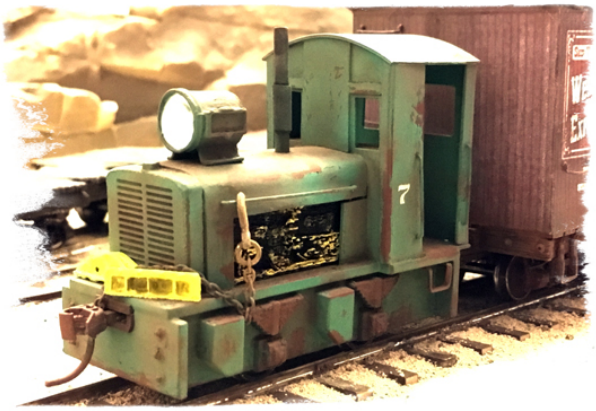
CJ's Inglenook Junction Critter #7



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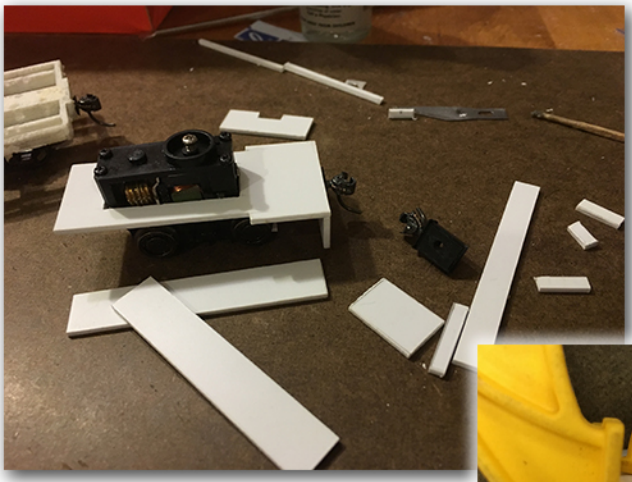

