure" selector

for 2216 psi cylinders: turn selector fully counter-clockwise - arrow pointing down

for 4500 psi cylinders: turn selector fully clockwise - arrow pointing up

"Outlet Shutoff" valve must be open *fully* - it may remain open

"Outlet Bleed" valve must be closed

### **Fill the cylinder(s)**

turn the Sierra compressor switch "ON"

the switch will reset to "OFF" when the selected pressure is reached

## EagleAir fill station - continued

fragmentation chamber - continued

### **Cylinder(s) filled**

open the door as previously outlined

when the door is opened, supply pressure is shut off to the cylinder hoses

close both cylinder valve(s)

open the bleeder valve on the fill hose attached to the left cylinder

this will bleed the pressure from both hoses

### **Remove the cylinders**

### **Shut -Down**

return the log book to the log book compartment

close any open cascade cylinder valves

open the "Outlet Bleed" valve on the Sierra system - close again when completely vented

close the fragmentation chamber door

switch the Bauer system "ON" if not already on and running to refill the cascade cylinder(s)

### **NOTES**

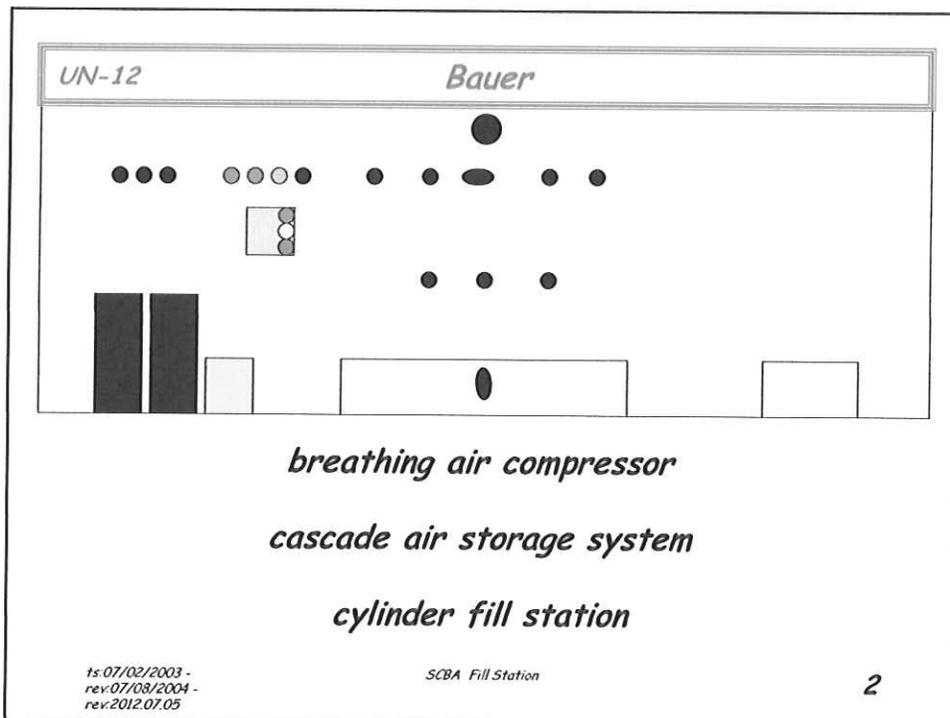
the Bauer system produces air at about the proper fill rate to fill two 1/2 hour cylinders simultaneously

by setting the Bauer pressure regulator at 1850 psi to supply the Sierra system,

the Sierra system will fill two 1/2 hour cylinders simultaneously at the proper rate

