Starting a 'Big' Build

New-in-the-box 5020.

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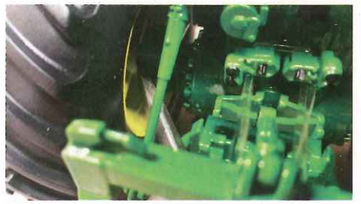
This month will be the beginning of a series on what I like to call one of my "big" builds—a project that can require between 30 and 50 or more hours to complete. Until now, my columns have covered projects that typically could be completed in a a few hours or even a day or two at the most. But with these "big" builds, things become more involved and there are more levels of customizing and scratch building.

So the "big" build I have for you is going to start a little simpler, but it gets the ball rolling on the bigger project. For a little background on this project, I have to take you back a few years. One day, Randy Abel called to ask me to build him a John Deere 700, which is the industrial version of the 5010. I never made any promises to Randy that I would build the tractor, but I never said I wouldn't either.

One day, I was getting a little bored and I still had the idea of that JD700, so I decided to give it a small amount of effort. Knowing that the hood was going to be my biggest obstacle, it was going to be my first priority. So I went to the "Chuckville Salvage Yard" to search for a 5010/20 hood that had some damage. After finding one, I used my bandsaw to cut the hood off right in line with the side screens. As you can guess, I was able to modify the hood and convert the rest of the tractor into the Industrial version.

That brings us to today. I have built the JD700, 4010I, JD600 and the California State Department 4020. The next tractor on the list is the JD700A, industrial 5020, but not just any JD700A. This model needs to have a ROPS, along with larger front and rear tires than were on the Precision 5020. The tires I do need for this project are available, but on a different tractor, the Precision 6030. So my plan is to take the front and rear wheels off the 6030 and test fit them to the 5020. If things go right, I will then install the 5020 front wheels onto the 6030, then use my own 20.8x38 tires, along with my heavy offset rear rims on the rear to make a more common row crop 6030.

To get this project started, I purchased four new-in-the-box 6030s and four new-in-the-box 5020s, as I am building four of the JD700As. But we will start with one! As I start sizing things up, there will be no problems with clearance issues by swapping the front tires. As for the rears, those larger 30.5x32 rear wheels on the 6030 might



A screwdriver is lined up through the three-point on the back of the 6030, getting ready to drive the wheel off.

Here is what the wicked barbed axle shaft of the 6030 looks like. This is why they were so hard to remove.

A simple bushing, to hold the 5020 wheel away from the wide front axle on the 6030, was made using a brass tube.

be a tight fit under the fenders of the 5020, but there is only one sure way of knowing!

The place to start the build is where the biggest problem may be, and that is the rear wheel swap. I have taken the wheels off both the 5020s and 6030s before. Both can provide their own challenges, although the 5020s are easier. I decide to start with the 6030. With the 6030 on my bench, I first try twisting the wheels in opposite directions. This failed, so I know the path I need to take.

With a long sturdy flat-tipped screwdriver, I carefully place the tip on the rim as close to the axle as possible. To do this, I needed to go through the three-point arms and close to the rest of the detailed parts of the 6030's rear. Once the tip of the screwdriver was placed on the rim, I then make some solid and swift hits to the handle of the screwdriver to drive the wheel off the axle.

I am starting to think Ertl is challenging us builders by continually making it harder to work on its toys, but we will win! If you have a helper to hold the tractor stable, it works best. I like to rotate the wheels every so many hits to try and drive the wheels off straight, but I don't know if it helps. It does limit the amount of damage on the back side of the rims.

After many hits to the back side of the rims, I had the rear wheels off the 6030. This leads to the 5020, which goes much better. I have had the 5010/20 wheels come off just by twisting and pulling them, but this was not going to be the case here. It was on to plan "B." On the 5010/20's wheels, Ertl installed caps on the wheels to simulate the black axles of the tractor. These caps are just glued onto the rim and they will come off with a little effort. I remove these caps with a vise grip. I place a paper towel or rag in the jaws and lightly grip the axle cap. With a little sideways pressure, the cap will be off. With the cap off, there will be a hole through the rim that will get you to the end of the axle holding the wheels onto the tractor. I then use a small punch to get inside of this hole. With a few light taps to the punch, the wheels should be off.

With the wheels off, we can proceed with the test fitting of the larger 30.5x32 wheels on the 5020. Well, the axle of the wheels on those 30.5s is quite a bit larger than the hole that is in the 5020's chassis. So with the help of my cordless drill, that problem is fixed. With the 5020 now drilled to accept the 6030 wheels, the test fitting begins. I slowly install the 6030 wheels and everything is going good. The fender clearance looks good. The only problem I see is that the wheels are set too wide, which isn't a big problem.

