Corrosion Protection Efforts Implemented by Thomas Built Buses on the Saf-T-Liner C2

Rear Emergency Door and Side Lift Door changed to galvanized steel to offer additional corrosion protection.

Introduction

This edition of the Carolina Thomas Bus Buzz (#111) is the first in a series to discuss new corrosion protection improvements to the Saf-T-Liner C2. Over the next several months, we will be discussing material and procedural changes recently implemented by Thomas Built Buses in an effort to improve the corrosion resistance of certain components and extend the service life of the bus. We will include photos whenever possible to illustrate the before-and-after results of these changes.

Background

This effort began several years ago with our visit to Watauga County when Toni Floyd was the Transportation Director there. At that time, we inspected different types of buses, service trucks, and wrecker trucks for the corrosive effects of the chemicals applied to our roads during inclement weather on those vehicles. Last year, Carolina Thomas followed up this initial visit by bringing a team of people to Avery County to meet with Brian King and his staff to inspect different makes of buses. Included were representatives from Thomas Built Buses, Freightliner Trucks, BASF Paint Company, Carolina Thomas and Randy Henson from DPI. We obtained road chemical samples from the State DOT offices. The samples were subsequently analyzed for their chemical makeup and tested for their effects on various materials used in school bus manufacturing.

Based on our findings, Thomas performed additional testing using alternative manufacturing materials in an effort to mitigate the corrosive effects of these harsh chemicals. The results were impressive.

The Present

Based on these results, Thomas is implementing a number of changes to its manufacturing processes and materials designed to greatly reduce corrosion in its products. While not promising that corrosion can be eliminated entirely – these are extremely harsh chemical conditions - Thomas is making every effort to respond to your requests to address the corrosion issue, and thereby extend the service life and reduce the cost of ownership of its buses. We will be sharing these changes with you as they are implemented, specifically pointing out whether the changes are standard or optional equipment.

The first change to be implemented as standard equipment on every C2 is the rear emergency doors and lift doors have been changed from cold-rolled to galvanized steel. While more expensive than cold-rolled steel, galvanized steel provides superior protection from corrosive

materials that sift inside a door or are tracked in the bus by passengers and come in contact with the door. We've included several before-and-after photos illustrating the positive results offered by the switch to galvanized steel after many hours of salt spray tests. (See below.)

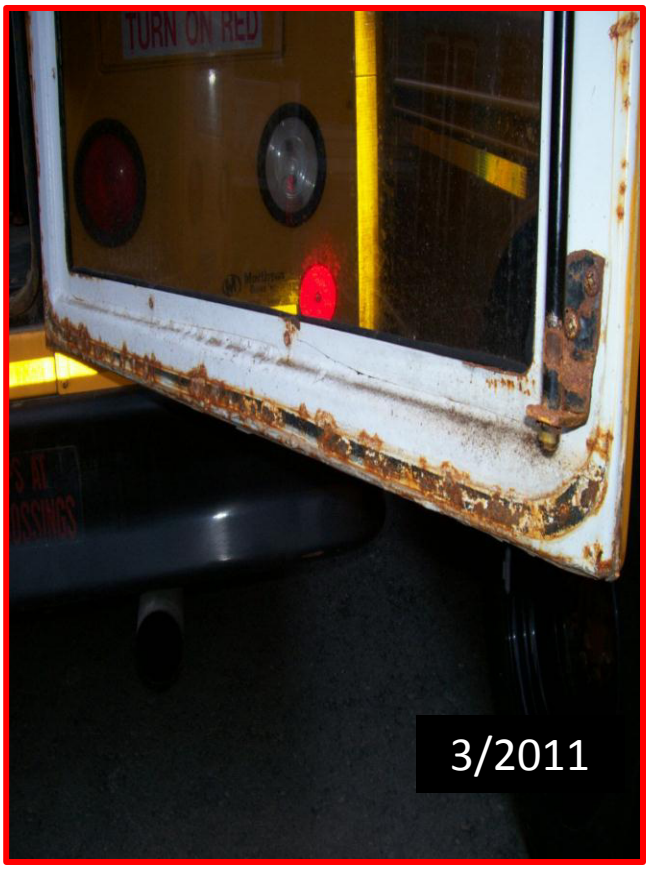
The great news is that all of the Saf-T-Liner C2s delivered into North Carolina in 2012 included this change. We hope that you are as excited about this change as we are. Look for additional product improvements in future installments of the Thomas Bus Buzz.

