



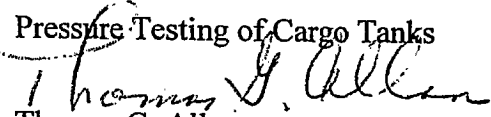
Memorandum

U.S. Department
of Transportation
**Research and
Special Programs
Administration**

Date: **MAY 10 2001**

Reply to Attn. of: Gorsky, x69532

Subject: Pressure Testing of Cargo Tanks

From: 
Thomas G. Allan
Senior Transportation Regulations Specialist
Office of Hazardous Materials Standards

To: William A. Quade
Chief of Hazardous Materials Division
Federal Motor Carrier Safety Administration

This responds to your request for an interpretation, by e-mail dated May 2, 2001, related to pressure testing MC 306 and DOT 406 specification cargo tanks under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you ask whether a manhole cover must be removed and replaced with a blank flange for the pressure test.

Your e-mail describes a manhole that includes a fill opening and pressure relief vent as one piece. Apparently, some manhole manufacturers are advising cargo tank operators to remove the manhole/fill opening/pressure relief vent component and replace it with a blank flange for the cargo tank's pressure test.

Section 180.407(g) requires all components of a cargo tank wall to be pressure tested. The cargo tank wall includes those parts of the cargo tank that make up the primary lading retention structure, including shell, bulkheads, and fittings, which, when closed during transportation, yield the minimum volume of the cargo tank assembly (see § 178.320(a)). A manhole cover is part of the cargo tank wall. Under the pressure test procedure outlined in § 180.407(g), the manhole/fill opening/pressure relief component should be removed from the cargo tank so that the pressure relief vent can be bench tested (see § 180.407(g)(1)(ii)(A)). Since § 180.407(g)(1)(vii) requires the pressure test of the cargo tank to be conducted with all closures (except pressure relief devices) in place, the manhole/fill opening/pressure relief component should then be reinstalled

and the pressure relief device disabled for the pressure test. You are correct that removing the manhole/fill opening/pressure relief component and replacing it with a blank flange for the pressure test is not consistent with the pressure test procedure in § 180.407(g).

I hope this information is helpful. If you have further questions, please do not hesitate to contact this office.

#

Gorsky, Susan

Gorsky
§ 180.407
Cargo Tanks Testing
01-0109

From: Shelton, Daniel <FHWA> [Daniel.Shelton@fhwa.dot.gov]
Sent: Wednesday, May 02, 2001 3:40 PM
To: Gorsky, Susan <RSPA>
Cc: Quade, William <FHWA>
Subject: Pressure Testing of Cargo Tanks

Susan, thanks for taking the time to discuss our issue concerning pressure testing of cargo tanks. The issue is this: some manufactures of manholes for MC 306 and DOT 406 cargo tanks insist the manhole cover must be removed from the cargo tank and a blank flange placed on the manhole opening to perform the pressure test.

HOW WE THINK IT SHOULD BE

We believe a more logical approach would be to require the test and inspection facility to remove the manhole cover and the fill opening as one piece, the fill opening being part of the pressure relief vent, and bench test the vent, then place the manhole cover and the fill opening back on the tank, make the fill opening vent inoperative and pressure test the cargo tank wall, including the manhole cover, which is part of the cargo tank wall.

This will comply with 180.407(g) which requires all components of the cargo tank wall to be pressure tested.

WHAT IS ACTUALLY GOING ON

What is happening is this: CT facilities are being instructed to remove the manhole and fill opening, bench test the vent, place a blank flange over the manhole opening, pressure test the tank, place the manhole cover back on the tank and then leak test the tank to verify the seal where the manhole attaches to the tank.

This approach does not comply with 180.407(g) because not all components of the cargo tank wall are being pressure tested.

Please send us a clarification concerning the correct process and procedures to following to perform this pressure test.

tk.