# *SCBA Refill System*

*Bauer Compressor*  
*Sierra* *booster compressor*  
*Eagle Fill Station*



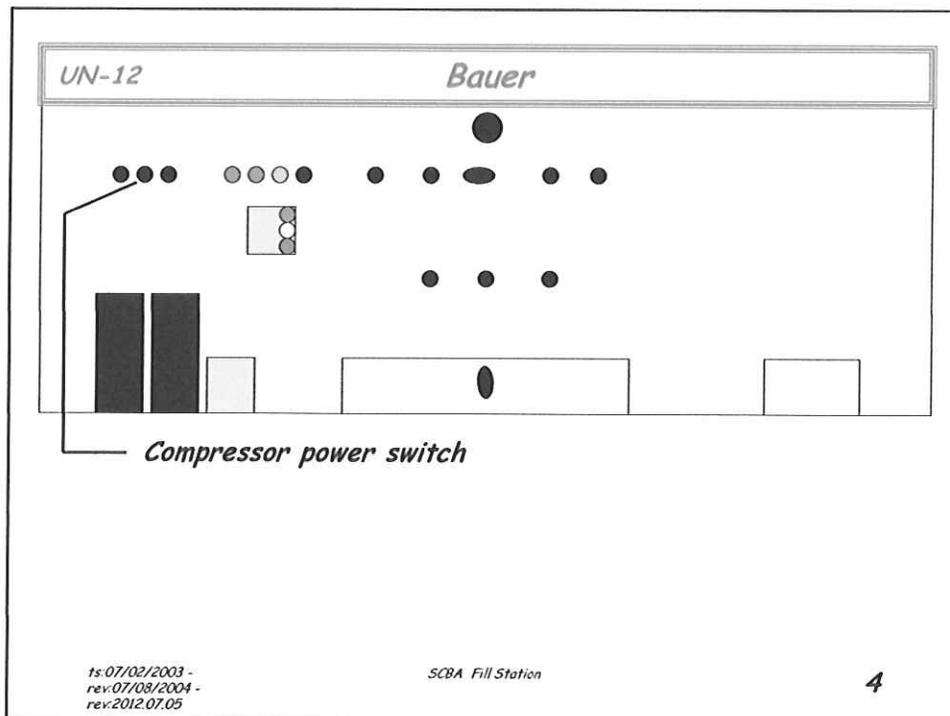
## main compressor

- *operate as usual*
  - *switch "ON"*
    - *compressor system operates as usual*
  - *switch "OFF"*
    - *compressor will not refill cascade*

1s:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

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3



1s:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

4

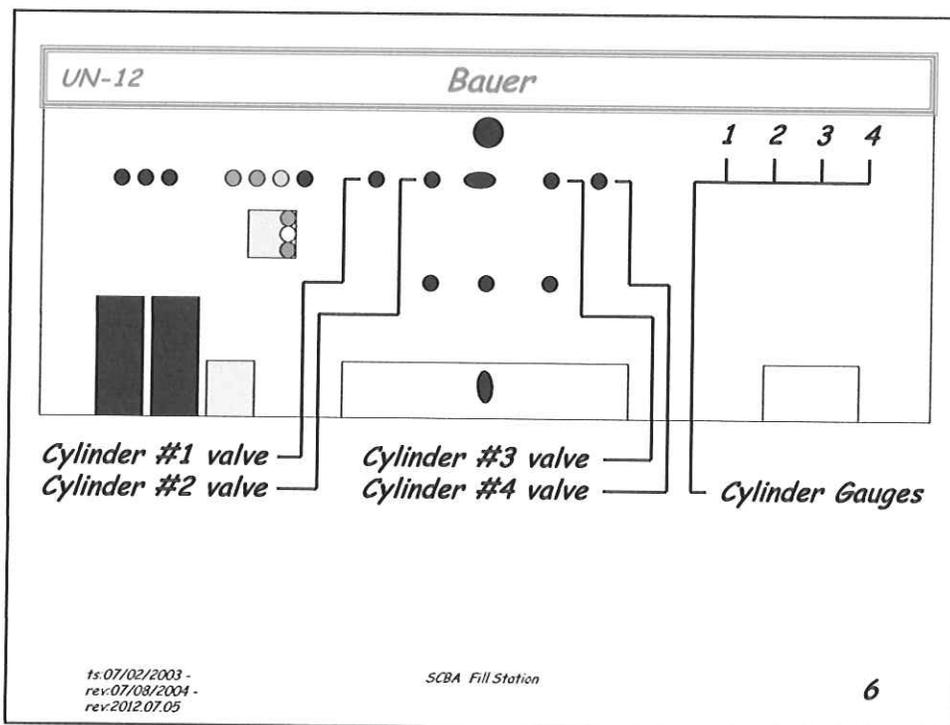
## cascade bank

- *select a cascade cylinder as usual*
  - *at least one (1) MUST be open*
    - *two (2), three (3), or all four (4) may be opened*
  - *(close when finished)*

