The S Resource

NEWS, REVIEWS, INFORMATION TO USE

December/January 2019
Volume 5 No. 2

S Scale

Building Second Generation EMD Diesel Locomotives in S Scale

Sn3 - How It Got Started, What Is Its Future?

Thoughts on Decals and a Few Techniques

Twin Whistle Sign & Kit Co. Contest

A Dirt Cover For Your Gondolas

New Tracks

Shows, Meets and so much more...

O&S Scale Midwest Show

Formerly the Indianapolis O Scale and S Scale Midwest Show

It's September! Time to kick off your modeling season!

The best of O Scale and S Scale in one Show

September 20-22, 2019

WYNDHAM Indianapolis West 2544 Executive Dr. Indianapolis, IN

DEALER SETUP
Friday 4pm - 9pm
Saturday 7:30am - 9am

SHOW TIMES
Saturday 9am - 5pm
Sunday 9am - 2pm

Room Rate $119.00* per night (until 8/21/19) Reference O/S Scale Show when calling
Link to hotel booking coming soon
***Based on availability**
317-248-2481 / 877-361-4511

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 8 ft. Tables ____ **$50.00 ea/$60 after 8/1/19** **$**_____

◯ O Scale vendor ◯ S Scale vendor ◯ No preference

Number of add'l registrants ____@ $25 each **$**_____

(Please list below/Use back if needed/Spouse/Children 15 and under free)

Name: _____

Name: _____

Name: _____

TOTAL AMOUNT ENCLOSED: **$**_____

(No refunds after 8/20/19)

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

OSCALEMIDWEST.COM OR SCALEMIDWEST.COM

CONTACT INFO@OSCALEMIDWEST.COM OR CALL **815-584-1577** WITH ANY QUESTIONS

THE S RESOURCE
NEWS, REVIEWS, INFORMATION TO USE
SCALE

Published Bi Monthly

The Model Railroad Resource LLC
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December/January 2019
Volume 5 No. 2

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Welcome to the online S 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

Beautiful scene from Bob Frascella's layout. The D&H in S scale in 1977.

Rear Cover Photo

A few of the facilities in the narrow gauge area on Bill Winans' layout.

BILL OF LADING

The Model Railroad Resource, LLC publishes *The O Scale Resource* and *The S Scale Resource*. Be sure to look at both of our magazines. There are many articles in our magazines that are not scale specific and will be of interest to you. Click the magazine title in this announcement to see the magazine.

From the Publisher's Desk

Great news – The Indianapolis O & S Scale Midwest Show is back on! As you may have read in the November/December issue of The O Scale Resource, it was not happening. As they say, "things can change in the blink of any eye". The hotel contacted us about a week ago to see if we were still interested. It was all I could do to not yell "YES!!!". So, mark your calendars for another great show September 20-22, 2019. The format will be the same as last year, but it will be a Saturday/Sunday show this year. Vendors and attendees both made this suggestion, and we complied.

We will once again have in-room presenters and layouts. One of the main negotiating items with the hotel was the number of room nights needed to secure the space. While we understand that vendors and attendees have a choice as to where to stay, keep in mind that it definitely makes a difference when trying to put on a show of this size. Room nights are what help us (and the hotel) to be able to secure so much square footage for the show. If you thought it doesn't matter where you stay while attending the show, I'm here to tell you that it does. We hope to see you there!

This issue brings you some great building articles. Bob Frascella scratch builds a second generation EMD diesel locomotive, and provides you with great detail so you can make your own. Glenn Guerra tries his hand at making dirt covers for gondolas, and Jim Kindraka takes you through his thought process with decals.

Don't forget to read "New Tracks", enter the Twin Whistle Sign & Kit Co. contest and read about some great modelers and mentors who are available to you. These include Allen Goethe, owner of Twin Whistle Sign & Kit Co., Bill Boucher, Warren Judge, Lance Mindheim and John M Sullivan.

Also in this issue, Jim Kellow speaks with Bruce Blalock and Don Wilde to get some insight into Sn3, its history, current state and what the future may hold for Sn3. It's very interesting, and if you have your own thoughts about Sn3, let us know by contacting us here:

daniel@modelrailroadresouce.com or amy@modelrailroadresource.com

Finally, as this year comes to an end, please enjoy this festive time of year, and as Scrooge would say "Honor Christmas in your heart and try to keep it all the year". This has particular meaning to me as I am now cancer free. It was a rough year, but I made it through with the support of loved ones (especially Dan), friends and readers of this magazine, along with readers of *The O Scale Resource*. Merry Christmas & Happy New Year from those of us at The Model Railroad Resource!