Special Thanks

With this being our first communication on this subject, we wish to extend special thanks to Watauga and Avery counties and their transportation staffs for taking the time to help us understand the severity of the conditions in which our buses operate. Special thanks also to Randy Henson from NCDPI who attended meetings with us and was able to share what he sees when inspecting buses in many of the "rust belt" counties.

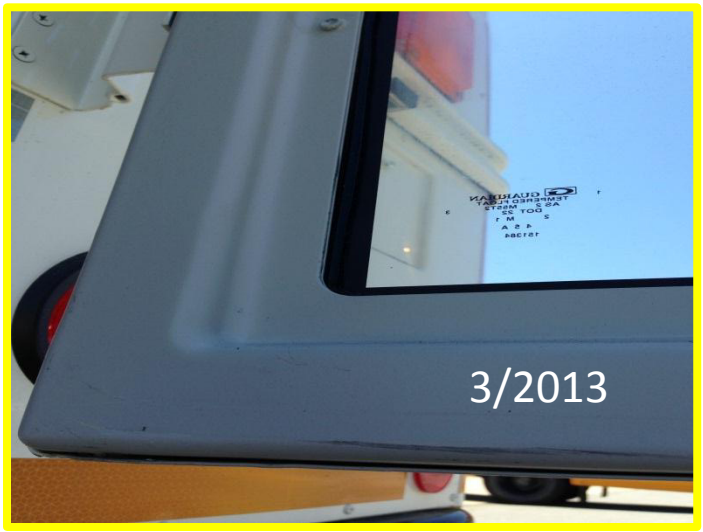
‘Before’ Photos. Corrosion effects on cold rolled steel material in doors.

Rear interior door rust shown after salt spray tests

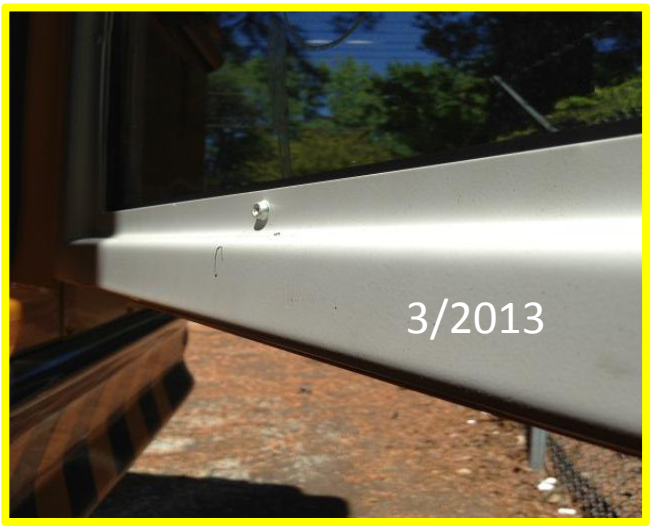


Rear interior door shown with rust perforation after salt spray tests

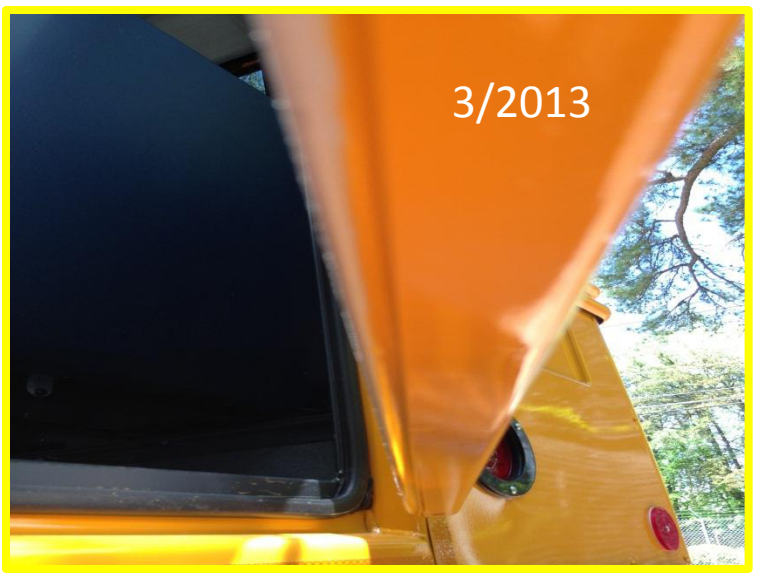
‘After’ Photos.
Saf-T-Liner C2 rear door and lift door improved with galvanized steel for superior corrosion protection.



Interior door skin after salt spray tests. Bottom inside corner of door.



Interior door skin after salt spray tests . Bottom inside edge of door.



Bottom edge of exterior door after salt spray tests.