1s-07/02/2003 -  
rev-07/08/2004 -  
rev-2012.07.05

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5



1s-07/02/2003 -  
rev-07/08/2004 -  
rev-2012.07.05

SCBA Fill Station

6

## *cascade system*

- *four (4) cylinders*
  - *total capacity*
    - *50-1/2 hr cylinders*
    - *with the compressor "OFF"*
  - *practical capacity*
    - *35-1/2 hr cylinders*
    - *with the compressor "OFF"*

ts:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

**7**

- **NOTE**
  - *if cascade capacity is sufficient for the cylinders at hand - the main compressor need not be turned on -*
    - *makes the fill room cooler and quieter*

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rev:07/08/2004 -  
rev:2012.07.05

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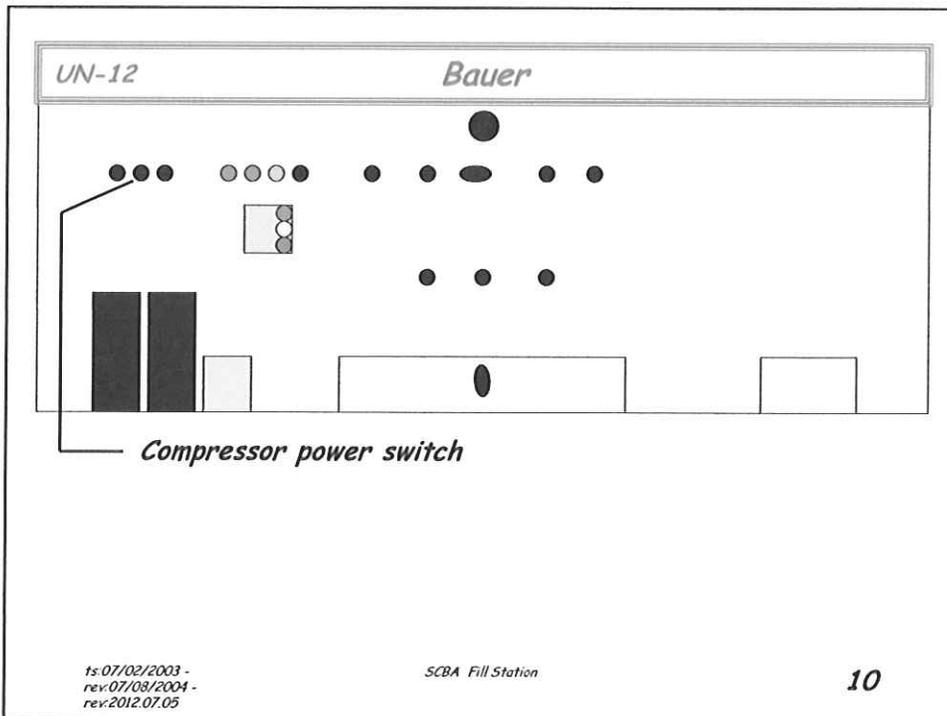
**8**

- **REMEMBER**
  - *switch the compressor "ON" when you are done*
  - *so that the cascade is replenished*