Happy Reading & Happy Modeling,

Amy Dawdy

NEWS YOU CAN USE

Ken Browning from WOODLAND® sent us some exciting news. Their The Field System™ has arrived!

The Field System combines everything you need to create realistic meadows, fields and pastures. The Field System includes Static Grass, which is a material that stands upright like individual blades of grass when applied with the Static King™. This material is perfect for adding dimension and texture to a layout while modeling fields and other tall grasses. Static Grass is available in four lengths and four colors that blend together to replicate all phases of growth.

Model other tall grasses or weeds with Field Grass, and use Briar Patch to create brambles and thickets. Accent highlights and shadows on the layout with Plant Hues, and add Flowers for extra color and interest.

The Field System also includes three new adhesives. These adhesives are specially designed for adhering the landscaping materials in the Field System.

Use The Field System products with easy-to-follow techniques for a simple way to mimic nature with incredible realism. The Field System is fully compatible with other Woodland Scenics products and can be used on new and existing layouts.

Click the image above or here to see a great video on this new system.

Jim King from Smoky Mountain Model Works, Inc. sent us the following.

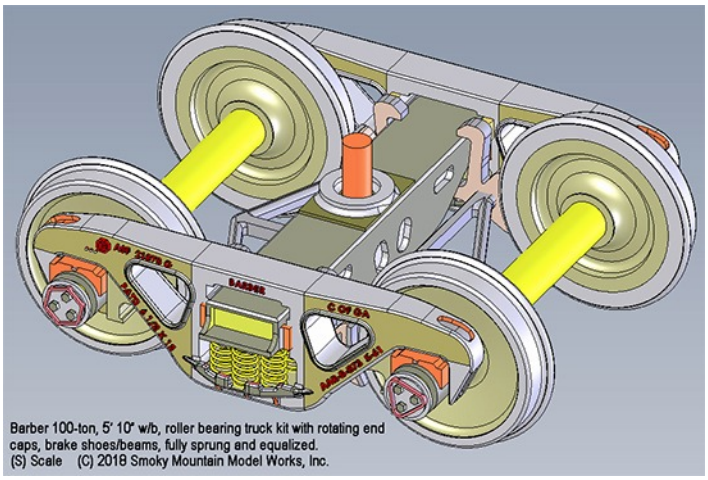
Following on the heels of the Blomberg-B sideframe kits are updated Barber S-2 roller bearing trucks. Designs are done and Stereo Lithography patterns will be ordered next week. There are no 3D printed parts in any of the freight trucks or brake shoes/beams kits. All parts are cast in grey-tinted, industrial-grade urethane for maximum strength short of injection molding.

An often-requested feature has been added: brake shoe/beams. Each truck contains (4) pieces that are easily assembled. The brake shoes castings are made from a semi-rigid urethane to allow snapping over the bolster. The brake beams are rigid urethane that glue into locator holes in the brake shoes castings. The 100-ton brake shoe assembly fits previously produced 100-ton truck kits for those wanting to upgrade current trucks, whether built or still in kit form. 50-tonner is new; 70-tonner has been revised to 5 ft 8 in wheelbase (previous kits were 5-10) so, if you're OK with an extra 1 inch gap between the shoe and wheel tread, the new 70-tonner will fit previous kits.

Now that cooler temps are finally descending on western North Carolina, I'll be firing up the injection molding press shortly to run more wheels. The code 110 wheels are bright Nickel-plated, machined brass with injection molded, black ABS centers that grip the axles and provide 100% electrical insulation for each wheelset. Assembled wheelsets are included in the trucks kits.

You can order brake shoes/beams add-on kits at any time (once production begins later this month). Trucks are made in batches and minimal inventory is maintained so, when they're gone, that's it until the next run, which is often at least a year away.
I'm taking reservations for 50-, 70- and 100-ton truck kits and separate brake shoes/beams kits for those wanting to upgrade 70- and 100-ton kits from previous runs. Your request will be logged in a spreadsheet and you'll be notified when production resumes.

