

# Oxygen Cylinder Maintenance

## Initial Filling

Charge the oxygen cylinder as follows;

Slowly pressurize the cylinder to the rated regulator pressure. Do not exceed the cylinders rated pressure.

Note: To prevent over heating, caused by expansion, it is recommended that filling be accomplished in stages as shown in Table 1. Each stage should take no less than 3 minutes to accomplish with a 2 minute rest between each stage.

Stage	PSI
1	500
2	1000
3	1500
4	1800
5	2000
6	2250

**TABLE 1**

### CAUTION

**Keep Hands And Filling Equipment Clean And Free From Oil. Keep Away From Flame Or Sources Of Ignition. Failure To Comply With All Cautions Could Result In Injury And Death.**

## Routine Maintenance

It is important to maintain positive pressure in oxygen cylinders at all times.

Do not allow the cylinder pressure to fall below 50 PSI if possible.

A fully depleted oxygen cylinder may require a dry air or nitrogen purge to remove moisture.

Table 2 Provides Hydrostatic Test and Service Life requirements for listed cylinders.

Cylinder Type	Hydrostatic Test & Inspection Rqmt	Maximum Service Life
DOT 3AL 6061T6 Alum	Every 5 Years 49 CFR § 180.209	Unlimited
DOT 3HT Steel	Every 3 Years 49 CFR § 180.209	24 Years
DOT-E 8162 Kevlar/Comp	Every 5 Years 49 CFR § 180.209	15 Years (10,000 Cycles)
DOT-E 10945 Carbon/Comp	Every 5 Years 49 CFR § 180.209	15 Years (10,000 Cycles)

**TABLE 2**

## Cylinder Purge

Cylinder pressures below 50 PSI may allow air into the cylinder. Air contains moisture and under certain temperature extremes can freeze and plug oxygen ports and lines.

The most effective method to purge the cylinder of any suspected moisture is to remove the regulator/valve and with the cylinder turned so the threads are down, blow hot air (heat gun or hair dryer) into the cylinder for about 20 minutes or until all moisture has evaporated.

Where a cylinder has been exposed to an extended period of low storage pressure, a cleaning and inspection by a licensed maintenance facility is recommended.

### **Re-Filling**

Verify the condition and cleanliness of all ports and fittings prior to performing re-filling operations.

When re-installing the regulator or valve, assure that the proper approved o-ring or seal has been installed.

Charge the oxygen cylinder as discussed in *Initial Filling*, above.

Upon completion of filling operations, check for leakage using a liquid leak detector or a mild soapy water formula.

### **General**

Fill only with Gaseous Aviators Breathing Oxygen, per MIL-PRF-27210.

Note that certain state, federal and international regulations may apply to the handling and maintenance of oxygen cylinders based on installation and application.

Further information regarding oxygen cylinder maintenance and use is available upon request.

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