



City of Winter Park Fire-Rescue

Standard Operating Guideline

330.03

Title: Portable Oxygen Trans-filling Procedures

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Purpose: To establish a procedure for the use, storage, maintenance and refilling of all aluminum portable medical oxygen cylinders used by the department.

Scope: This procedure shall be followed by all members of the department and shall be supervised by the Fire-Rescue Division – EMS Supervisors. Any deviation of this procedure will require prior notification of the EMS Supervisors or their designee. These procedures are based upon the requirements of the U.S. Food and Drug Administration and the Florida Department of Health and Rehabilitative Services.

General: The department will utilize a multi-section trans-filling station manifold designed for the filling of up to three (3) portable cylinders at one time. The system will utilize up to six (6) supply tanks and will operate at a pressure of 2015 psi (pounds per square inch)

The portable aluminum “D” size cylinders hold 415 liters of product. These cylinders are property of the City. The supply cylinders shall be a minimum of size “H” holding 6900 liters of product. The supply cylinders are rented and the product is supplied of an outside vendor.

When these tanks reach a minimum of 500 psi, they can be used to replace the tanks used on Rescue unit. Tanks falling below the 150 psi minimum requirements for the Rescue units shall be returned to the vendor for refilling.

330.04.01. Safety Operations for Refilling Station:

All safety procedures must be adhered to when handling the compressed medical oxygen cylinders. Failure to do so can result in a catastrophic failure of the vessel with the potential of serious injury or death to the users.

Avoid carrying the cylinders by the valve assembly. Grease and oil from other equipment on the hands may create a violent reaction resulting with the gaseous oxygen resulting in fire.

330.04.02. Personal Protective Equipment:

All personnel operating with the compressed medical oxygen equipment shall be required to wear the following safety equipment. Failure to wear the listed equipment may result in serious personal injury or damage to the equipment.

- Approved Eye Protection
- Approved Hearing Protection
- Approved Latex Gloves on **BOTH HANDS**

330.04.03. Operational Procedures:

- The cylinder should be inspected for any obvious damage or contamination.
- Open the cylinder valve and bleed-off any remaining product.
- Place the cylinder in the wall-mounted refilling sleeve.
- Connect the refilling pigtail valve to the cylinder.
- Fill the required information on the log sheet.

The information required on the log sheet will include:

- Date
 - The **Supply** and **Portable** cylinder serial numbers
 - The lot number on the **Supply** cylinder
 - The gas expiration date on the **Supply** cylinder
 - The hydrostatic date of each cylinder (within 5 years)
 - Check-Off that vacuum function test was performed
 - Enter YOUR Winter Park Fire Department ID number (6---)
- With the cylinder valve OPEN and all other valves CLOSED, turn on the vacuum pump.

- Open the RED VALVE until the vacuum gauge reads 25mm of Hg.
- Close the RED VALVE and turn the vacuum pump off.
- Open the valve on the supply tank marked #1
- Crack the brass in-line valve and slowly fill the portable cylinder at a rate no faster than 10 psi per second. Continue until the pressure equalizes.
- Close the valve on tank #1 and repeat the process with tanks #2, 3, 4, 5 and 6 until the pressure gauge reads 2000 psi.

SAFETY NOTICE!

ONLY ONE SUPPLY TANK VALVE SHOULD BE OPENED AT A TIME.

- Close all cylinder valves and the supply tank valve.
- Open the valve at the end of the manifold assembly near the relief valve to bleed off any remaining product.
- Remove the refilling valve assembly from the portable cylinder and seal the valve stem with a NEW plastic seal and gasket.

330.04.04. Changing of Supply Cylinders:

When changing out the supply-side cylinders, the newest tank shall be placed in position #6. All other tanks should move down the scale in position towards position #1. The tank with the least amount of product should end up in position #1. Make sure that all tank identification tags are placed properly to reflect the change in the supply tank line-up.

The **Refilling Form** must also be revised and changed out to reflect the change in supply cylinders.

A red **“EMPTY”** tag shall be hung over the valve cover once the tank pressure is below operational levels. When there are four **“EMPTY”** tags present the Battalion Chief shall be notified so he/she may re-order.

330.04.05. Required Forms:

All personnel should be familiar with the Medical Oxygen Re-Filling Form located at or near the re-filling station.

- All completed forms are to be returned to the Battalion Chief's office for filing.
- New forms are also available in the Battalion Chief's office.



A handwritten signature in black ink, appearing to read 'James E. White', is written over a horizontal line.

James E. White
Chief of Department