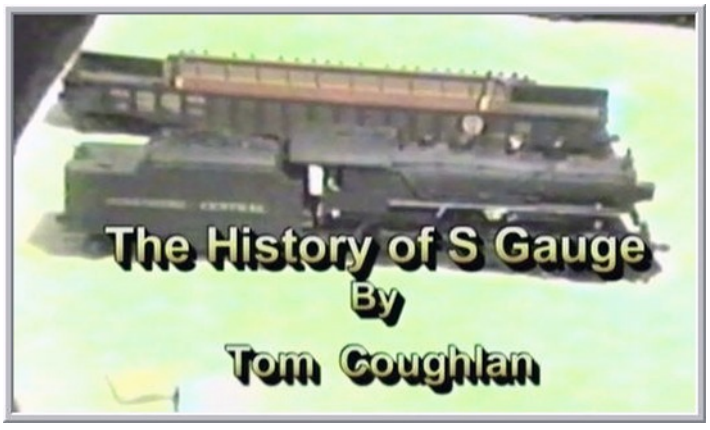
No money required until production resumes, just your firm commitment. Again, trucks are not maintained as in-stock items due to the many hours required to mold wheel centers and make urethane castings for the other parts. Place your reservation within the next 2 weeks to guarantee your "place in



the next run".

Go to the bottom of the web link below to view CAD images of all 3 trucks plus the 50-ton brake shoes/beams. The 100-ton truck design remains the same as previously produced. The 70-ton sideframe has been redesigned to 5 ft 8 in wheelbase. The 50-ton truck is brand new (a Milwaukee Road prototype). http://www.smokymountainmodelworks.com/S_rolling_stock.html

New DVD available now! Tom Coughlan was a founding member of the Bristol S Gauge Railroaders, and was very active in the S scale community. At the 1984 NASG convention, Tom gave a clinic called "The History of S Gauge" including all of the US manufacturers starting with Cleveland Models. Tom knew all the manufacturers personally, and his clinic



was filled with great stories and insights. He also shows representative models from the manufacturers. Tom did not include American Flyer in this clinic, as there were, and are, several books available covering the history of American Flyer.

Bristol member Bill Morris was at that clinic, and videotaped it. He has had the original tape professionally mastered to create a 1 hour record (the entire clinic) of that incredible clinic! Copies are now available as a fund raiser for the Bristol Club, from Bill.

For information on getting your own copy of this historic DVD, contact Bill Morris.

Bill's Email is billmorris52@hotmail.com

Precision Vintage Classics sent us a note reminding you that they have S scale parts on hand. We have the Tomalco Line of Parts & Locomotives And many more parts in our own line.

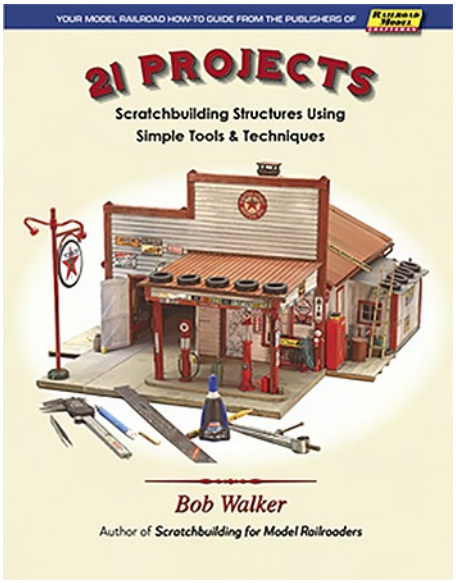
Check out their Website pvc-sn3.com

New from B.T.S. Bill Wade announced that they are going to do a re-run of their Dodson Farm's Milk Platform milk platform kit.

Best way to insure that Dodson Farm's Creamery had a good supply of milk was to make it easy for the dairymen to get it to them. For farms too far for the daily wagon or pickup drive, the company built platforms along the main line where milk cans could be dropped off for pickup by the local milk train. Empty cans were returned later.

Bill will be busy this coming month, so check his Website and call or Email him.

Steve Wolcott from Pre-Size Model Specialties has a new S scale double tunnel portal. This stone portal has a Lehigh Valley prototype and is cast in our high-grade urethane resin. Overall dimensions are 11" wide x 7-1/8" tall. The opening is 6-1/4" wide x 5-1/2" tall. $34.50, free shipping. Order on our website!



White River Productions is pleased to announce the release of the 21 Projects – Scratchbuilding Structures Using Simple Tools and Techniques. Written by long-time Railroad Model Craftsman columnist Bob Walker, 21 Projects features 120 pages of structure-building inspiration in HO, S, O and F scales. Printed on high quality coated paper, this softcover publication will give model railroaders a multitude of structure projects for their layout or module, 21 of them in fact! The book also includes scale drawings for five of the structure projects. See their Website for this and all their fine books.

