

Oxygen Procedures

Be sure to fully understand the dangers of working with oxygen at high pressure. It's flammable, reacts with grease, and the high pressure can create deadly projectiles if a valve or connection fails.

**Please read and understand all steps before proceeding.
If in doubt, ask for help.**

Filling direct to bottle

1. Remove protective cap from end of hose.
2. Close bleed valve finger tight.
3. Open needle valve a couple turns.
4. Locate lowest pressure bottle and crack the valve to run 1-2 seconds of oxygen through hose to purge bad air from the line.
5. Attach hose to target bottle. **Do not force** the connection. Tighten by hand only! The O-ring may be damaged if over tightened.
6. Open target bottle valve. Note pressure gage reading.
7. Close needle valve.
8. Locate lowest pressure source bottle that has more than the target. Open the valve.
9. Open needle valve slowly until flow is heard or the gage starts moving. Filling slowly reduces heat buildup in the target, allowing for a higher pressure fill. A hot target can lose 2-300 psi once it has cooled.
10. Close source valve and needle valve.
11. Repeat steps 8 – 10 until the target is full. Most bottles are limited to 2000 – 2200 psi. The
12. Close target bottle valve.
13. Open needle valve a couple turns to display pressure remaining in the highest source bottle.
14. Tap pressure gage and write the value and date on the open bottle.
15. Close source bottle valve.
16. Open next lower pressure source bottle.
17. Repeat steps 14 – 16 until hose pressure has been purged back to all bottles.
18. Verify all source bottle valves are shut.
19. Open bleed valve to drain pressure from the hose. **Failure to do this will blow out the O-ring!**
20. Remove hose from target bottle.
21. Replace protective dust cap on the end of the hose.
22. Coil and secure the hose on the cart.

Using quick-fill adapter

The quick fill adapter is a section of copper tubing with a threaded male bottle fitting at one end, and a small threaded female end with a protective cap.

This adapter is relatively **fragile** and cost **\$95**. It is strongly recommended that anyone needing such an adapter, buy their own as this is the component most likely to fail.

1. Perform steps 1 – 4 above.
2. Remove protective cap on male end of adapter and attach to hose. **Do not use a wrench!** Hand tighten only.
3. Purge air and any debris from adapter as in step 4 above.
4. Using a wrench, loosen cap on target quick-fill connector, then remove by hand.
5. Attach female end of adapter to target. It is very easy to damage the threads on this connector, so be sure to support the hose while threading the connector to the target. It should be possible to get this relatively tight just by hand.
6. Using a wrench snug the connection $\frac{1}{4}$ - $\frac{1}{2}$ turn.
7. Perform steps 6 – 19 above.
8. Using a wrench, loosen quick-fill connector from target. Be sure to support the hose while unscrewing the connector by hand.
9. Replace cap on target connector. Tighten $\frac{1}{4}$ - $\frac{1}{2}$ turn with wrench.
10. Replace cap on adapter and hand tighten.
11. Disconnect adapter from hose.
12. Replace protective caps on adapter and hose.
13. Coil and secure the hose on the cart.
14. Replace adapter to its storage location.