ts:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

9



ts:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

10

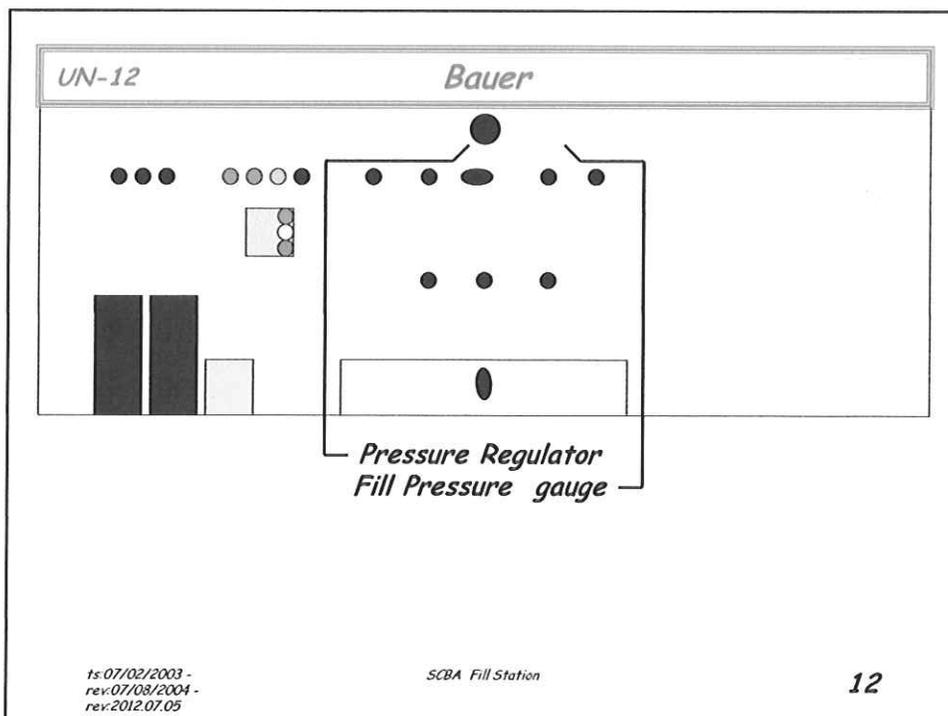
## pressure regulator

- *set @ 1850 psi*
  - *for general operation*
    - *for both 2216 psi and 4500 psi bottles*
    - *may be left at that setting*

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rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

11



ts 07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

12

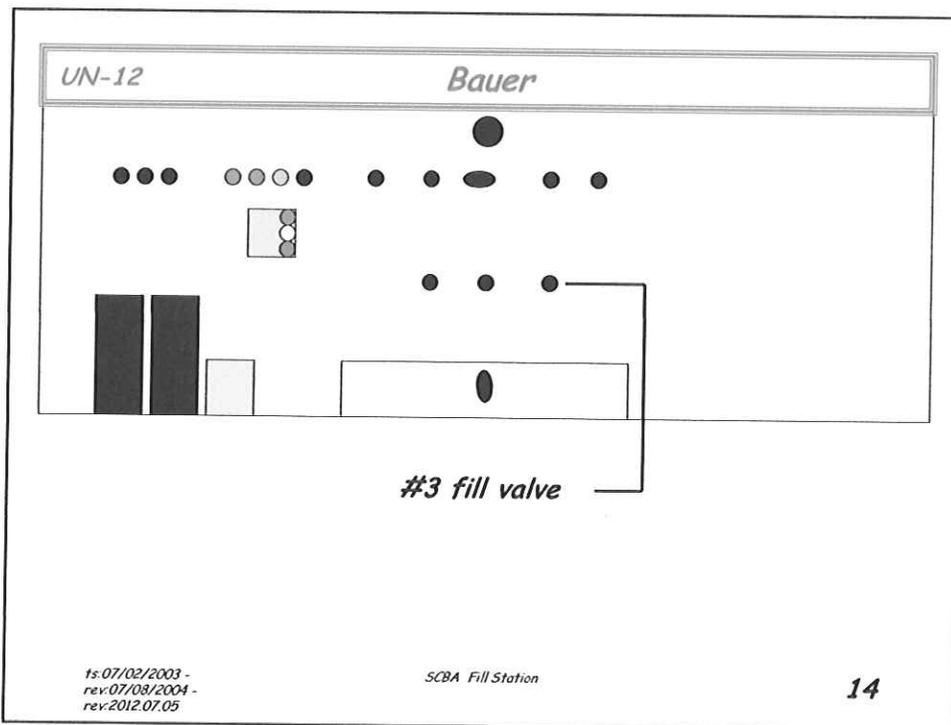
## fill-station supply

- *Bauer #3 fill valve must be open*
  - *should be opened completely*
  - *may be left open*

