

TerranearPMC Safety Share

Week of August 17, 2015 – Free Rigging

It is not uncommon for workers in the field to modify equipment so that a specific operation can be performed; even though such modifications are not approved or accepted by the equipment manufacturer. OK, so even though such a practice may not be correct or even safe, when more leverage is needed to tighten a bolt or to move an object a few feet, an easy fix is all too tempting. After all, it takes time to leave one's current location and walk to the tool shed and select the right tool. So a crow bar is jerry rigged and precariously attached to an object and VIOLA! Mission accomplished. No harm....no foul!

While the origin of the term *jerry rigged* seems to have been lost in the annals of history, lexicon experts believe that there is a connection with the term, jerry-built, which dates back to 19th century England, meaning temporary or shoddy construction: possibly derived from the name of a builder who was notorious for poor construction. An unconfirmed source from 1884 says that the phrase is in reference to a particular construction project on the Mersey River in Britain. During this time the term, "jerry" was a slang expression for "temporary," which came to be used of all sorts of makeshift and inferior objects.

One specific operation associated with jerry rigging is the practice of free rigging. This is the direct attachment or placement of rigging equipment (slings, shackles, rings, etc.) onto the tines of a powered industrial truck for a below-the-tines lift and does not use an approved lifting attachment.

Although free rigging is a common practice, it could affect the capacity and safe operation. The OSHA standard that governs the safe operations of industrial trucks and forklifts is 29 CFR 1910.178. Paragraph (a)(4) of this standard requires that "Modifications and additions which affect the capacity and safe operation shall not be performed by the customer or user without manufacturers prior written approval."

Employers must seek written approval from powered industrial truck manufacturers when modifications and additions affect the capacity and safe operation of powered industrial trucks. However, if no response or a negative response is received from the manufacturer, OSHA will accept a written approval of the modification/addition from a Qualified Registered Professional Engineer. A Qualified Registered Professional Engineer must perform a safety analysis and address any safety and/or structural issues contained in the manufacturer's negative response prior to granting approval. Such modifications require that machine data plates are changed accordingly. Of course the best alternative is to use a manufactures approved attachment.

Today, free rigging persists and it is doubtful that all forklift operators are asking for a manufacturer's prior written approval before they perform below-the-forks lifts. However, because free-rigging is such a popular and necessary application, many attachments are now made for powered industrial trucks specifically for below-the-forks lifts.

So, is free rigging safe? Many Construction Advisory Committee members agree that if a forklift operator complied with all the relevant requirements of the *Powered Industrial Truck* standard –



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including using certified and competent operators, keeping the load within the rated capacity of the truck, and to use extreme caution when tilting the load – then the practice most likely would be safe.



Illustration of free-rigging process

Subdivision CC, otherwise known as the Cranes and Derricks in Construction standard, applies to equipment that can hoist, lower, and horizontally move a suspended load. Does that equipment include forklifts? According to the standard's Scope, Subdivision CC does **not** apply to forklifts used exclusively to lift or lower a load when the forks are placed under the load

But does Subdivision CC apply when a forklift lifts or lowers a load that is suspended from the forks? The answer depends on what you use to hoist, lower, and horizontally move a suspended load.

Subdivision CC does not apply if the forklift's sole means of suspending the load is a chain, nylon strap, or other rigging wrapped around the forks. But, what if you attach a boom (with a winch and a hook) to the forks and use the attachment to suspend a load? Does Subdivision CC apply? In this case, the answer is "yes" because you're using the winch and hook to "hoist, lower, or horizontally move a suspended load." Most boom attachments fit directly over the forks, which makes it very easy to turn your forklift into a mini crane. And many different types of attachments are available from retailers. But just remember: the attachment must be designed and approved for such use by the forklift manufacturer, or you must have written permission from the manufacturer stating that that attachment can be used safely with the lift.

I get no respect...the other day I was standing in front of a big apartment house. The doorman asked me to get him a cab!

Rodney Dangerfield

