



# Solving Paint Adhesion Problems

A farm equipment supplier's quest to find the right cleaning chemistry.

BY SCOTT FRANCIS EDITOR-IN-CHIEF

You've heard the old saying, "it's a dirty job, but somebody's got to do it." Well, that dirty job goes a lot more smoothly when you have high quality equipment. That's exactly what Bazooka Farmstar Inc. (Washington, Iowa) prides itself on. One of the agricultural equipment supplier's divisions is dedicated to manufacturing high-quality equipment for the liquid manure management industry. This specialized equipment consists of large pump mechanisms that are used to extract manure from a livestock farm containment lagoon and transfer to a site where it is injected into the ground for use as fertilizer for crop farming.

Bazooka Farmstar quality and continuous improvement manager Joe Huston explains, "With big livestock farming operations, you've got to have a waste management program.

Typically, you'll pump it twice a year. You need to get your lagoon emptied out and the manure pumped into the ground before the winter when you get the frost in the ground — you can't do anything with it once you have frozen ground. And then you have a short time span in the spring before you start to plant. In addition to getting rid of it, the manure also is very beneficial to crop growing. It has the nitrogen, phosphorus and potassium that everything needs to grow. So it's a benefit for the farmers that are doing the row crop farming."

Manure injection equipment includes a range of components, including the pumps themselves, but also hose reels, the hose and fittings, injection units, toolbars and various parts that enable agitation and conveyance of the manure. Given the corrosive nature of the environment and these



Bazooka Farmstar provides equipment for liquid manure management for the livestock and agricultural industries. Photo Credit: All photos courtesy of Bazooka Farmstar Inc.



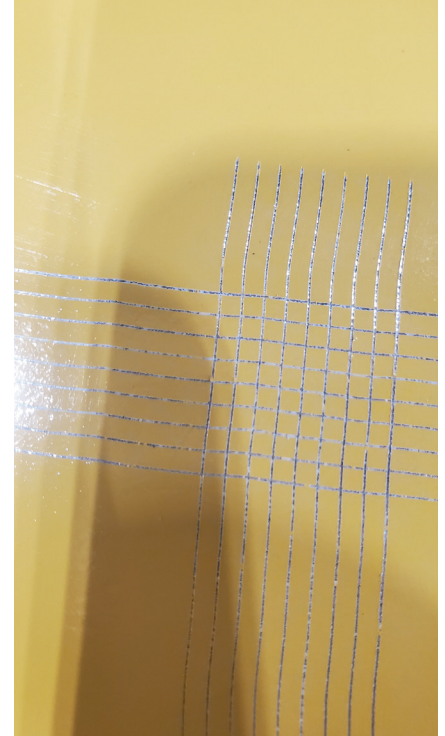
The company was experiencing paint adhesion problems and sought to find the root cause.



Full Throttle Outlaw Trailer







Sections of the topcoat and primer were peeling off, exposing the steel substrate.

BCI performed a series of tests to find the cause of the adhesion failure.

materials, the equipment needs to be durable and resistant to corrosion and the coatings are a key component in guaranteeing the service life of the equipment. When a problem arose with the quality of its painted products, Bazooka Farmstar immediately set about finding a solution.

“We were having large sections of paint peeling off of our equipment,” says quality technician, Chris Ousey. “It varied in severity. Sometimes it was one-foot sections coming off; other times smaller areas were being affected.”

“There was absolutely no adhesion to the substrate at all — you could peel it off and just hold it in your hand. The top coat as well as the primer came right off, and we were down to bare steel,” Huston adds. “We were scratching our heads like ‘what is going on?’ Chris was inspecting everything as it went through, doing a white glove test, wiping it down and making sure it was clean. But, we continued to have issues with adhesion.”

Farmers can invest several hundred-thousands of dollars in a manure injection dragline system, so quality is of utmost importance to Bazooka Farmstar. Naturally, a lot was at stake. The company turned to a colleague at DeJong Manufacturing Company (New Sharon, Iowa) for advice, who, in turn, recommended reaching out to Bulk Chemicals Inc. (BCI, Reading, Pa.) for assistance.

Jeff Paschka, who handles sales and technical service at BCI, visited the facility to assess the situation. Paschka’s initial tests suggested that an alkaline cleaner that Bazooka Farmstar was using for its cleaning process was not being rinsed off effectively.

Paschka suggested a new process based on new chemistry utilizing Bulk Bond 739SC – Rinse and E-CLPS 1700RA, as well as a new spray wand application system from PEM Corp. (Mankato, Minn.). Subsequent salt spray testing proved the consistency of BCI’s suggested process.

“When the salt spray test came back, it was very revealing as to what we needed to be doing,” Huston says.

With a new course of action, Bazooka Farmstar, BCI and PEM moved quickly. These changes, based on the new equipment and chemistry, were implemented in just 45 days. Huston and Ousey agree results have been fantastic and the paint adhesion problem has been completely resolved.

With 40 years in business, Bazooka Farmstar continues to grow rapidly, adding a brand new wash bay supporting its new process. The company says switching to BCI was one of the best decisions they ever made. “Having somebody that could help us with the root cause analysis in order to fix our actual issue made a huge difference for us,” Huston says. ■■■

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