



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

1200 New Jersey Ave, S.E.  
Washington, D.C. 20590

**JAN 27 2010**

Mr. Christopher P. Prioli  
Safety & Compliance Manager  
SJ Transportation Co., Inc.  
P.O. Box 169  
1176 U.S. Route 40  
Woodstown, NJ 08098

Ref. No. 09-0136

Dear Mr. Prioli:

This responds to your letter requesting clarification of the construction and marking requirements for DOT 407/412 variable specification cargo tank motor vehicles (CTMVs) under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Your questions are paraphrased and answered as follows:

Q1. Under § 178.345-14(c)(6) and (c)(7), the maximum loading and unloading rates in gallons-per-minute must be marked on the specification plate of a DOT 406, 407 and 412 CTMV. The manufacturer of our variable specification DOT 407/412 CTMVs only marks the pressure on the specification plate at which the maximum loading and unloading rate is given as a hyphen that denotes no limit is placed on the flow rate. Is this practice correct?

A1. No. As specified in the introductory text under § 178.345-14(c), the maximum loading and unloading rate in gallons-per-minute entry is required regardless of its applicability or appropriateness.

Q2. Our company's DOT 412 CTMVs were found to be in violation of the venting and drainage requirements for ring stiffeners that enclose an air space under § 178.345-7(d)(4). What is the appropriate location for ring stiffener drains? Must the vents be visible to verify compliance?

A2. The HMR do not explicitly dictate the location of vented drains in the enclosed air space of a ring stiffener. It is the opinion of this Office that a ring stiffener drain or vent should be visible, as far as practicable, in order to verify compliance with the HMR. Additionally, there is no need to install multiple vents or drains when only one satisfies the intent and functionality of the requirement.

I trust this satisfies your inquiry. Please contact us if we can be of further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'Hattie L. Mitchell', with a long horizontal flourish extending to the right.

Hattie L. Mitchell  
Chief, Regulatory Review and Reinvention  
Office of Hazardous Materials Standards



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Stevens  
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27 May 2009

United States Department of Transportation  
PHMSA Office of Hazardous Materials Standards  
Attn: PHH-10 East Building  
1200 New Jersey Avenue SE  
Washington, DC 20590-0001

RE: DOT-412 Specification Cargo Tank Requirements

Dear Sirs:

I am seeking guidance regarding two separate issues as outlined below. My interest in these issues stems from violations charged at recent roadside inspections.

The first issue involves information required to be marked on the DOT-412 specification plate per 49 CFR §178.345-14(c)(6) and §178.345-14(c)(7). The regulation states that the maximum loading rate in gallons per minute and the maximum unloading rate in gallons per minute are to be marked on the plate. The vehicle in question is a 2001 Stainless Tank & Equipment (ST&E) DOT-407/DOT-412 cargo tank motor vehicle. Although maximum loading and unloading *pressures* are shown on the specification plate, the *rates* are not shown; instead, a line is marked in the blocks provided for the loading and unloading rates (see Figures 1 and 2). In a telephone conversation earlier today, Mr. Paul Kreuger of ST&E's Engineering Department stated that the specification plate is so marked because there is no limitation placed on the maximum loading and unloading rates for this tank. He further stated that very few of ST&E's cargo tanks of this type have such a limit, and that therefore the specification plates of those tanks are also not marked with maximum loading and unloading rates. Having been charged with a violation of §178.345-14(c) for these limits not being marked on the specification plate, I now must ask what the proper marking should be if the manufacturer does not impose an upper limit on loading and unloading rates, and if a plate marked as shown in Figure 1 is in violation?

