

Down to Details

By Chuck Steffens

I always anxiously await the new releases, especially hoping the new JD and/or IH Precisions will be on display at the Ertl outlet store so I can see what type of customizing I will be able to do to them. This also gets me a little depressed because no matter how nice the new offering will be, I will not be able to buy any of the pieces/parts from the tractors without purchasing a complete tractor.

I have had luck in the past buying damaged tractors from Burkholder's, but that bucket is running dry. I also have had luck buying used or damaged tractors on eBay, but sometimes damaged tractors bring more than new-in-box (NIB) tractors. And there is always my growing customer base keeping me informed of deals



My pressure pot was built using a used three-gallon painter's pot.



The lid of the pot clearly states, "Do not pressurize over 60 lbs."

or parts, along with my fellow builders over at www.piratefarmtoys.proboards.com.

The major manufacturers seem to have little or no interest in helping the custom-built side of the hobby. They seem to blindly focus on the NIB customer, hoping us custom builders will just continue to buy that NIB tractor just for a set of wheels or fenders, spending \$100 or more under the assumption we will be able to use the rest of the tractor's parts somewhere else.

Now for the part suppliers we do have. Yes, they do offer a plethora of aftermarket parts, but they are mostly for tractors 30 years old or even older, which is more for the restoration crowd than the customizing crowd. For the customizing crowd, the selection is extremely dated and often a far lesser quality than what is offered by the major manufacturers.

Many of the parts they handle have not been updated in 20-30 or more years. I was flipping through a *Toy Farmer* from 1985-'86 and saw that Standi was intro-



My \$300 vacuum pump. I should have did some more research!



The pressure pot lid with the relief still intact but the paint hole plugged.

ducing the "new" Standi 20.8-38. That is going on 30 years now with basically nothing new since.

I may be overly sensitive about this topic, but I have found that the toys being produced today are tenfold the quality of the toys even 10 years ago and I feel this trend will continue. The continual onset of technology will make it easier to produce these greater detailed pieces at a reasonable price. With an ever-demanding customer wanting better each and every year, if any of these manufacturers went back to the detail level of 10 or 20 years ago, it would be the beginning of their end.

So, how do us custom builders stay with the times? One of the ways has been going to resin casting. I fought the battle against resin casting for quite some time, but eventually I gave in. I fought against it because I have had some quality issues with the parts I bought from other builders using resin casting, and there was a lack of knowledge about it.

Looking into many other options trying to produce a quality part at a reasonable price, I traveled six hours north to an injection-molding facility that had already been producing toy parts for the "aftermarket" and was informed they could not produce the quality I was looking for.

After many hours of talking with them, we decided that if I/we couldn't produce anything better than what was already offered, it would be a waste of time for both of us. I then talked with others about producing parts and had little luck. The one thing they all kept saying is "China." Well, I wasn't ready to go there yet.

So I accepted the fact I was going to have to learn resin casting! I did have some experience from the tires I had been producing, but these are different products and trying to find a product I like was a challenge.

In the past, I used Smooth-On products for producing my tires, so I was familiar with its line of products. After a few phone calls and talking with a knowledgeable tech, the company hooked me up with a resin known as 65D. This product is the closest thing to plastic I have found. In the past, most resin-casted parts I was exposed to were very brittle, but this product provided some flex, lessening the chance of breakage especially after the parts were painted and on final assembly!

Another problem I have encountered

with resin-casted parts were pinholes. Here again my experience with producing tires helped me with this aspect of the process. I have not been able to eliminate the pinholes 100 percent, but I have definitely reduced them.

Now the upside of resin casting is the limitless possibilities. You may lose a small amount of detail, but the parts you can produce are astounding! No longer will we be limited to purchasing an NIB item at full price just to part it out and no longer will we be limited to the lesser-detailed parts that are offered through the parts suppliers. Instead, we will be able to produce what we want. The sky is the limit.

Now don't get me wrong. There are some expenses involved with resin casting, but mostly in the initial setup cost. Even that can be lessened if you take some time and are a little handy. Another advantage is the repeatability. Once your mold has been built, it is good for 100 or more cycles. For example, if you are building a one-off corn planter and you are spending four to five hours building boxes and row units times the number of rows, it can really add up. With resin casting, you build it once and cast it, saving you hours!

From my personal experiences, some of the most valuable items you need for resin casting are:

1. A decent tech support to help you with product selection. There are thousands of options out there for producing molds and resins. Finding one that works for you is the best. Just because it works for me doesn't mean it will work for you. I have dealt with the Smooth-On company and have had some success, but it didn't come free or overnight. I have had more than one tech who didn't know or care.

2. Pressure pot! I can't express this enough. I have had product techs tell me that their product does not require pressure potting, but I have not seen the results they promised without it. You can purchase an NIB pressure pot, but instead of spending the money, I built my own. I bought a used three-gallon painter's pot on eBay for \$70. Then I added a shutoff valve and PSI gauge to it, and plugged all of the other holes except for the pressure relief. The pot I bought had a rating of 60 pounds, so I made sure I never went above that. Along with a pressure pot, but not nearly as important, is a vacuum chamber. I bought one when I got started,

hoping it would be the answer. I learned the hard way that it was far from it, but I believe it helps me produce better quality molds. But I don't know if it was worth the \$300-plus I paid for it.

3. Parts to produce. What I have learned is that you don't want to just produce parts that are available from the suppliers or from an NIB item, but instead produce something that is not available or hard to get.

4. Experience. You can't buy experience, so this is where I am going to try to help you. I am not an expert in this field, but I have had some success and I am hoping the information I give you will be enough to get you started. I am still learning and I am sure I will continue to learn until I find a better option.

So, next month, I will take you through the procedures I use to produce one of these products from start to finish. I will show you how and why I picked the item I did and maybe you will be able to use my experience to better your collection or even the hobby as a whole.

Maybe with the increasing availability of CNC machines and 3-D printing, resin casting may soon be a thing of the past. I do feel it will be a nice option for many of the collectors and builders today, if for no other reason than there is no computer programming needed! Only simple common tools are required!

Until next time, Chucky.

TF



Some parts that I have resin casted.



This is a three-point lever assembly casted for a JD 600.