

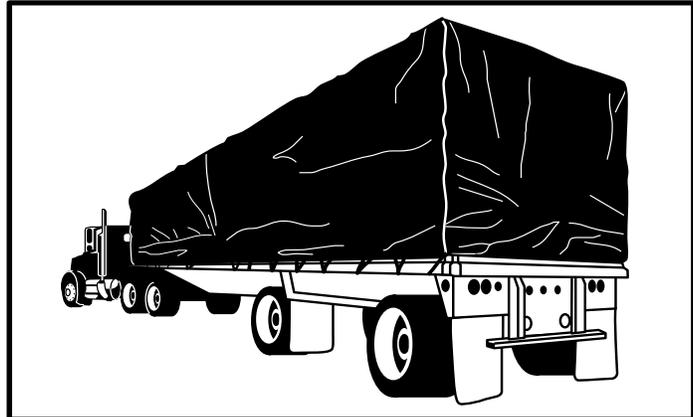
LOCTITE*Adhesives for more
reliable assemblies***APPLICATION CASE HISTORY****No. 112****LOCTITE® PRODUCTS REPLACE WELDING
IN ALL-ALUMINUM PLATFORM TRAILER**

The McCullough Aluminum Flatbed Trailer is manufactured in North Carolina, and Loctite products play an integral part in its assembly. Where most flatbed trailers have welded frames, the McCullough Aluminum Trailer uses the unusual design of bolting and bonding. Bill McCullough, designer and manufacturer, chose this assembly method for several reasons:

- to achieve greater cargo capacity over traditional flatbeds;
- to increase the ability to take road and dock abuse through flexibility; and
- to reduce labor costs normally associated with aluminum welding.

Every aluminum-to-aluminum joint is bonded with a Loctite Structural Adhesive and aluminum Huck bolts or stainless steel fasteners. This method forms flexible bonds and doubles the strength of each bolted joint on the trailer.

McCullough uses this Loctite Structural Adhesive as much for sealing out moisture, as for joining the parts. His assembly ideas are based on the fact the aluminum oxide becomes a lubricant between interfacing aluminum parts. To assure that no oxidation or movement can begin between such parts, all the Huck bolts are tightly press-fit, and the facing parts are coated with the Loctite Structural Adhesive, sealing out the moisture. In addition, many of the joints are caulked with an RTV sealant to seal out the effects of acids, fertilizers and other corrosive cargos the trailer may be hauling.



Instead of using elastic stop nuts wherever a stainless steel fastener is used, a flat washer and Loctite 262 Threadlocker is applied.

This has enabled McCullough to cut material and labor costs significantly, while eliminating the galling normally associated with stainless steel fasteners. Loctite 262 is a high-strength adhesive, especially useful where Grades 5 and 8 fasteners are subjected to heavy shock, vibration and stress levels, as on a loaded flatbed trailer. For ease of repair, assemblies treated with Loctite 262 can be disassembled with heat and hand tools.

In all cases where brake and air lines are connected with threaded parts, a Loctite Anaerobic Pipe Sealant with Teflon® is used.

The trailer is rated at 50,000 lbs. concentrated in any 10 feet and capable of forklift loading. The frame is guaranteed for five years, and is designed to carry heavy loads without being overloaded. McCullough built the trailer to last. "We think that a 20-year life is reasonable," he said. Using Loctite products the way Bill McCullough has is one way to ensure that life span.

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