Secondly, I have a question regarding the 49 CFR §178.345-7(d)(4) requirement for drain holes in ring stiffeners on DOT-412 cargo tanks. At the time of a roadside inspection performed in New York State on 28 April 2008, an inspector cited us for violation of §178.345-7(d)(4) in that the drain holes in two of the ring stiffeners were "covered" by

additional structural members, specifically the framework of the under-ride protection around the belly valve on the trailer. In that circumstance, the ring stiffeners actually had working drain holes that let into the under-ride frame, which in turn was open at the ends of its tubular members and thus provided adequate drainage. The inspector's concern, which is easily understood, is that there is no practical means of verifying the presence of the ring drains in that scenario. As a result, and after conferring with ST&E (the manufacturer of that tank), we campaigned our fleet, drilling drain holes at the bottom of the (vertical) side of the ring stiffeners of any trailers with such "hidden" drain holes.

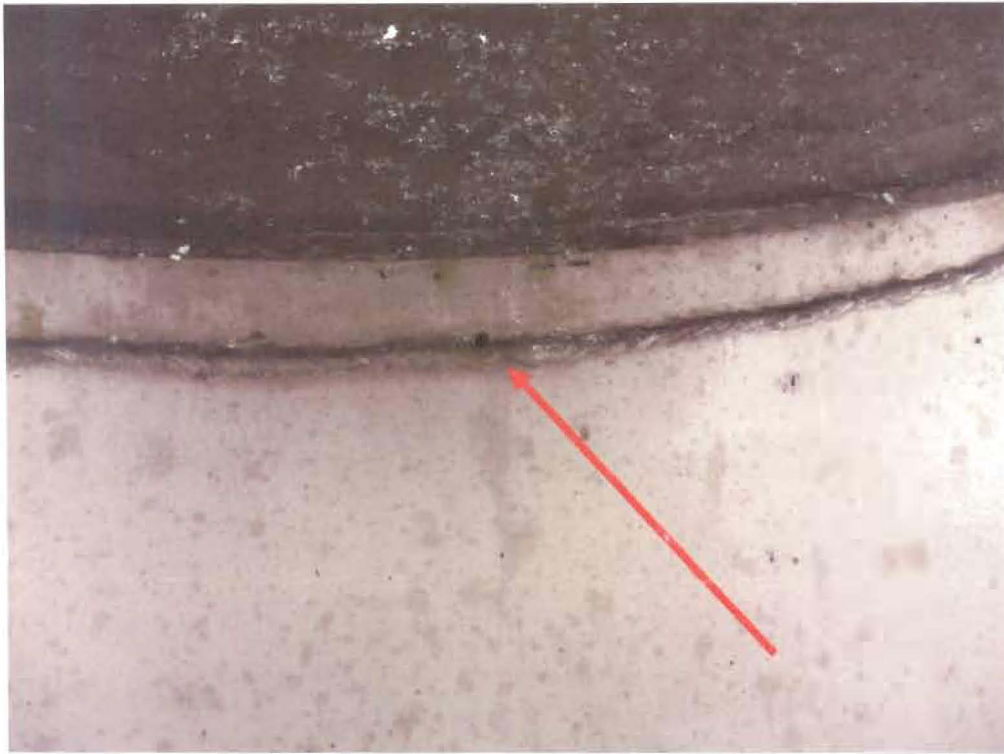
Now, just over a year later, the trailer discussed in Question 1 above was also cited for not having drain holes in the ring stiffeners to which the under-ride frame is mounted, in spite of the fact that there are holes present in the ring stiffeners as discussed in the previous paragraph (*see Figures 3 and 4*). In light of these inspections, I am looking for specific information regarding the requisite location of ring stiffener drain holes. The regulation is somewhat vague in this regard, stating only that any air spaces enclosed by ring stiffeners must "*be arranged for venting and be equipped with drainage facilities which must be kept operative at all times.*" Obviously, there is nothing in the regulation that fixes the specific location of such "*drainage facilities*". What locations are acceptable for such drain holes, and are drain holes located as are those in the accompanying photographs adequate for compliance with §178.345-7(d)(4)?

I look forward to hearing from you in the near future, and I hope that you will be able to provide the guidance that I need.

