



Standard Operating Guideline	
SOG Name:	Cascade Operations
SOG Number:	200.3
Standard:	TBD
Guideline Owner:	Non-Emergency Operations
Implementation Date:	June 15, 2017
Date of Last Revision:	May 06, 2021
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PURPOSE: To establish the proper procedure for use of the cascade system in a safe and efficient manner.

A. RECHARGING SCBA CYLINDERS

SECTION 1

SCBA cylinders should be maintained at 2000 psi (Minimum) for conventional pressure cylinders or 4000 psi (Minimum) for high pressure cylinders.

SECTION 2

Examine the cylinder to ensure that the most recent hydrostatic test date is acceptable and determine the correct recharge pressure. Hydrostatic test dates on composite cylinders can be found on the main D.O.T. cylinder label, or just below this label. "Composite" cylinders must be tested every three years. *Do not fill cylinders that exceed the hydrostatic test date timeframe. This includes filling for outside agencies!* Tag the outdated cylinders and forward them to Station 1 for servicing. An email should be sent to Support Services notifying them of the cylinder status. Fill all low-pressure composite cylinders to 2216 psi. Fill ninety cubic foot high pressure cylinders to 4500 psi.

SECTION 3

Inspect the cascade fill line and SCBA cylinder threads before beginning the recharging operation. Ensure that they are free of foreign matter and debris. Inspect SCBA cylinders for exterior damage. If exterior damage exists, do not fill the cylinder. Tag the damaged cylinder with a description of the damage found and forwards it to Station 1 for repair or replacement. A work order should be submitted to Support Services documenting the damages.

SECTION 4

Check the amount of air remaining in the SCBA cylinder by opening the SCBA cylinder valve while the cascade cylinder valve remains closed. The valve on the fill line should be opened. Use the cascade system pressure gauge and compare the reading with the cylinder pressure gauge for accuracy of the cylinder gauge. If these two pressure gauges are different by 200 psi or more, tag the defective cylinder and forward it to Station 1 for pressure gauge repair or replacement and a work order submitted. Close the valve on the SCBA cylinder, disconnect the fill line, and bleed the air pressure from the defective tank.

SECTION 5

Slowly open and close the cascade system cylinder valves, starting with cylinder #1, to find the cascade cylinder with the lowest pressure as long as it is higher than the SCBA cylinder being filled.

SECTION 6

After selecting the correct cascade cylinder to begin the filling operation, open the valve on the SCBA cylinder.

SECTION 7

Open the valve on the selected cascade cylinder slowly. Regulate the rate of flow into the SCBA cylinder to approximately 600 psi per minute. Faster filling rates will cause a heat build-up of the SCBA cylinder, causing a false pressure reading.

SECTION 8

When the SCBA and cascade system pressure gauges have equalized, close the cascade cylinder valve.

SECTION 9

Open the cascade cylinder with the next higher pressure and repeat Sections 9 and 10 until the SCBA cylinder is filled. Fill all SCBA cylinders to their appropriate pressures as stated in Section 2. Always rely on the cascade system pressure gauge rather than the SCBA cylinder pressure gauge. If the SCBA cylinder is completely filled, then continue with Section 12. If after using the last cascade cylinder the SCBA cylinder is still not completely filled, have trained personnel fill the in-station cascade system.

SECTION 10

Close the cascade cylinder valve. Close the fill valve.

SECTION 11

Close the SCBA cylinder valve.

SECTION 12

Release the pressure slowly from the fill lines.

SECTION 13

Disconnect the SCBA cylinder from the fill line.

SECTION 14

When all SCBA cylinders are filled, make sure that all the cascade cylinder valves are closed and the pressure in the fill lines have been slowly released.

SECTION 15

If you are unsure of the proper operation of any cascade system, please contact your supervisor or a member of that station for assistance and training **prior to use**.

(Signature on File)

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Fire Chief

DOTHAN FIRE DEPARTMENT