



Transportation of Dangerous Goods Directorate  
L'Esplanade Laurier  
300 Laurier Avenue West  
Ottawa, Ontario  
K1A 0N5

Direction générale du transport des marchandises dangereuses  
L'Esplanade Laurier  
300, avenue Laurier Ouest  
Ottawa (Ontario)  
K1A 0N5



## Equivalency Certificate (Approval issued by the competent authority of Canada)

**Certificate No.:** SU 11437 (Ren. 1)

**Certificate Holder:** Worthington Industries or Worthington Cylinders

**Mode of Transport:** Road, Rail, Air, Marine

**Effective Date:** July 4, 2019

**Expiry Date:** August 31, 2024

### LEGEND

For the purposes of this equivalency certificate, documents referred to by an abbreviation have the following meaning:

***TDG Act:*** *Transportation of Dangerous Goods Act, 1992*

***TDG Regulations:*** *Transportation of Dangerous Goods Regulations*

***CSA B339-08:*** CSA Standard B339-08, “*Cylinders, spheres, and tubes for the transportation of dangerous goods*”, March 2008, published by the Canadian Standards Association (CSA)

***CSA B340-18:*** CSA Standard B340-18, “*Selection and use of cylinders, spheres, tubes, and other containers for the transportation of dangerous goods, Class 2*”, June 2018, published by the Canadian Standards Association (CSA)

### **CONDITIONS**

This equivalency certificate authorizes Worthington Industries or Worthington Cylinders, to sell, offer for sale, distribute, or deliver in Canada, and authorizes any person to handle, offer for transport, or transport in Canada, by road or railway vehicle, by aircraft, or by vessel on a domestic voyage, cylinders in a manner that does not comply with:

- subsections 5.1.1(1) and 5.1.1(2) of the *TDG Regulations*,
- section 5.2 of the *TDG Regulations*,
- subparagraphs 5.10(1)(a)(ii), 5.10(1)(b)(iii), 5.10(1)(c)(ii), 5.10(1)(d)(iii) of the *TDG Regulations*, and
- subsection 5.10(2) of the *TDG Regulations*,

if the following conditions are met:

#### **Selection and Use**

- (a) Subject to condition (b) of this equivalency certificate, the requirements with respect to specification TC-3AAM cylinders in *CSA B340-18* are complied with;
- (b) The cylinders do not contain:
- (i) hydrogen, compressed,
  - (ii) hydrogen sulphide,
  - (iii) NATURAL GAS, COMPRESSED, with high methane content,
  - (iv) carbon monoxide, compressed,
  - (v) gas mixtures containing:
    - (A) hydrogen sulphide or other free sulphide,
    - (B) hydrogen or natural gas,
    - (C) more than 10 percent carbon monoxide, or
    - (D) carbon monoxide and having a dew point of  $-47^{\circ}\text{C}$  or higher at atmospheric pressure,
  - (vi) any liquefied gas, or
  - (vii) any gas or gas mixture that could cause corrosion, stress corrosion cracking, enhanced fatigue crack growth, or hydrogen embrittlement of the cylinder steel;

**Manufacture**

- (c) The cylinders were manufactured prior to March 2014 in accordance with the conditions of equivalency certificate SU 4957 issued by the Transportation of Dangerous Goods Directorate, Transport Canada;
- (d) The cylinders were manufactured in accordance with the specific procedures and with the drawing numbered E-2015 filed on May 7, 1996 by Steel Cylinder Manufacturing Ltd., drawings numbered XK0150, XK0250, XE0150, XF0150 or XF0250 filed on February 24, 2005, drawings numbered XK1050T or XK0250T filed August 10, 2006, drawing numbered XK0350 filed on September 14, 2006, drawings numbered XF0151 or XK0151 filed on July 6, 2007, or drawing numbered XF0450 filed on March 25, 2008, by Worthington Cylinders of Canada Corp., with the Executive Director, Regulatory Frameworks and International Engagement, Regulatory Affairs Branch, Transportation of Dangerous Goods Directorate, Transport Canada;
- (e) The Transport Canada mark, the specification designation, and the service pressure marked on each cylinder are as follows:

**TC - SU 4957 –**

followed by the service pressure expressed in bar;

**Requalification**

- (f) Subject to conditions (g) and (h) of this equivalency certificate, cylinders due for requalification are requalified in accordance with the applicable requirements for specification TC-3AAM set out in *CSA B339-08*;
- (g) The requalification period for the cylinders is five years;
- (h) For cylinders that have been treated for corrosion protection at time of manufacture by a hot-dip galvanizing process, the 10% permanent expansion rejection criterion specified in clause 24.2.1.3 of *CSA B339-08* does not apply. However, hot-dip galvanized cylinders are condemned if the elastic expansion exceeds the rejection elastic expansion (REE) marked on the cylinder. Hot-dip galvanized cylinders are permanently marked on the shoulder at time of manufacture with one of the following model numbers: X7-65, X7-80, X7-100, X7-120, X8-119, or X8-130;
- (i) The Transportation of Dangerous Goods Directorate is advised prior to the cylinders being returned to service, where cylinders are requalified after having been subjected to fire;

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- (j) The documents referred to in clause 4.19 of *CSA B339-08* are retained by the equivalency certificate holder and by the independent inspector, as referred to in that standard, for the service life of the cylinders; and
- (k) The certificate holder, cylinder owner, or user reports any incident involving loss of contents or failure of the cylinders to the Executive Director, Regulatory Frameworks and International Engagement, Regulatory Affairs Branch, Transportation of Dangerous Goods Directorate, Transport Canada.

**Note 1: Subsection 31(4) of the *TDG Act* stipulates that any non-compliance with the conditions of this equivalency certificate causes the provisions of the Act and Regulations to apply as though this equivalency certificate did not exist.**

**Note 2: Any other requirement of the *TDG Regulations* applies.**

Signature of Issuing Authority



David Lamarche, P. Eng., ing.  
Chief, Approvals and Special Regulatory Projects

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*(The following Explanatory Note is for information purposes only and is not part of this certificate.)*

**Explanatory Note**

The cylinders were previously authorized for manufacture and use under equivalency certificate SU 4957 issued to Worthington Cylinders of Canada Corp. The manufacturing facility has since closed. This equivalency certificate authorizes the continued use of the cylinders manufactured prior to March 2014 in accordance with the conditions of equivalency certificate SU 4957 under the *TDG Regulations*, as amended.

**Legend for Certificate Number**

SH - Road, SR - Rail, SA – Air, SM - Marine  
SU - More than one Mode of Transport  
Ren. - Renewal

**NOTE**

Under Canadian Law, a foreign manufacturer of non-specification cylinders cannot be charged with an offence under the *Transportation of Dangerous Goods Act, 1992* for failure to comply with the conditions of an Equivalency Certificate. However, certain remedies under the Act are available to Transport Canada in this eventuality.

These include:

1. detention of dangerous goods and consequently the means of containment containing them (subsection 17(1));
2. detention of the means of containment whether full or empty (subsection 17(1));
3. directions not to import the means of containment or to return them to origin (subsection 17(3));
4. inspectors' directions (section 19);
5. directions to importers of the means of containment to issue notices of defective construction or recall (subsection 9(2)); and
6. revocation of the certificate, thereby making any use of the means of containment an offence (subsection 31(6)).

If none of the foregoing are adequate, Protective Directions may be issued to prohibit or to control the use of the means of containment (section 32).