The O Scale Resource

NEWS, REVIEWS, INFORMATION TO USE

Volume 4 No. 3
January/February 2017

3D Printing a Western Pacific Boxcar
Make it Run as Good as it Looks
A Symmetrical Tilting Mechanism
T&P Baggage Dormitory Car Pt 2
Cleveland Show
Workbench
Sand Cars
Oddities
Shows, Meets and so much more...

THE O RESOURCE
NEWS, REVIEWS, INFORMATION TO USE
SCALE

Published Bi Monthly

The Model Railroad Resource LLC
Dwight, Illinois

Owner / Publisher
Amy Dawdy

Managing Editor / Advertising Executive
Daniel Dawdy

January/February 2017
Volume 4 No. 3

Welcome to the online *O Scale Resource* magazine. The magazine is presented in an easy to use format. The blue bar above the magazine has commands for previewing all the pages, advancing the pages forward or back, searching to go to a specific page, enlarging pages, printing pages, enlarging the view to full screen, and downloading a copy to your computer.

Front Cover Photo

We normally don't run a prototype picture on the front cover, but rather then seeing a large image of me, I thought you would enjoy a view from days gone by. Actually, I shot this while we were touring the backshops of the Strasburg Rail Road back in October. Photo by Daniel Dawdy

Rear Cover Photo

Avalon, TN engine servicing facility on the Richmond, Danville & Southern. Photo by Daniel Dawdy

Bill Of Lading

Page

From the Publisher's Desk

Last year at this time, my publisher's note mentioned scheduling my time a little better in 2016. While that didn't always happen, I have come to the conclusion that while I work well under pressure/deadlines, I don't always fully enjoy the project. Somehow, I forgot that traveling can put a wrench in even the best laid plans. Dan & I wrapped up our traveling this year with a trip to Phoenix to visit family and see some S Scale layouts after a trip to the Cleveland O Scale Show, where we enjoyed a nice dinner and presentation the night before a great show. This show always features some great bargains. Plus, Dan & I visit wineries and the Coach Outlet store on the way over. Between you and me, I think that's just to appease me when he comes across something he "can't live without" at the show.

This issue is a builder's extravaganza and features many projects for you to work on in the new year. Bill Basden brings us Part 2 of Building a Baggage Dormitory Car; Dan tries weathering sand cars and learns a few things along the way that anyone can benefit from; Tad Daito shows us how to minimize derailments using a symmetrical tilting mechanism; J. Chris Allan shares his adventure into the world of 3D printing and modeling to produce a Western Pacific Pullman boxcar; Bill Pistello converts a Lionel dummy GP-30 into a fully functional scale engine; Andreas Mehrl's workbench shows off scratch building; and "Scene Around the Layout" features Michael Culham's layout. While not featured in *The O Scale Resource*, be sure to check out Glenn Guerra's article in the October/November issue of *The S Scale Resource* where he explains the math behind building a conical (witch's hat) roof in Part 2 of Building an Industrial Scene.

So, get in the building mood, and while working on projects, don't forget about the model contest at the upcoming Chicago O Scale Meet in March. Check out the details in this issue.

2016 is almost over, winter has officially begun, and here in the Midwest, we've had our first snowstorm (or ice depending where you live) and bitter cold. The snow always puts me a festive mood, but I really could do without the negative temperatures. I would like to take this opportunity to wish everyone a Merry Christmas, Happy Hanukkah or simple Glad Tidings for this wondrous time of year!

Happy Reading & Happy Modeling,

Amy Dawdy

NEWS YOU CAN USE

Bill Basden from Delta Models says: New items to be released first quarter 2017.

DM-285 Fish belly under frame for 50' express box cars based on the PRB model.

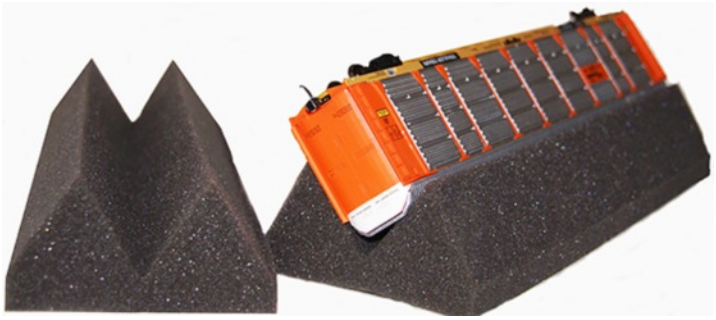
DM-288 fold out toilet with cushion top as used on early sleepers.

DM-319 Baggage/RPO mail sacks based on USPS postal specifications .

Also many parts for the Pullman Heavy Weight Sleepers based on PSC models. Check his website at deltamodelsusa.com

Chooch Enterprises is proud to announce their new Sea Walls! Available in two O Scale sizes. Click here for a video.

Steve Moore from K.I.S.S. Method Inc. Says: How about giving a Super-V Cradle or a set of Track Planning Tools to the train lover on your Christmas list, or yourself!



Take a look at all the goodies at www.kissmethodinc.com or find us on Amazon.

Scott Mann from Sunset Models says: The Production Schedule for our projects do change over time. We will keep an updated list of our projects and their production status to help you plan your finances, and or your purchases over time. Thank you all again for your support and patronage.

A quick Update of projects:

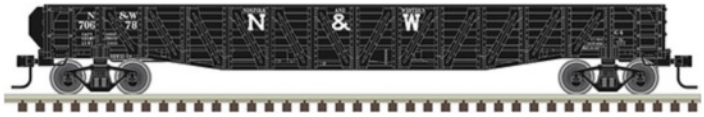
- SD79 Diesels arrived, shipped and are basically sold out. We are considering a rerun. Give us your suggestions.
- Announcing SP Hospital Car Paint Schemes.
- Sierra #38 Production is a GO!!!
- T&P 2-10-4 Production is a GO!!!
- E8/E9 Reservations are now full and closed. Any further reservations must be on stand-by. These are entering production now.
- GGD 12-1 / 8-1-2 Sleepers will arrive in January. Some roads are fully reserved, others not. See our web site for details.
- GGD O Scale Harriman Car Entering Production. Also, reservations closing soon.

- SP S-12 0-6-0 Production Finishes is DONE. Coming Late December. Reserve Yours now, only a few left.

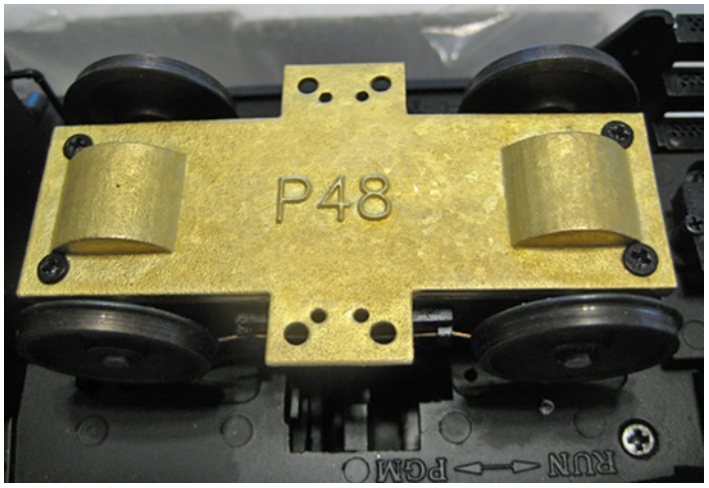
Atlas O announces new 1:50 Scale Ford® F-250 Pickup Trucks

Features Include:
Fully Detailed Ford F-250 XLT Models
Steerable Front Axle
Opening Doors, Hood and Tailgate
Spring Suspension
Engine and Underbody Detail
Realistic Rubber Tires
Combination plastic and die cast

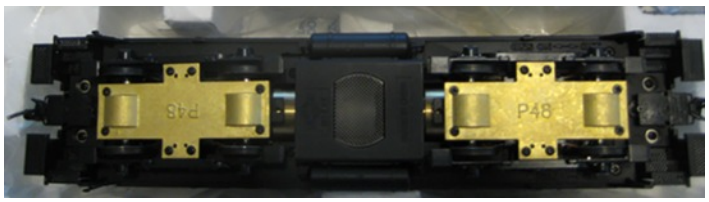
Also, new paint schemes for the Atlas O Trainman® 52'6" 70 Ton War Emergency Gondola. In the early 1940s, WWII was in full swing and materials were in short supply. This left the nation's railroads in a state of disarray, as many of the materials normally used for freight cars was redirected for wartime usage. The concept was to substitute wood for steel, wherever possible. This resulted in cars having a half wood, half steel structure. The Atlas O 52'6" 70-Ton War Emergency Gondola captures the look and feel of the composite gondolas right down to the texture of the wood along the side.



Jay Criswell of Right-O'-Way writes, Around one year ago, via multiple posts, on various forums, it became apparent there was a problem developing with the truck retainer plates on the Atlas SW8/9 (I've been told their SW1200 uses the same parts, but I can't confirm that at this time). The original factory retainers were made out of plastic and were beginning to deteriorate, crack, break, and, in general, fall apart. I, personally, don't see this as a design flaw but merely a fact of life when we depend on plastic components for critical parts.



While investigating the opportunities for direct replacements, many modelers asked if new plates could be made to facilitate Proto 48 conversions and another version for the use of 145 tread wheel sets used for regular O Scale retrofits. Two people quickly jumped into the venture to help. Jim Read volunteered to do the CAD work, and Terry Van Winkle stepped up with providing 3D prints and getting RTV molds created. Once Jim & Terry worked their magic, I took the molds to my caster, Valley Brass & Bronze, and



had him cast up samples for me. It took three tries to get it right, but we're now able to offer lost wax cast brass retainer plates. One is specific to a Proto48 conversion, the other is for the previously mentioned 145 tread.

One important thing to note, because these parts are metal, it is critical to watch for shorts. I personally have seen aftermarket replacement axle/wheel sets that, once installed, were not centered properly in the

truck. To fix the problem, I had to move the axle gear upwards of .0600". Not difficult to fix, but critical for satisfactory operation.

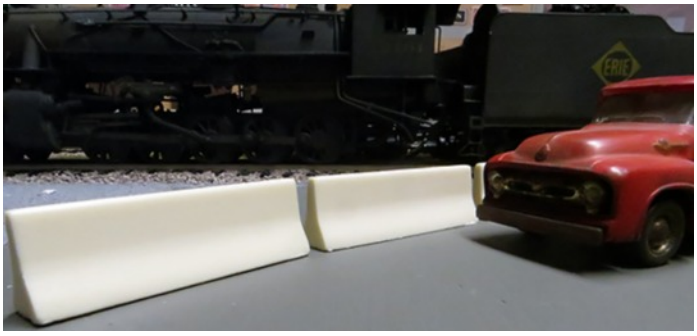
These parts are being offered by Right-O'-Way and cost $50.00 per set with shipping included.

Rusty Rail has a new release. Here is a scene of a model CAT 30. As you can see, the radiator has been removed and is laying on the ground. This CAT can be setting in a field turning to rust or behind a tractor repair shed. The possibilities are limitless. The casting is unpainted. Check out all the detail throughout. Measures 4" by 3" by 1 1/2" tall.

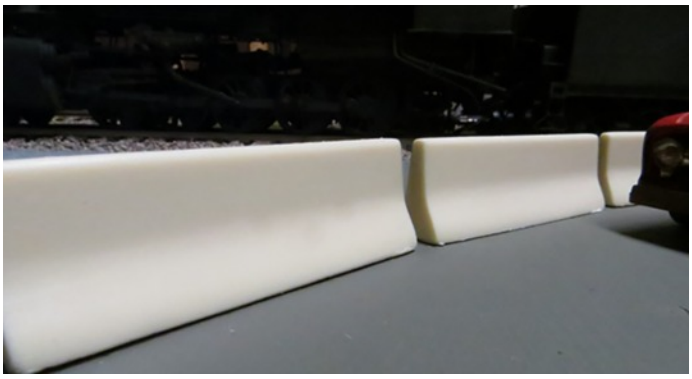
New from Scale City Designs, Headrest Covers. Next time you look through the window of your passenger cars, think what's missing? That's right, Headrest Covers! Scale City Designs has you covered! This is a quick and easy to do upgrade and will fit pretty much any brand passenger car seats out there. We did a few seats on a B&O car to show just how they really upgrade the interior with before and after shots. Each Headrest Cover set comes with 90 pcs and is coated with a peel and stick material. So you

literally just take your car apart with the few screws, clean the seat, peel and stick the new headrest cover and reinstall the shell! Makes a great evening project and completes the interior nicely.

Also, we have been busy putting a new 3D printer to work with the release of Concrete Construction barricades. These barricades are nice and smooth and cast in durable resin. We apologize for not having them painted and weathered for the picture, but they literally just came out of the mold. They are approx.



2.6" wide x .75" Tall. They will come packaged 6 pcs for just $9



Click here to order from Scale City Designs.

Andre Garcia from River Leaf Models has some new offerings.
Hairpin Fence: Used in a vast type of buildings from family homes to cemeteries.

This fence was found in passenger stations too, blocking the passengers from crossing the track, encouraging them to use the footbridge.

River Leaf Models recreated this interesting detail in "O" scale keeping the accurate dimension. Features: one inch tall and five and a half inch length each section. Six sections in total per sheet. Made from laserboard material to allow curved shapes. Price $19.95

Mosconne Bail Bonds Building: normally operates day and night in the other side of the tracks.
With a very reduce footprint this building offers a nice character.

Features: Sturdy 1/4 MDF construction, 4.00" wide 6.50" tall and 3.50" deep, Engraved front acrylic window, windows shade and security gate. Instructions and signage in our website. *Free custom name engraving.*

Price $64.95. Visit our website for more information at www.riverleafmodels.us.

Altoona Model Works is taking preorders for Omaha Station This will be a Cast urethane kit with mix of laser cut wood & plastic parts.

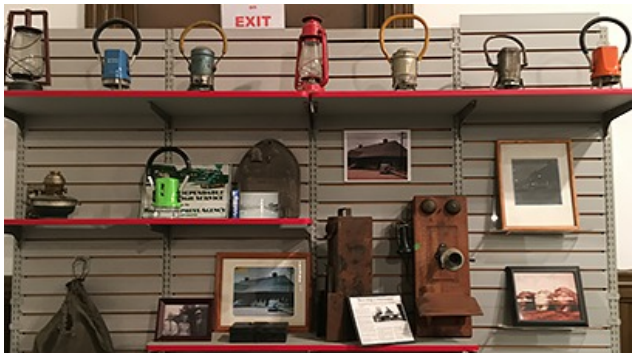
Model features a removable base and will have optional lighting and super detail kit. Model is a prototype of station in South Omaha used by Union Pacific. The model base foot print total is 35” x 9”, some shorter versions will be made by reducing the freight side of building. Also, a few pre builds will be custom made. Limited run of 20 or so. Kits will be made in summer of 2017.

See the Model at Chicago O Scale Meet in March, 2017. Visit www.altoonamodelworks.net for details or our new website: altoonamodelworks.us coming soon.

Cleveland O Scale Show

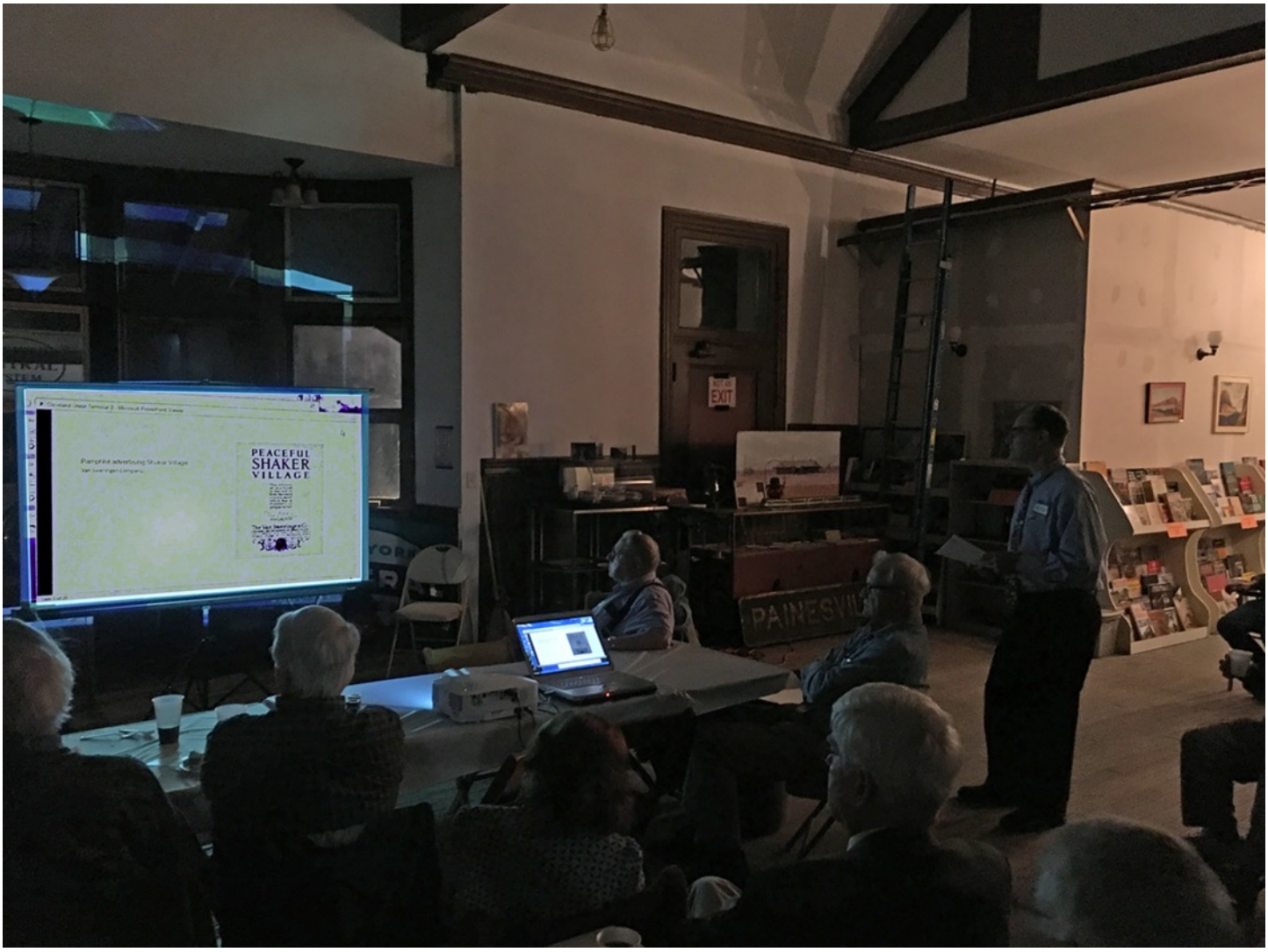
Amy and I made the trip out to Cleveland again this year to attend the Cleveland O Scale Show. Although a week later than normal, the weather was great. This year, Sam Shumaker was able to line up a neat location for the Friday night dinner. It was held in the old NYC Painesville Depot, now The Painesville Railroad Museum. Check out their Website and see the progress they are making. The dinner was catered in and the food was very good. The depot is being restored and is a beautiful piece of history. I am not one for fancy banquets, but this Cleveland dinner has always been small and enjoyable. It's a great place to meet up with old friends, just talk and enjoy the evening. This year's speaker was Tom Pappas talking about The trains that served Cleveland Union Terminal. While the station was dark for the presentation, a couple of freight trains passed just outside, giving a surreal feeling to the night. Let's take a look at this years activities!

Miscellaneous historic items on display in the depot.



Inside of the Painesville Railroad Museum. Much progress is being made on the rooms.

Dinner is served.



Tom Pappas presenting "The trains That Served Cleveland Union Terminal".

Many years and a lot of work!

Let the show begin!

A nice variety of items.

Items for every budget.

There's always deals to be had. You can do as little or as much extra work to these as you want. O Scale does not have to be expensive.

Neil Gage, Jr., Vice President, and Mike Goguen, President, of the Southern New England Model Railroad Club representing the 49th National O Scale Convention for 2017 to be held in Enfield, CT.

Joe Foehrkolb and Carl Johnson, old friends solving the world's problems.

Amy hiding behind items we brought from the Harmon Monk Estate.

Our friends from O Scale Trains were also there.

Good to see Pat from P&D Hobby Shop at the show.

Rich Yoder had his display and was taking reservations.

The hosts of the Cleveland show, Janet & Sam Shumaker.

Texas & Pacific No. 300 Baggage Dormitory Car Part 2

By Bill Basden

Editor's Note: This month, we continue a multi-part series of articles by Bill Basden on his building of a Texas & Pacific Baggage Dormitory Car. Last issue (The O Scale Resource November/December issue), Bill covered the prototype information.

Part 2 of this series consista of tools and equipment used, along with part layout and the start of fabrication. It is my intent to show you what I use and not to say "my method is best"; if what you do works for you, that's great. I hope you will find something useful that will help you in future projects. All my major tools where accumulated over a 50 year period. You could not go out and purchase it all at once now as it would cost upwards of $50,000 all at once. I decided early on you have to have good quality tools to do great work, so this is what I did. For example, it was in 1966 I purchased a Foredom flexible shaft machine that lasted 45 years. So with that in mind, I replaced it with a larger one of the same brand since they are expensive, but do not wear out.

The other items I have are German lathes and mills from Emco Maier that I purchased in 1993 and they are still going strong. I had Unimats, but could not do good work in O scale so I went German and increased to a larger 5" size . If you are going to make a major purchase like this, you want to get all the accessories at that time, as they will soon become hard to find. In the pictures, I will show other things I use in the sundry types of tools and the various fixtures made for doing car body fabrications.

I also have a great 13" x 13" metal shear that allows us to cut up to .032 thick brass in 12" lengths, I put off buying one of these for many years. Finally the price drop made it more reasonable, once I had this, I found that I used it for 90 percent of the metal work needed. http://www.accucutter.com/3001.htm

Also in the mix of tools are several versions of rolling bars and bending brakes. Over time, I have made many assembly fixtures for brass. One example is a solder fixture to solder those pesky two-piece Kemtron ends.

When I start a new project, I gather up all the raw pieces that will go into the fabrication. I am a firm believer in buying in bulk quantities – believe me it helps. I use brass floors that are precut for me 18 floors at a time .032 x 2.5 x 20.5. The other brass is 36" in length so it's cheaper to do this. Also 12 x 1 2 x .020 brass sheets for car sides are cut as needed on my nice metal shear. By doing this, it makes things go faster. I hate to have to stop and wait for something I may not have, but it does still happen at times.

My whole thing about model trains was simple to me. I like to run trains, but did not want to build a layout. There are a dozen layouts in my area that I can run my trains at. But, my current layout is 20" x 12'. I have always been a builder and collector, and leaned towards Passenger car models. I have other models that are geared towards the passenger cars in the form of locomotives. I do have some steam, but mainly diesels. With the advent of the decal situation, I have become selective in my purchases of models and my available decals to use. I just hate to have a model painted and not finished.

I had about 50 Kemtron roofs in flat form, but have a friend who formed them for me using his 10 ton press and metal die. It sure made it easy to build car bodies.

Now, before we open the door and enter the workshop, I want to mention the diamond emblem on the door. (Figure 1) This is a real T & P cast bronze 26 x 14 x 1.5 emblem from a steam locomotive that was mounted on the feed water heater up front. It weighs 60 lbs and is a real toe masher – trust me I know! It was given to me by my friend, Larry Sokol. Now for the 1000th time, thank you Larry. If I did not say this I would never hear the end of it.

Welcome to the workshop

Figure 1

Figure 2

(Figure 2) Workshop area 9' x 18' work space. The photos are laid out to give you a view from left to right working around the room and back to the door. The countertops are 30" high, and this makes for a very nice height from a computer chair to work. You will see in the photos I have utilized the space to maximize the best usage of the equipment.

Figure 3

(Figure 3) This cabinet contains a lot of detail parts along with our trove of brass passenger trucks, We have about 70 pair from the major manufacturers who have made trucks over the years, including Kemtron, Sunnyside Shops and Wasatch. These are the best trucks to use for my types of cars, as they average 3.5 lbs each.

Figure 4

(Figure 4) This cabinet contains our large supply of metric screws, Pittman ball bearing motors, fabricated motor brackets and couplers. Through the years, we have standardized what really works to have a nice model that operates.

(Figure 5) This is the main counter area where the majority of the assembly work is done. I use draw liner material use as a cushion to work on. Inset below right shows the Weller soldering station we use for most of the soldering work.

Figure 5

Figure 6

(Figure 6) This counter is our secondary work surface were we do all the car side layout and soldering assembly of the car sides to the roof.

(Figure 7) This is a raised area that has our 3 gallon L&R ultrasonic cleaner underneath. This comes into play for clean up and painting.