1s:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

13



1s:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

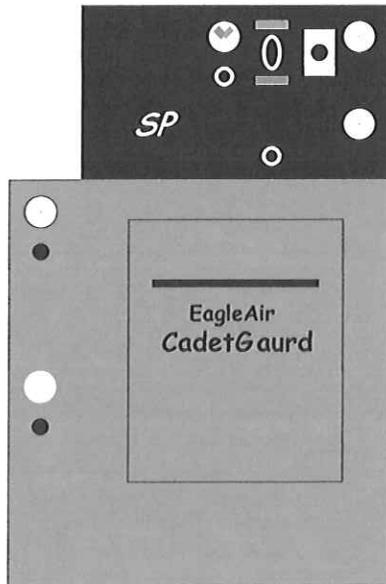
14

Eagle fill station

ts:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

15



ts:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

16

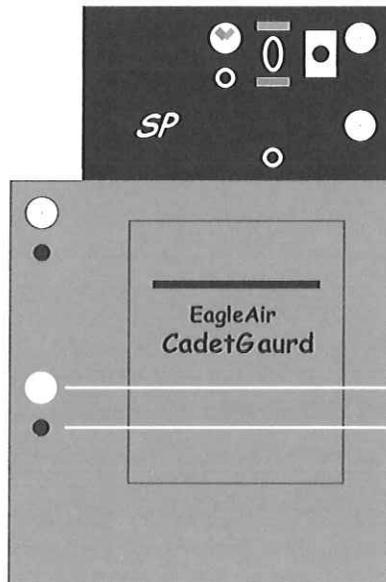
## new fill-station

- **"Storage Pressure"**
  - gauge & valve
    - location: lower left
      - valve should be opened completely
        - » may be left open
      - gauge should agree with Bauer #3 fill gauge

ts:07/02/2003 -  
rev:07/03/2004 -  
rev:2012.07.05

SCBA Fill Station

17



"Storage Pressure" gauge

"Storage Pressure" valve

ts:07/02/2003 -  
rev:07/03/2004 -  
rev:2012.07.05

SCBA Fill Station

18

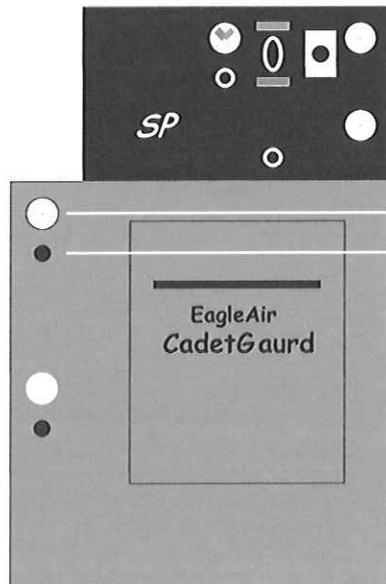
## *new fill-station*

- **"SCBA Fill Pressure"**
  - *gauge & valve*
    - *location: upper left*
      - *valve should be opened completely*
        - » *may be left open*
      - *gauge registers pressure available to fill cylinders*

ts: 07/02/2003 -  
rev: 07/08/2004 -  
rev: 2012.07.05

SCBA Fill Station

19



*"SCBA Fill Pressure" gauge*  
*"SCBA Fill Pressure" valve*

ts: 07/02/2003 -  
rev: 07/08/2004 -  
rev: 2012.07.05

SCBA Fill Station

20

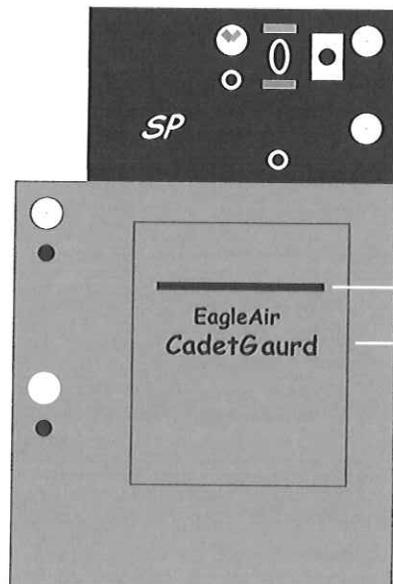
## fragmentation chamber

- *to open -*
  - *push straight down on the black bar*
    - *all the way down*
      - *about three (3) inches*
  - *while holding it down,*  
*pull the door to you*
    - *it tilts out from the top about 45 degrees*