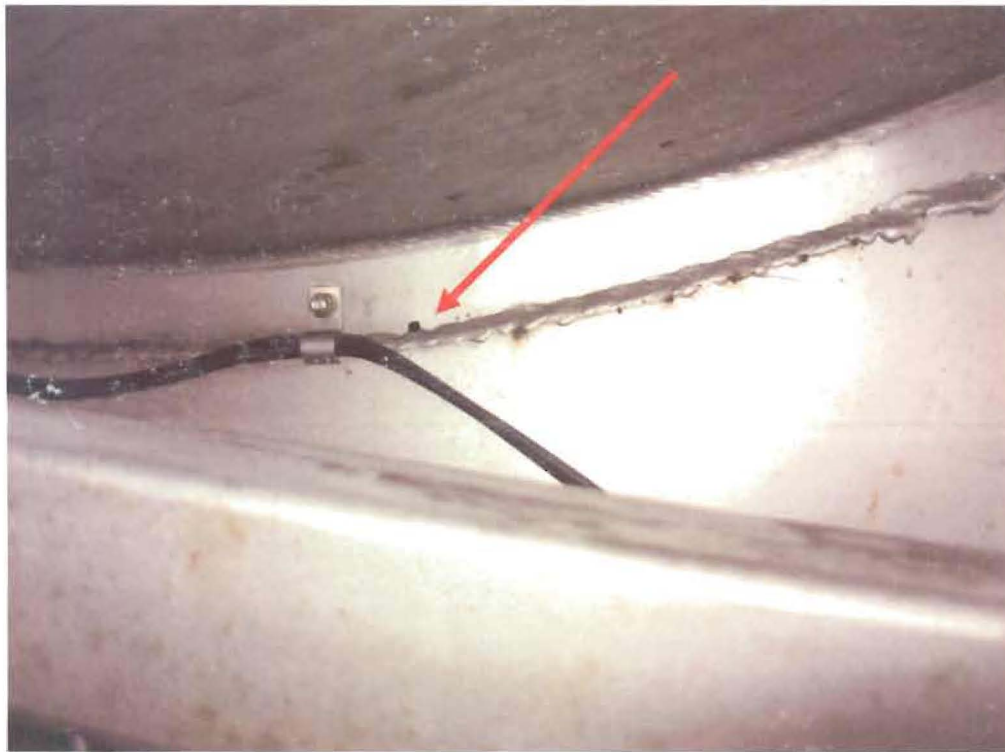
Sincerely,



Christopher P. Prioli  
Safety & Compliance Manager



*Figure 3 – Ring Stiffener Drain Hole (Forward Ring)*