Figure 7

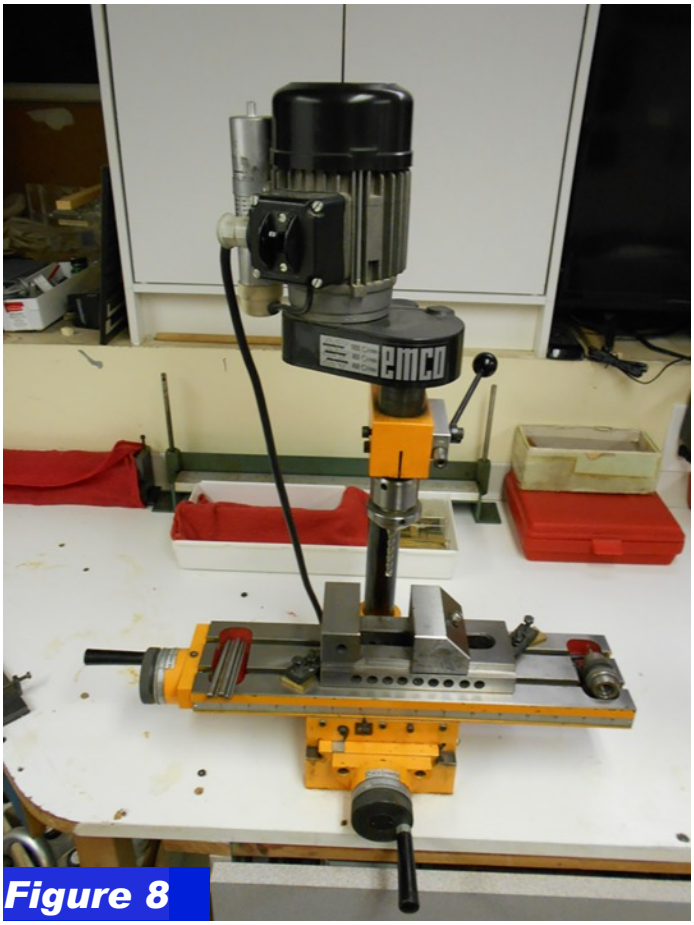


Figure 8

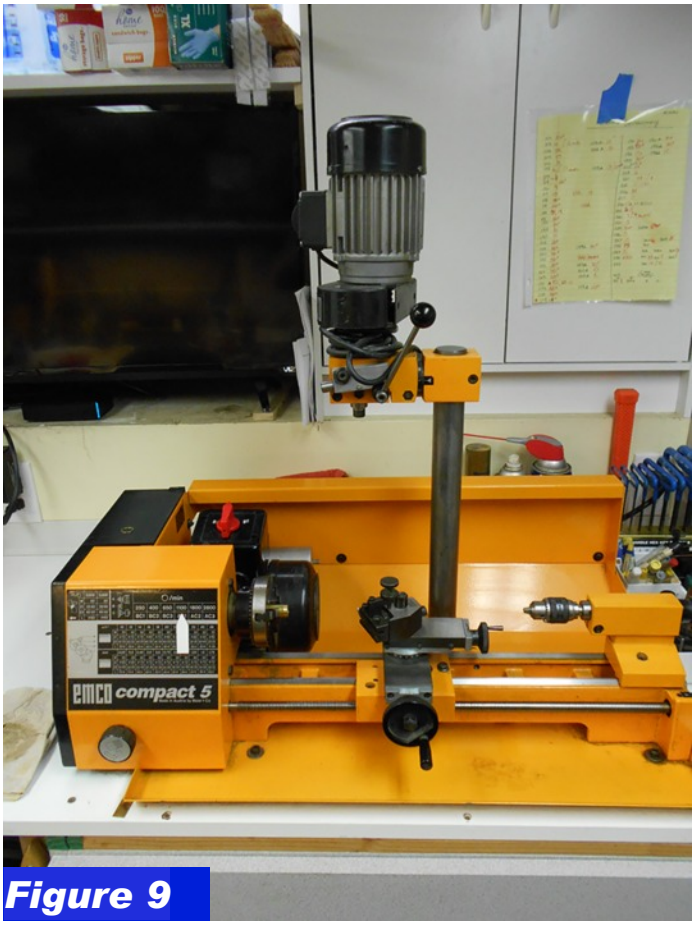


Figure 9

Figure 10

(Figure 8) Emco C 5 uni mill table and milling head table size 3 x 15 with x y movements. Interesting to note is that the head is made in Germany and the table is made in Spain – both have excellent quality. This is used for metal work and to make cast resin masters. Both the lathe and mills are the inch versions, however, they did come in metric as well. The lathe can be purchased on the secondary market, but the mill and table are hard to find. Shown in photo are various Tommy bars and wrenches to change out accessories as needed.

(Figure 9 and 10) Emco Maier German 5" lath with vertical mill head. We use this if we have our other mill with a set up to do repetitive work and do not want to remove the set up. As you can see, this has the ability to make screw threads as needed by changing gears. You can also see in the photo to the right of the lathe, various tools, fixtures and drill chucks.

Figure 11

(Figure 11) Various accessories and fixtures for the lathe and mill. I purchased everything available at once as they will become hard to find in the future an will be three times the price. Many lathe and mill accessories can be used on both machines, along with die holders for making screw threads from turned brass blanks. Sometimes, certain types of trucks will require special screws for mounting to the floor bolsters. This was true with this project. Because of the 6-wheel trucks, it required the screw head go to the inside the car which also required a cast resin insulating bolster with clear screw hole.

Figure 12

(Figure 12) This is our mini torch set up runs on oxygen and propane. We use this for some heavy side to roof assembly.

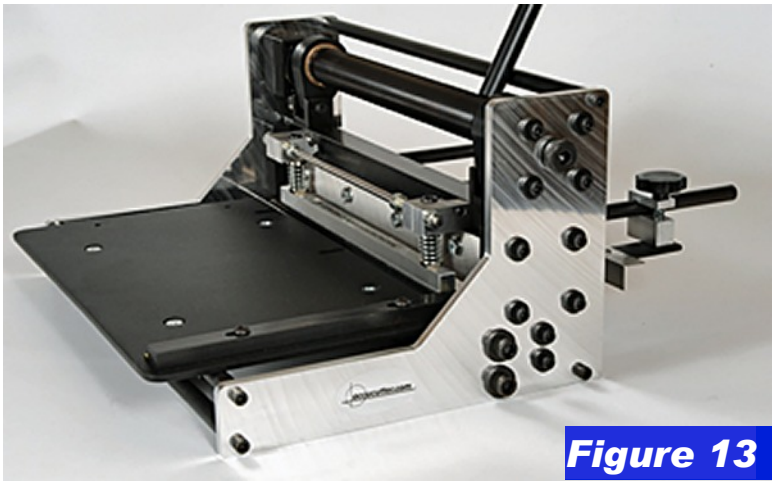


Figure 13

(Figure 13) This is the 13 inch metal shear used for all large metal pieces like car sides and interior walls. This is a very expensive tool, but makes fabrication go faster. It also helps cut down on waste from other methods we used. If you are interested, here is the link to the website. This will cost you around $900.00 including shipping. Acucutter 3001 EVO type.
http://www.accucutter.com/3001.htm

Now, for the rest of part 2 in this series, we will deal in some car side layout and prepping of the floor. As I said in part 1, I use calipers along with proportional dividers to measure a drawing and transfer it to the brass side sheet. Doing as much work as you can as a flat sheet, makes assembly go better. You will pre-drill all holes before you start soldering up the sides to the roof and ends.

The series of photos below shows the floor that has been pre cut to O scale. It is .032 x 2.5 x 20.5 long. Use Dykem layout dye to mark where you want to mark your work lines, both width and length. A 2.5 CL would be 1.25 from edge of brass and 10.25 for the length. The location of the metric type screws are .150 from the edge, and most cars use eight screws. Now that I have done that, I will mark for screw locations and use a punch to help with the drilling of the screw hole and also the truck bolsters. The screw used for the floor are 2mm, 2.6mm and 3mm for the trucks. I also like to screw the built up center sill down and then solder it up, making it really strong. The center sill is built up from C channel .125 x .250 and angles .187 x .187.

Figure 14

(Figure 14) With dial calipers starting to make scribe lines for trucks and screw locations.

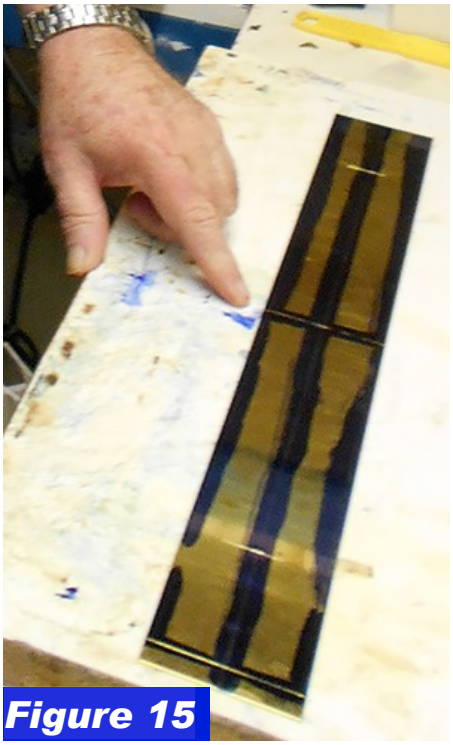


Figure 15

(Figure 15) Floor length centerline has been established, from here.

(Figure 16) Sets truck centerline 2 places x 7.437 to equal 14.875 or 59' 6".

(Figure 17) Scribing for the 2 mm floor screws .150 from edge.

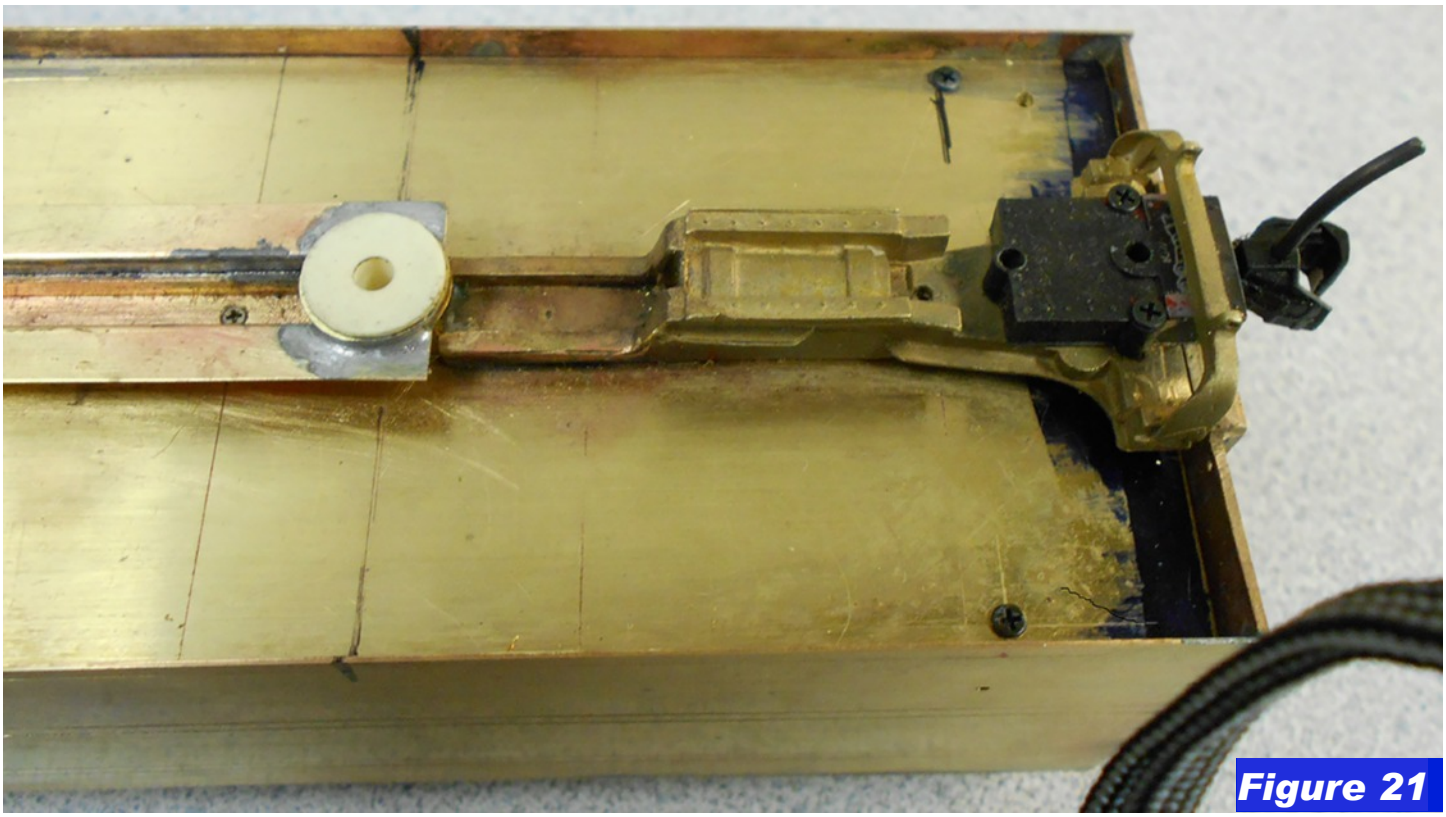
(Figure 18 and 19) Use a sharp punch and hammer for screw holes. This works well when you go to drill the various holes needed in the floor. With the car body assembled, the floor is set on top of the angles and held in place for drilling. I drill a pilot hole through both the angle and floor for the 2 mm screws to secure the floor to the brass side angles. This method assures all holes will line up together. Now, one final step on the floor holes, use a 2mm clearance drill for all holes. The holes in the angle are tapped for 2 mm.

Figure 18

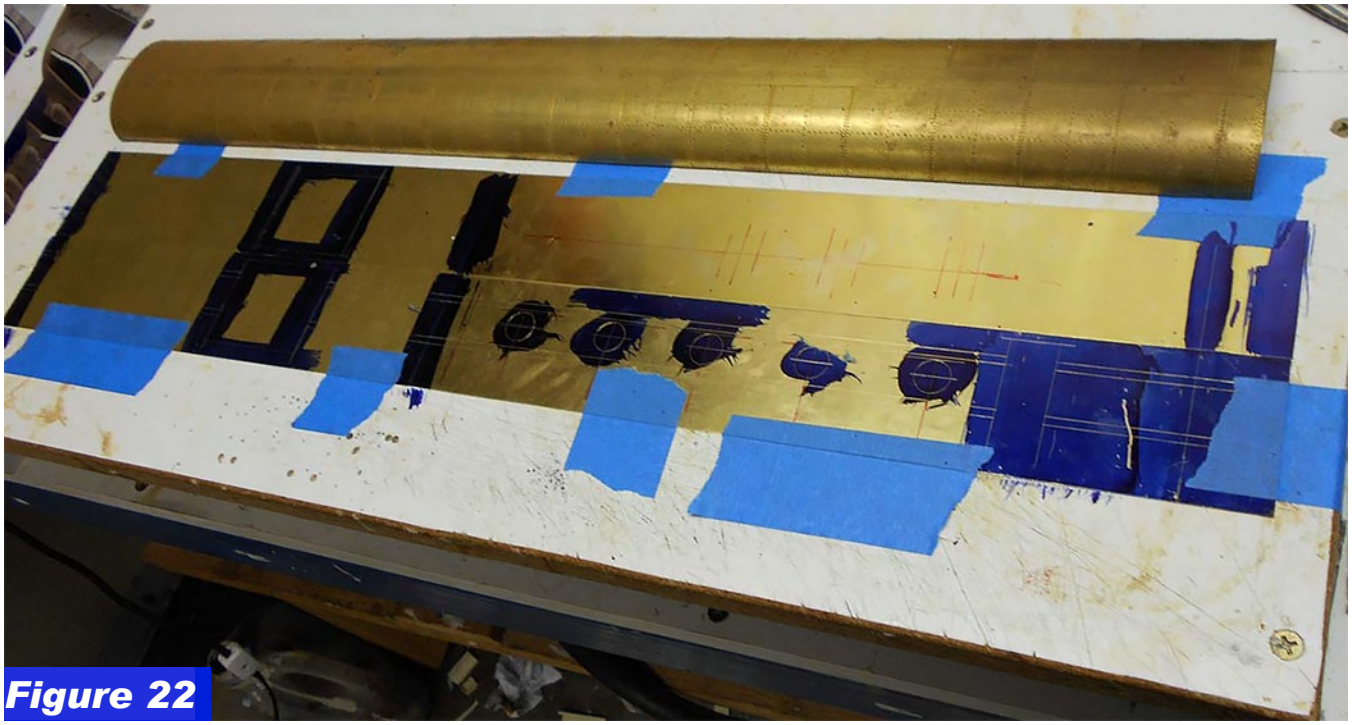
Figure 19

Figure 20

(Figure 20) Tools used:
Dykem layout dye,
machinist square,
scribe and hammer.



(Figure 21) Image above shows the assembled floor section with built up center sill and resin cast insulating bolster. It was done this way because of the 6-wheel truck type. With the Dykem washed off, you can see the scribe lines as show in figures 14-19.



(Figures 22, 23 & 24) The beginning of the car side layout using the methods as shown in the floor layout. All of this plays into the entire project for this and any of my other cars being considered. The blank sides have already been cut and soldered up to the correct length needed. Both sides are butted together to do the layout and taped to the work surface with blue tape. All material used on the sides is .020 thick 260 brass (half hard). The roof is a Kemtron pre-rolled by my friend with a 10 ton press.

Once all the scribe lines are done, the hard work begins to take place. Cutting out the openings for the windows, doors, side length and pre-drilled misc holes. The major tools used are shown in Figures 25 and 26 (next page). The larger areas, like windows, are gang drilled as close to the scribe line as possible, removed and filed to the line. Dial calipers are used to check for the correct size opening as we move along. If I think the vertical mill works best for this, I will use it as well, but most times not. **Yes this is a lot of work!**

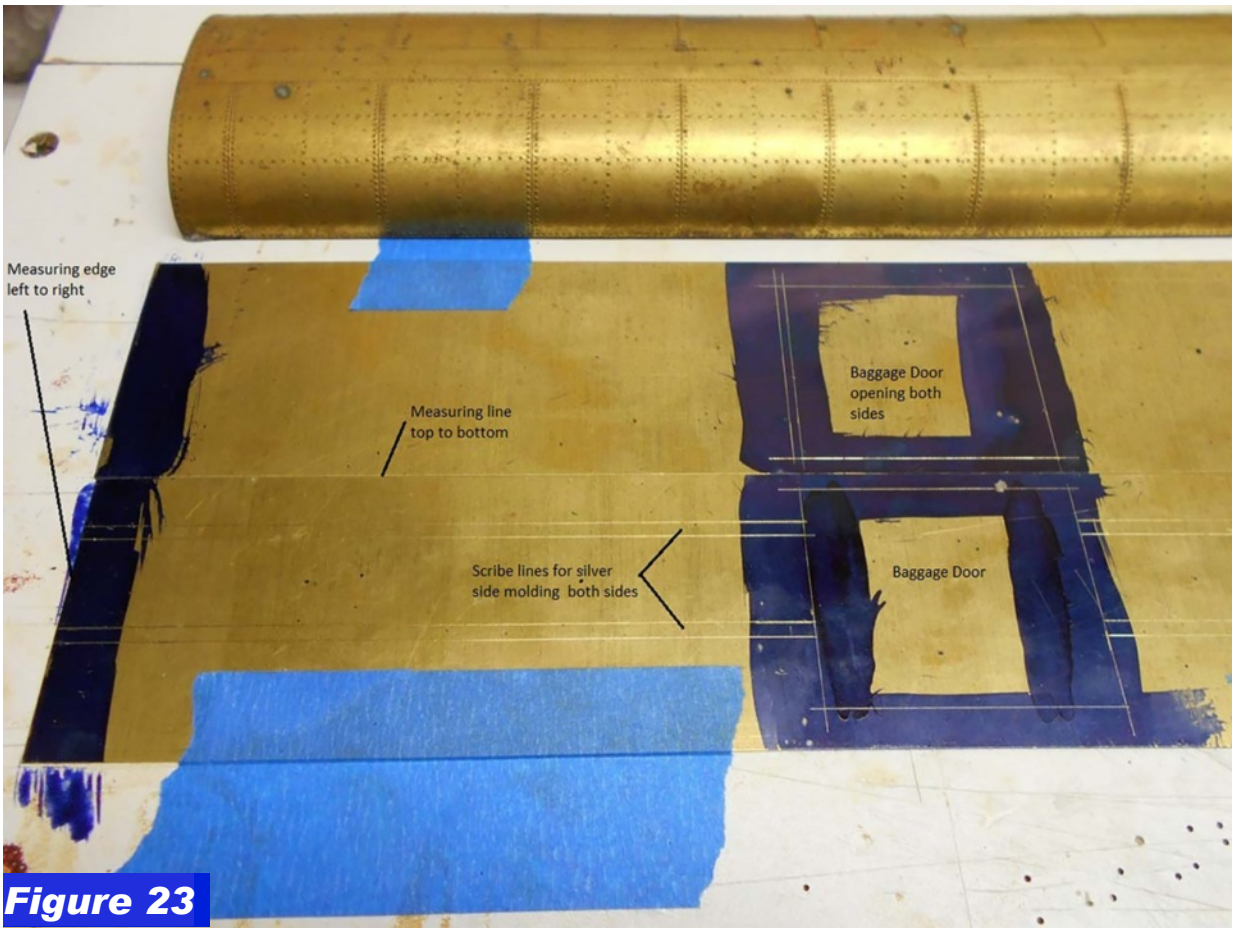


Figure 23

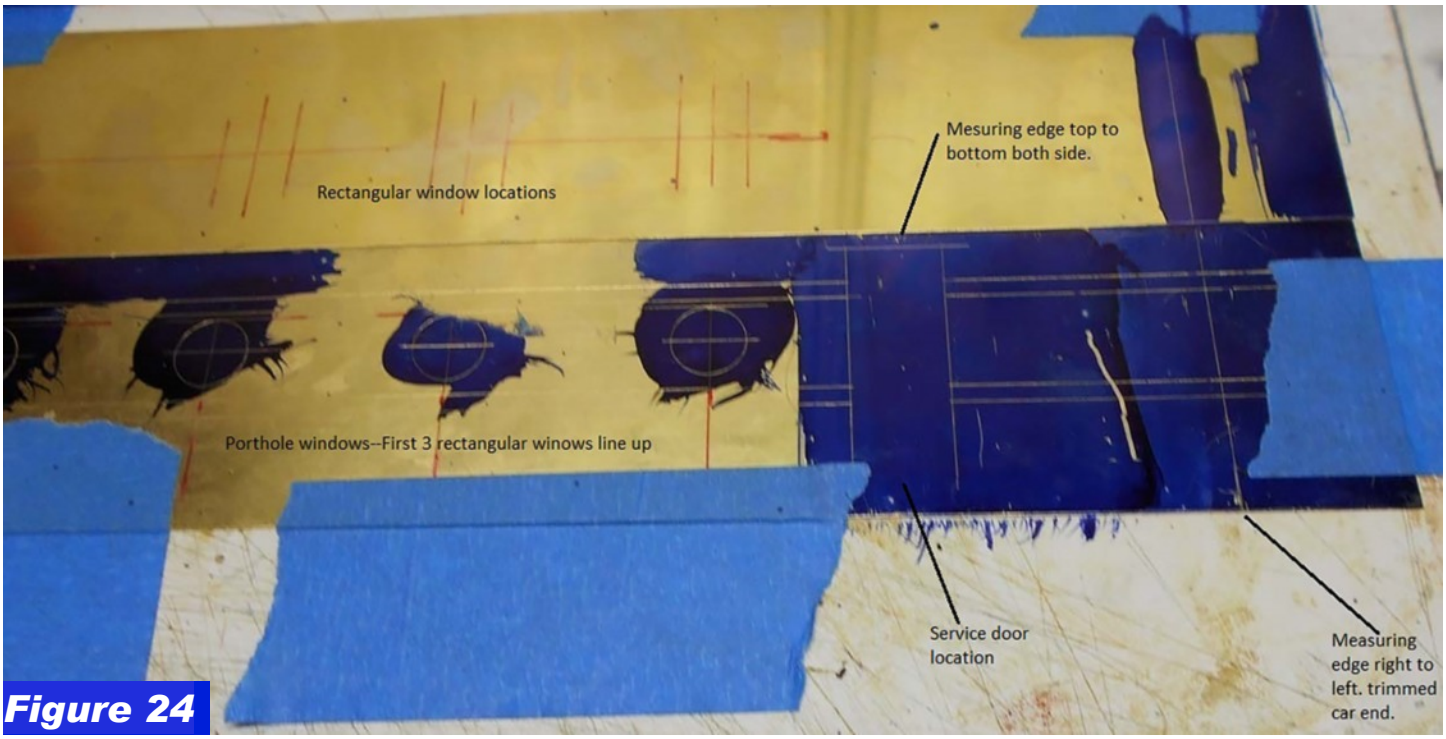


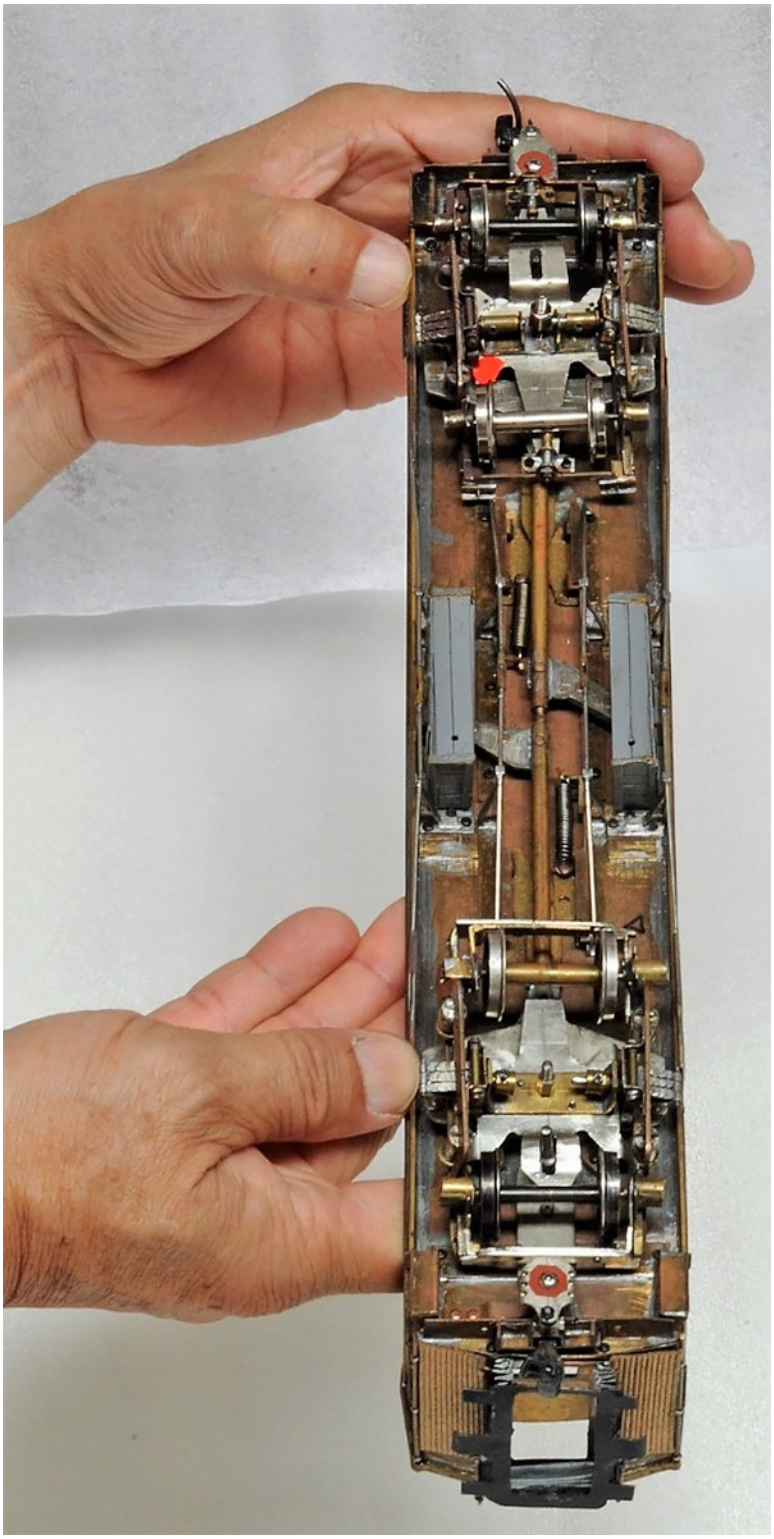
Figure 24

Figure 25

Figure 26

Symmetrical Tilting Mechanism

By Tad Daito



Forty-five years ago, I was a student at University of Utah. At that time, there were some industrial lines in the city. Sugar House line was in the residential area, and located on the line was a furniture store's warehouse. The track was a branch line of incredibly rough D&RGW track, and once a week, a short train came through consisting of a GP9 and two or three boxcars.

