



U.S. Department
of Transportation
**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

June 24, 2025

Kevin Turner
Training & Assurance Manager
Bancroft Hinchey Ltd.
Unit 7A, Hartley Business Park
Selborne Road
Alton, Hampshire, GU343HD

Reference No. 25-0004

Dear Mr. Turner:

This letter is in response to your January 10, 2025 email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to pressure tests and system checks performed on cylinders. You state that the pressure test requirement in § 180.205(g) of the HMR permitting a “system check” to be performed at a pressure up to 90% of test pressure conflicts with instruction offered in the Compressed Gas Association (CGA) publication, C-1, “*Methods for Pressure Testing Compressed Gas Cylinders*,” which is incorporated by reference in § 180.205(g). Specifically, CGA C-1 provides instruction for a cylinder to be pressurized to less than 90% of the minimum test pressure. You provide an example of a DOT 3AA cylinder with a service pressure of 1800 psi, which is pressurized during a system check to 2700 psi¹ (*i.e.*, exactly 90% of the minimum required test pressure). Specifically, you ask, would pressurizing the cylinder to 90% of the test pressure rather than below be considered a “system check” instead of a test?

Yes. Based on the example you provided, it is the opinion of this Office that what you describe would be considered a system check. While § 180.205 requires pressure testing in accordance with CGA C-1, § 180.205(g) allows a system check to be performed at or below 90% of test pressure. Section 180.205(g) does not require adhering to CGA C-1 which prescribes a system check below 90% of test pressure. However, because any pressurization that exceeds 90% would be considered a test, performing a system check at

¹ Table 1 to paragraph (a) of § 180.209 – DOT 3AA cylinders must have a minimum test pressure of 5/3 times service pressure, except non-corrosive service (see § 180.209(g)). As such, 1800 psi x 5/3 = 3000 psi.

pressures below 90% is more conservative as it ensures that a cylinder is not inadvertently pressurized over 90% of test pressure (*e.g.*, due to minor gauge tolerance differences).

I hope this information is helpful. Please contact us if we can be of further assistance.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Dirk Der Kinderen', written in a cursive style.

Dirk Der Kinderen
Chief, Standards Development Branch
Standards and Rulemaking Division

From: [INFOCNTR \(PHMSA\)](#)
To: [Dodd, Alice \(PHMSA\)](#)
Cc: [Hazmat Interps](#)
Subject: FW: 49CFR - Interpretation request - Hydrostatic Testing - Maximum System Check Pressure
Date: Friday, January 10, 2025 4:54:07 PM
Attachments: [image001.png](#)

Hello Alice,

See the attached interpretation request. Let us know if you need anything else.

Best, Aminah

From: Kevin Turner - Bancroft <kevin.turner@bancroft.co.uk>
Sent: Friday, January 10, 2025 9:25 AM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Subject: 49CFR - Interpretation request - Hydrostatic Testing - Maximum System Check Pressure

You don't often get email from kevin.turner@bancroft.co.uk. [Learn why this is important](#)

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Good afternoon

Please can we have a clarification on a conflict between the information presented in §180.205(g)(5):

*“A system check may be performed **at or below 90%** of test pressure prior to the retest.....”*

And the information presented in CGA C-1 2016 (5.7 – Cylinder retesting):

*“When conducting water jacket testing it is highly recommended that the cylinder be pressurized in the water jacket to a pressure **less than 90%** of its test pressure before conducting a volumetric expansion test.....If a cylinder is pressurised **below 90%** of minimum test pressure..... this does not count as a test....”*

The apparent conflict is “at or below”, vs “below”

So as an example, does pressurising a DOT-3AA 1800 cylinder to exactly 2700 psi count as a system check, or a test?

Many thanks

BANCROFT



Member 2024



Kevin Turner

Training & Assurance Manager



+44 (0)1444 248884



+44 (0)7990 740628



kevin.turner@bancroft.co.uk



www.bancroft.co.uk

BANCROFT HINCHEY LTD
Unit 7A, Hartley Business Park,
Selborne Road
Alton
Hampshire
GU34 3HD

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