New Tracks

Mentor Definition: A Trusted Counselor or Guide

By Contrubiting Editor Jim Kellow MMR

"You Can Build Great Models"
Model building requires confidence in your building abilities.
A Mentor can help.

When I saw this somewhere on the Internet, I just could not resist starting this article with this message. I totally agree with the quote.

In this issue, I am honored to be able to present a company that is familiar to many modelers and has proven the high quality and design creativity in its kits for many years. Please show your appreciation to this company by entering their contest and go down their "**New Tracks**"

Twin Whistle Sign & Kit Co. wants to help modelers improve their skills and gain confidence in their model building. Since 1992, Twin Whistle Sign & Kit Co. has manufactured products for hobbyists, collectors, and model railroaders. Their products have won convention competitions, and many of their models are in museums and on professionally built layouts. Check out their building structures, billboards, graphics, kits, and castings.

Modelers with any questions should contact the company. Twin Whistle Sign & Kit Co. wants to hear from you. Phone Number: 828-329-092 email: twinwhistle@hotmail.com

When I contacted Allen Goethe, the company's owner, about the mentoring program he was very supportive and immediately told me he wanted to be involved in it. There is no question that Allen understands the value of a mentor.

He selected a kit to be awarded to the winner of his contest that he feels will give the modeler a great building experience, as well as, help the modeler learn new skills and develop confidence in their building abilities. The model to be awarded to the winner is the S Scale McPherson Tooling and Machinery Company. Please go to the Twin Whistle Sign and Kit Co. website for details about the kit. Allen told me he selected this model because he believes it will be a great kit for the mentoring program. He told me the history of the original building the kit was based on. The building was located on the Swannanoa and near the French Broad Rivers

that flooded in 1916. The building was destroyed...you can still see the watermarks to this day on buildings near the flood.

Having a company that develops its kits based on original buildings provide a kit, and have the manufacturer of that kit as your mentor is an experience any modeler would love to have. It can be yours if you enter and win this contest. I wish everyone good luck in the contest.

To enter the Twin Whistle Sign & Kit Co. contest, click the button below. Entries must be received by January 14, 2019, and the winner will be announced on or about January 18th. Only one entry per email is allowed.

Enter to win the Twin Whistle Sign & Kit Co. drawing - Click here

The winner's mentoring experience and photos of the completed model will be included in a future article in this series.

Twin Whistle will contact the winner directly to arrange for mentoring and delivery of the kit. Good luck and thanks again to Allen and Twin Whistle Sign and Kit Co. for their help in this mentoring project. Lastly, thanks to you, the modeler, for participating in the project and going down **New Tracks**.

Individual Modelers

I recently tried to profile a master craftsman, but found out he is no longer modeling and his great models have been dispersed to others. This made me start thinking about the skills we as modelers will never learn from some really outstanding masters. I hate to see the hobby losing some great highly skilled modelers whose skills will now need to be remembered, and hopefully passed on by the modelers they mentored in the past. Bill Boucher is one of these modelers.

Bill Boucher

Bill Boucher, of New Bedford MA, is an S Scale master modeler that I have never met, but have seen photos of some of his fabulous Circus Train models displayed at the 2018 NASG convention.

Don Thompson told me Bill is now in a senior living home, and his models have been dispersed. Don was kind enough to share some stories about Bill which makes me wish I could have had the opportunity to have Bill as my mentor. I welcome members of the Bristol Club or other modelers who learned from Bill to contact me about being profiled in one of my future articles. Bill's talent and skills need to be remembered and passed along to a whole new generation of modelers. My email is jimkellow@sscaleresource.com.

These photos of Bill's Circus Train were taken by Don Thompson at the 2018 NASG convention. Truly outstanding modeling.


W. A. BOUCHER'S ROYAL 'S' CIRCUS
SEA LIONS
DINING DEPT.


W. A. BOUCHER'S ROYAL 'S' CIRCUS
ROYAL 'S' CIRCUS
W. A. BOUCHER'S ROYAL 'S' CIRCUS


TICKETS
W. A. BOUCHER'S ROYAL 'S' CIRCUS
2005

Now please read some of Don Thompson's stories about Bill:

"When Robin and I had Train Stuff, he (Bill) made us patterns for the CNJ Blue Comet passenger cars in S Scale. We offered these kits with cast polyester sides, NE bass wood stock roofs and soft metal detail parts. I learned about Bill from his 1970's articles in the *S Gauge Herald* "Pasteboard Pullmans" where he described how to build layered heavyweight passenger card sides using shirt cardboard and a pounce wheel for rivets. Bill made us patterns for the right and left sides for the combine, diner and baggage car, as well as, for the coach/observation. These were mounted on plywood and RTV "E" molds were poured.