Cars were swinging, making it was an attractive scene for railroad fans. I wanted to build such a rough track on my pike; however, it was very difficult to employ. Cars derailed easily. I made the center-pin very loose, and they ran, but the bodies were very unstable. Sometimes they would lean to the extreme point of the left side or right side. Weak springs made the car body upright so they would lean outside on curves. On the uphill, they were pulled down inside. Something was needed to make them stable.

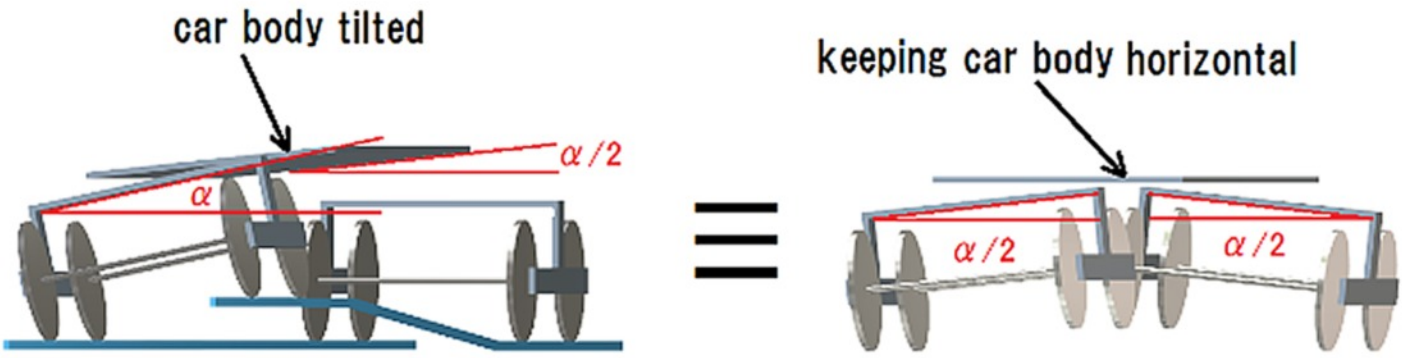
In Japan, a forerunner was there. In 2001, Mr.Fumiyuki Dewa invented "Rhomboidal Equalizer". It is a link motion to support the body. All the wheels remain on rough track. See demo in links below.

http://livedoor.4.blogimg.jp/dda40x/imgs/c/5/c564cfb1.gif

http://livedoor.4.blogimg.jp/dda40x/imgs/6/7/67bf3f2c.gif

There are some other solutions as well. Mr.Go Itoh invented "Shark-fin Equalizer".

Analyzing these two ideas, they are basically the same in concept. To make a long story short, the angle of twist in front truck causes the the car body to twisted in the same direction as the front truck, but, only half the distance.



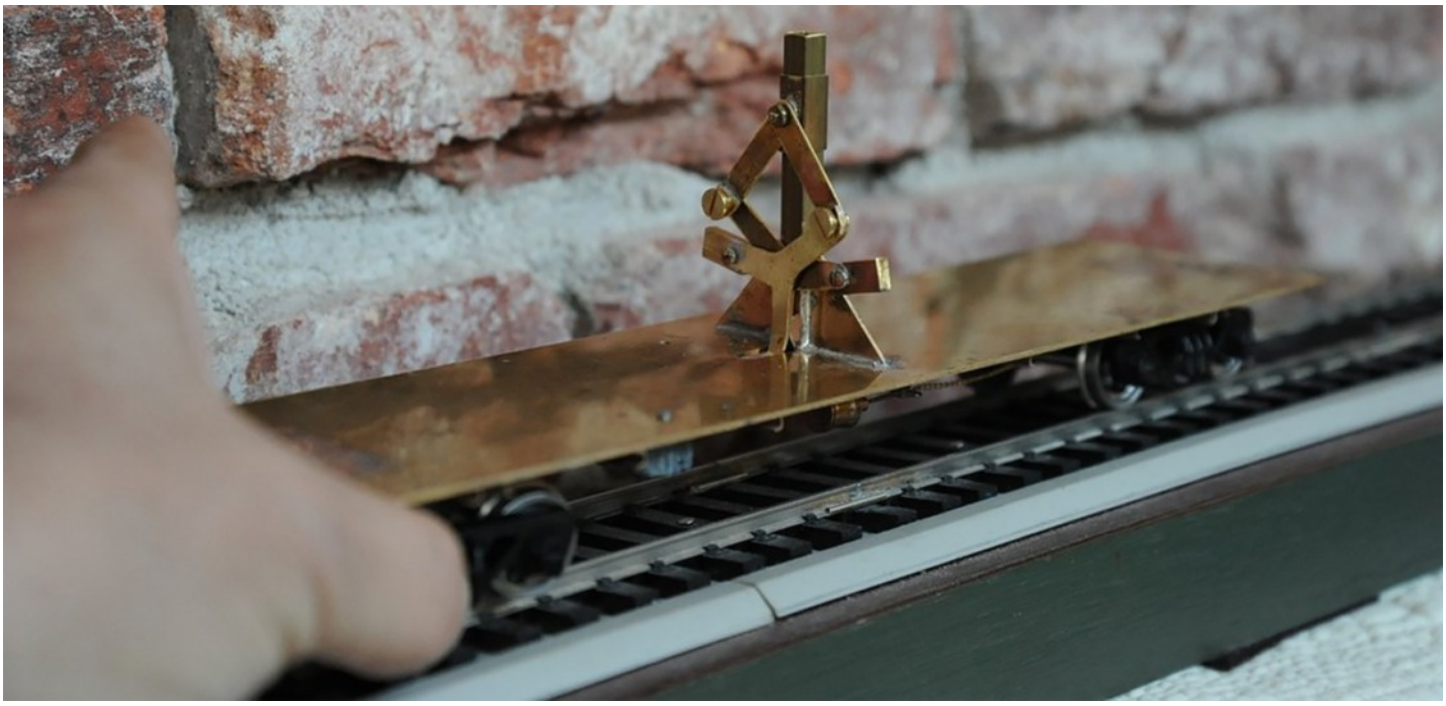
Illustrated by Atsushi Atarashi

Then, the car body is supported horizontally, if you tilt the front truck, the rear truck is to be tilted at same angle in the opposite direction.

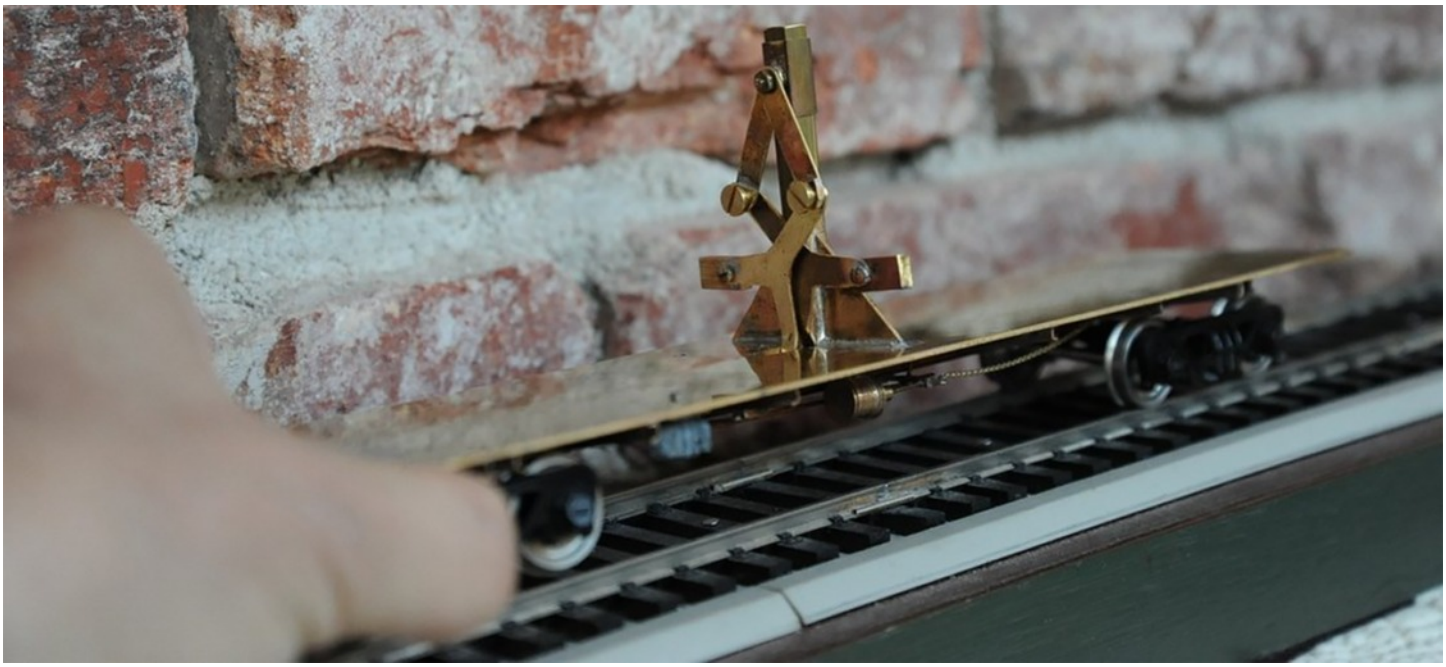
I have developed the mechanism to negotiate any rough track. Please watch the following videos on youtube to see the mechanism at work.

https://www.youtube.com/watch?v=P5qvi9_RhtA&t=24s
https://www.youtube.com/watch?v=HqdEslurVoo

I was convinced there should be various solutions for this purpose, and have made several mechanisms, with this being the best answer for this project. You can see this system on the pantographs on the roof of electric engines. The shoe goes up straight. Two of the link shafts rotate clockwise and counter clockwise. That is the mechanism I used. The shafts under the floor detect tilting of the truck bolsters. The motion is transmitted to the link, moving the upper link and crosshead vertically. The crosshead and the upper link have weight so some compensation was needed in the form of a counter-balance.



Note the mechanism on level track.



Note the mechanism as the front truck is twisted from the track.

This mechanism is to be hidden in the car body so that nothing will be seen underneath.

If you'd like to convert a passenger car with full interior, the mechanism is to be hidden in the washroom on the end of the car. To do that, a tube and shaft are needed. They are twisted in opposite directions, and are not difficult to make. Not only improving running quality, electrical pickup is greatly improved.
A small engine does run without stopping.

Modeling Western Pacific's Pullman Boxcars

By J. Chris Allan

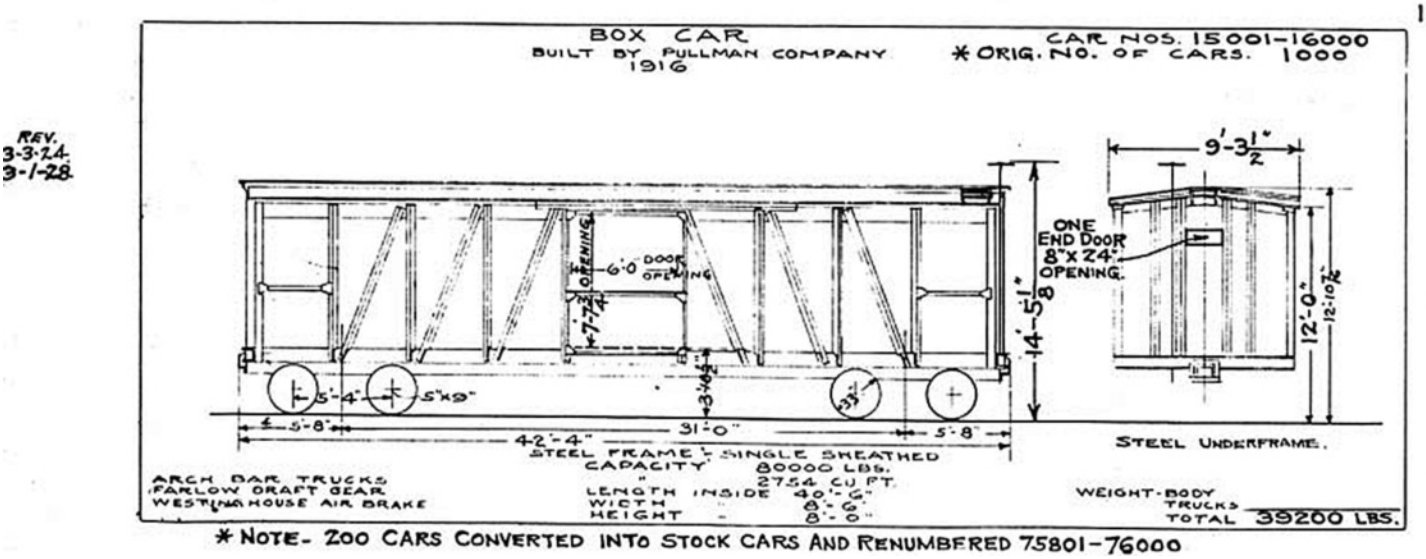
The Western Pacific Railroad was completed to the west coast of California in 1909, giving their parent company, Denver and Rio Grande, a direct route to the Pacific ports. Being so closely associated with the D&RG, WP leased most of their revenue-producing rolling stock from them for the first years. By 1916, the WP was ready to purchase their own house cars, and in that year purchased 1000 outside braced boxcars from the Pullman Company numbered 15001-16000. These cars were 40-ton capacity, originally rode on archbar trucks, and were equipped with K-triple brake valves. They were typical of the era.

Prototype photo from the Feather River Rail Society Collection

As a modeler of the Tidewater Southern, a subsidiary of the WP in the fall of 1947, there would have been fewer than 35 of these cars in regular service on the WP. There were however many of these cars remaining, albeit modified, as outfit cars, tool cars, stock cars, etc. A number of them were also converted to cabooses in the 1940's, and the Tidewater rostered 3 of these in 1947. These cars, in one form or another, served the WP faithfully right up to the end. More of these are pictured at: http://wplives.com/archives/mow/outfit/index.html

Models of these boxcars have never been in produced satisfactorily in any scale. As a result, I was faced with the prospect of gluing scores of nut castings onto a model, as I did when I built my TS caboose, or delve into the world of 3D printing, which I was keen to learn about anyway. At the suggestion of Jack Burgess, who models the stunning Yosemite Valley Railroad in HO, I read his excellent clinic on solid computer modeling and 3D printing: http://yosemitevalleyrr.com/clinics/sketchup.pdf

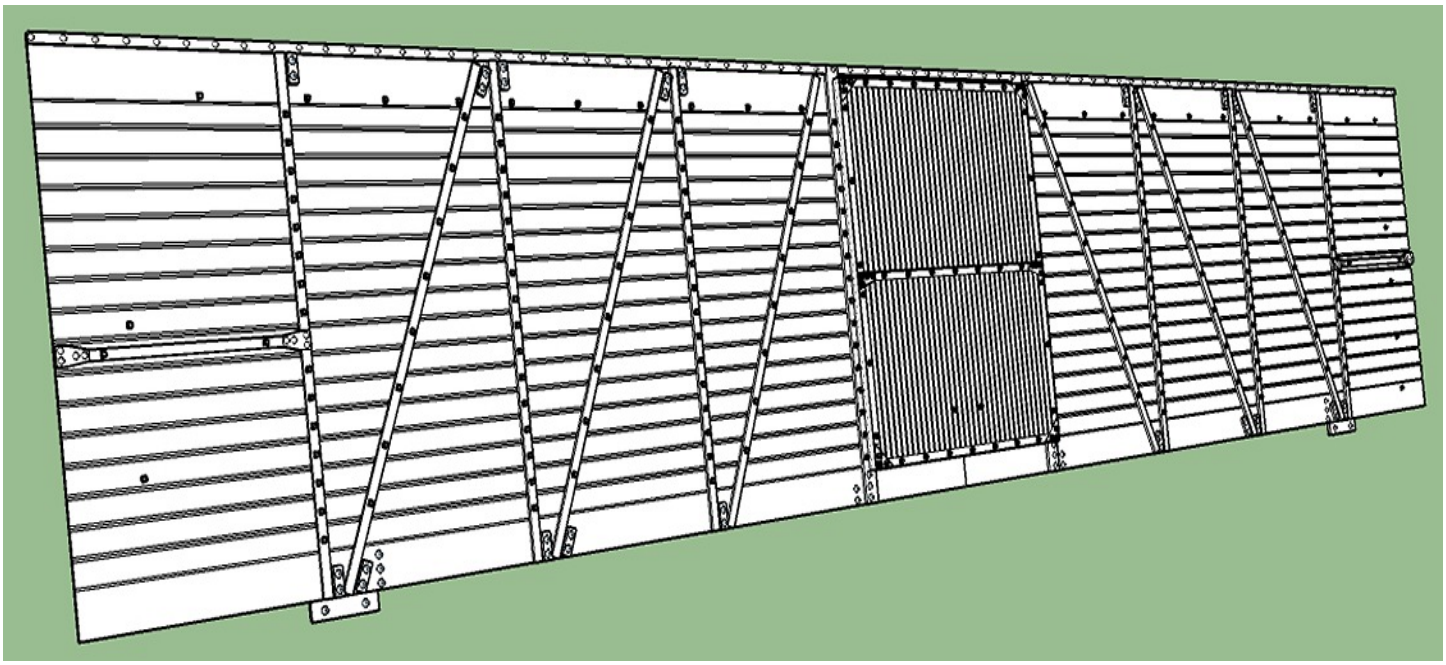
Jack inspired me to give it a go.



Page from the 1947 Western Pacific folio book gives info on these cars, including how many remain, and how many were converted for other uses. Feather River Rail Society Collection

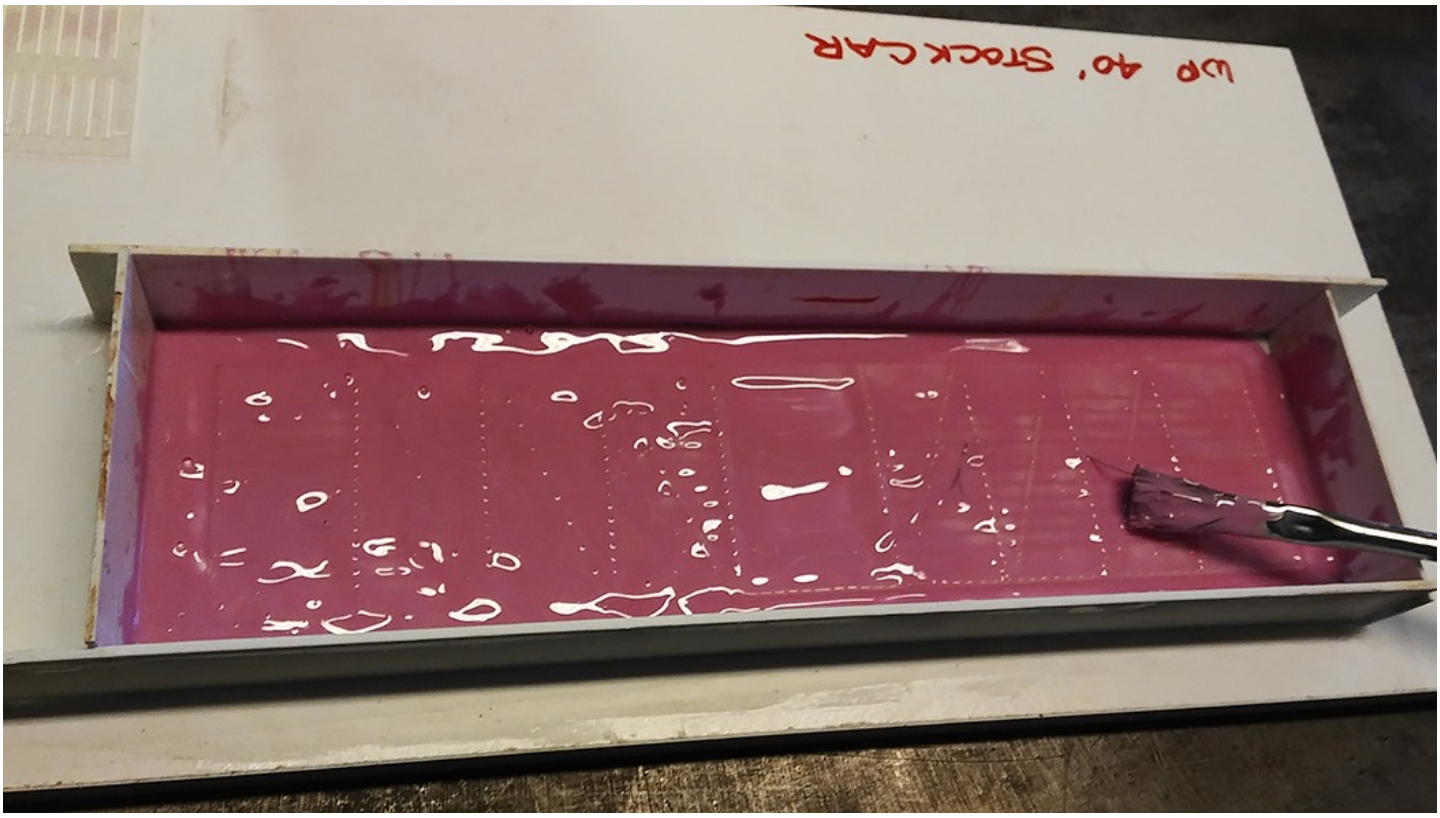
Research at first was tricky, as information on the original state of these cars is sparse. No prototype exists in its original form. I was able to track down an article on the cars by Al Armitage in the *Mainline Modeler* March 1990 issue. To my relief, there were elevations in HO, as well as, lettering for both eras. This gave me the dimensions and enough other information to start modeling in Sketchup, a free program.
http://www.sketchup.com/

I cannot go into the particulars of the learning curve when mastering a new way of modeling, particularly on your computer screen. I would encourage someone new to the technology to start small. My first "print" was a Bohn ventilator as used on early PFE reefers. Modeling this small and fairly simple part gave me the confidence to go ahead with a larger project. Once again, Jack Burgess' tutelage was invaluable. I went ahead and decided against purchasing my own 3D printer. I use the Shapeways.com service exclusively. As Jack put it, "Why use a $2,000.00 machine at home when you can use their $100,000.00 machine?".



The side of the car as modeled in 3D, using the free Sketchup program. I had the door printed up separately.

Upon receiving the prints, or in this case, patterns, from Shapeways.com, I laminated styrene to the backs of the side and ends to thicken them up a bit. This gives them more structure and keeps warping down after they are poured in resin. The laminations on the ends did not go all the way to the edge to leave a place for the side to set in during assembly. I prefer to use a two-part resin product from Micromark, their CR-900 High strength resin, which is better for the thinner casts. Make sure to use their recommended release agent. I also use an acid brush to "poke" the resin into each little nut casting void prior to placing 1/8" plate glass on the back and weighting it while it cures. This process cannot be rushed. Take your time, and don't expect the first cast to come out very well. Casts are like pancakes; you have to throw the first couple away! Many videos are available online showing these techniques, so I will not go into the particulars here. I will say, however, practice makes for near perfection!