When narrowing the stance of the wheels on the 5020, see if the axle housing of the 5020 has extensions to hold the wheels, that were originally on the tractor, out far enough for clearance. These 6030 wheels will not need this extension, so with the help of my 2-inch angle die grinder, I trim this extension down, doing a few test fits during the process to make sure I didn't take too much. After a test fit or two, I had the correct width.

Now that the 5020 had the rear wheels I wanted on it, it was time to work on the front. This task has some easy and challenging moments as well. To remove the front wheels from the 6030, I examine the back side of the rim and spot three pins sticking through the back of the rim. Using my spring-loaded center punch, I place the tip on these pins and give them a

With the axle cap removed from the 5020 rear wheel, a punch is lined up to remove the rear wheels.

A before and after of the 6030 front rim.

With this combination of tubes and a bolt, the 6030 front wheels will now work on the 5020.

Finished 6030.

My Grizzly lathe.

The finished 5020 which will be the beginning of our much larger "big" build.

couple good hits. After a few hits, the pins push through and the face plate that is on the front side of the rim will push out and expose a screw that will need to be removed.

On the 5020, it is a little more of a challenge to find the pins, so onto the front of the rim. On the 5010/20s, the center hub of the rim is removable, but Ertl used half a tube of glue on each hub. To tackle this, I grab my heat gun and warm the rims, then let them cool, giving the rim a few heat cycles to loosen the bond of the glue. After a few of those heat cycles, I use my vise grip again with the rag in the jaw to pop the cap off. If all goes well, it will come off on the first try, but it may require a few more tries.

Once the cap has been removed from the 5020 front wheel, you will see a mushroomed head on the axle stem which the wheel is mounted onto. To remove the wheel, this mushroomed head will have to be drilled off. I use my spring-loaded center punch to mark the center and then proceed to drill the very center of the mushroomed axle, making sure not to take too much. After drilling a little, I again use my spring-loaded center punch and give it a test hit. If it does not go, drill it a little more. Don't drill too much off, because you will need this to mount the 6030 wheels to the 5020.

Now it will be time to mount the wheels on the opposite tractor. This time, we will start with the easy one. The 5020 wheels on the 6030 is easy. The hole on the rim of the 5020 wheel is smaller than the 6030's mounting pin. With the caliper, I measure the 6030 pin and drill the rim to match. With the rim drilled, I give it a test fit and find that the wheel sits too close to the axle, making the tire rub. This will be an easy fix. I use a piece of brass tubing to make a spacer that holds the wheel out until I have the stance I want. After the stance is set, I reinstall the screw that held the original front wheels on the 6030 and reinstall the cap with a little glue and the front wheels are installed on the 6030.

Now onto mounting the 6030 wheels on the 5020. The first challenge is that the 5020 axle stem is much smaller than the hole in the 6030 wheels. To win this battle, I use a combination of brass and aluminum tubing to shim the axle size up to the proper fit. After the proper fit has been established, I drill the center of the 5020 axle and proceed to tap it for a 0-80 bolt. With the shims built and the axle tapped, I give everything a test fit and find that the stance is too wide for my liking. The best way of fixing this problem is with a lathe. I have a small Grizzly lathe. After warming the tire and removing it from the rim, I chuck the rim up in the lathe and trim down the stem until I get the rim set for the proper stance.

With the stance achieved, I now have to narrow my shims and shorten my bolt. Ultimately, I had the 6030 wheels all of the way around the 5020, giving the tractor a much larger stance and getting me one step closer to building the JD700A and yet having the parts leftover to build a custom 6030, leaving no parts left over. I did install my rims and tires on the rear of the 6030, so I guess I do have those 5020 rear wheels left, but they won't be wasted!

Now onto the tool of the month. I mentioned my Grizzly lathe earlier. I purchased this 2-inch lathe, new from Grizzly for $350, with tooling a few years ago. This lathe has done countless little tasks for me through the years, but it is a little small for a lot of my projects. I wish I would have spent the extra money for a 4-inch, but it still comes in handy! The lathe does have the option of having a drill head, which I need to get. As for power, it is weak, but it is great for working in plastics. Working with metals will take some time, but it will get the job done.

So next time we meet, I will start converting this larger-wheeled 5020 into that JD700A.

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Living just northwest of Dyersville, Iowa, in the heart of farm country and farm toy replica country, Chuck Steffens has found a niche in the toy world, building high-detailed replicas in his spare time. He shares his experiences with Toy Farmer *readers, hoping to lead other collectors to personalize one of their own tractors. Comments or suggestions can be directed to csteffens@wildblue.net.*