



# **CGA V-19—2018**

(Formerly TB-16)

## **MARKING REQUIREMENTS TO MITIGATE POTENTIAL CYLINDER AND CYLINDER VALVE THREAD MISMATCHES**

**FIRST EDITION**

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Work Item 16-009  
Cylinder Valve Committee

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NOTE—Technical changes from TB-16—2010 edition are underlined.

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## 1 Introduction

Millions of cylinders and cylinder valves are transported and used without any incidents every year. However, there have been incidents when a valve has been ejected from a cylinder because the threads on the cylinder valve did not match the threads on the cylinder. Valve ejections can cause personal injury and/or death, property damage, and product loss. Investigations of these incidents indicate that the causes of the cylinder valve ejections usually have included:

- using a cylinder valve with straight threads installed into a cylinder that has tapered neck threads;
- installing tapered cylinder valve threads into a cylinder that has straight neck threads; and/or
- interchanging International Organization for Standardization (ISO) and/or other metric classification threads with National Gas Taper (NGT) threads.

## 2 Purpose and scope

In some cases, it is difficult to visually determine if the threads on a valve are mismatched to the threads in a cylinder after a cylinder valve has been installed into a cylinder. Markings on valves and cylinders are used outside the United States that permit cylinder fillers and users to see if the cylinder valve and the cylinder have the same threads. The Compressed Gas Association (CGA) recommends that a coded marking system be used in the United States and Canada to ensure that valve threads and cylinder neck threads can be identified after the valve is installed into the cylinder.

This publication outlines the coded marking system to be used to identify and mark valve inlet threads and cylinder neck threads.

## 3 Definitions

For the purpose of this publication, the following definitions apply.

### 3.1 Publication terminology

#### 3.1.1 Shall

Indicates that the procedure is mandatory. It is used wherever the criterion for conformance to specific recommendations allows no deviation.

#### 3.1.2 Should

Indicates that a procedure is recommended.

#### 3.1.3 May

Indicates that the procedure is optional.

#### 3.1.4 Will

Is used only to indicate the future, not a degree of requirement.

#### 3.1.5 Can

Indicates a possibility or ability.

### 3.2 Technical definitions

#### 3.2.1 Valve inlet

Portion of the valve body that connects to the cylinder.

#### 3.2.2 Valve outlet

Portion of the valve body through which product is introduced or discharged from the cylinder.