ts:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

21



*black bar - door handle*  
*fragmentation chamber door*

ts:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

22

## fragmentation chamber

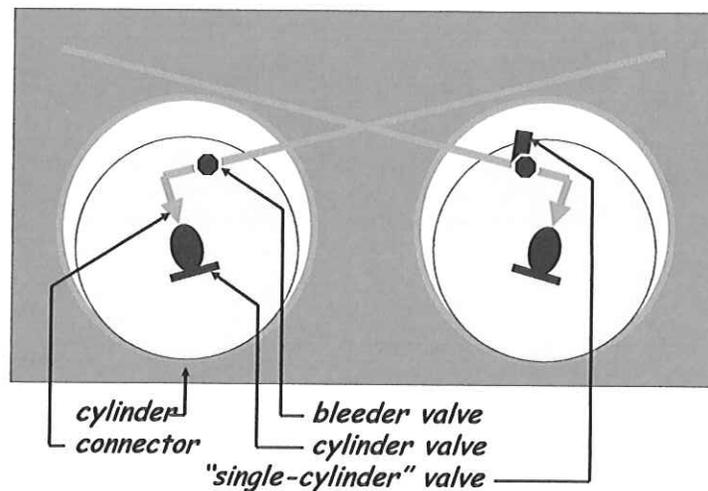
- *load two (2) cylinders*
- *connect fill-hoses*
  - *ensure bleeder valve(s) are closed*
  - *ensure "single-cylinder" valve is open*
  - *open cylinder valves*

*NOTE: a single cylinder may be filled by loading it into the left cylinder tube and closing the "single-cylinder" valve on the right cylinder hose.*

ts:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

**23**



ts:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

**24**

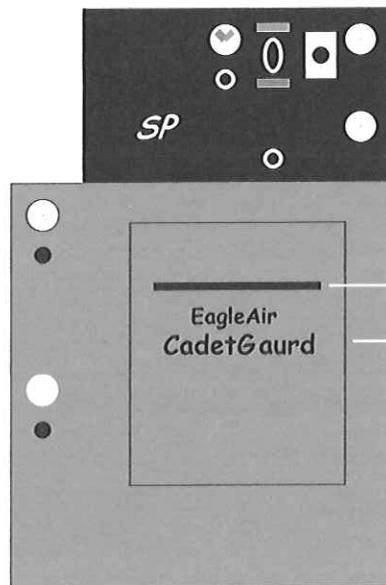
## fragmentation chamber

- *close the door*
  - *cylinders CANNOT BE FILLED with the door open*
- *cylinder(s) are now ready for filling*

ts:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

25



*black bar - door handle*  
*fragmentation chamber door*

ts:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

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26

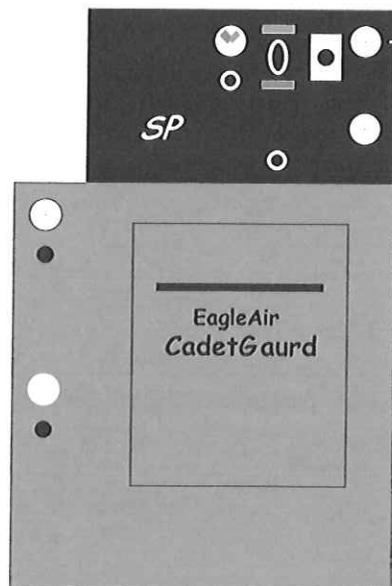
## "Sierra" system

- **"Inlet Pressure" gauge**
  - indicates supply pressure
    - gauge should agree with
      - "Storage Pressure" gauge
      - Bauer #3 fill gauge

ts:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

27



**"Inlet Pressure" gauge**

ts:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

28

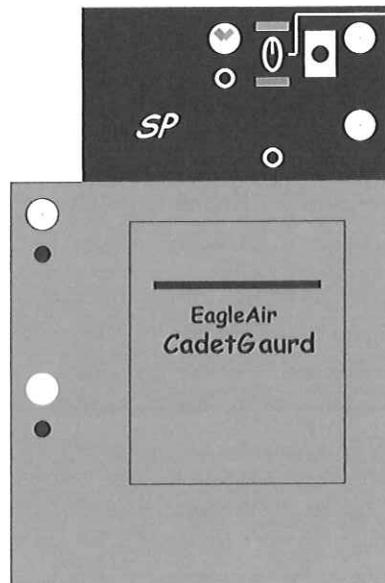
## "Sierra" system

- *select bottle fill pressure*
  - *2216 psi or 4500 psi*
    - *turn selector fully counter-clockwise*
      - *arrow pointing down to the blue "2216 psi" label*
    - *turn selector fully clockwise*
      - *arrow pointing up to the red "4500 psi" label*