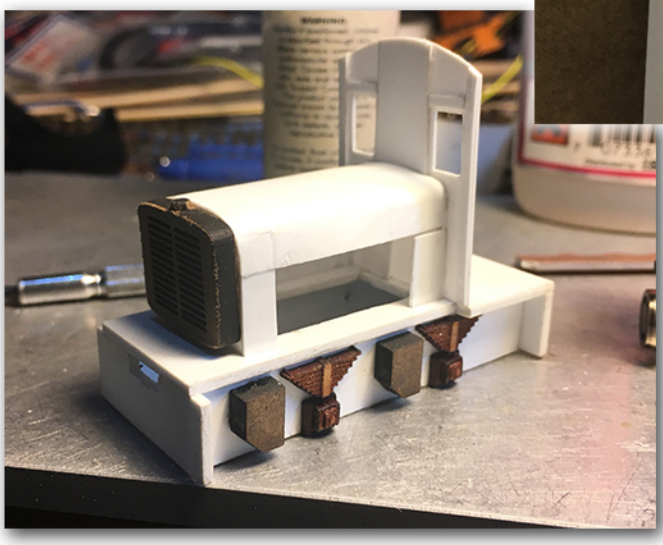

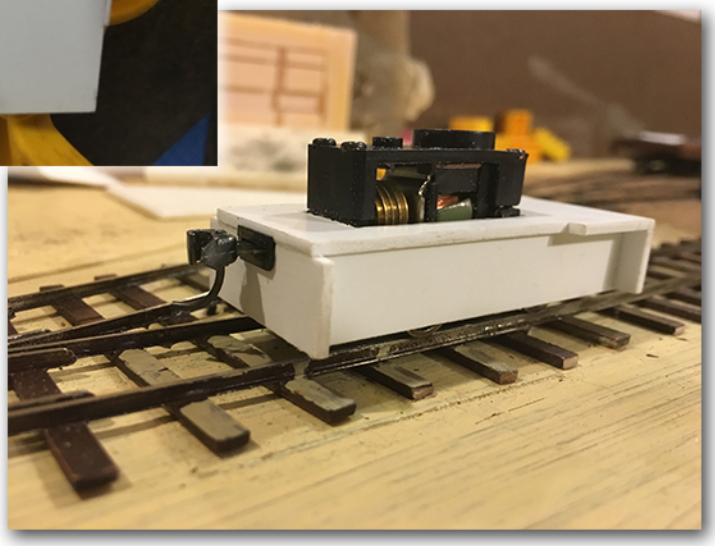

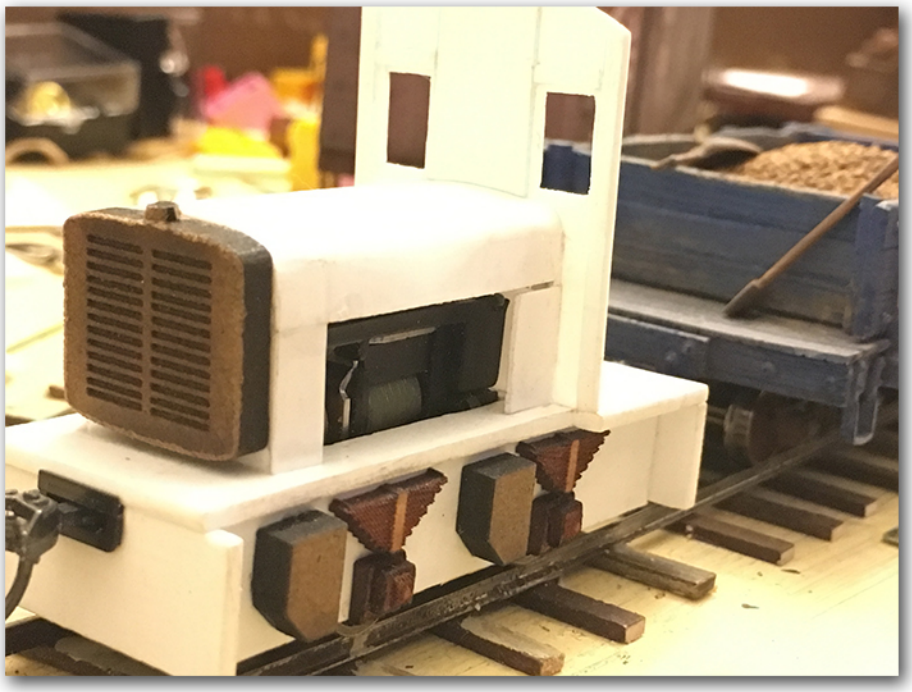

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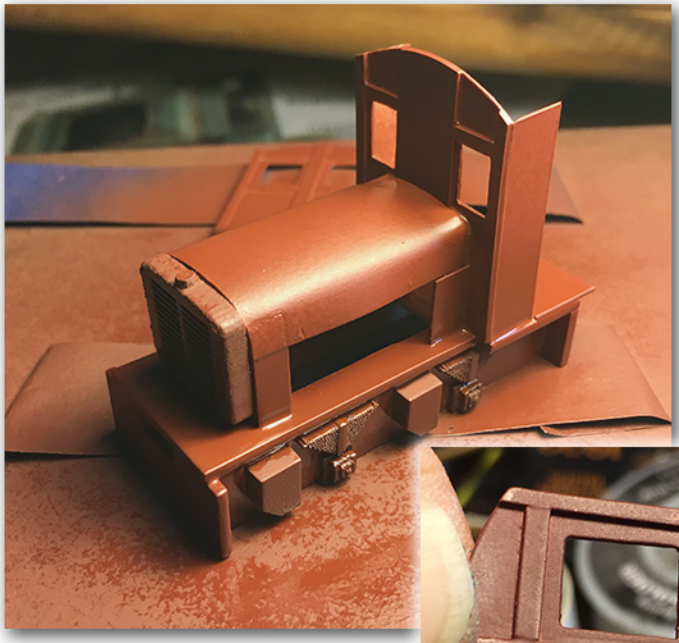