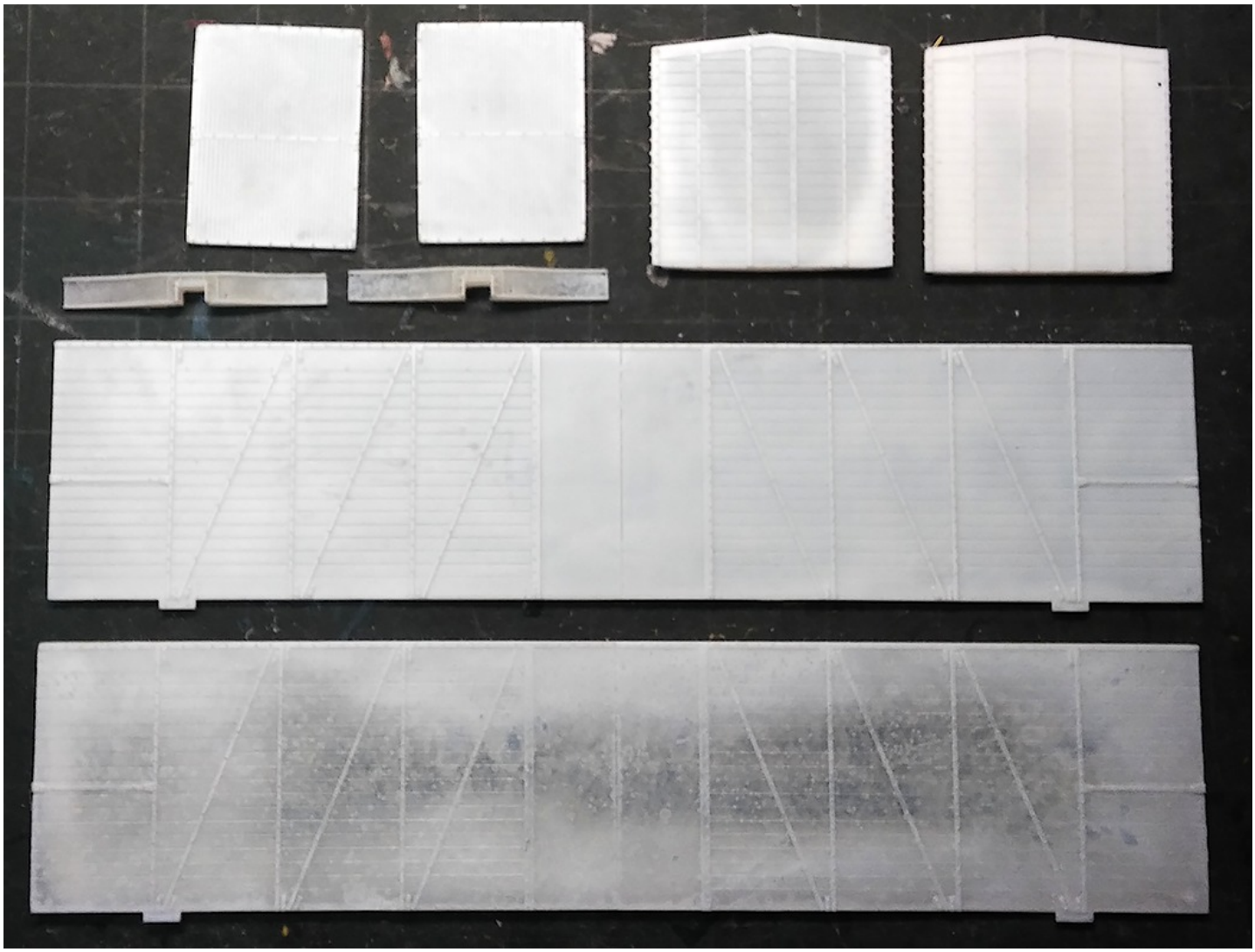


Silicon rubber is brushed over the side pattern. This process takes time and patience to avoid any bubbles or voids up against the part.

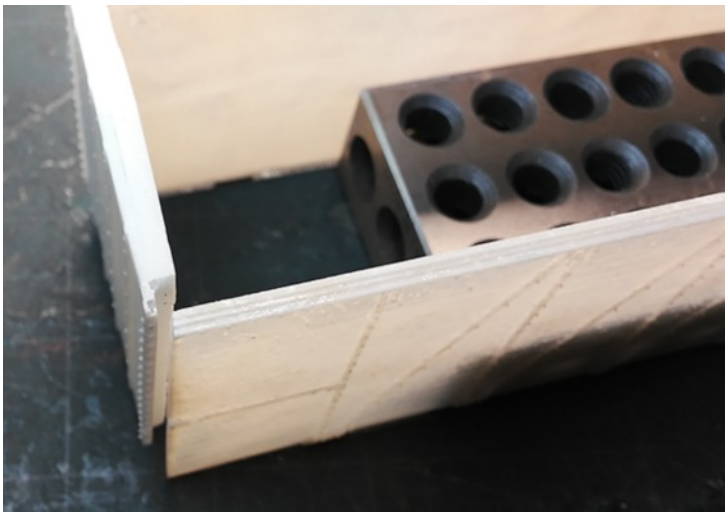
One potential issue was the "Zee" shaped bracing used on the sides and ends of the car. Since I planned on taking silicon rubber molds of the 3D prints, this presented the problem of a nasty negative draft on the mold, which would lead to tearing of the rubber, or at very least, much shorter mold life. I solved this by application of a piece of Evergreen .062" angle along the flat section of the zee cast into the model later during the build. When glued in place, the appearance of it being a single brace is effective. Fourteen of these angles are required per side, and four per end, but it is a small concession to be able to make up several dozen more casts per mold.

My modeling partner, Paul, noticed when we were building the cabooses that the old 1970's era underframes from Atlas boxcars were exactly right for the truck centers on these WP cars. Recycling these saved us from having to build up floors and underframes for each car. These cars are in generous supply for not a lot of cash at many O scale shows. All that is required is to narrow them a bit, cut off few bits, and fill the bolster centers with a styrene plug for the truck screw.

The Atlas underframes come with the later ABD valve system, which would have been applied to these cars in the late 30's or early 40's. For an as-built car, Grandt Line, among others, sells an appropriate "K" type brake valve and cylinder.

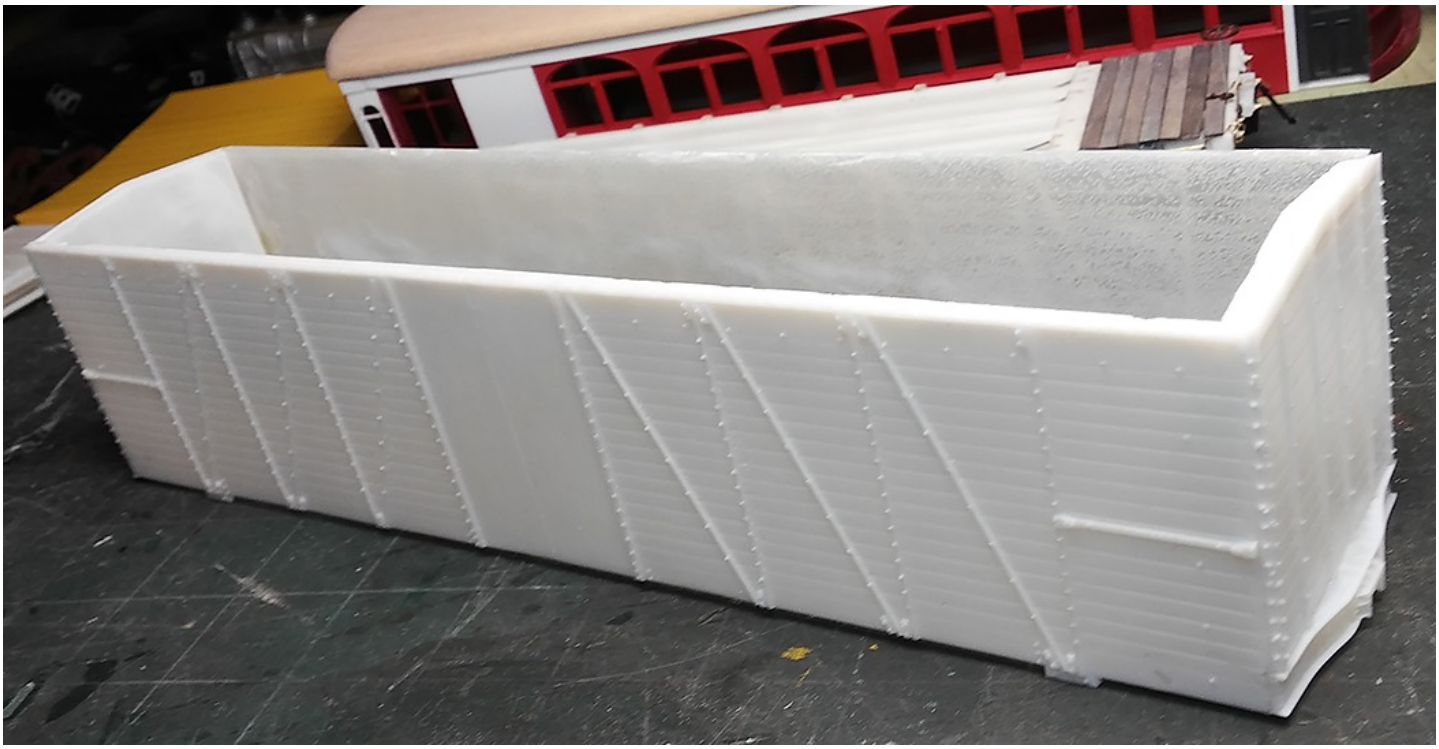


All the urethane resin castings for the car, cleaned up and ready to be assembled.



A step is cast into the end, allowing the side to be flush when it is glued up. A piece of styrene sheet is glued to the back of the pattern prior to casting. This saves on the cost of the prints since Shapeways charges according to the size of the 3D print.

After I glue up the sides and ends square, I glue some .250" x .125" styrene behind the side sills on the bottom to give me somewhere to screw in the Atlas underframe. Test fit first with couplers installed to make sure to get the floor height right at the end sills. After this, I make up a .040" sheet styrene roof, using formers from one of the San Juan Sacramento Northern Boxcar kits to achieve the angle I want. Then, it is just a matter of carefully gluing on the roof, using thin Zap cement or whatever you prefer. During this process, you are much more likely to glue yourself to the car rather than the roof…



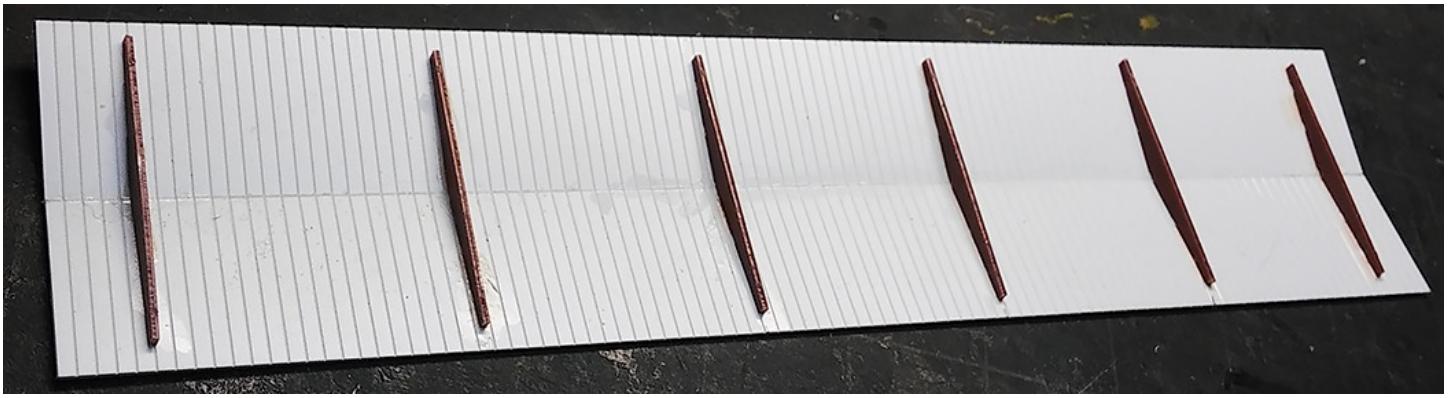
The complete body is glued up square, and the endsills are added to the bottoms of the end pieces. We are now ready to apply the roof.

The end of the carbody shows the .062" angle glued in place to create the Zee bracing. Notice that the angle is not in place on the sides. The bolted portion of the Zee brace is cast into the side of the car.

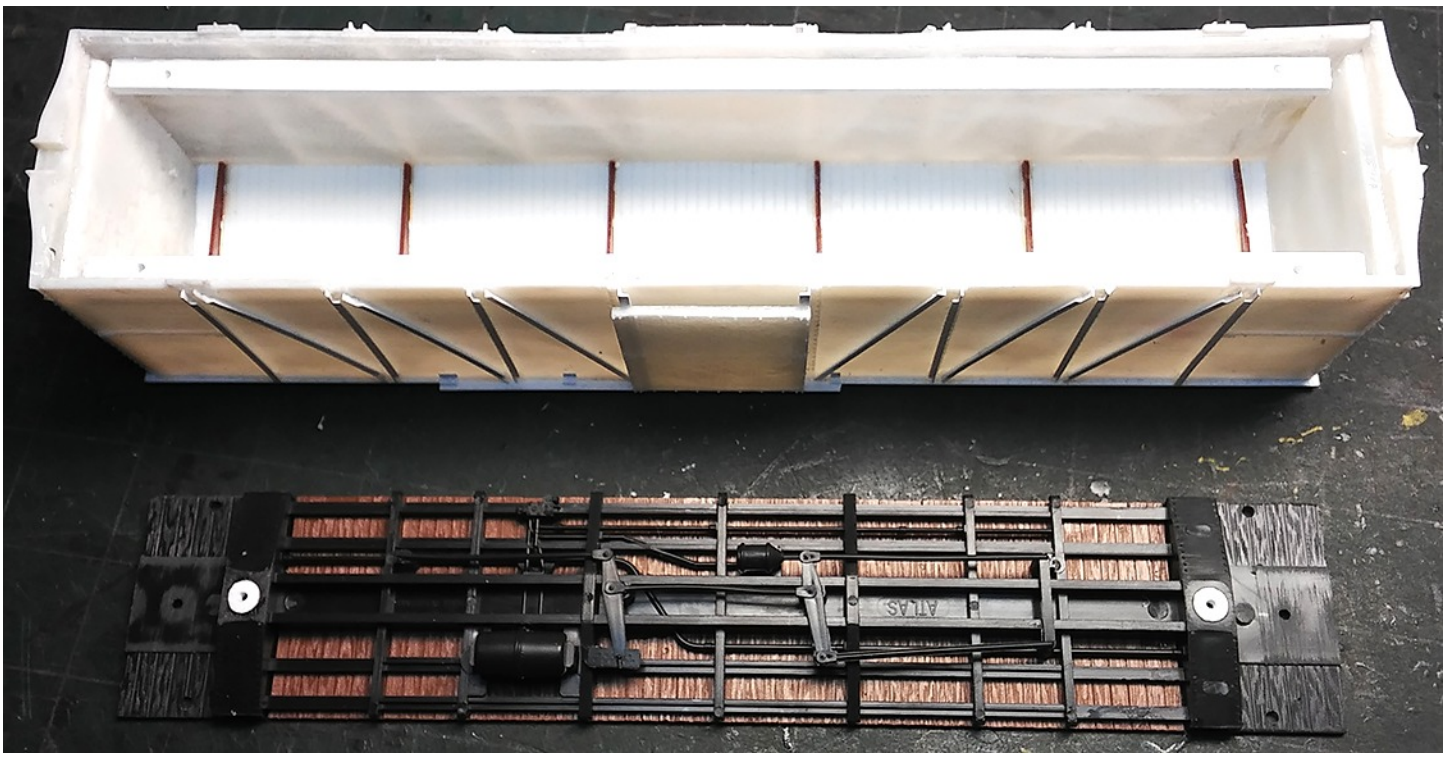
At this point I use the same method to glue in the .062" angle everywhere necessary to complete the Zee bracing. All angle on the car sides faced toward the center, including the angle making up the sides of the door opening. After gluing on the doors and end sills, the really fussy work can begin.

Fussy work would be applied details such as door stops, latches, hangers, brake shaft, retainer valve, lumber door, etc. I purchased all of these parts, except the lumber door, from Grandt Line. I used a bending jig

available from San Juan Car Co. for the grab irons. I was able to place the nuts for these on the print so they come through in the casting and give me an idea of where to drill. I use .020" brass wire off the roll from mcmaster.com which is much cheaper than buying it at the hobby store in small quantities. Anyone who has built a "craftsman" level kit with some success should have no problem.

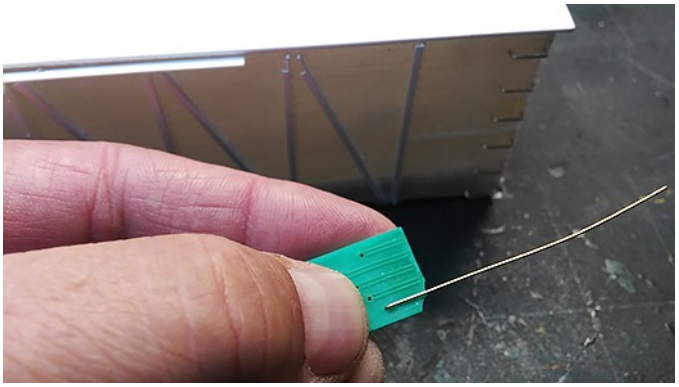


Roof assembly shows the formers from the San Juan Models Sacramento Northern boxcar kit glued in to achieve the correct angle and give some structural strength. I have an abundance of these pieces as I choose not to model the interiors of the San Juan cars.



We used old Atlas boxcar underframes from cars built in the 1970's which are narrowed to fit. Here you can see the .250" x .125" styrene glued into the carbody to accept the underframe, as well as the styrene plugs in the bolsters drilled and tapped for the truck screws.

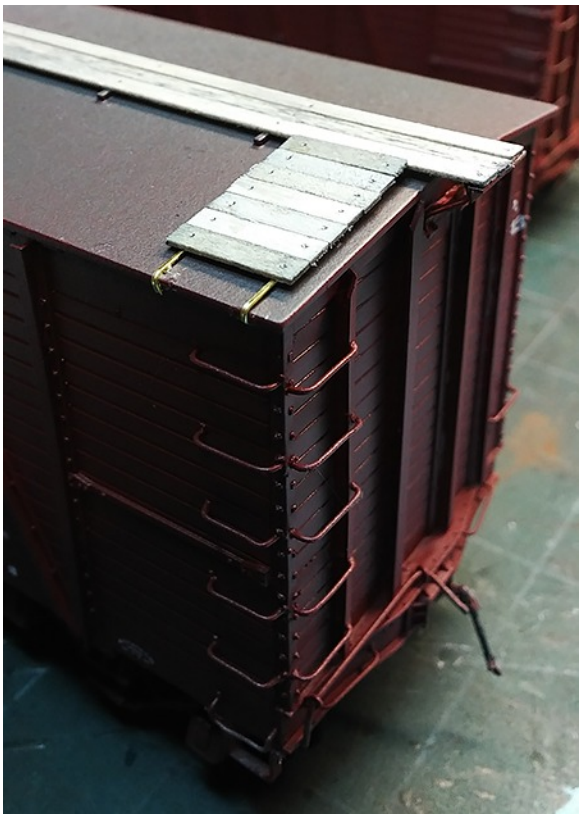
I refer constantly to photos as I am detailing, as well as to Al's drawing of the car. One thing about the WP; it was rare when two pieces of equipment were equipped or even painted in the same way. Standardization was not their thing, as it was with their competitor, the Southern Pacific. To get something absolutely correct when modeling the Western Pacific, Sacramento Northern, or Tidewater Southern, one needs photos of that particular car. Of course, this is difficult if not impossible, so I tend to use this excuse as a license to make small changes or unique adjustments to various details, or painting details such as truck colors and the like. This is what I really enjoy about modeling the "WP Family" of railroads.



Another nice tool from San Juan is the grab iron bending jig. It does several sizes, and can be easily modified.

The completed carbody after being sprayed with automotive primer. You can choose to paint the roofwalk, or not. Corner steps are fashioned from Details Associates brass flat bar.

Details Associates brass flat bar create the supports for the side walkways, to which scale 1 x 6 basswood is glued.



Roofwalk side platform completed, including pencil point "bolt heads". All that remains is to touch up the brass flat bar.

Detail on the door showing the various "fussy" parts, including hangers, latches, and handle. The decals for this car came from a Protocraft set for a later steel car.

I feel that real wood does not make for realistic appearance in scale as does styrene or resin, especially when painted. Roofwalks, for safety reasons, were seldom painted, so for these I choose to use the real thing. Scale 1 x 6 bare wood roof walks can be treated with a product like "Age-it-Easy" from Micromark for a pleasing weathered look. First, I glue the numerous supports to the roof, which are .030" square styrene. When dry, I sand them flat, giving me a good surface to apply the wood to. Carefully poking a sharp #2 pencil into the wood and twisting gives the appearance of bolts at each support.

Painting is fairly straightforward. One necessity prior to painting resin castings is to wash them thoroughly. The release which helps you to remove them from the mold will also make sure that no paint will ever stick to the surface. Warm water, dishwashing soap, and a toothbrush work fine. After the model dries, I shoot it with several light coats of grey automotive primer from a spray can. Go easy, as runs in the paint are the enemy. The primer will give an excellent surface to apply your favorite brand of model paint. I used Tru-Color TCP-204 Western Pacific Freight Car Red. This is a dead-on match to some chips I obtained off from a prototype car of the era. I then overspray the roof with a black or near-black to emulate the canvas roofing used on these cars. I don't use masking when I spray the roof, I just take it slowly and aim the airbrush so as not to hit the sides. This gives the car the same appearance of the prototype, which was painted less than carefully, and knowing the WP, probably with a broom!

Decals were a mix of Protocraft (set WP MOD-1) for the later lettering using the rectangular trademark, or my own decals printed by Rail Graphics for the as-built lettering. I chose to letter my car in the later 8000 series, as one of the unaltered cars that made it into the 1940's.

Testors Dullcoat from the spray can, and some "light" weathering using chalks complete the body. The trucks are from San Juan and are exactly correct, although these are not available from them at this time. We hope this changes soon. Rich Yoder's "USRA Andrews" trucks are a good substitute. The arch bars for the modeling of an as-delivered car are available from Protocraft in regular O scale and Proto 48.

At last! A complete car, minus couplers, ready to roll when I finally am able to build a layout.

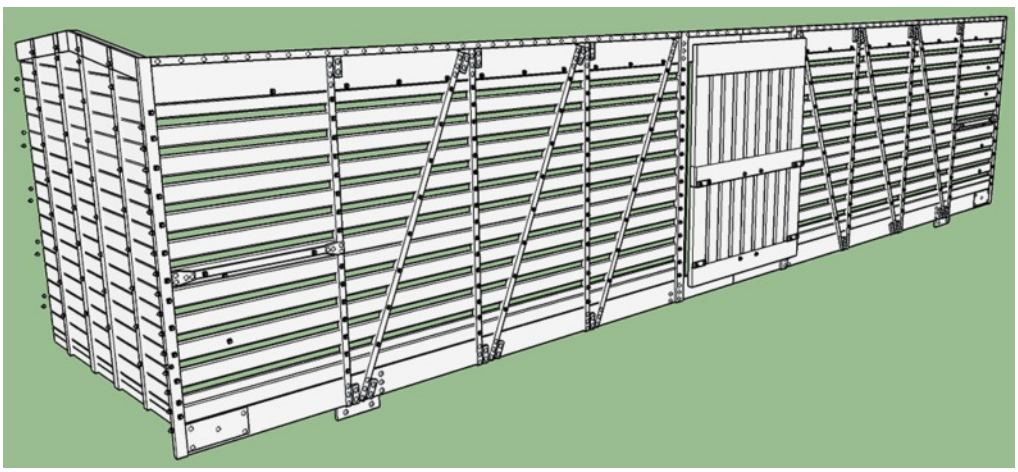
A complete painted and weathered car, in the original "as-delivered" paint and lettering. I used custom decals using my own artwork. The decals were printed by Rail Graphics.

One nice aspect after modeling this car in solid modeling on my computer screen – it is very little trouble to modify it a bit to come up with one of the WP's stock cars built from the Pullman cars, or myriad other outfit cars or cabooses. Then it is just a matter of sending the files off to Shapeways, pouring molds, and the process repeats itself again.

Give solid modeling and 3D printing a try. It may not be for everyone, but for some, it may be a brave new way to get those models you have always wanted without waiting for someone else to produce them. Happy building!

The WP and its subsidiaries, in this case the Sacramento Northern, rebuilt a number of the Pullman boxcars into cabooses. This is an example of one of the bay windows.

A cupola caboose conversion, painted in the iconic silver and orange by the WP. Many cars and most of the locomotives received this treatment after the introduction of the California Zephyr in 1949.



Above: Here is a photo of a car I did for a client that I delivered recently on 12/4/2016.

Left: My next project – It was a small matter to remove a few side boards, and draw up a new door to model the cars that were converted to stock service by the Western Pacific.

MAKE IT RUN AS GOOD AS IT LOOKS

Photo 1 *Bill Pistello converted a Lionel dummy GP-30 to scale using a Des Plaines Hobbies brass conversion frame and P&D trucks and drive. The trucks are beautiful sprung brass trucks, but Bill found the two wheel electrical pickup needed some help. In this article, he will show how he modified the trucks with wipers on all four wheels.*

By Bill Pistello

Like a friend of mine always says after one of my projects is going to the test track for the first time, "Make it go!". Well, the trip to the test track with a newly converted Lionel GP-30 (photo 1) was anything but good. The loco stalled and had to be pushed several times and lights and sound went on and off. I had used one of Des Plaines Hobbies new brass GP-30 frames that is CNC cut to fit the Lionel shell along with the P&D drive kit (with the brass trucks), and after some checking, it turns out the trucks only pick up off two wheels and then through all kinds of poor contact areas. So on to the rest of my story to explain how I solved the issues.

First of all, I would like to tell you that you will see in some of the photos some pretty nice equipment. I have access to mills and lathes; however, any of what is being done here can be done with a Exacto saw, files, drills and taps.

I dropped the trucks out of the new brass chassis and decided that these trucks would have to have all wheel pickup. The only way to make this happen was to make a back of the wheel wiper for all eight wheels. It sounded easy, but nothing really good comes out of doing something the easy way. I had a little contest with a great problem solver friend of mine, Larry Naus. He is also a RR model builder and my neighbor, and we went to work on designing a wiper system that would do the electrical job, be insulated from the brass, but that could also could be removed to paint the brass trucks. So no glue.

After some discussion and testing in my shop, Larry's design won. Here is the drawing Larry did for me in AUTOCAD.

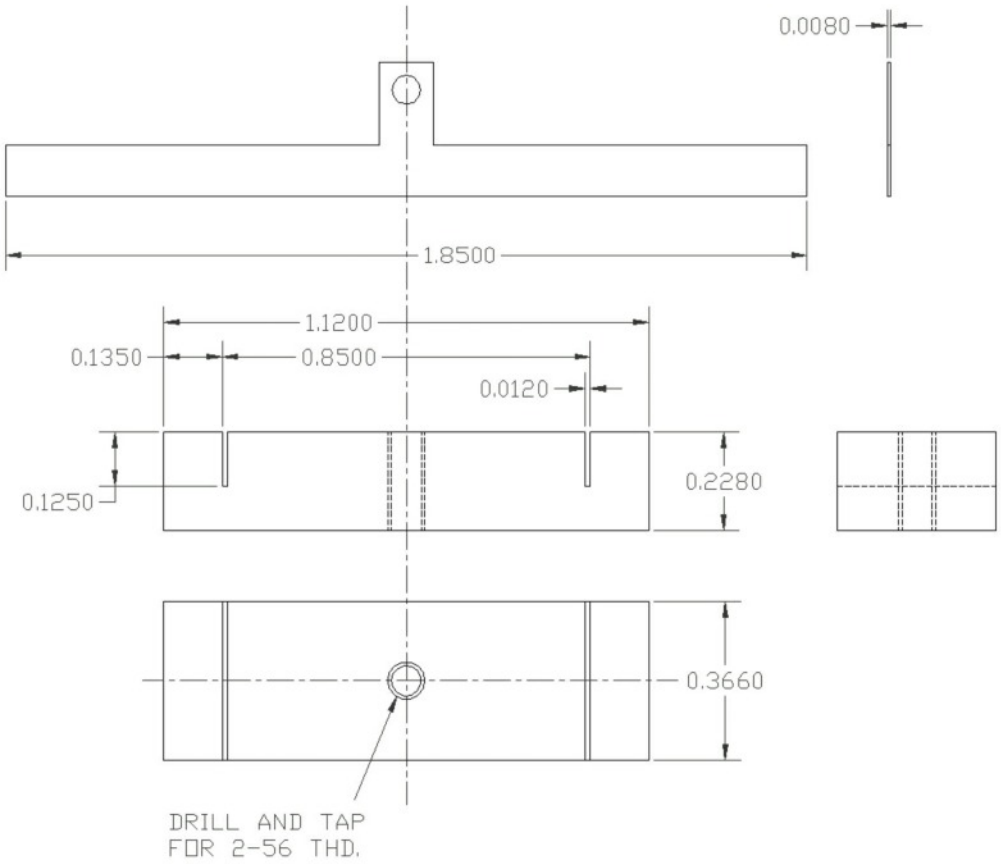


Photo 2 *Bill and his friend, Larry, had some discussions on how best to modify the electrical pickup. Larry came up with a good idea, even making a drawing for Bill. These parts are modified Atlas wipers that are readily available.*

I used four wipers that were designed for the ATLAS O RS1 to solve the electrical pickup problems. I got them from Ron Sebastian at Des Plaines Hobbies, which is where I work. Ron thought they were made and sold by Rod Miller in California. They worked out perfect after cutting them shorter, as per Larry's drawing. See photo 3.

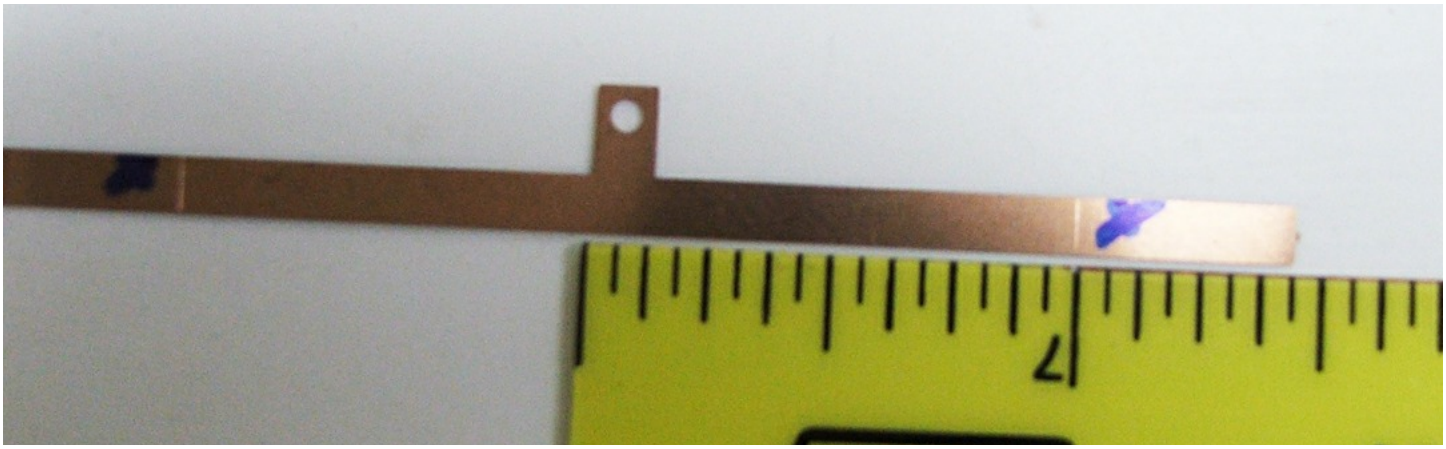


Photo 3 *Bill trimmed the stock Atlas wipers to match Larry's drawing.*

After making the wipers shorter, I cut two lengths of very flexible 22 gauge black wire. One wire is 4" long and the other is 10" long. I soldered the wires to the wiper, so the wire stood straight up, and then put a short piece of heat shrink tubing on the joint. See photo 4. Do a long and a short wire & wiper combo for each truck..

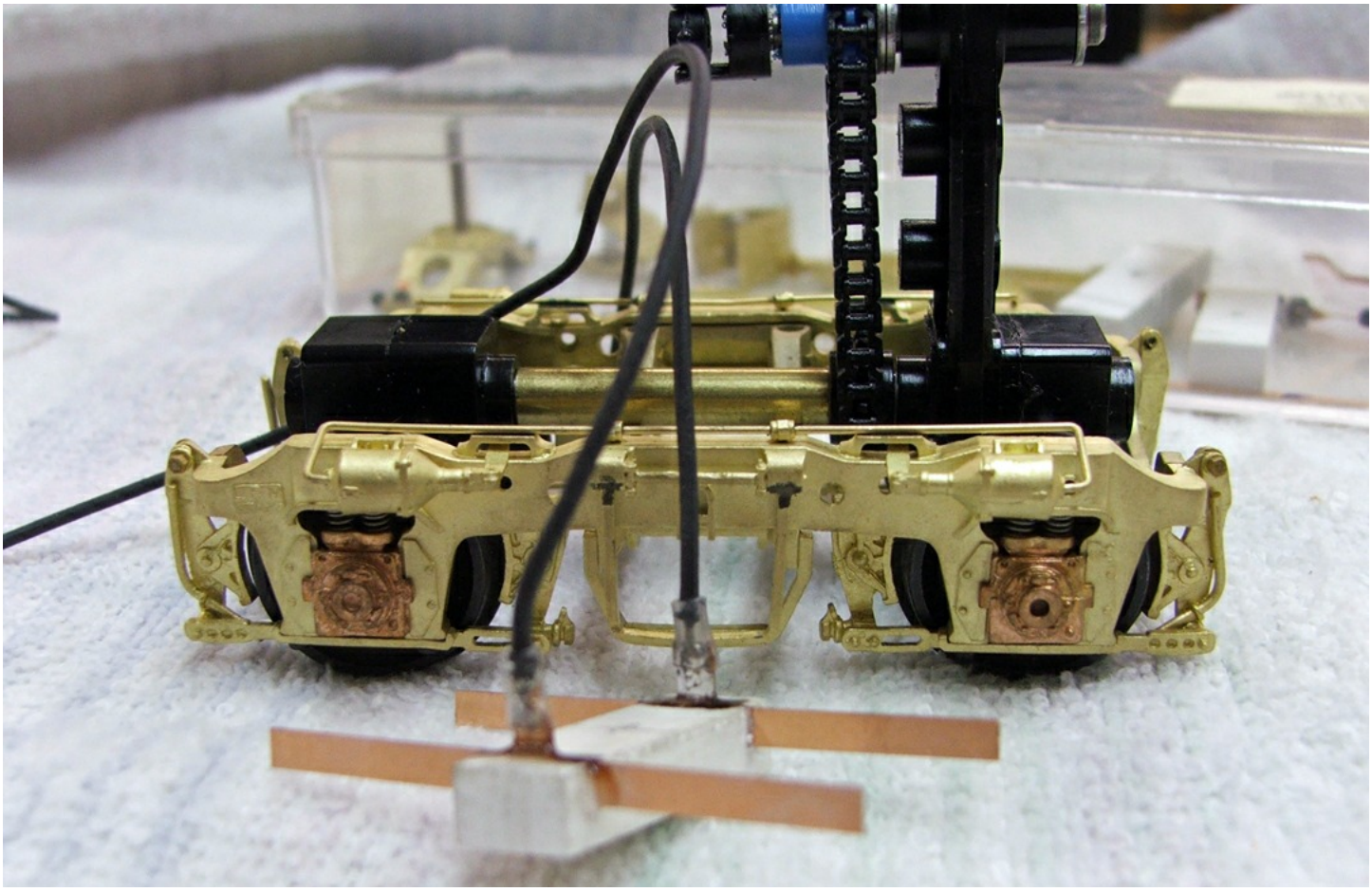


Photo 4 *In this photo, you can see why Bill said to solder the wires on the wipers straight up. The wipers will sit in the insulating block as shown, and the wires will go up into the chassis. The heat shrink tube will strengthen the joint.*

Now we need blocks to glue the wipers into. See photo 5. I made mine out of strips of PVC, but styrene would be a good choice also and it may be easier to obtain.

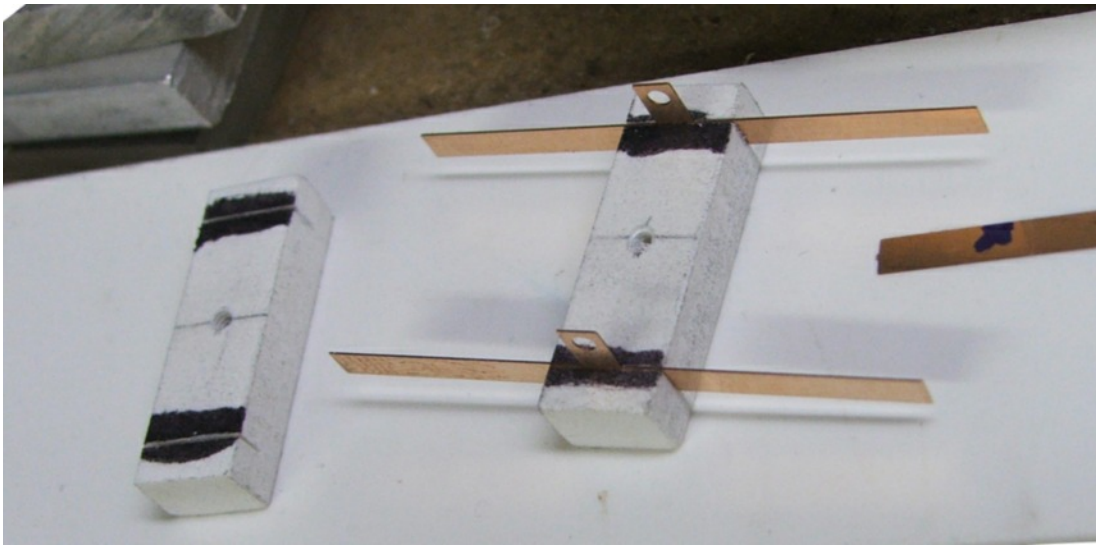


Photo 5 *This photo shows a machine's plastic insulating block and how the wipers will mount into the block.*

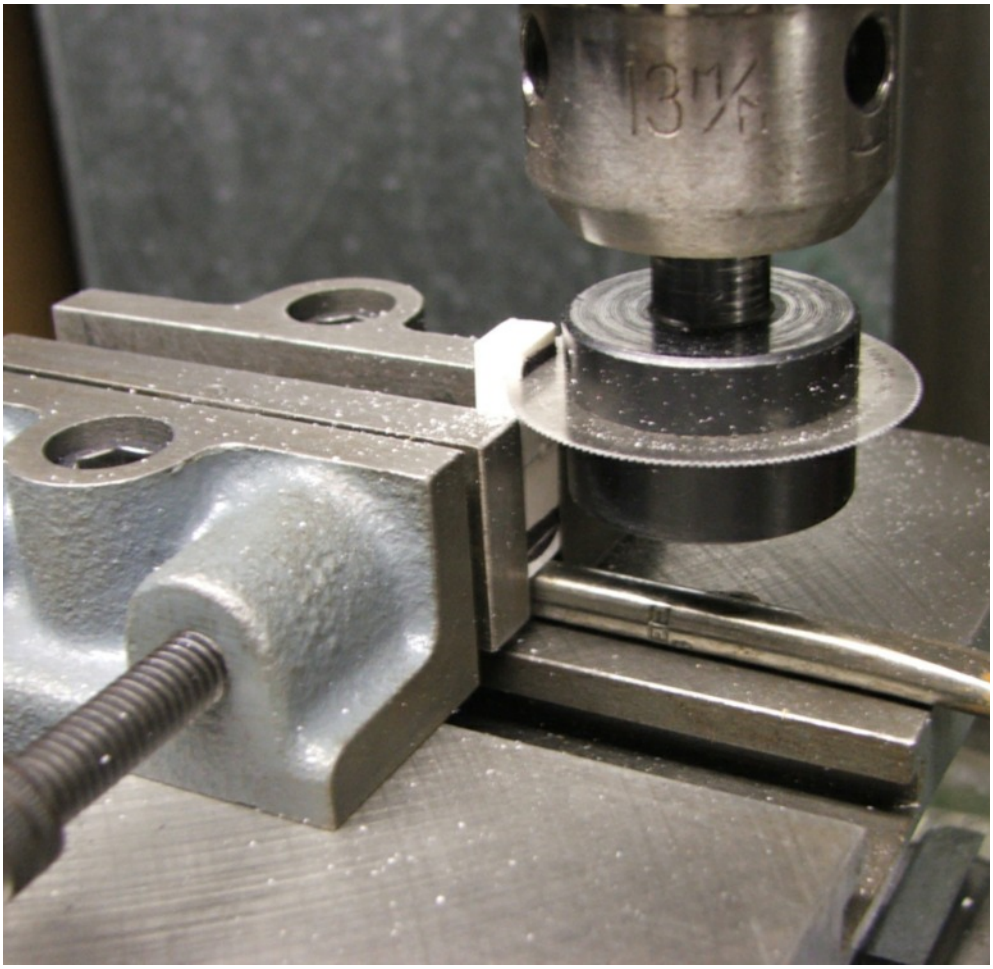


Photo 6 *Bill cut the slot in his insulating block with the milling machine set up shown here. He used a slotting saw to make the cut. Use low RPM so you don't heat up the saw and melt the plastic.*

To make the insulating blocks, look at the drawing and make 2. See photo 6. I cut the slots in my blocks using the milling machine set up shown in the photo. The slotting cutter will give you an exact cut so the wipers will fit snug in the insulating block. Use low RPM so you don't heat up the saw and melt the plastic. You can do this with a thin saw also. Make that slot for the wiper a nice snug fit. If it comes out too big, just give the wiper a little bend so it sits nice and straight, by itself, in the plastic block.

The next step is to fit the insulating block into the spring plank on the truck. You do not have to be exact, just close, so it fits down into the spring plank on the bottom of the truck. See photo 7. NOTE: You are looking at the bottom of the spring plank in photo 7.

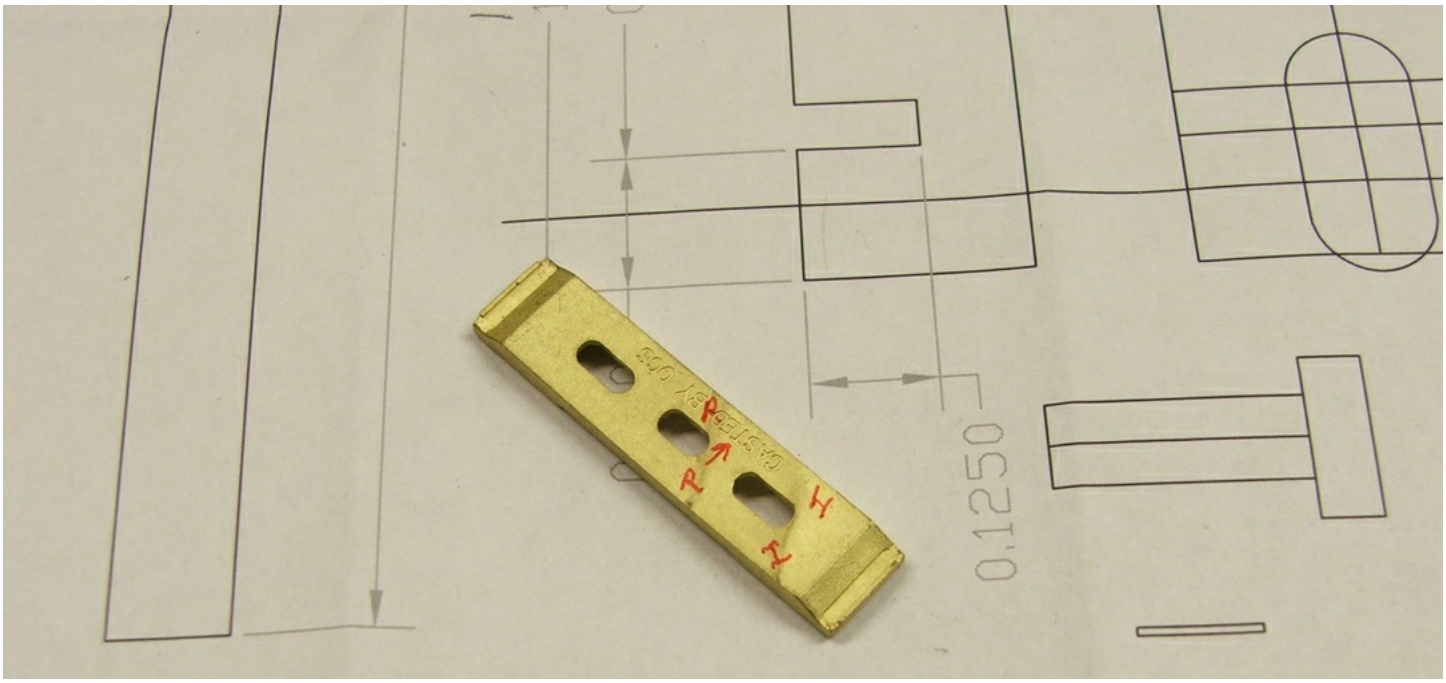


Photo 7 *This is the spring plank of the truck assembly. You are looking at the bottom of it in this photo. The insulating block will fit into the other side of this part and will be held in place with a 2-56 screw through the slot in the center of the spring plank.*

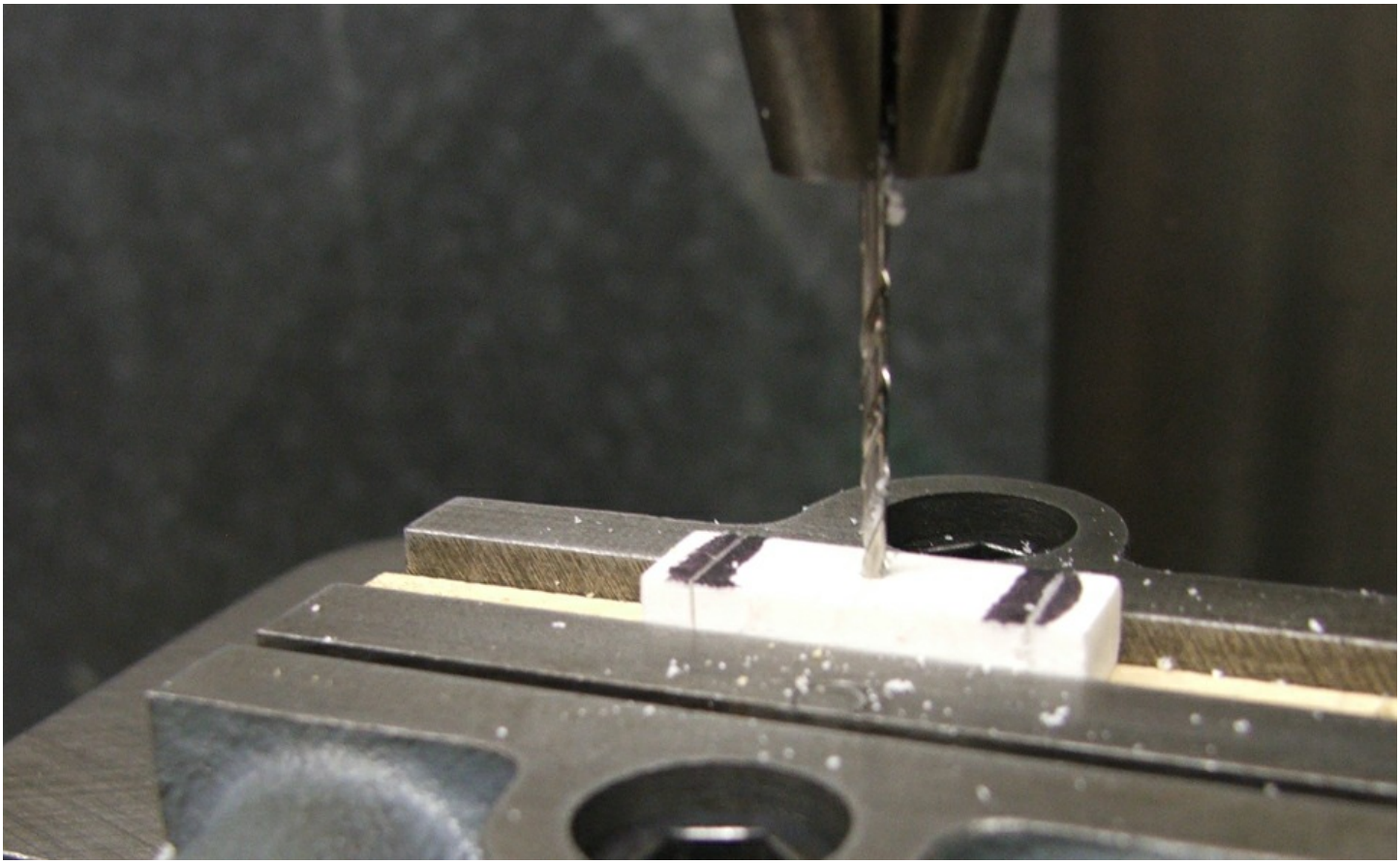


Photo 8 *Drill the center of your insulating block so you can tap a 2-56 screw thread in it.*

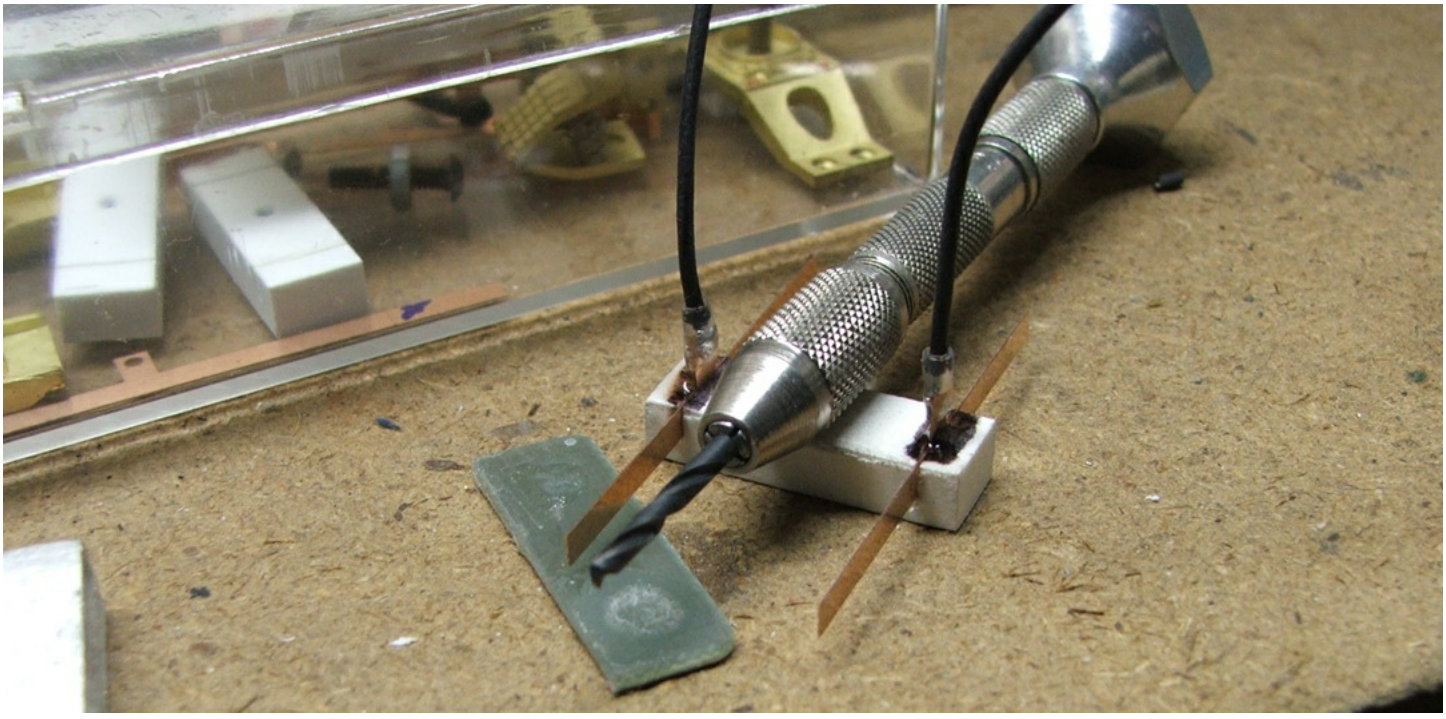


Photo 9 *Glue the wipers into the insulating block with ACC and let them sit overnight so the glue fully sets. If you hand cut the slots and your wipers are a bit loose, you may want to use Walthers Goo to set the wipers in the block. That type of glue will fill a loose fit better than ACC.*

Drill and tap the center of your blocks for a 2-56 screw. See photo 8. Now, take the wipers and glue them into the slots in the block. Remember to glue one of each wire length into each block. Weight the block down flat, and before you drip the ACC into the slot, make sure the wipers are parallel with the bottom of the block. See photo 9. Let that dry overnight so when you do the next step they do not come loose!

OK, now comes the fun part. I hope you have had a good night's rest and have had your coffee or a soda. Take the wipers and bend them so they look like photo 10. Double check that there is a long and a short wire coming from the wiper block that you bent up.

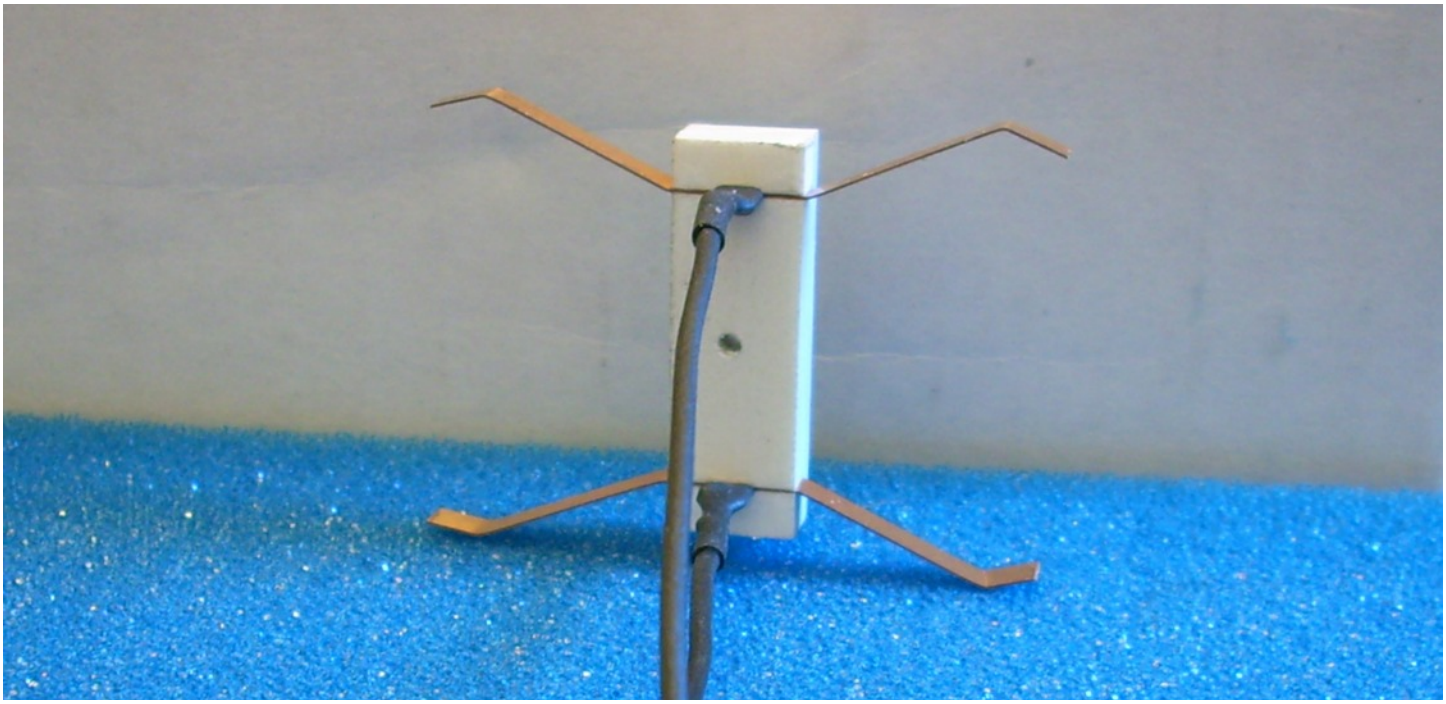


Photo 10 *Bend your wipers like this before mounting the insulating block into the spring plank.*

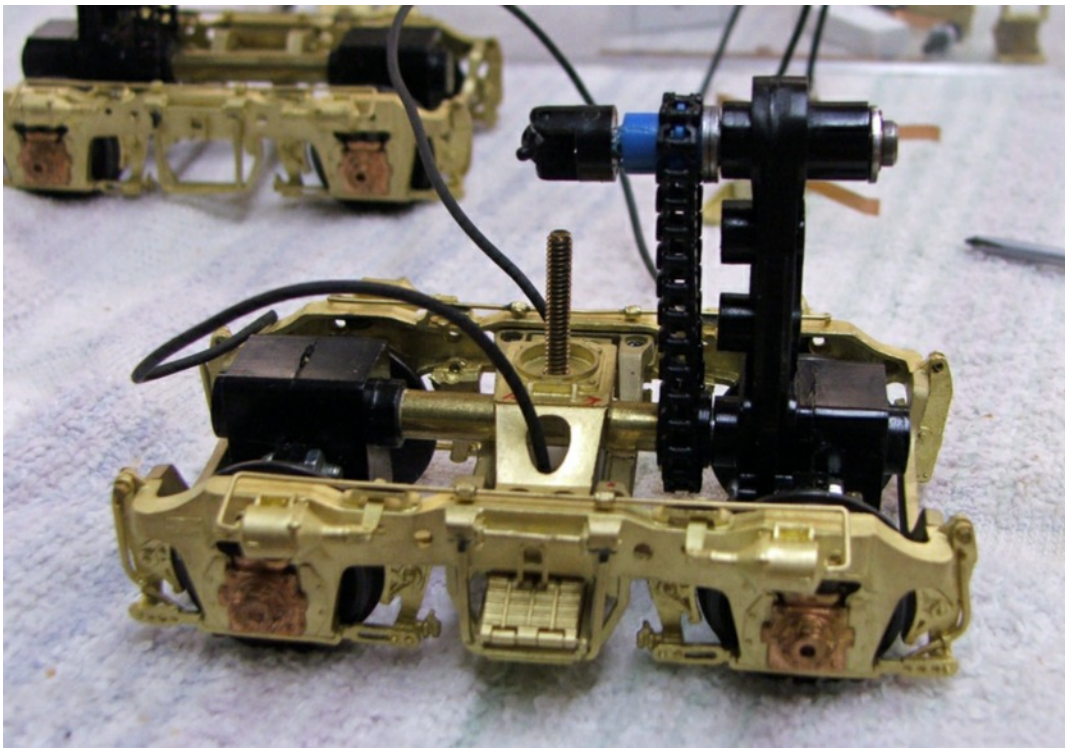


Photo 11 *Place your truck on a white towel with the chain drive to your right as shown before taking it apart. The white towel helps you find the small parts better. Mark the orientation of the parts as you take them apart.*

This next step is why you need the coffee, soda or possibly a beer. First, take the truck and set it down on a white towel so that the chain drive is to your right. See photo 11. Check with an OHM meter and make sure the non insulated wheels are closest to you. Mark the truck side frame with a marker. I also marked the bolster pin piece and the cross piece that holds the truck together. This is only so that I get the same pieces in the same orientation that P&D had them in. Now, have your 2-56 x .75" screw and flat washer in a place where you can easily pick it up. Take the four screws out of the bolster and lift it out of the way. Remove the four screws that hold the cross beam in. Now remove it. Take the side frame that is furthest away from you ***OFF***, and try not letting any parts on the side closest to you come apart. I have done ten of these, and this method of taking only one side apart is what I think works the best, but if you feel like you want to take both side frames off , be my guest.

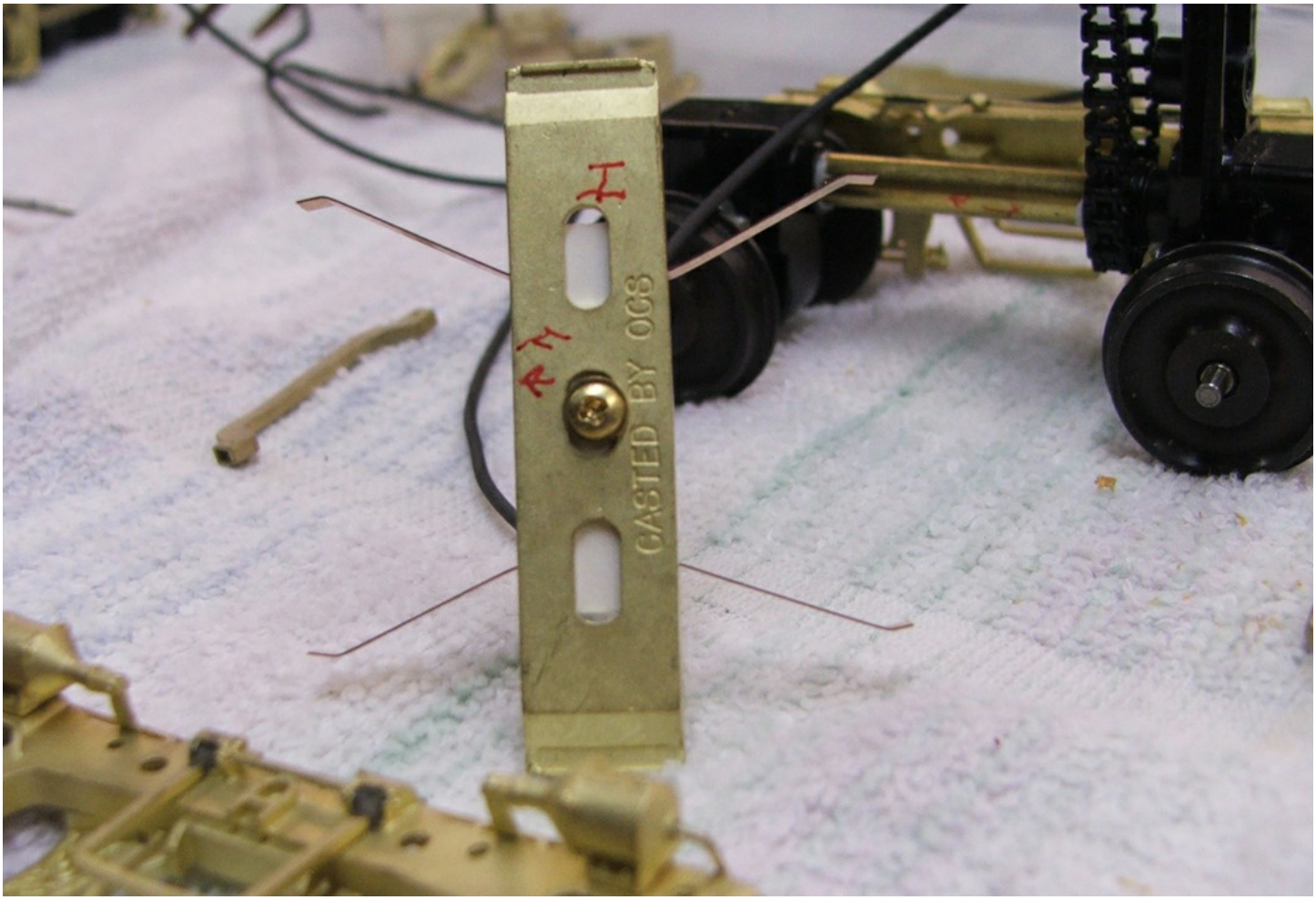


Photo 12 *When you assemble the truck keep it in this orientation with the chain drive to your right. Make sure you have the non insulated wheels placed so they will all be on the same side of the model. Mark the spring plank so you know which side of the truck you want the long wire on. The short wire will be on the side where the non insulated wheels are.*

Look at photo 12. You are going to put the block and wipers in place by installing the 2-56 screw & flat washer thru the spring plank. Make sure you center the insulating block before you snug it up. Now you should have a truck that is only half put together. Remember the different length wire? You want to install the short wire on the ***NON INSULATED*** side of the truck. This wire will be screwed to the truck mounting screw later, and will be the wire for the decoder.

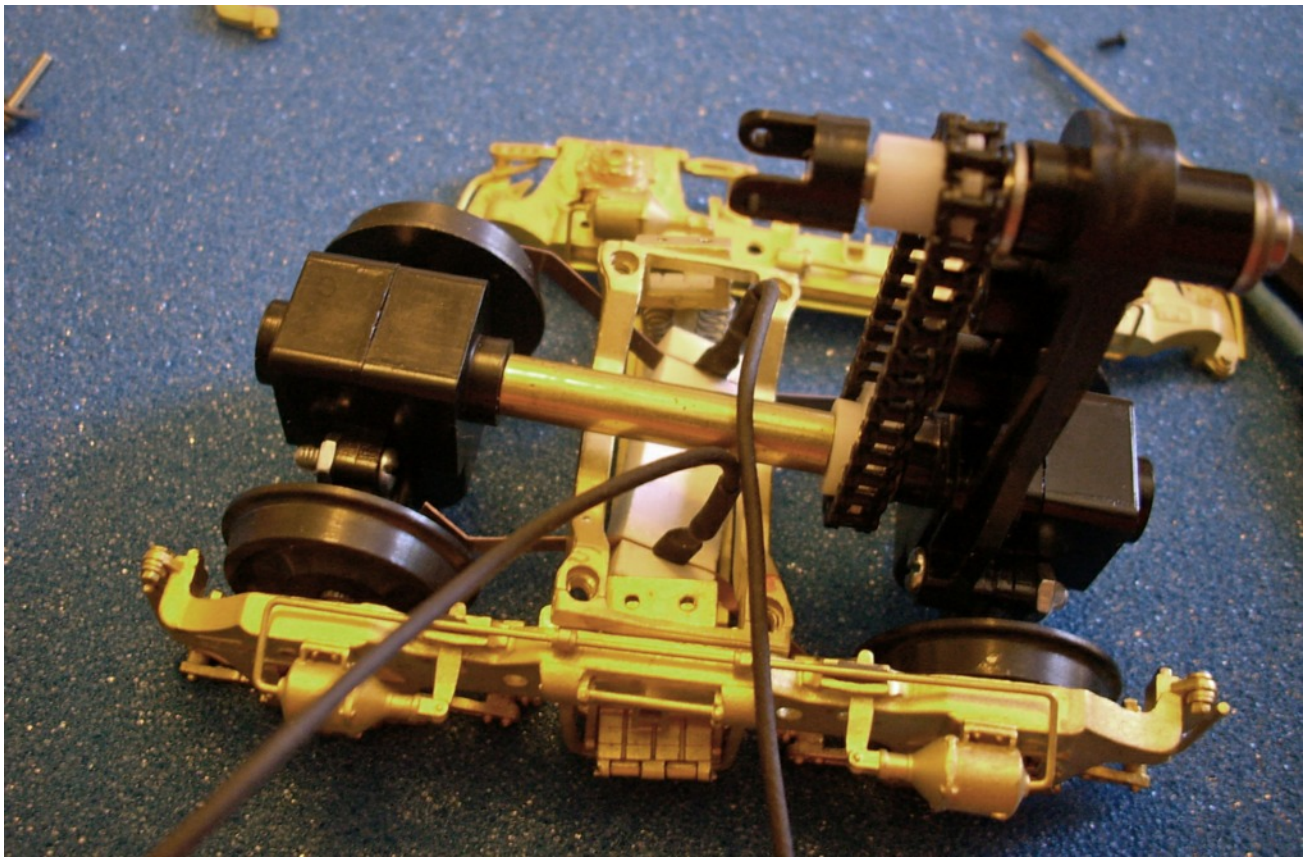


Photo 13 *This is what your partially assembled truck should look like with the new insulating block in place.*

Now comes the second fun part. Get some more caffeine in you, and just like all good repair manuals say: “Repeat the process in reverse and reassemble.”. Watch that the springs are in position before you screw the cross pieces in place. See photo 13.

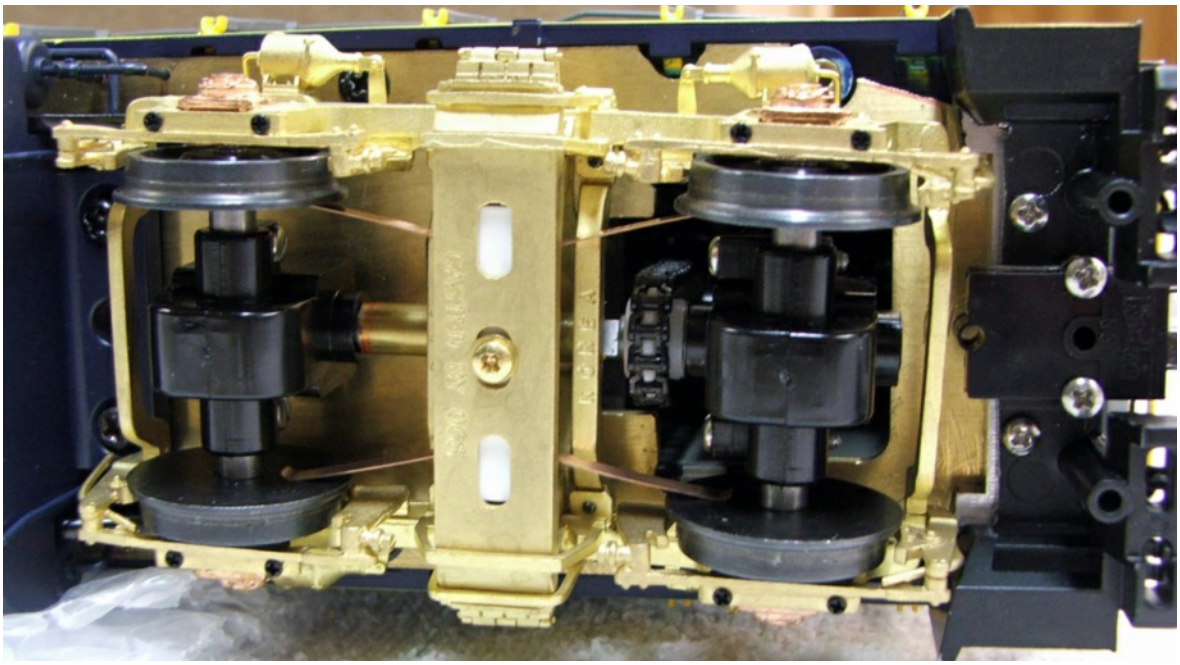


Photo 14 *This is what the assembled truck should look like. You can see the white plastic insulation block through the holes in the spring plank. Make sure the wipers are not touching any of the brass parts.*

Photo 14 is what the truck should look like from the bottom. Before you install the much improved truck assembly on to the brass frame (GP-9 or GP-30), take note of how the wires (both the short and long ones) are coming up into the chassis. See photo 15. The short wire comes right up and is attached to the stud that goes through the bolster. It also goes to the decoder. This is to make sure that the signal gets there without any problems right from the back of the wheels. The long wire goes directly to the decoder. Again, take a look at photo 15. I added a ring terminal to the short wire making it easier to attach to the truck mounting stud. The decoder I used has terminal wire attachment so I left the wires bare. If your decoder has a plug in connection, you may need to install a second plug so the long wire can be disconnected easily for any future disassembly of the model.

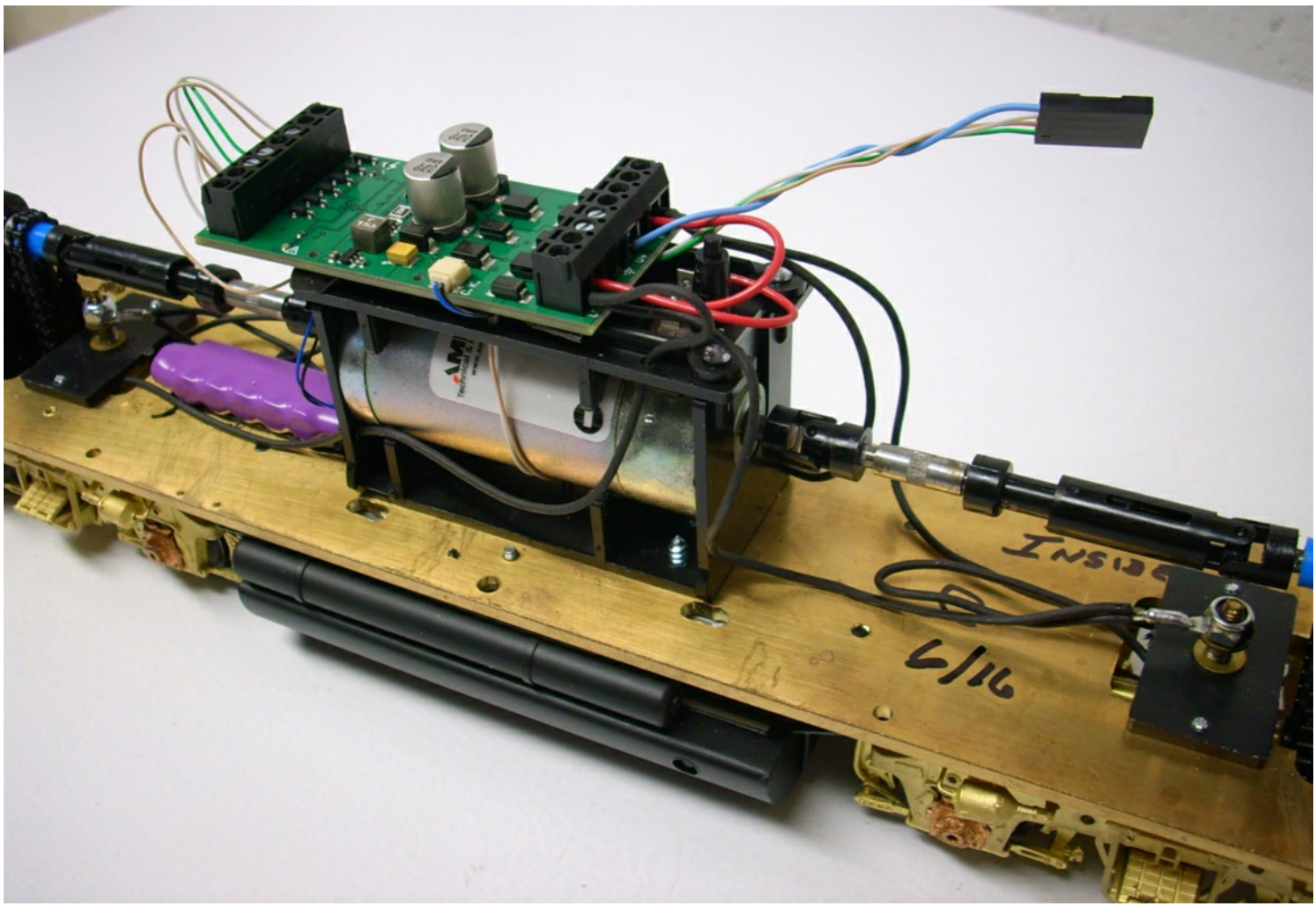
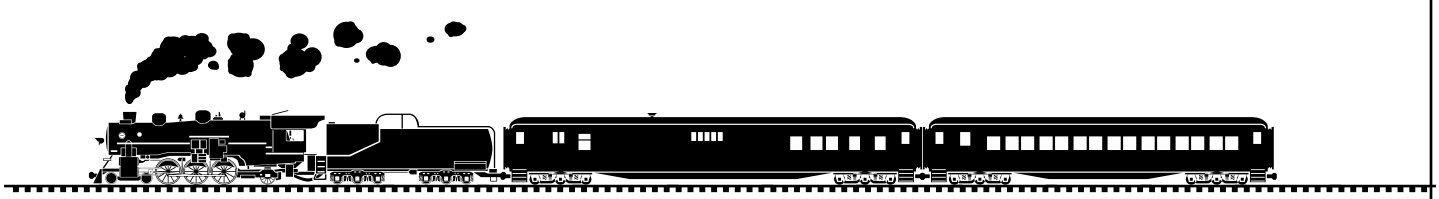


Photo 15 *When your trucks are installed, the short wire (which should be connected to the non insulated wheel side of the truck) attaches to the stud on the truck mount. The long wires are connected together and go to the decoder. A wire from the truck mounting stud also goes to the decoder.*

And, there you have it. All wheel pickup for your P&D project. Similar things can be done with other brass trucks. The ready made Atlas wipers are a good thing to start with, and all you need to do is fashion an insulating block to attach to your trucks. I can tell you that this simple modification makes these great looking trucks up to the task of getting the power to the DCC decoder or, whatever else. Give it a try. It's definitely worth it. Now you can "MAKE IT GO" without pushing it. In a future article, I will talk about fitting the Des Plaines Hobbies brass frame to the Lionel GP-30.