ts:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

29



*"Fill Pressure" selector*

ts:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

30

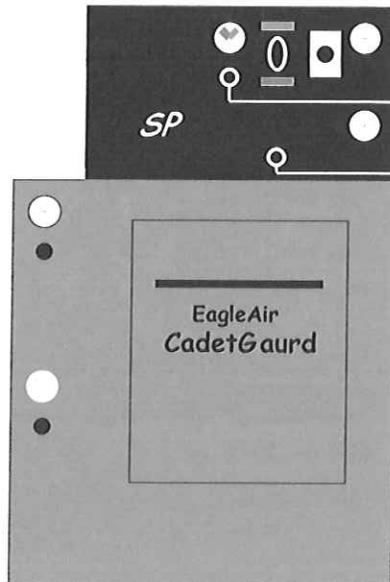
## "Sierra" system

- **"Outlet Shutoff" valve**
  - should be open
  - may remain open
- **"Outlet Bleed" valve**
  - should be closed

ts:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

31



**"Outlet Shut-off" valve**

**"Outlet Bleed" valve**

ts:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

32

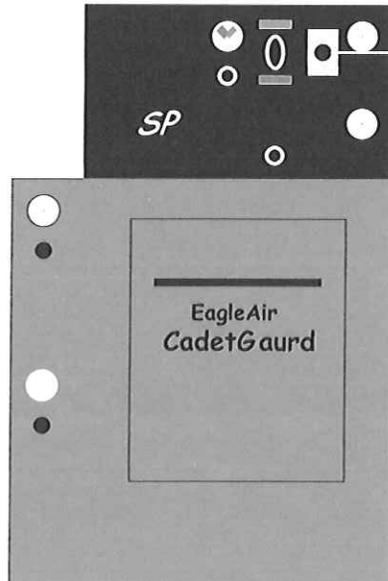
## "Sierra" system

- *fill cylinders*
  - *turn compressor switch "ON"*
  - *switch will re-set to "OFF" when selected pressure is reached*