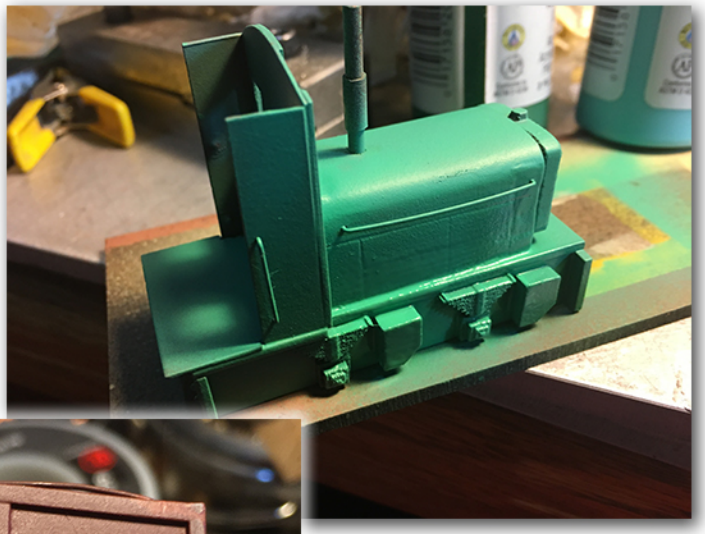

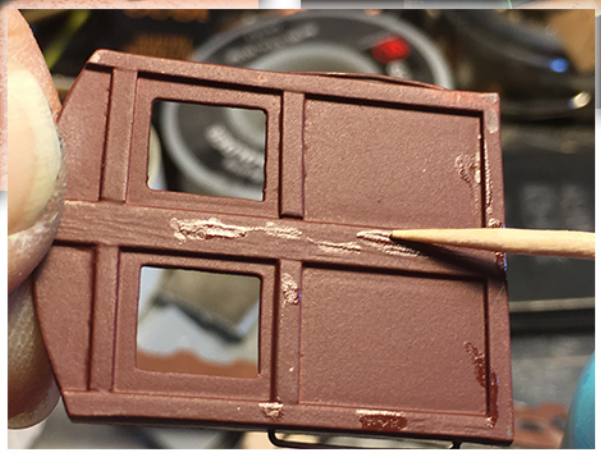

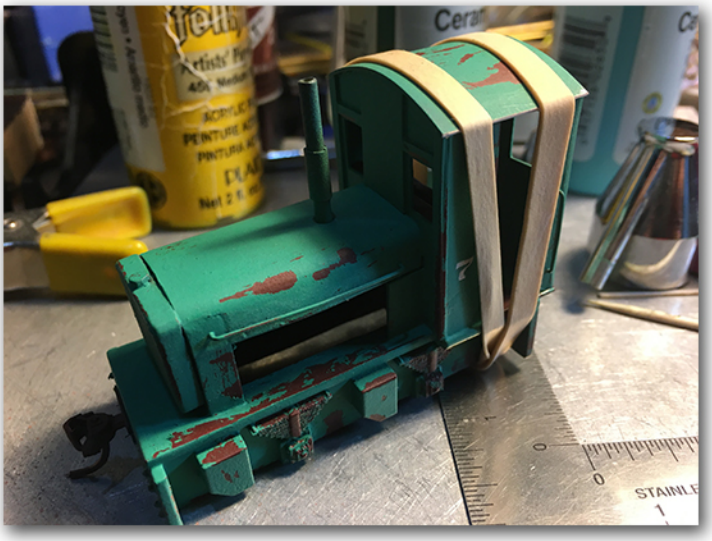

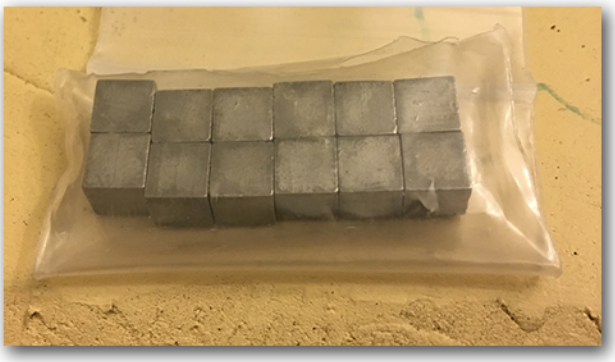

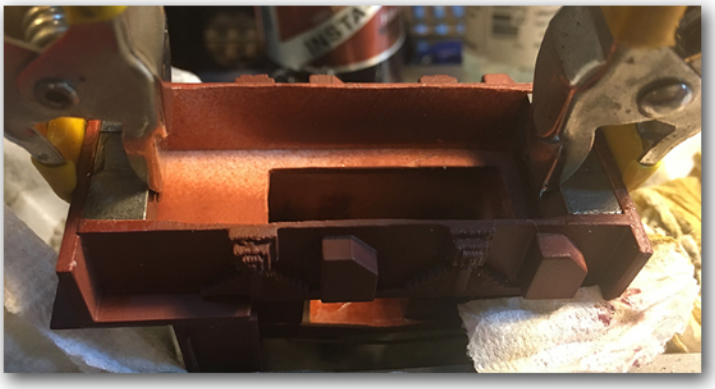

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Introduction:

Initially I was hesitant about scratch building a locomotive but after scratch building rolling stock I figured it didn't need to be too much different. The main difference being the gears and motor required to make it move! Besides that I used skills learned and developed from building rolling stock.

I started making an Inglenook Switching Puzzle that used rolling stock I scratch built and wanted/needed a very small engine for the puzzle. This turned out to be a fun project that I started and then took a break to finish my MMR. A year later all the work I had already done, including planning, worked beautifully, made it easy for me to finish, and am very happy with the results!

