

5-2.3 **Twelve-Year Maintenance**

The 12-year maintenance is typically done in conjunction with the semi-annual maintenance. These procedures shall be performed **in addition** to the tests conducted at Semi-Annual intervals (Paragraph 5-2.2), and the monthly inspections (Paragraph 5-2.1).

Refer to NFPA 17A, NFPA 96, DOT and TC requirements for all 12-year maintenance and hydrostatic testing.

5-2.3.1 **WET CHEMICAL CYLINDERS**

Badger recommends that a complete internal inspection be done in accordance with this schedule.

Table 5-4. Wet Chemical Cylinder Inspection

Checkbox	Procedure	Section
<input type="checkbox"/>	Determine date of cylinder manufacture. See CGA pamphlet C-1 for hydrostatic test requirements.	Paragraph 5-2.3.2
<input type="checkbox"/>	Depressurize the Cylinder and Valve Assembly.	Paragraph 5-2.3.3.2
<input type="checkbox"/>	Remove the valve and siphon tube.	Paragraph 5-2.3.3.3
<input type="checkbox"/>	Remove and discard the wet chemical from the cylinder.	Paragraph 5-2.3.3.3
<input type="checkbox"/>	Visually inspect the entire inside surface of the cylinder, per CGA pamphlet C-6.	
<input type="checkbox"/>	Hydrostatically test the cylinder.	Paragraph 5-2.3.2
<input type="checkbox"/>	Rebuild valve with new stem/O-ring and new valve/cylinder O-ring (Cylinder Rebuild Kit P/N B120067).	Paragraph 5-2.3.3.4
<input type="checkbox"/>	Recharge the cylinder.	Paragraph 5-2.3.3.5

5-2.3.2 **HYDROSTATIC TESTING**

Refer to Title 49 of the Code of Federal Regulations Paragraph 180, and CGA pamphlets C-1 and C-6. Refer to <http://www.cganet.com> for more details.

Hydrostatic testing is to be performed on the Range Guard cylinder in compliance with the appropriate DOT and TC requirements.

The wet chemical is to be discarded when performing the hydrostatic test.

Note: Do not reuse the wet chemical per NFPA-17A.

To protect the hazard during this testing period, a substitute cylinder is to be used, one equal to the unit under test. An alternate protection method may be used so long as it is acceptable to the Authority Having Jurisdiction (AHJ).

This is only an example; failure to properly identify and test the cylinder to appropriate DOT and TC requirements may result in damage to cylinder.

No leakage, rupture, or expansion greater than 10% shall be allowed. Internal or external corrosion, denting, bulging, or evidence of rough usage that would be likely to weaken the cylinder should cause the cylinder to be condemned and replaced.



Cylinders are to be either hydrostatically tested or volumetric-expansion tested to **TWO TIMES** the standard rating. A cylinder's standard rating is stamped on the crown or footing of the cylinder. For example: