

# The HO scale Bowser RS3 Project!

*As related by Lee English, CEO Bowser Manufacturing*

Developing and producing a quality model ALCO RS3 had been on my mind for many years. I strongly believed that a version, other than the Phase 1 version, would be very interesting to make and a good selling model. So I finally decided to go ahead with the project.

In October 2014, my staff and I finally measured the RS3 (\*Hammerhead version) that was preserved at the Rochester & Genesee Valley Railroad Museum. Then, in November 2014, the same group measured the ex-Delaware and Hudson RS3 at the Western New York and Pennsylvania Railroad. We even traveled to British Columbia's Alberni Valley Museum (Vancouver Island Canada) to view and measure another RS3 stored there. We were determined to ensure an accurate model. In addition, we made several visits to the scrap lines at the Delaware Lackawanna Railroad and Steam Town at Scranton Pa. In addition we received help from the Pennsylvania, L&N, Western Maryland, Nickel Plate, SP&S, Northern Pacific, Boston and Maine, N&W, and GB&W Historical Societies, many customers and other individuals. The response so far has been extremely favorable.

*\*Note – Hammerhead is a high short hood designed to house a steam generator for use in passenger train service.*

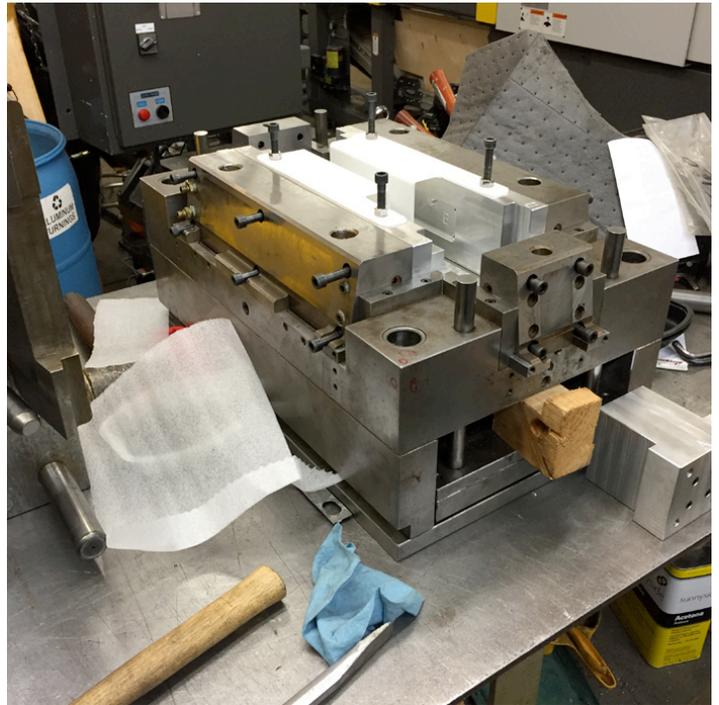
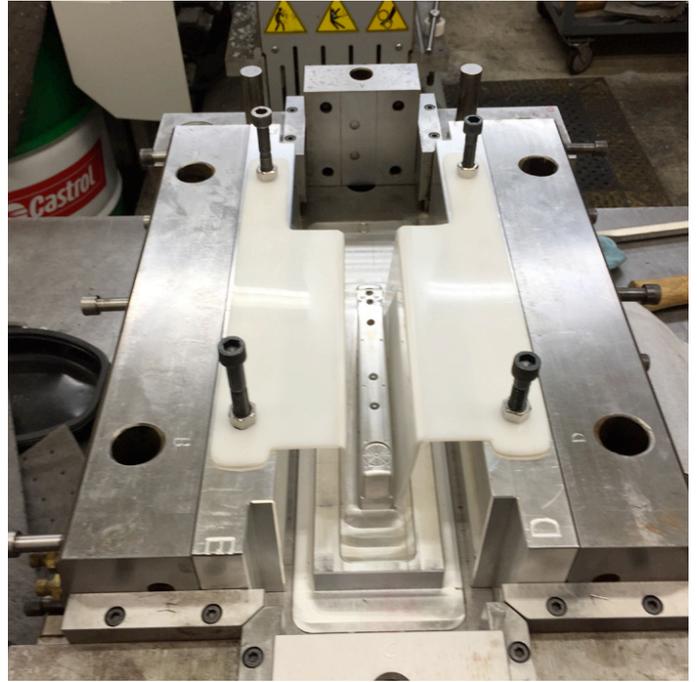
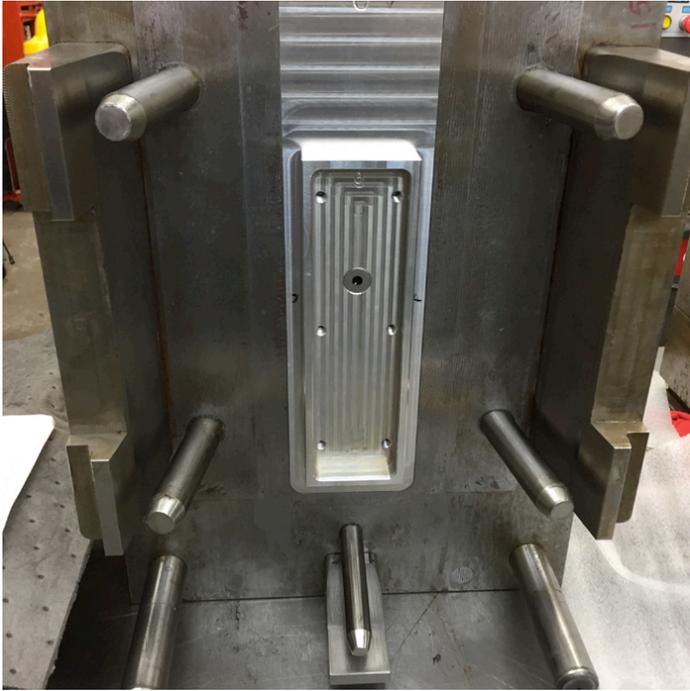
After much consideration, the decision was made to start with the Phase 3 and look-alike versions. We started with the main body and quickly found why other companies may not have been willing to undertake this project. So far we have 25 road names that we could produce but the photos show that almost all the bodies are different. So far we have 22 different bodies and I think it will be more.

Drawings and design effort took off. Boyer Machine, owned and operated by Ron Boyer, in Northumberland, PA is creating the molds and Bowser Most of the body parts will be produced right here in the Bowser factory. We obtained two Milacron Roboshot All-Electric Injection molding machines, the next generation of Artificial intelligence in injection Molding machines. The design of these molds permits us to change different parts in the mold to create different bodies without having to make a new mold for each body. However, we must be careful not to mold bodies that never existed. We could make a locomotive with Pennsylvania Railroad sides and Louisville & Nashville ends as an example. So we will have to practice some strict Configuration Management.

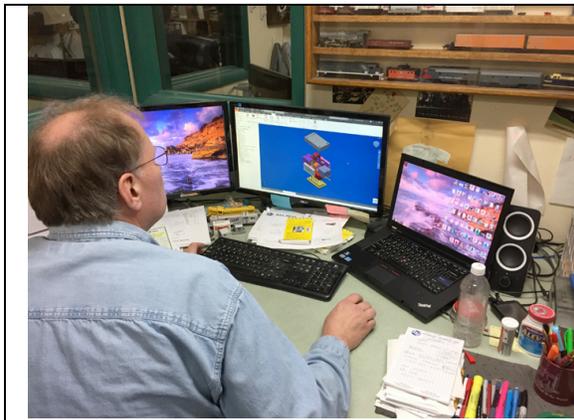
For the main body we have over 60 interchangeable inserts in the mold.

The first molded bodies were displayed at Trainfest (Milwaukee, WI) in November 2016. All 22 bodies were on display. Also shown was a mock up body with 3D printed cab, deck and fuel tank.

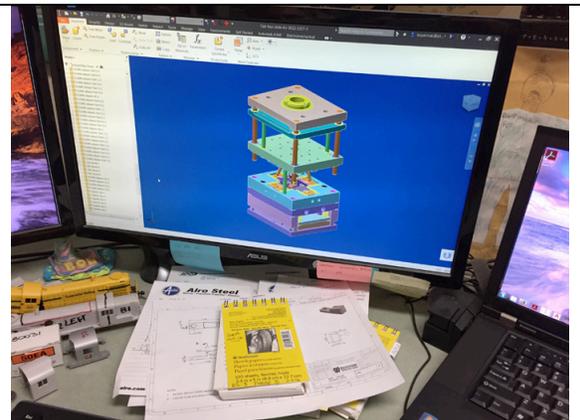
The next four photos show the mold base to hold the body inserts. When all assembled, the mold will weigh about 1500 pounds.



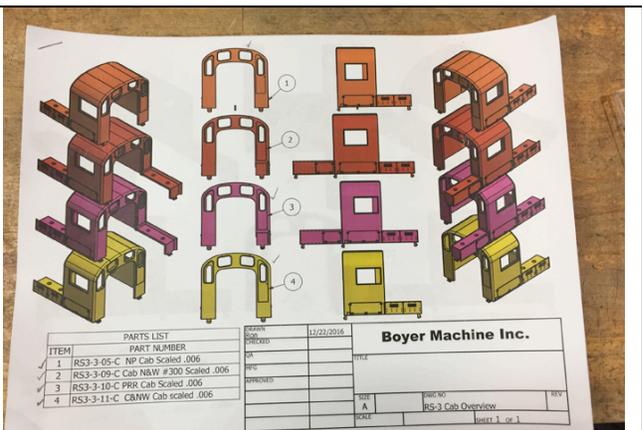
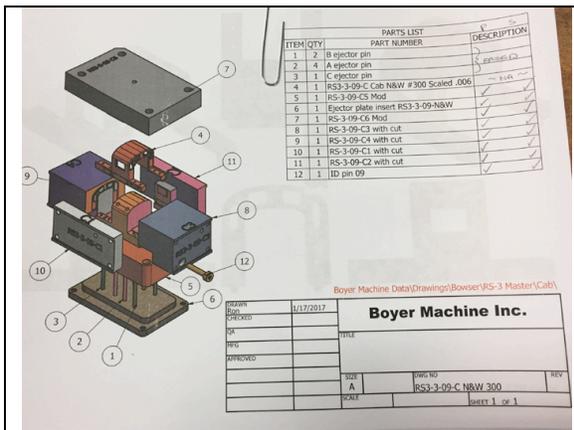
Below are some of the mold inserts for the main body RS3 Phase 3:



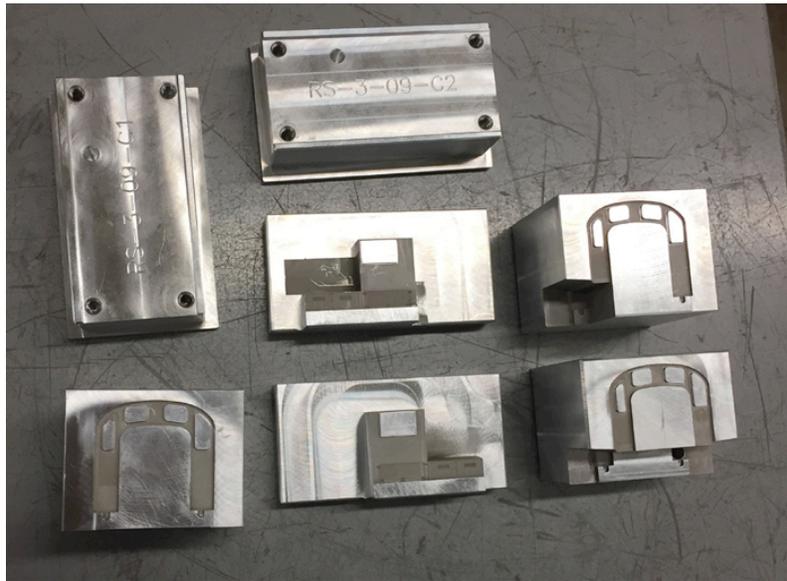
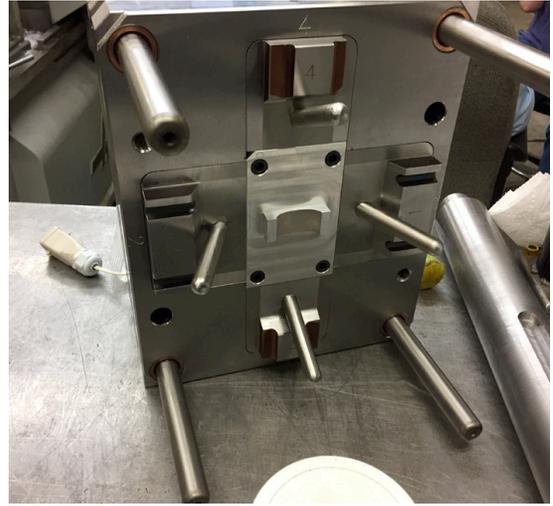
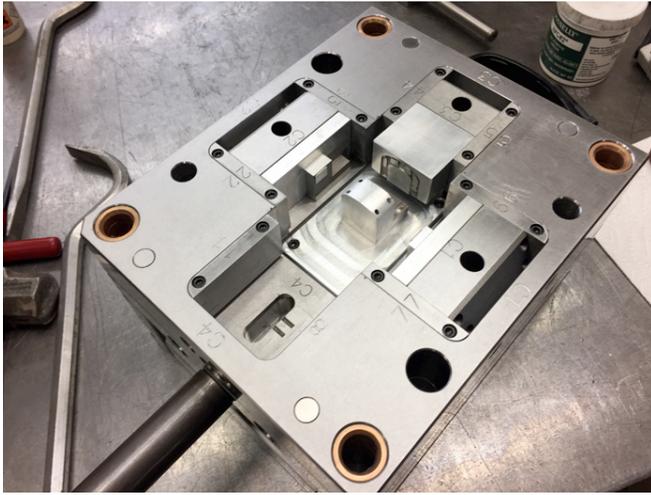
Ron Boyer working on the cab designs!



Cab Mold base



Mold base for locomotive cab. When assembled this is small but weighs about 250 pounds!



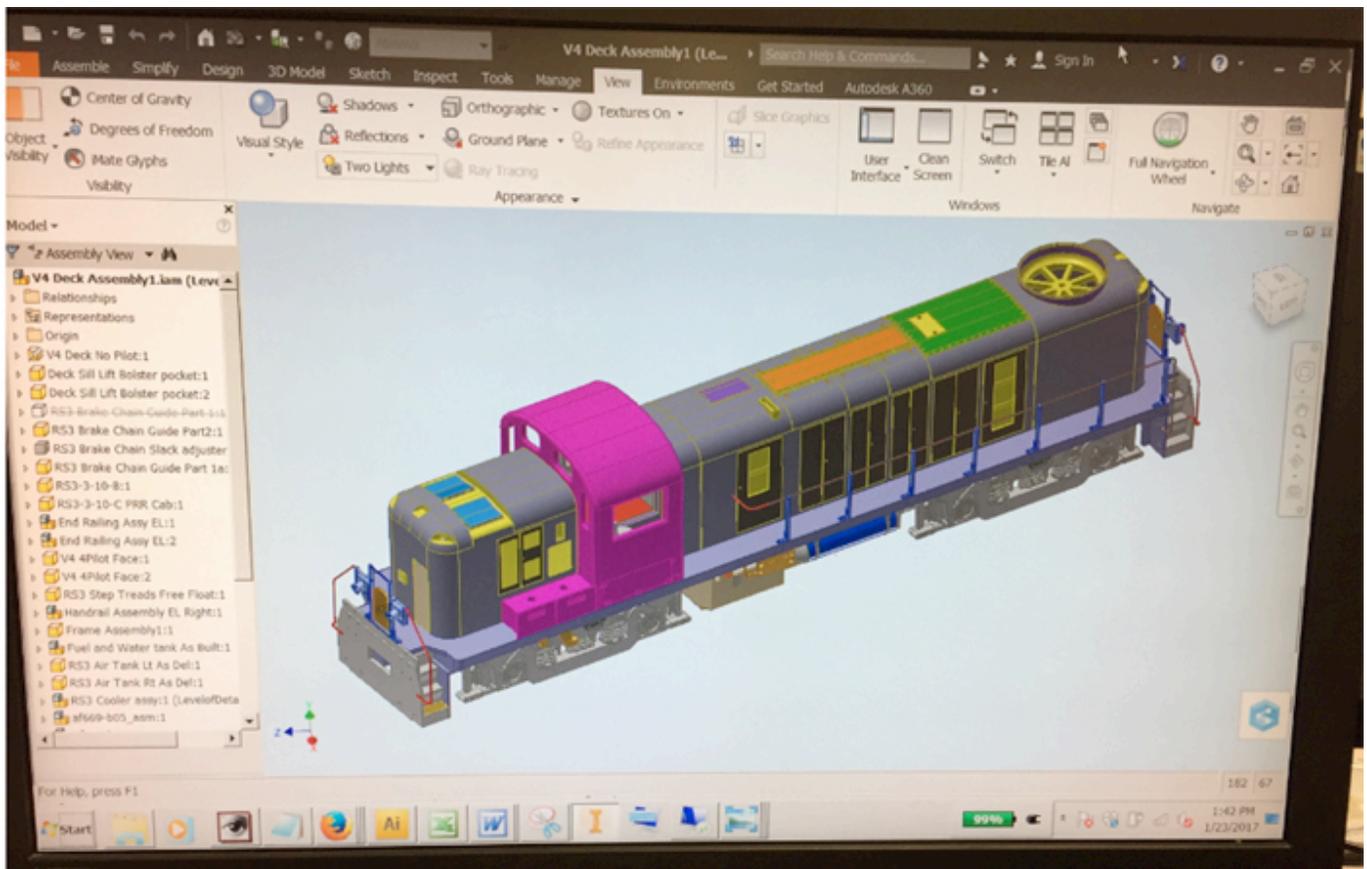
**Inserts shown above to make one cab. Core and roof are missing!**



**Electrodes to "burn" the details - micro grain carbon machined in the Hurco and use in the Agie 'GF'**



Below is the design drawing. Parts are a mixture of road names. But every piece has to fit perfectly. The program currently used is Autodesk Inventor, very powerful 3D design software, which is currently very expensive to either purchase or lease.



Right now, we are planning to make the following versions, so stake your claims quickly as some of you will want one of these unusual engines on your railroad:

- 1 - RS3 Phase 3
- 1 - RS3 Phase 2
- 1 - RS3 PRR Hammerhead
- 1 - RS3 Western Maryland Hammerhead
- 1 - RS3 Chicago Northwestern Hammerhead
- 1 - RS3 Canadian National
- 1 - RS3 Canadian Pacific Chop Nose
- 1 - RS3 British Columbia Railway Chop Nose
- 1 - RS3 Green Bay & Western Chop Nose
- 1 - RS3 Delaware & Hudson Chop Nose
- 1 - RS3 Rebuild
- 1 - RSD4/5 (Six-wheel truck version)

Lee K English,  
Bowser Manufacturing