Construction:

When researching and purchasing items for the rolling stock for the Inglenook, I found a couple really cool small locomotives. As I looked at how they were constructed, I realized it would be easy to recreate my own version, modified to my own look and style, using sheet styrene cut and fitted to the right shapes and sizes.

I used a laser to cut 1/8th inch masonite to the shape needed for the hood. I laminated several pieces together to make it thicker. I then took a piece of styrene, heated it with a heat gun so it was soft and formed it around the sub-structure and clamped it until it cooled. This was harder than I thought but in the end it worked. After the piece cooled I took out the masonite because that is the space where the motor would go. As seen in the pictures thicker styrene was used to make the rest of the structure.

I also used the laser to engrave the springs and other detail items as seen on the outside. These are very visible in the pictures before it was painted. I wanted to be able to "see the engine" but had very little space to show that kind of detail. I used a photo of a real critter's engine and engraved that on 1/16th inch piece of wood. With it being painted I think it gives the illusion that there is something without actually having space for it.

Being made of styrene I knew the loco would be very light. It only used one of the motors from an HO donor mechanism so that didn't add much weight. I also had very limited space. Lead wheel weights could be used (free) but were relatively bulky. I found tungsten weights sold for Pinewood Derby cars that were in little cubes. I glued them together and found little voids throughout the model where they could be placed. Even though a little pricy they work perfectly! Without the extra weight the loco would bounce around the turnouts and couldn't pull all the cars. With them the loco does a nice job!

Detail:

Almost everything about this is scratch built and thus all the details added are extra. As mentioned above, I lasered the springs, and other detailed items to make them as real as possible. I've seen critters without lights but most have at least one so I added them. I also added the exhaust using two sizes of brass tubes. I added several hand rails to give the scale people an easier time climbing on the loco. I made a stirrup step using wire from staples. Chain and a hook was added as well as a re-railer for those times something unfortunate happens. Nut-Bolt-Washer castings were added to the front and rear pilots.

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Conformity:

Critters are 300-1000 hp light duty industrial switching engines. Usually built to a specific need to satisfy a customer's request and that results in these tiny types of engines having an odd, and often very different, look about them. Because of this, often no two looked alike. I found many different pictures of prototypes and models both that I drew inspiration from. As I have built it I believe it is very believable and referencing the included photos one can see what I mean. While assembling, I did not like the spacing I had planned on for the opening and extended the base slightly to overhang the coupler. I like how it turned out and believe that the same thing could have happened "in the field" if it were being built at a small shop on site.

It has the "small critter look" as it pulls the boxcar on the Inglenook. The spacing is tight and it's smaller than the rolling stock just as the prototypes are as seen in the included photos.

Finish & Lettering:

After a majority of the loco was built and details added, I spray painted it a rust (red oxide primer) color. After letting that dry several days I used rubber cement to spot it where the rust would show through. I had a nagging feeling that I should use my airbrush to paint the top coat. It has probably been 20 years since using it in college. Last year we had an airbrush clinic but I was only able to give it an extensive cleaning at that time. I knew it would take longer to complete the project but also knew it wasn't about how fast I could get it done. It was about the experience and what I could learn from doing the project. Besides, I wanted a custom color and what better way to mix and apply the color I wanted.

I was right, it did take longer but I'm glad I used the airbrush. It gave a nice even finish with a unique color that this Critter deserved! Several hours after drying I used the tip/side of a toothpick to rub off the rubber cement exposing the "rust" underneath. In spots where I did not apply the rubber cement but wanted some rust I was able to use my fingernail but that was harder. To add additional rust I sprayed the red from the can onto a board to puddle up and used a brush to apply that paint so it was an identical match.

I applied a road number with dry transfers. Many prototypes of the pictures of critters did not have a number but some did and I wanted one. I used a matching number form the set I used for the rolling stock. Several more days of drying then using chalks to blend all the weathering and rust it up a bit more.

As mentioned earlier the hint of an engine in the open hood area is engraved on 1/16th inch wood. The background area was painted black to look like the negative space and "empty" area while the high spots were dry-brushed with yellow to hint that there is machinery inside.

Scratchbuilt:

The entire model is scratch built except for a couple of small details like the lights, re-railer, N-B-W's, motor and couplers. The rest is wood and styrene cut with either an Exacto knife or the laser. As I've said before, "The laser is just a big fancy knife." I had to draw the cut files in Adobe Illustrator. I also used brass rod and tubes and a staple formed for the stirrup-step.

I am very please with how it turned out, and just like the prototypes, it is something very unique, and a perfect addition to my Inglenook Switching Puzzle to move the rolling stock around!

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Reference Photos