

SERVICE INFORMATION LETTER (SIL)

Understanding the Opening and Closing Requirements of Carleton P/N B42365-1 Cylinder and Valve Assemblies Used in Commercial Aircraft Oxygen Systems



OXYGEN – ATA CHAPTER 35

CAGE CODE: 04577

This Service Information Letter was released to assist customers to get more familiar with the opening and closing procedures of the 115 cu. ft. oxygen cylinder and valve assembly manufactured by Carleton Technologies.

During overhaul or service maintenance, users of this cylinder and valve assembly often find that there is a difference in resistance in opening and closing the valve assembly when comparing the Carleton version to that of other manufacturers. Although the Carleton valve assembly meets all airframe specifications, some users occasionally find Carleton's valve assembly more difficult to open or close. The degree of difficulty can depend on how much oxygen is in the cylinder as well as how many turns into the opening or closing sequence has occurred.

Included in this SIL will be information about the airframe manufacturer's opening and closing torque requirements of the valve assembly. Additionally, this SIL provides information about the operation of the valve assembly and how other factors may affect opening and closing.

This SIL does not change any procedures in the affected Component Maintenance Manual (CMM).

A. SUBJECT

The airframe OEM requires the following basic specifications of the valve assembly for correct operation:

- 1) The amount of turns on the valve handle from fully opened to fully closed shall be between 2-1/4 and 6.
- 2) The torque required to open and close the valve assembly at any cylinder pressure up to 1850 psig. shall not exceed 30 inch-pounds.

All Carleton oxygen valve assemblies designed and manufactured for commercial aircraft meet the above requirements.

By design and due to internal spring tension, the Carleton valve assembly may appear to need increased torque during the first 1-1/2 to 2 turns during opening of the valve. By design, there will be a let-off in torque after the initial opening sequence.

The perception of increased torque will differ depending on internal cylinder pressure. The higher the pressure inside the cylinder, the more torque that may be needed to open the valve may be felt.

When compared to other manufacturer's cylinder and valve assemblies, opening the Carleton valve may seem more difficult.

B. APPLICABILITY

This SIL is applicable to all aircraft where the Carleton Cylinder and Valve Assembly is installed, especially certain series of 747, 767 and 737 model aircraft.

Cylinder and Valve Assembly part numbers affected by this SIL are:

B42365-1 B43570-1

C. REFERENCES

Service and Maintenance of any Carleton Cylinder and Valve Assembly must be done in accordance with the applicable ATA Component Maintenance Manual issued by Carleton Technologies Inc. Refer to the table below to identify which CMM to use for a particular top assembly part number.

Carleton Top Assembly P/N	Applicable ATA CMM	CMM Rev. No. and Rev. Date
B42365-1	35-22-02	Rev. 9 / Feb. 26, 2010
B43570-1	35-22-03	Rev. 1 / Aug. 8, 2002

D. RECOMMENDED ACTIONS

None required. However, any suspect cylinder and valve assembly should be function tested in accordance with the applicable CMM. Refer to Section E of this SIL for further directions if needed.

E. INSTRUCTIONS

- Use the CMM to do a function test of the Carleton cylinder and valve assembly.
- Any function test performed on this apparatus shall be done by those facilities experienced in, or by personnel knowledgeable in high pressure aviation oxygen equipment. Contact Carleton Technologies for information regarding getting a cylinder and valve assembly function tested at Carleton's facility. See Section G for information on how to contact Carleton Technologies, Inc.

F. WARRANTY INFORMATION

Carleton warranty remedies may not be applicable to the subject(s) covered in the SIL.

G. CONTACT CARLETON TECHNOLOGIES

To get a Carleton Cylinder and Valve Assembly serviced contact Carleton at +1 (716) 662-0006 or www.carltech.com.