Tell Your Friends About
The O Scale Resource
Help get the word out about the most read
O Scale magazine



SAND HOPPERS FOR THE RD&S RAILROAD

DECALS AND WEATHERING MAKE THESE CARS LOOK WELL USED

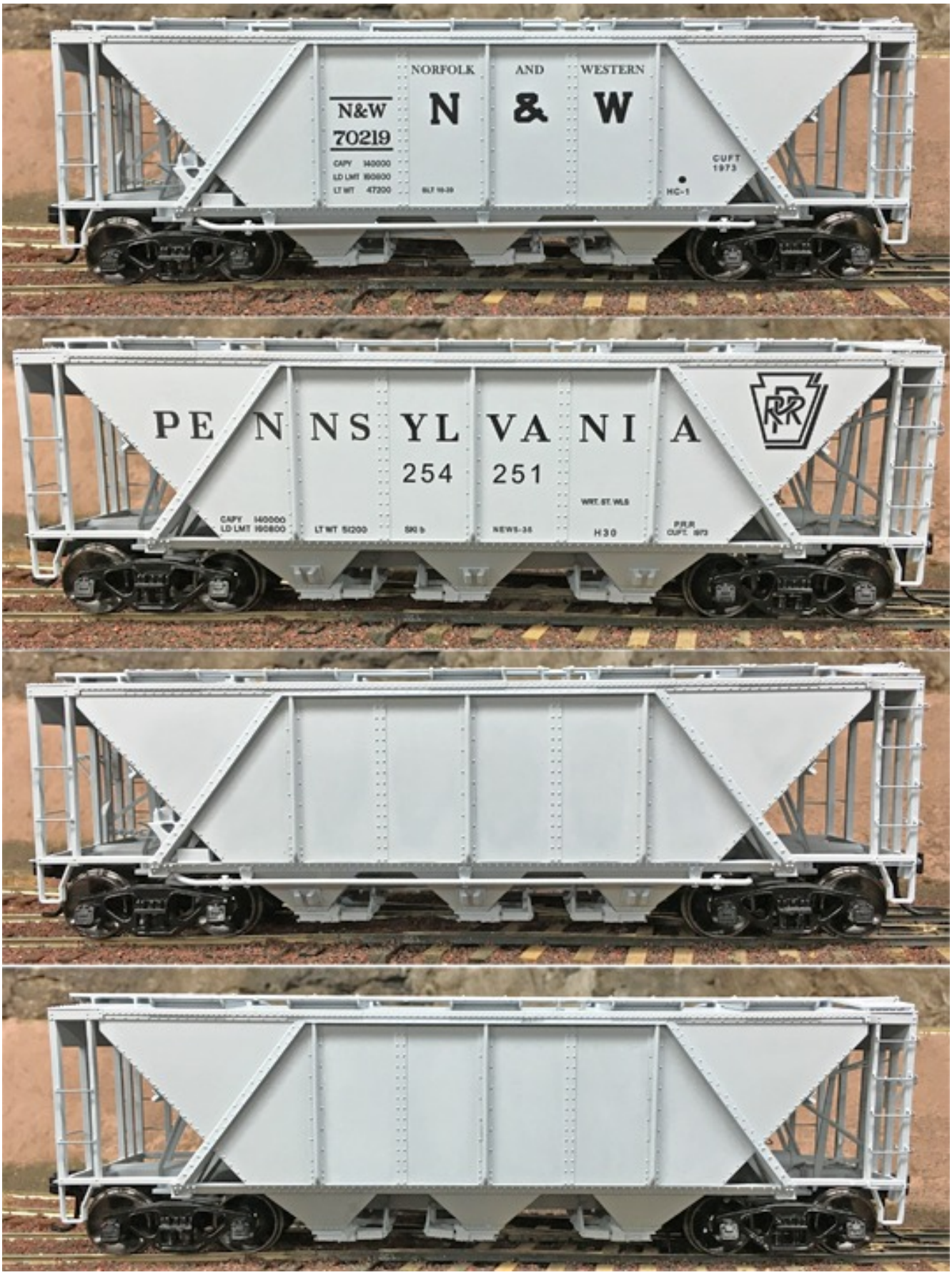
By Daniel Dawdy

A few months ago in *The O Scale Resource* July/August 2016 issue, I wrote an article on kit bashing the Korber Sand Tower. I don't have enough room for a full sand drying facility; therefore, sand at the the Avalon roundhouse will be delivered via covered hopper which was not uncommon.

My covered hopper selection is sorely lacking, so while at the Chicago O Scale show, I found a couple new Weaver Ultra Line models. One was a Pennsylvania H30 and the other was a Norfolk and Western HC-1. Just how accurate these are to their respective railroads is unimportant to me as they will be carrying the Richmond, Danville & Southern banner. I just wanted a nice model; and although Weaver is no more, there are many cars still out there.

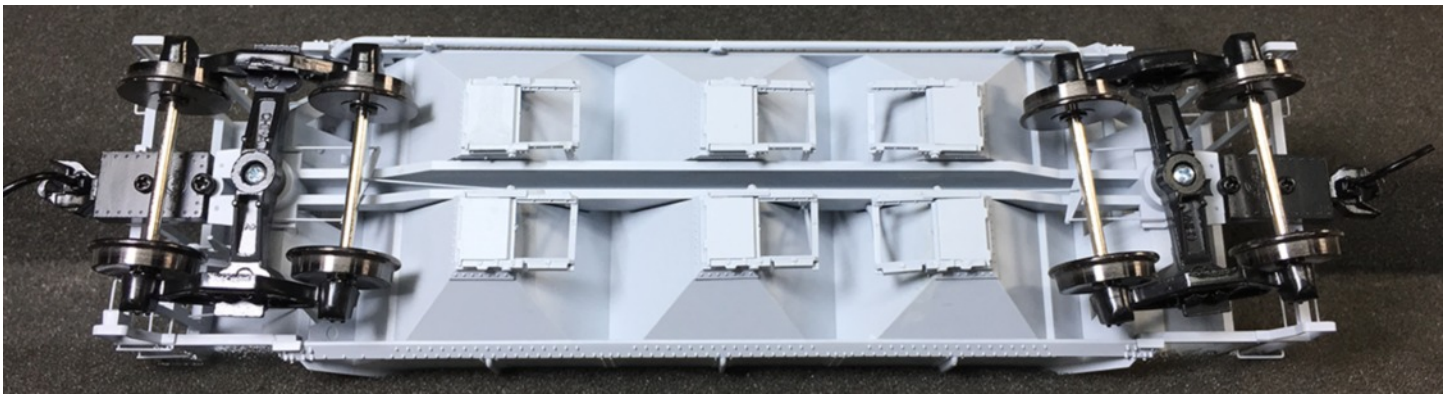
The first order of business was to remove the lettering and try not to damage the paint since there would be no reason to repaint the cars. (Yes there was, but we'll talk about that later.) I used 91% Isopropyl Alcohol and Q-tips® along with Tamiya Finishing Wet/Dry Sandpaper 2000 grit. It was slow going, but did work. I suspect these cars were molded in the gray color, so there was no paint loss per se.

Since I have not really weathered my freight cars, I thought this would be a good time to experiment with weathering knowing that if I totally screwed up, I could strip the cars back down and try again. Let me say this right off – I am NO expert in weathering. I watched videos. I read books and magazines. One article was "Weathering Steam Locomotives" that appeared in the November/December 2014 issue of *The O Scale Resource* which featured some insight from two masters, Lee Turner and Jim Booth. I also looked at what others had done in some online forums. In the end, I picked up ideas from many sources. There is no right and wrong here.

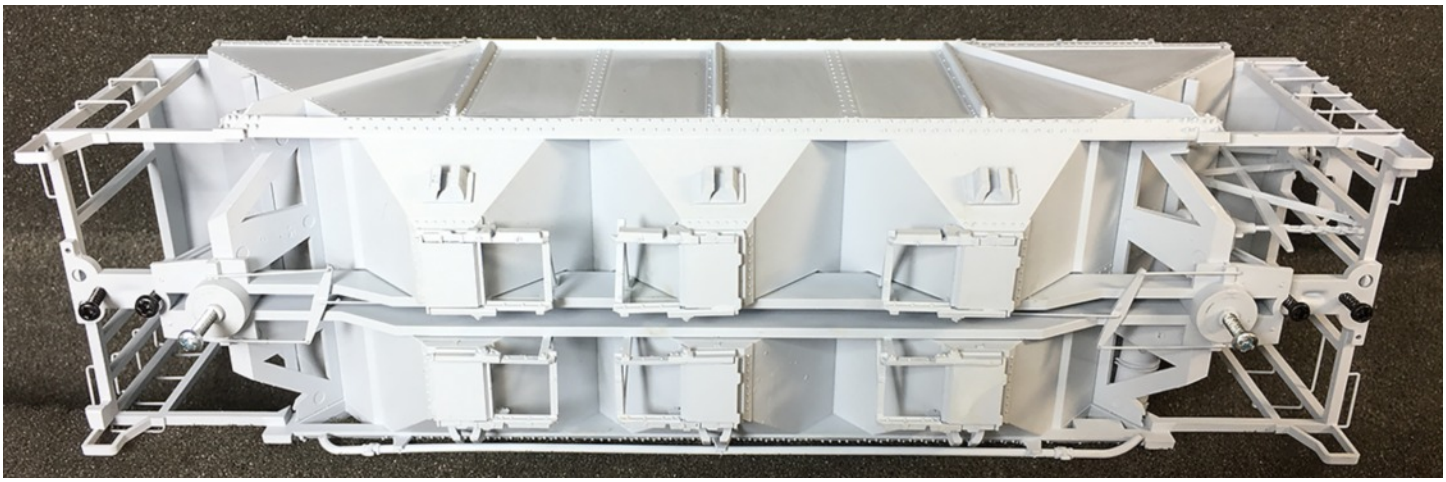


Cars before and after the 91% Isopropyl Alcohol treatment.

If you're following along at home, flip the cars over and remove the couplers and trucks. I don't use the Weaver couplers, so they were tossed will be replaced with Kadee®.



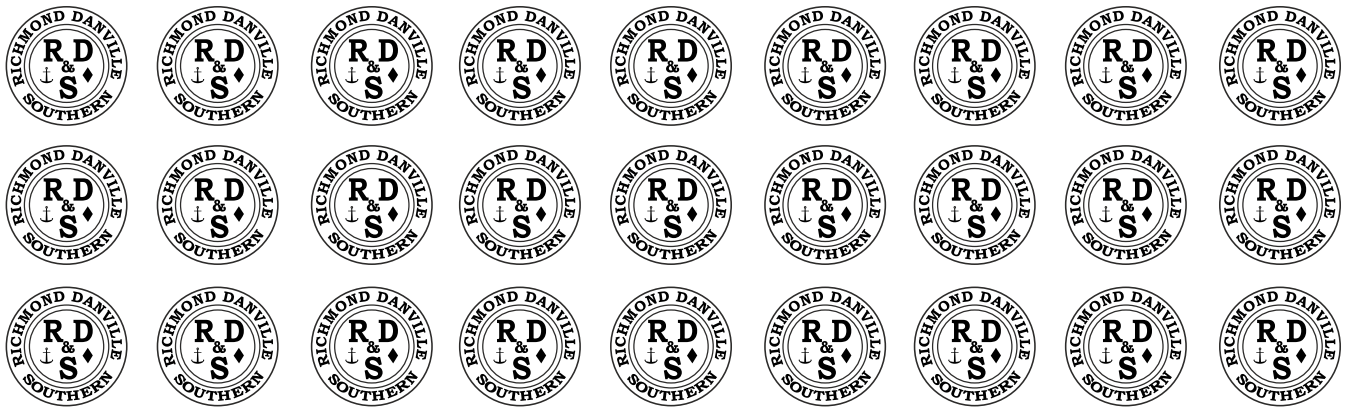
It's very simple to remove the couplers. There are two screws for each coupler and a single screw each for the trucks. The new Kadee® couplers will fit right on using the same screws. Kadee® is a personal preference as I fit all my rolling stock with them. It's not necessary, but it's what I do.



With everything removed, put the screws back in! I can't tell you how many screws I have lost because I started a project, got sidetracked and lost them. The screws here are easy to find replacements for, but some, such as those used on brass cars and locomotives, are not – get in the habit of putting them back in.

With the trucks and couplers removed, I was ready for new decals. And that, friends, is where I went wrong. I should have shot these with a gloss coat or even a glossy paint. I did not even think of that until way late in the game. You need a good gloss base for decals. You will see later on what I faced by skipping this step. Remember that these cars were pad printed and not decaled in the first place.

I have artwork for my railroad, The Richmond, Danville & Southern. In fact, I have two logos – one prewar and one after 1946 that was redesigned for the modern era. Since these were older cars, they would receive the prewar logo and lettering. I did not have any black decals for the railroad, so using a laser printer, I made my own. You could do this in Word or most any other program. My logos are in CorelDRAW®, so that's what I used. If you don't have any artwork, you can measure the reporting marks, car data and such from any other car you have. On the next page you can see the layout I used. The original was done at 600 DPI and was very sharp. Yes, much more then I needed for two cars, but allowing for the accidental mishaps and wanting to fill the page anyway, I added a lot of extra "stuff". I also wanted to know how small I could get with text so I added some different font sizes in different colors and other color logos. Inkjet and laser printers while printing



RD&S S6005
RD&S S6009

CAPY 140000
LD LMT 160800
LT WT 47200

BLT 12-39
CUFT 1973

LOCOMOTIVE SAND ONLY

RD&S S6005
RD&S S6009

RICHMOND, DANVILLE & SOUTHERN

WATCH YOUR STEP 12
WATCH YOUR STEP 8

FONT SIZE 5
FONT SIZE 4.5
FONT SIZE 4
FONT SIZE 3.5
FONT SIZE 3
FONT SIZE 2.5
FONT SIZE 2

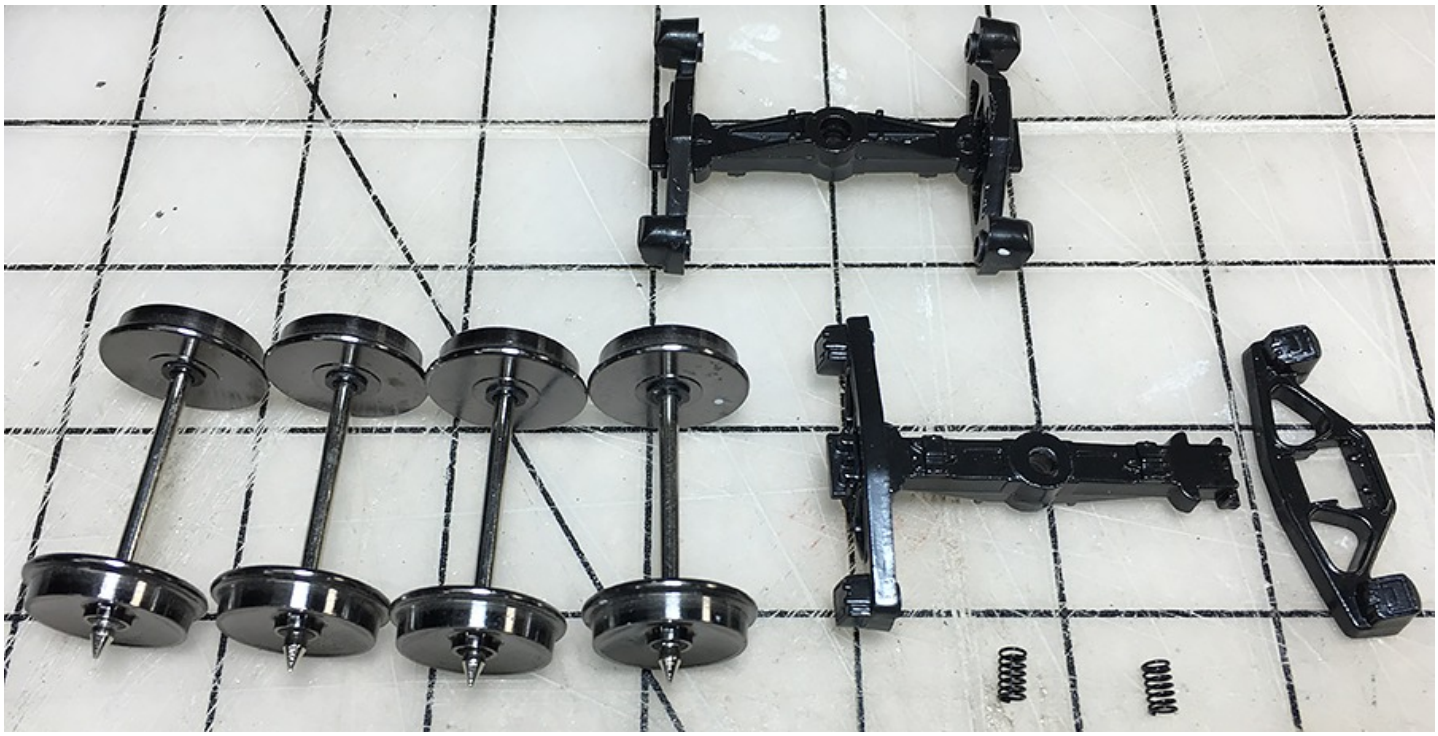
RICHMOND, DANVILLE & SOUTHERN

RICHMOND, DANVILLE & SOUTHERN

RICHMOND, DANVILLE & SOUTHERN

great color are not much good at color decals, at least not for bright colors. It's too opaque but I tossed a few colors on here to see if I could use them on signs or anything else. Again, I had a whole sheet of paper so I might as well fill it. I have made decals in the past on an inkjet printer, but now I was going to try a laser. I ordered a 25 sheet pack of laser waterslide decal paper from decalpaper.com, and a few days later I was ready to print. I sent a high resolution print to a friend who printed it for me. Most office supply stores and copy centers will also run this for you. The results were very nice and crisp, and I have that sample to know how small I can go.

Unlike inkjet decals, these did not need a protective spray before using. For the record, I have used LaserJet decal paper, and once coated, it's not bad. Decals were cut and trimmed in the normal way. I used drops of Microscale's Micro Set to slide the decal on to the car. Using small cut pieces of paper towel I "pulled" the extra solution from behind and around the decals. After an hour or so I lightly added Micro Sol to help soften the decal over some of the rivet detail. Once finished, I over sprayed and set the cars aside.

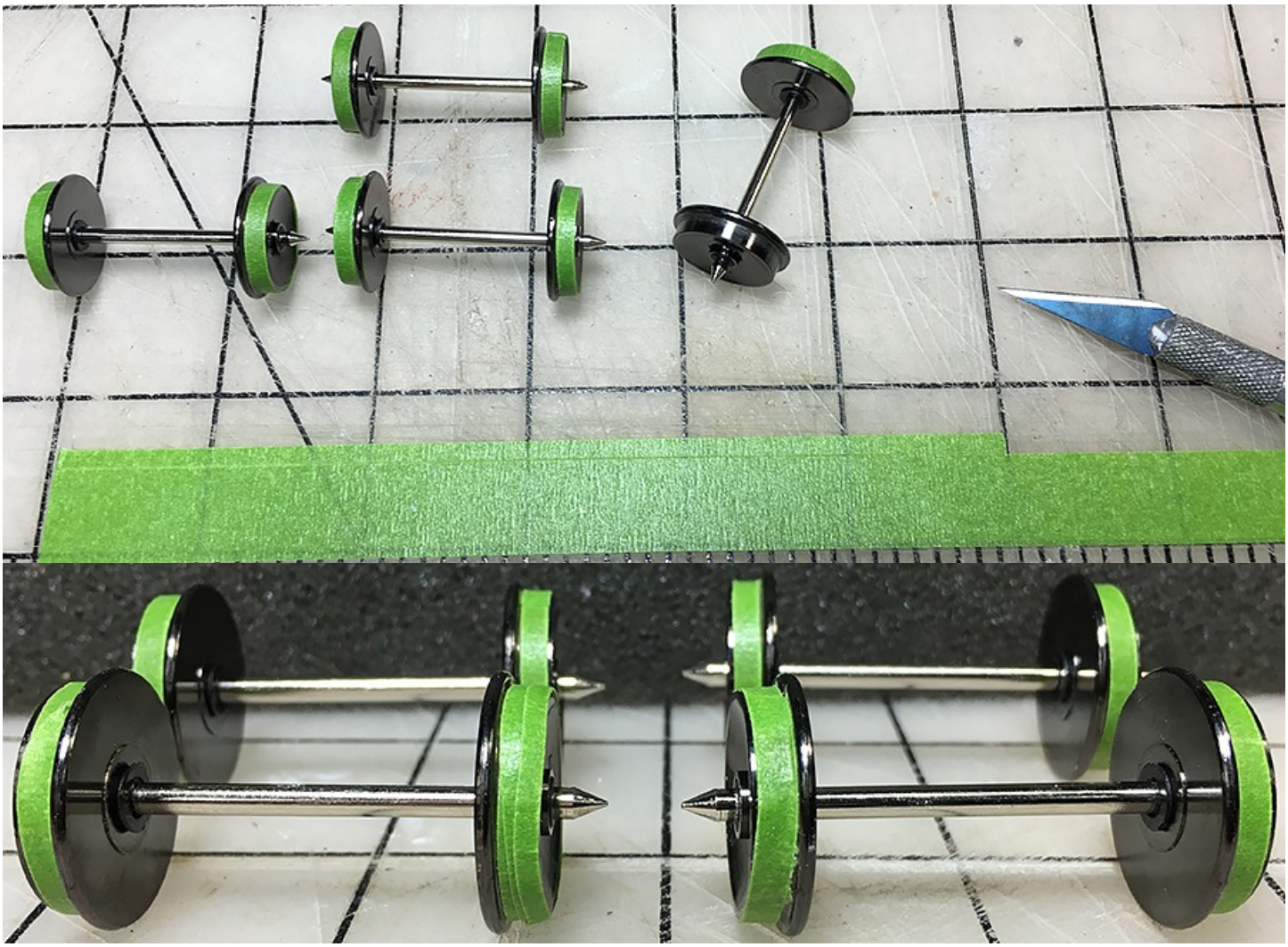


The trucks have been removed and disassembled. You need to remove the springs from one side of the truck to work the bolster out of the side frame. Be careful. Once you accidentally launch a spring, chances are you will never find it.

On to the weathering. As I said, I am no expert, and there are many ways to weather models. Here is how I decided to do it.

To weather the wheels, first wash and dry them to remove any oils. I lay down painters tape, and using an Exacto knife and a straight edge, I cut a small strip of tape the width of the wheel tread. I wrap the tread and then spray with Roof Brown for the base. I have seen a gizmo will make this go a bit faster with holes for the wheels, but being "cheap", I went the tape route. Setting the wheels aside to dry, I moved onto the trucks. Sticking a wooden dowel into a pencil sharpener I came up with easy to hold sticks to support the truck while spraying. I first used an auto primer to coat the entire truck. After drying, they also received the roof brown.

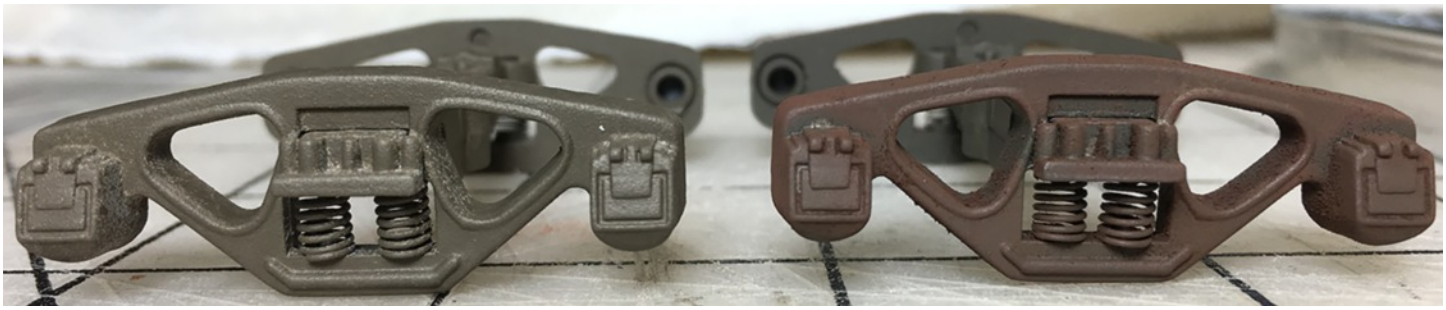
Next, I broke open another product I had bought awhile ago, but not yet used. PanPastel® Artist Pastels have been around for awhile, and are now really making inroads in model railroads and gaming. You don't need much, and they stick to even smooth surfaces. For the wheels, I brushed on Burnt Sienna Extra Dark, followed by some Raw Umber Extra Dark trying to mimic that oily/greasy look.



Cutting painters tape about the width of the wheel tread. Once wrapped, they were shot with roof brown.