*Figure 4 – Ring Stiffener Drain Hole (Aft Ring)*

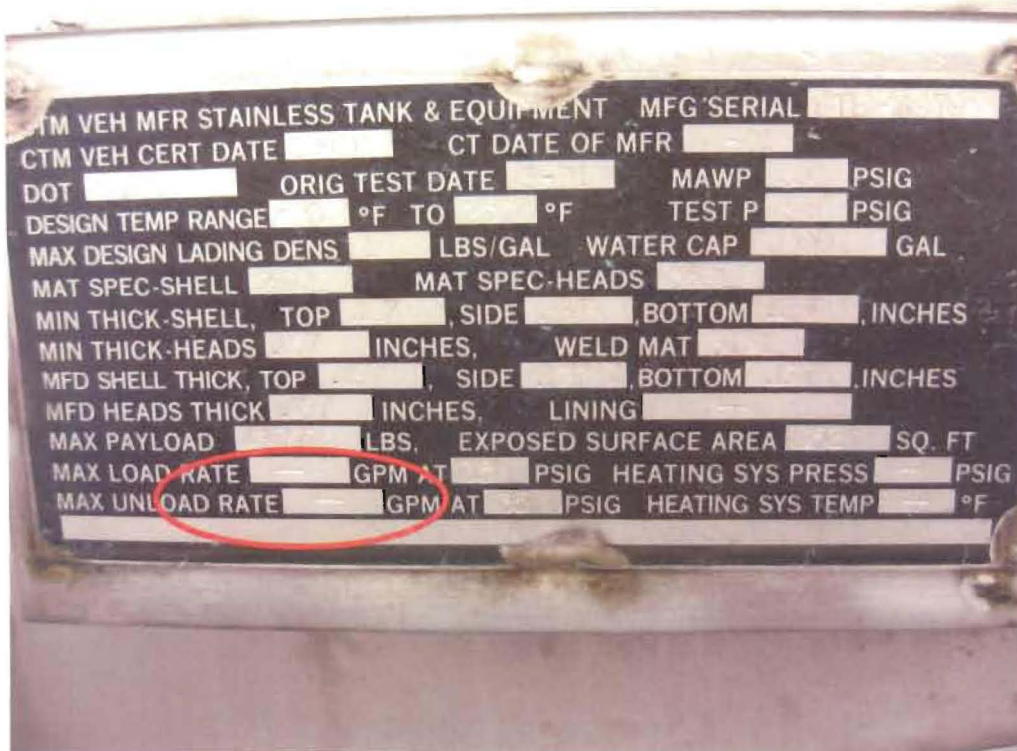


Figure 1 – Trailer Specification Plate

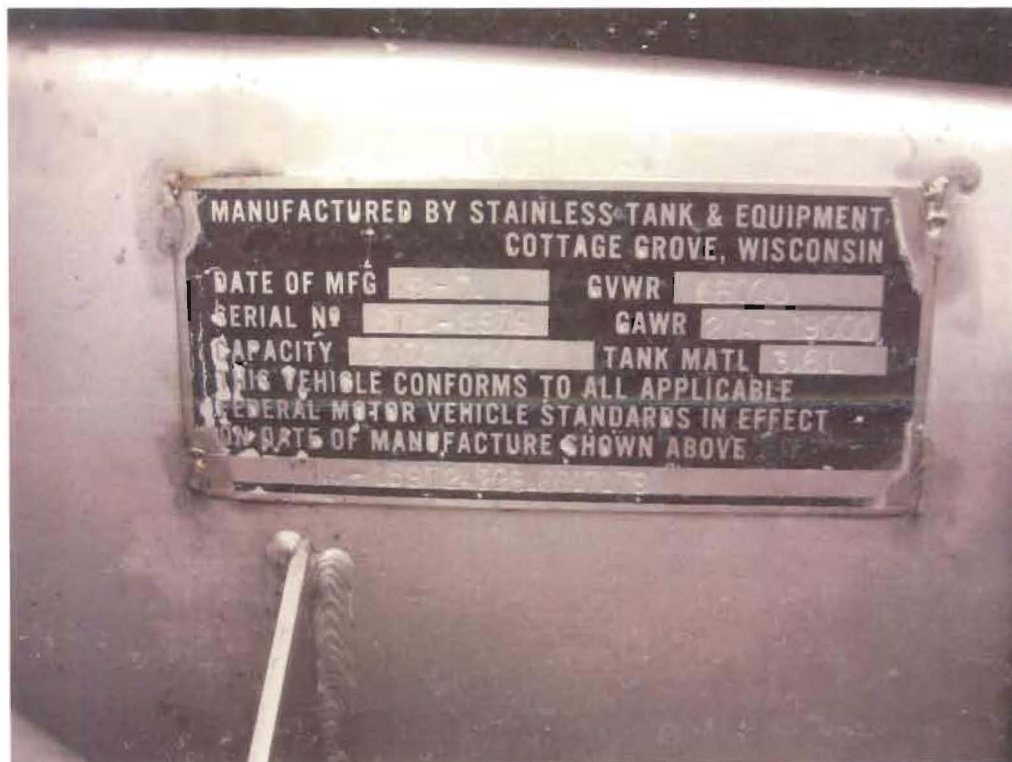


Figure 2 – Trailer Name Plate