ts:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

33



*compressor switch*

ts:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

34

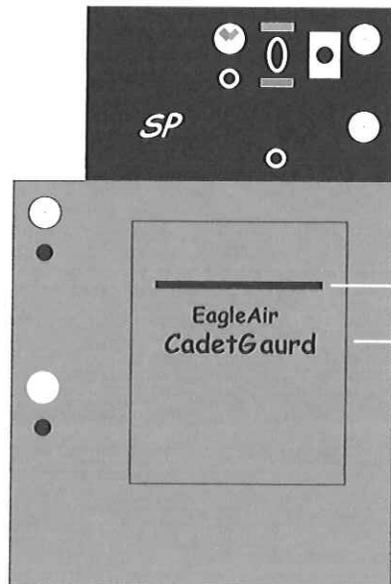
## remove filled cylinders

- *open the fragmentation chamber*

1s:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

35



*black bar - door handle*  
*fragmentation chamber door*

1s:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

36

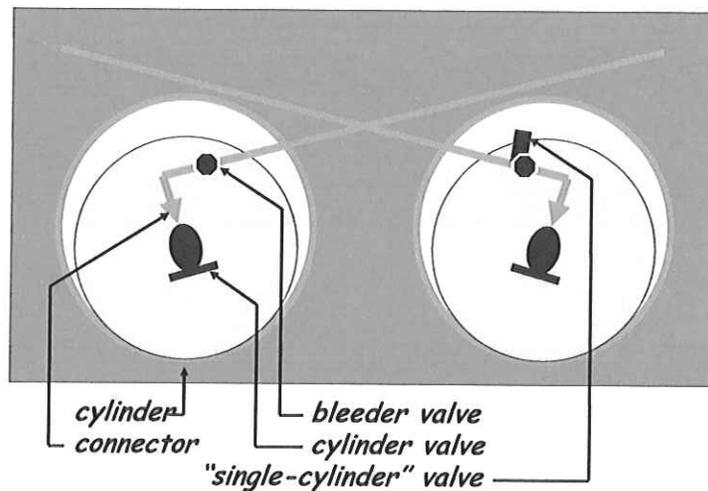
## remove filled bottles

- *disconnect fill-hoses*
  - *close cylinder valves*
  - *open bleeder valve(s)*
    - *only one (1) need be opened*
      - *either bleeds both fill-hoses*
- *remove filled cylinders*

1s:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

37



1s:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

38

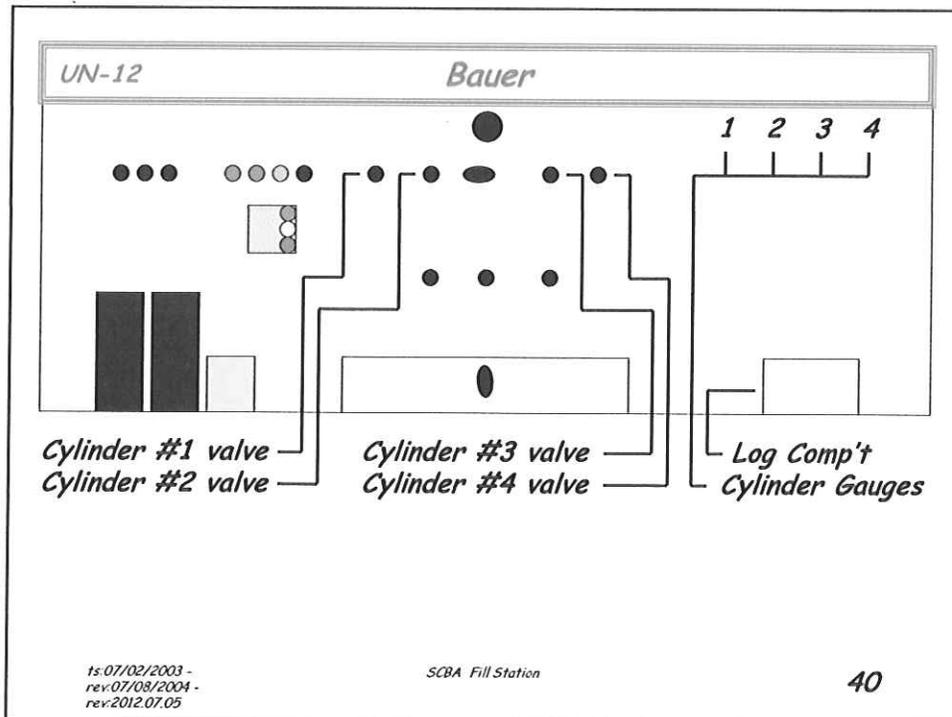
## Shut-down

- *return log book to compartment*
- *close cascade cylinder valve(s)*

fs:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

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39



fs:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

40

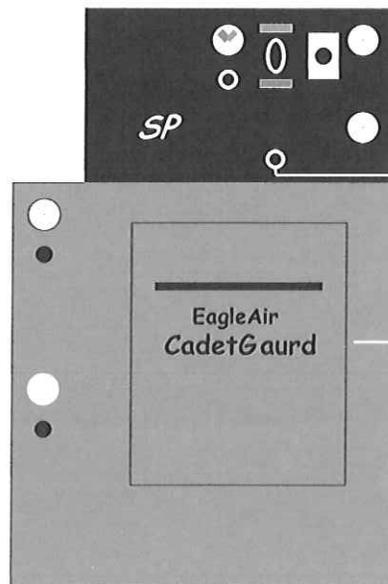
## Shut-down

- *close fragmentation chamber door*
- *open "Outlet Bleed" valve*
  - *close again after pressure is relieved*

1s:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

41



*"Outlet Bleed" valve*

*fragmentation chamber door*

1s:07/02/2003 -  
rev:07/08/2004 -  
rev:2012.07.05

SCBA Fill Station

42