

Cargo Tank Safety Advisory Notice



Attachment of Appurtenances to MC-331 Cargo Tanks

An appurtenance is defined in 49 C.F.R. §178.320(a) as any attachment to a cargo tank that has no lading retention or containment function and provides no structural support to the cargo tank. Some examples of an appurtenance include ladders, light brackets, hose trays, conduit clips, brake line clips and placard holders, just to name a few. On June 30, 2004, the Research and Special Programs Administration (RSPA) issued an interpretation¹ regarding the attachment of an appurtenance to an MC-331 cargo tank. This interpretation identifies situations when mounting pads are required and the minimum qualifications required for repair facilities to attach an appurtenance to the cargo tank wall.

Cargo Tanks Manufactured Prior to September 1, 1995 are not required to have pads and there is no retrofit requirement for these tanks. These cargo tanks must be maintained in accordance with the specification in effect at the time of initial manufacture or in accordance with the current specification.

Cargo Tanks Manufactured After September 1, 1995 are required to meet the following criteria:

1. Appurtenances and other accessories must be attached to structural members, the sub-frame, accident protection and ring stiffeners when practicable (§178.337-3(g) (1)).
2. When appurtenances cannot be attached in accordance with §178.337(g) (1), they must be attached to the cargo tank wall using a welding pad as specified in §178.337-3(g)(3). This includes devices such as lifting lugs and the “half-moon” gauge protection devices that are illustrated above, unless those devices meet the definition of a lightweight attachment described in § 178.337-3(g)(2).
3. Attachments meeting the definition of a lightweight attachment do not require a welding pad. A lightweight attachment must be of a construction having lesser strength than the cargo tank wall materials and any attachment to the cargo tank wall where the measurement of the thickness of the attachment is less than or equal to 72% of the thickness of the cargo tank shell or head material to which it is attached. **NOTE: Lightweight attachments are not authorized under part UHT in Section VIII, Division 1 of the ASME code.**

An MC-331 cargo tank manufactured after September 1, 1995 that does not conform to these requirements must be repaired. Repairs involving welding on the cargo tank wall must be performed by a facility registered with the Department and having a National Board Certificate of Authorization for the use of the “R” stamp.² In addition, repairs must be performed in accordance with all applicable regulations, the National Board Inspection Code and the American Society of Mechanical Engineers (ASME) code. A registered inspector is required to determine if the cargo tank complies with the applicable specification.³ Any tank that is discovered not in compliance with the specification requirements shall be removed from specification service until appropriate repairs or modifications have been completed. Please contact Danny Shelton at 202-366-0476 for additional information.

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¹ This interpretation letter (Ref. No. 04-0124) can be downloaded at the following web address: <http://www.myregs.com/dotrspa/>

² A listing of repair facilities that have been issued an “R” stamp and are registered with the Department are listed on FMCSA’s web site at www.safersys.org, click on cargo tank search and enter the search parameters.

³ **Registered Inspector** means a person registered with the Department in accordance with subpart F of part 107 of this chapter who has the knowledge and ability to determine whether a cargo tank conforms to the applicable DOT specification.