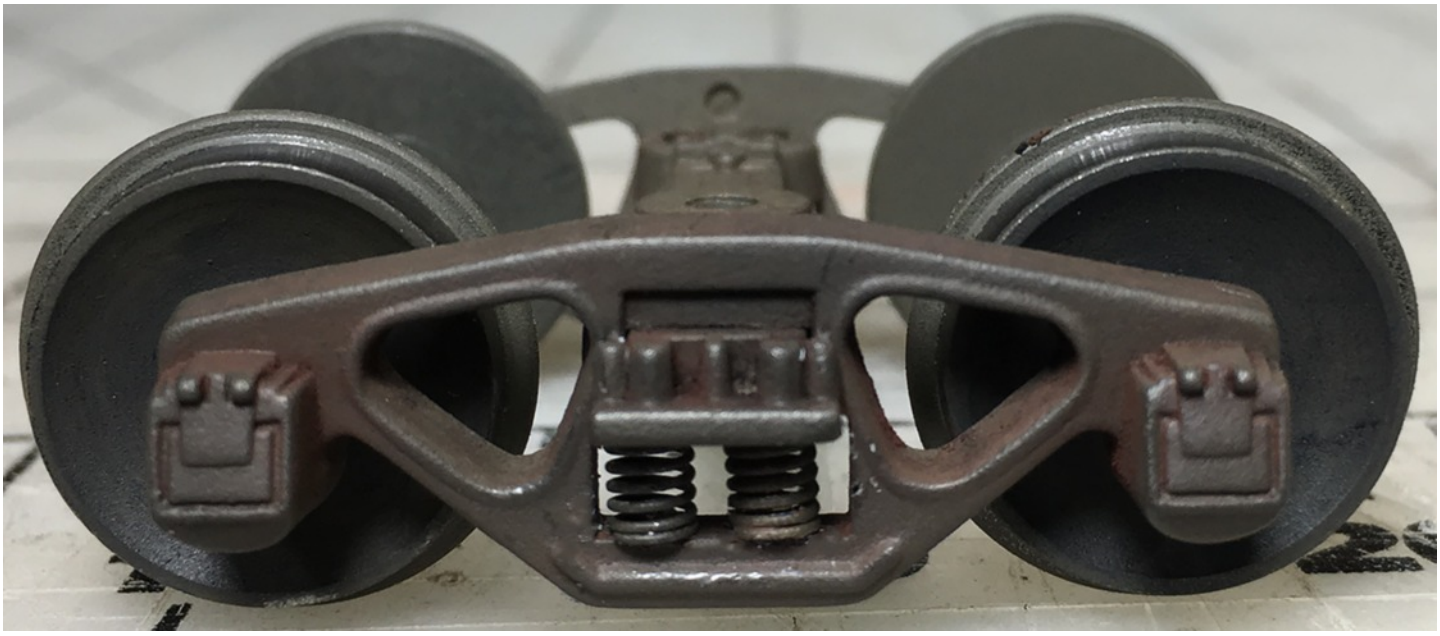
Plain old automotive primer was used first, and then the trucks received the roof brown.

This photo shows the wheels after painting and using PanPastel® powders. By using different colors of the PanPastel®, you can achieve a more rusted, unused look if you prefer; however for my railroad, sand would need to brought in a few times a week. Therefore, my cars would be on the road more than sitting idle.



The trucks should show more rust, except around the journal boxes because of the oil/grease.

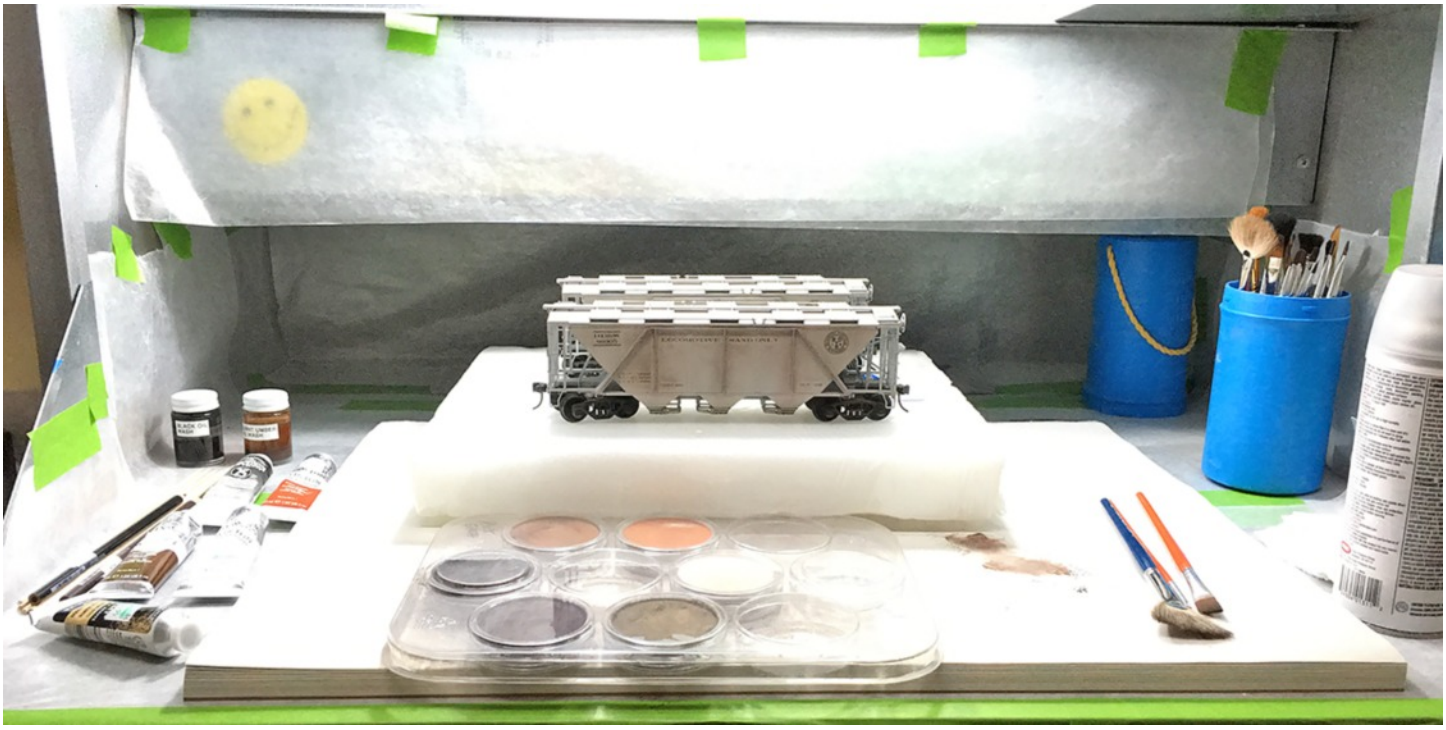
Below is one of the finished trucks reassembled and ready to be mounted back onto the car.



I tried to make things not look "the same". Different amounts of powder and blending allowed me to do just that.

Cars with decals applied and ready for weathering. You can see some decal film here and that is because I did not repaint or use a gloss coat. I a future issue we'll try again with a new car and see if we can't do a better job because as you will see this gets real ugly and almost impossible to fix.

Moving on to the car, I watched some videos from TrainMasters TV and just tried what I saw in the videos to get the effect I was looking for.



Inside the paint booth are the tools I used, which included many small brushes along with the PanPastel® powders and oils for wash. I use real oil paint, not acrylic for the wash.

To be honest, I did practice on a cheaper plastic car that was going to be removed from the layout, and I would suggest you do the same. In this case, the car looks so much better and realistic with just 20 minutes spent weathering it.

Weathering is a personal preference. Obviously weathering happens, but to what degree, is up to you. I have seen some fantastic weathering work, but then thought it was too much and too derelict. I can always go back and dirty the up some more if I want. I worked inside my paint booth because I had better lighting and could vacuum out the mess when finished. Also, notice that I always tape up wax paper inside the paint booth. this allows for better cleaning between types of jobs. Using dark umber, raw umber, burnt sienna and others, I simply started to add color to the sides of the car going heavier on the riveted areas. The PanPastel® powders are easy to work with. If you get too much on, simply brush with a stiffer brush up and down to remove it or lighten it up. I wish I could show you step by step, but I just got into a groove and stopped when they looked good. Also, surf the Web for the car type you are weathering and study the pictures of the real thing.

Ok, here's my first attempt with this weathering technique. "Houston, we have a problem." Because I did not repaint the car with my usual Scalecoat paint or clear cote the car, the weathering powders found the edges of the decal file and then some. So now what? A sane person would stop and cut their losses, removing the weathering and decals down to the original paint,and start over doing it the correct way. Not me! I thought, what if I used some 2000 grit paper carefully sanding the edges of the decals to help remove/hide the edge?

Really ugly decal edges showing up after weathering – all because I did not do what I should have in the beginning.

Don't ruin tomorrow for the convenience of today!

Close up of the problem with the decal film edges and weathering powders.

I took some Tamiya wet/dry finishing abrasive and carefully worked around the edges. My thought process here, yes there was some type of process, was to bring down the edges and blend them into the car side. I could then add more weathering powders, over spray the car and continue with more powders.

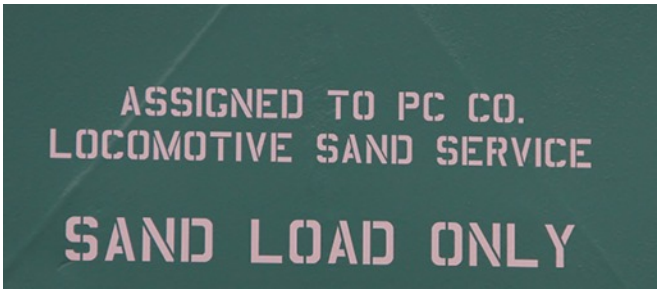
Left: In the process of sanding the edges and trying to blend.

Stop laughing… I know I know…

Below: Car after sanding and another weathering session. It's better.

Now, so I don't come off as a complete idiot, I purposely continued to see if I could fix this without going back to square one. I am sure this happens to a good many of us where we take a short cut only to be burned later on. It could be scenery, wiring, painting, most anything. Don't ruin tomorrow for the convenience of today! After a few more trips to "the powder room" and over spray, they look pretty good.

For me this was a fun exercise and something you just get in and do. Don't over think it, just look at prototype pictures and replicate what you see. You can always take it off and start over. Now I know that many prefer to use only an air brush for weathering and other different type of chalks, oils or acrylics. Hey, I don't care what you use as long as you get in and try it. This worked for me, and although maybe not perfect, it was a good starting point.



While visiting the Railroad Museum of Pennsylvania a few months ago, I saw this example of a car in sand use. Although much newer and cleaner than what I was modeling, it shows they were indeed used into more modern times than my 1947.

Scene Around the Layout

Michael Culham from Peterborough, Ontario writes: A scene on my O scale layout, the Great Central Railway. The Great Central is an industrial short line that handles all the switching in the fictitious city of Wentworth; it interchanges with the CNR in the south end of the city and with the NYC via a car float in the east end.

The locos are reworked Atlas SW1200s. The track work is hand laid with four spikes per tie with tie plates, all turnouts along with all the track details are from Right-O'-Way.

Freight cars are from a mixture of manufacturers. Buildings are a mix of pre built, kit built and kit bashed, as well as scratch built.

We are proud to feature work from our readers. Depending on your response, we would like to make this a regular feature. So get those cameras and cell phones out and start shooting!
High quality JPG or TIF files only.
Email to scene@oscaleresource.com with a description of your picture.

Oddity

n. 1. One that is odd. 2. The state or quality of being odd; strangeness.

By Daniel Dawdy

Many people take photos of engines and even cars, but most stop at that. I, on the other hand, just love to shoot things that I may want to model in the future. I love to model details and have people say, "Must have made that up… never seen a real railroad do that.". That's when I whip out the picture to show them that indeed the real railroad did.

Caution: This tactic does not make many friends :-)

While maybe not so odd these do give us some good uses for older scrap cars and parts.

What's on your workbench today?

This series shows our readers what other modelers are working on, and we need your help to make it successful. All that's needed is a simple snapshot of what your workbench looks like and the project on it. Send us a picture or two along with a short description of what you are working on so we can share it here. If it's a project under construction, send it in. Repair job, send it in. Completed project, send it in. Send your pictures and descriptions to daniel@modelrailroadresource.com

Andreas Mehrl from Munich, Germany writes: I'm working on a small locomotive servicing station. For this, I've already scratchbuilt a water tower from a blueprint I found on the www.

The tower is a C&NW prototype. The spout is a Grandt Line detail part. The engine house is inspired from the Thurmond engine house. The whole building would be too large for the space I have at my place. It is not yet finished because I'm thinking I want to leave one side open to make the interior visible. For this, I'm still looking for the right detail parts. Further inline is an oil servicing station because I own some SP locomotives and also a coaling tower. The progress is quite slow, due to my every days work.

Indianapolis O Scale Show

S Scale Midwest Show

Come to Indy and kick off your modeling season!

The best of O Scale and S Scale in one Show

September 21-23, 2017

Wyndham Indianapolis West 2544 Executive Dr. Indianapolis, IN 46241

WYNDHAM

Room rate $105.00*
Per night
until 8/20/17
***Based on availability**

317-248-2481

Dealer Setup
Thursday 4pm - 7pm

***** Show Times *****
Friday 9am - 5pm
Complimentary Hors d'Oeuvres and Cash Bar 5pm - 6:30pm
Saturday 9am - 2pm

Buy/Sell/Trade
Modeling Clinics
Model Contest
Modular Layouts
Layout Tours

Meet old friends and make new ones

Please print clearly – Detach and return lower portion with payment

Name: _____
(Exactly as you would like badge printed)

Business: _____
(Exactly as you would like badge printed - table holders only)

_____
MAILING ADDRESS

_____
CITY/STATE/ZIP

Phone: (_____) _____

Email: _____

Make checks payable to: Model Railroad Resource LLC
Mail registration form to: 407 East Chippewa St
Dwight, IL 60420
Or register and pay online at:

Registration (Both days included) $25.00 **$25.00**
(Table holders must pay the $25.00 registration fee)

 # Of 6 ft. Tables ____ $50.00 ea/$60 after 8/1/17 **$_____**

O Scale vendor ◯ S Scale vendor ◯ No preference ◯

Number of add'l registrants ____@ $25 each **$_____**
(Please list below/Use back if needed/Children 15 and under free)

Name: _____

Name: _____

Spouse's Name: _____
(No charge/only needed if attending show)

TOTAL AMOUNT ENCLOSED: **$_____**
(No refunds after 8/1/17)

Electrical needed? **Yes** ◯
(Subject to availability)

IndyOScaleShow.com or SScaleMidwest.com

Contact info@indyoscaleshow.com or call 815-584-1577 with any questions

The parties, whose names appear on this registration form, have agreed to hold harmless all of the organizers, sponsors, Model Railroad Resource, LLC, The Wyndham Indianapolis West, and others, single and collectively, for any injury, harm, loss, damage, misadventure, or other inconvenience suffered or sustained as a result of participating in the Indianapolis O Scale Show and S Scale Midwest Show 2017, or in connection with any activity related to this event, whether of negligence by agents under their employ or otherwise.

THE O SCALE RESOURCE

NEWS, REVIEWS, INFORMATION TO USE

March Meet Model Contest

March 18th, 2017 at the Chicago O Scale Meet

Categories

- Diesel
- Steam
- Passenger Cars
- Single Structure
- Display/Diorama
- Traction/Trolley
- Freight Cars
- Heavy Electric
- Gas-powered
- Caboose
- Non-revenue

1. The model contest will be held Saturday, March 18th, 2017 at the Chicago O Scale Meet. Models must be entered prior to 11:00 AM on that day. Once entered in the contest, the models must remain in the contest area until 4:00 PM on Saturday, March 18th, 2017. Awards will be presented at 3:30 PM on Saturday, March 18th, 2017, and models may be picked up at that time.

2. All models will be judged by a team of judges using nationally established judging guidelines. Categories that have only one model will not be judged, and no placement will be given. In these cases, An O Scale Resource gift certificate will be awarded to the sole entrant in that category. Best of show will be a popular vote.

3. Judging will start at the judge's discretion, and will be finished by 3:30 PM on Saturday March 18th, 2016.

4. All models must be put in the display position by the modeler, and only the modeler may handle the model.

5. Any descriptions, photos, or other information relevant to your model will be attached to this entry for the duration of the contest, and will be made available to the judges at their request. The material will be returned after the contest.

6. Entrant must certify that the model entered is his/her own work., And agree to release *The O Scale Resource* magazine (the contest sponsor), Hobby Hill Inc. (the show promoter), and all persons connected with the contest from any liability due to damage or loss of the model entered.

7. Entrant also grants The Model Railroad Resource, LLC photo reproduction rights for publication of this entry in *The O Scale Resource* magazine and/or use on their Website.

Chicago O Scale Meet 2017
Model Contest

Thanks for entering the model contest at the Chicago O Scale Show on Saturday March 18th 2017. The following pages are the Model Contest Entry Form and the Model Contest Judging Form. You may fill them out prior to coming to the show, which is recommended.

The Contest Entry Form identifies your model and is your receipt for your model. When you place your model in the contest, this form will acknowledge that you have a model in the contest. When you pick up your model, you will need to sign this form in the Claim Check area. This tells us that you have picked up your model, and it is no longer in the contest. The form also explains the rules for the contest. You will notice that there is a category for Single Structure and one for Display/Diorama. There needs to be a distinction between when a Structure model becomes a Diorama. For the purpose of this contest, a Single Structure is a stand alone building with no base. The building may have all the interior partitions and trim, but no other details. For example, a clock on a wall or a person on a platform will move your model into the Display/Diorama category. If the building is mounted on a base with scenery, that will move the building into the Display/Diorama category. This may seem awkward, but it is the simplest way to make the distinction. The other categories should be clear. If not, contact us for help.

The Contest Judging Form will be used by the judges when looking at your model. You need to fill this out in as much detail as you would like. In addition, we would encourage you to supply more information on separate pages. Title any additional pages with the title of the judging box they apply to. For example, titling the page Construction will tell the judges that the information applies to the first box of the judging form which is titled Construction. If you supply photos or drawings, they will be used by the judges and returned to you when you pick up your model. The first box titled Construction explains how you built your model. For example, if your model is more than 90% scratch built, you would check off that the model is scratch built. In the construction techniques section, you may check off more than one item. The last item in this box is the description of how you built the model. The space is short, and we would recommend more explanation on a separate page. Make a note on the line to see the attached pages. The next box titled Detail is where you will describe the detail and what it took to create it. Again, we would recommend a separate page for your explanation. Any photos or drawings you used would be a help to show how you replicated features in your model. The next box titled Conformity is where you will describe how your model matches a prototype. If your model is entirely free lance, that is OK. Just describe how your model would match a prototype construction. Again, we would recommend a separate page. The next box titled Finish and Lettering has some items that can be checked. Check as many as apply to your model. A separate page may be required to explain all your techniques. The last box that you will need to fill out is the Scratch Built box. Describe any parts of your model that you made from scratch, along with how you made them. A separate sheet will help here as well. Any information that you can give the judges will help them to understand your model and how you built it.

The three judges will each make their own observations and assessment of your model. They will then confer with each other to give you a total score. You will get the contest judging form back with your model, and your information when you pick up your model. All decisions by the judges are final.

If you have any questions, please do not hesitate to contact us.

Amy Dawdy amy@oscaleresource.com

Dan Dawdy dan@oscaleresource.com

Chicago O Scale Meet 2017 Model Contest Entry Form

Entry No.

ENTRANT / MODELER (please print legibly)

Name_____ Category_____

Address_____ City_____

State/Provence_____ Zip Code_____ Country_____

Phone (_____) _____,_____ Email_____

CONTEST EVENTS (please print legibly)

Enter your model description, number, or railroad name in the event you would like to enter.

Diesel_____

Passenger Car _____

Steam _____

Single Structure _____

Display/Diorama _____

Traction/Trolley _____

Freight Car _____

Heavy Electric _____

Gas-powered _____

Caboose _____

Non-revenue_____

CONDITIONS OF ENTRY

1. The model contest will be held Saturday March 18th, 2017 at the Chicago O Scale Meet. Models must be entered prior to 11:00 AMon that day. Once entered in the contest, the models must remain in the contest area until 4:00 PM on Saturday, March 18th, 2017.
   Awards will be presented at 3:30 PM on Saturday, March 18th, 2017, and models may be picked up at that time.
2. All models will be judged by a team of judges using nationally established judging guidelines. Categories that have only one model will not be judged, and no placement will be given. In these cases, *The O Scale Resource* gift certificate will be awarded to the sole entrant in that category. Best of show will be a popular vote.
3. Judging will start at the judge's discretion, and will be finished by 3:30 PM on Saturday Saturday, March 18th, 2017.
4. All models must be put in the display position by the modeler, and only the modeler may handle the model.
5. Any descriptions, photos, or other information relevant to your model will be attached to this entry for the duration of the contest, and will be made available to the judges at their request. The material will be returned after the contest.
6. I hereby certify that the model entered is my work. I also hereby release *The O Scale Resource Magazine* (the contest sponsor), Hobby Hill Inc. (the show promoter), and all persons connected with the contest from any liability due to damage or loss of the model entered.
7. I hereby grant The Model Railroad Resource, LLC photo reproduction rights for publication of this entry in *The O Scale Resource* magazine and/or use on their Website.

Entrant Signature_____ Sponsor_____ Date_____

CLAIM CHECK

I hereby certify that my entry #_____ entered in the model contest has been returned to me.

Entrant Signature_____ Sponsor_____ Date_____

Chicago O Scale Meet 2017
Contest Judging Form

Entry No.

1. Construction (Maximum 40 points) Points Awarded

Select the construction that best describes your model

___Scratch built complete model and details >90%
___Scratch built partial model and details <90%
___Modified commercial model >50% modified
___Kit bash commercial model not per the kit plan
___Kit built per the kit plan >90% some modification
___RTR model with some modification <20%

Name of kit or commercial model used as basis if applicable_____

Construction techniques–Select the methods and materials that apply to your model

___Drew own plans	___Followed construction article	___Cut & fit wood	___Soldered metal
___Used proto/com plans	___Cut & fit metal	___Cut & fit cardstock	___Made patterns
___Used kit plans	___Cut & fit plastic	___Cut & fit glass	___Made molds

Describe how model was built, complexity, and materials_____

2. Detail (Maximum 20 points) Points Awarded

Describe complexity, difficulty, & quantity of detail parts added by you. Identify commercial parts.

3. Conformity (Maximum 25 points) Points Awarded

Describe how your model conforms to a prototype. Include prototype documentation other than supplied with kit.

4. Finish & Lettering (Maximum 25 points) Points Awarded

___Weathered ___Hand Lettered ___Decals ___Transfers ___Spray ___Airbrush ___Dry brush ___Stain
___Non weathered Describe methods and materials_____

5. Scratch built (Maximum 15 points) Points Awarded

List all parts scratch built and note special refinements. _____

6. Total Points (Judges only here) Total Points

Tabulated by_____Verified by_____

O Scale Shows & Meets

Have an upcoming O Scale event? We would like to help publicize it. Send us the information up to one year in advance, and we'll place it here along with a direct link to your Website and/or Email.
Click here to send us your information.

O Scale South 2017
January 14, 2017, Atlanta, Georgia,
Two-rail swap meet at the Cross of Life Lutheran Church, 1000 Hembree Road, Roswell, Georgia, 9AM-1 PM. Modular layout and clinics. Admission $5 (spouses & children free). Tables $25. Layout tours on Saturday afternoon and on Sunday, Jan 15, 2017.
Website (www.oscalesouth.com) (PENDING)
Email (oscalesouth@gmail.com)
Dan Mason at 770-337-5139

Greater Houston Train Show
February 18th, 2017
Stafford Centre, 10505 Cash Road, Stafford Texas (Houston area)
San Jacinto's Model RR Club's Greater Houston Train Show features 20,000 sq. ft of exhibit layouts, vendors, educational clinics, and model/photo contests
Website: sanjacmodeltrains.org
Email: Bob@BobWphoto.com

Chicago March Meet
March, 17, 18 and 19, 2017
Weston Lombard Hotel
Lombard, Illinois
Email : info@marchmeet.net
Web Address: marchmeet.net

Strasburg Train Show
April 22, August 12 and October 14, 2017
2 -rail swap meet at the Strasburg Fire Co, 203 W. Franklin St, 9 AM - 1 PM. Admission $5 (Wives/children/military w/ID free). Tables are $25 for first table, additional tables $20 each. Great food, modular layout, clinics. Contact John Dunn 609.432.2871 or jdunn8888@hotmail.com or Rich Yoder at oscale48@comcast.net.

2017 O Scale West / S West 12
May 25-27, 2017
The Hyatt Regency Santa Clara (San Francisco area).
Family registration for the entire meet is $35. This includes you, your spouse/SO, and all children under 18, related or not. Un-registered attendees can walk up on Saturday and get in for $25.
http://www.oscalewest.com/

"Yankee Clipper", The 49th O Scale National Convention!
June 22 through 25, 2017
Holiday Inn, 1 Brightmeadow Boulevard
Enfield CT New England USA 06082
O Scale National Convention. Dealers, Clinics, and Model Contests. Tours include the Essex Steam Train, Pioneer Valley Live Steamers, Home and Club Layouts.
Email: godfreys78@aol.com
Website: snemrr.org/index.html

Indianapolis O Scale Show / S Scale Midwest Show
September 21-23
Wyndham Indianapolis West
The Indianapolis O Scale Show has been in place for over 48 years. For the past 15 years, it has been chaired by James Canter, and he has decided it is time to "pass the torch" We, at The Model Railroad Resource LLC, publishers of The O Scale Resource and The S Scale Resource, are proud to have been selected to carry on the tradition for the 49th year.
Website: indyoscaleshow.com
Email: info@indyoscaleshow.com

The O Scale Resource — Classified Listings

Manufacturers

Pre Owned

Shows & Meets

Dealers

Proto 48

Please let our advertisers know that you saw their ad in The O Scale Resource

Advertisers Index


Route of the
701
7871
RD&S
86005
LOCOMOTIVE SAND ONLY
RICHMOND DANVILLE SOUTHERN
R D
S