U.S. Department
of Transportation
Research and
Special Programs
Administration

400 Seventh Street, S.W.
Washington, D.C. 20590

NOV 23 1994

Mr. J.J. Fulnecky
Regional Director
Office of Motor Carrier
18209 Dixie Highway
Homewood, IL 60430-2294

Dear Mr. Fulnecky:

This is in response to your memorandum regarding pressure test of an MC 306 cargo tank motor vehicle. Specifically, you asked if a manhole assembly, containing a 10-inch pressure actuated fill cover (PAF or PAV), must be installed on a cargo tank during the pressure test as prescribed in § 180.407(g).

The answer is yes. A manhole assembly, which includes the dome cover, must remain installed on the cargo tank as required by § 180.407(g)(1)(vii). However, if rated at less than test pressure, the PAF or PAV may be removed and the area plugged, or the PAF or PAV may be clamped down to make it inoperative. See enclosure.

I hope this answer is helpful.

Sincerely,

Hattie L. Mitchell, Chief
Exemptions and Regulations Termination
Office of Hazardous Materials Standards

Enclosure

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Ap 1 of 1

Pressure Retest of MC-306
Cargo Tank Motor Vehicles

March 25, 1994

J. J. Fulnecky, Regional Director
Office of Motor Carriers
Homewood, Illinois

HMC-05

Alan I. Roberts
Associate Administrator for Hazardous Materials Safety
Washington, D.C.

Attn: Edward Mazzullo, Director (DHM-10)

We are currently performing compliance reviews of cargo tank repair, inspection, and testing facilities and have uncovered some procedural differences in the conduct of pressure tests as prescribed in §180.407(g). We have two open compliance reviews of major DOT cargo tank repair facilities in northeastern Illinois with corrective action pending until we receive an answer to the following procedural issue.

The Quality Management Institute (QMI), Milwaukee, WI and the National Tank Truck Carriers have both published procedural guidelines which differ in whether the manhole assembly is installed or removed during the conduct of the pressure test of MC-306 cargo tank motor vehicles equipped with a 16 inch manhole assembly containing a 10 inch pressure actuated fill cover (PAV or PAV).

Considering §180.407(g)(2)(vii) must the manhole assembly (dome cover), as shown in the attached illustration, be installed on the cargo tank during the conduct of the pressure test prescribed in §180.407(g)?

The pressure actuated fill cover can be removed or disabled if the manhole assembly (dome cover) remains installed on the cargo tank. One procedure for removing for inspection and testing the reclosing pressure relief device (PAV mechanism) is to remove the manhole assembly from the weld collar and install it on a pressure chamber; pressuring up the pressure chamber until the PAV opens. The manhole may then be reinstalled on the cargo tank for completion of the pressure test.

The companies that are removing the entire manhole assembly, attaching a 16 inch steel plate adapter with fittings to the manhole, aver that the "dome cover" portion of the manhole assembly is the bottom half (or seat) of the pressure relief system and therefore can be removed as stated in §180.407(g)(2)(vii).

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In a telephone conversation on March 24, 1994 between Greg Roling, Region 5 Office of Motor Carriers, and Tom Moony, Vice President of Sales, Betts Industries, Warren, Pennsylvania, Mr. Moony stated that the dome cover is not considered by Betts Industries as being a part of the reclosing pressure relief device but is considered to be the manhole assembly complying with §178.345-5. The reclosing pressure relief device is the 10" fill cover only. Betts Industries is a major manufacturer of this type of manhole assembly.

In a telephone conversation between Greg Roling and Mr. Richard Katzung, President, Quality Management Institute, on March 23, 1994 Mr. Katzung stated that an errata sheet had been published in early 1993 and sent to all owners of the QMI procedural manual changing the recommended method of performing the pressure test to include the installed manhole assembly. It seems that the companies reviewed did not follow this recommended procedural change.

Additionally, we know of a third large repair and inspection facility in southern Illinois that has performed pressure tests on over 1500 MC-306 cargo tank motor vehicles in the last two years with the manhole assembly removed from the tank.

Your immediate attention to this matter will be greatly appreciated.

For further questions please contact Greg Roling, (708)206-3178/3175.

Attachments

cc: James K. O'Steen, Director (DEM-20)
Ronald Ashby, Chief (HFO-20)
Dick Singer, HFO-20

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