We visited Bill's house to pick up the patterns. It was odd as we walked through his house without any signs that he liked trains or modeling. Downstairs we went, and the dark basement was empty except for a furnace and tiny room in one corner, about 6' x 6'. When we entered, it was crammed with plane, train, boat and car models! Along one wall was a workbench where Bill was working on the circus train serpent car. A boa constrictor was being modeled using solder. The brush Bill was using to paint the snake had 1 bristle! He showed us a passenger car steam globe valve he was making using a pinhead; he had drilled out four holes to mimic the openings in the handle. I used the level of detail that I saw there when we approached Mr. W.S Ting on our models to be manufactured by Sanda Kan. Bill was a long time Bristol Club member and we would look for him and his models at the January West Springfield, Massachusetts Show. He is in his 80's now, but Robin and I appreciated how much he had helped us in our previous business.… Don T."

Bill is by no means the only master modeler we need to remember and learn about. I hope you will contact me with stories of your own master modeler, who you will never forget. We will all benefit by knowing him or her. Don thank you for sharing your memories of Bill.

For me, the Master Modeler I will never forget is Harry Darst, primarily an HO modeler who worked for GM, in their model department. Harry taught me how to build models in brass. Every Saturday morning for over a year, I sat by Harry's side and watched, listened, and learned to cut, bend, shape, anneal, hammer out imperfections, solder, select the type of solder to use, etc. It was the best education I could have ever gotten.

Harry was also the person who encouraged me to enter my first contest. I was afraid my model would not be good enough to compete against other models that would be entered. Harry gave me the confidence to enter it anyway. My model won first place in its category. I never hesitated to enter a contest again.

Harry has been gone for over 20 years, but not to me. I can still hear his voice every time I sit down at my workbench to build a model. Harry Darst will always be with me.

I want to now introduce you to some modelers who can be your mentor and help you create great memories and improve your modeling abilities and confidence. I know you will enjoy meeting these modelers and seeing the "**New Tracks**" they can help you travel.

I believe *confidence* makes a talented modeler. With confidence in your modeling skills and abilities, you can build anything you want and be proud of it. So how does a modeler get confidence in his modeling skills and abilities?

I have met modelers over the years as a NMRA Regional Achievement Program Chairman, for three different regions, a NMRA Contest Chairman for two different regions and a model railroad author for many years, who have told me they could never be a talented model builder and would never get NMRA awards or win contests. In many cases, the reason for their belief was either a lack of confidence in their modeling ability or even worse, a fear of trying and failing. I can understand such feelings as I had them in my early modeling.

I truly believe a modeler can eliminate his doubt and gain confidence, if a person, friend or even someone they do not know who is a model builder, convinces him or her to build models. I call these people *mentors*. Every talented model builder I have ever talked with has started with a lack of confidence, some call it trial and error efforts, and overcome it by building models. Just *trying* to build your first model puts you on the track to becoming a skilled confident model builder.

The difference in a talented model builder and a modeler who does not believe he can ever become talented, is that the talented modeler is a builder and never hesitates to try building something new. These modelers have found a way to overcome their doubts, make many mistakes, and ultimately achieve their model building dreams.

For some modelers, this has required a long up and down trip and having one or more mentors to rely on for help. For others it is just gut determination and continuing to try to build great models. Either way, they got there and so can you.

Warren Judge

As a Freelance narrow gauge modeler in Sn2 and Sn3, scratchbuilder, historical figure painter and military miniaturist in multiple scales, I've always found it better to share your knowledge then to keep it. Since I've been a boy, I've enjoyed model railroading and model building as a whole, and have always loved to see other people's work, in addition to to learning from the masters when given the opportunity.

Only in the past 25 years did I start to get into the hobby, and most recently in the past 15 years, did I really begin to start getting serious in model railroad and scale modeling.

I guess, like the rest of us, I can only say any success I have or talents I've developed would first be accredited to the Lord of my life, Jesus. I have everything because of Him first and secondly, I have been blessed from those who have mentored me.

As with any hobby, I believe our success to getting better is attributed to the mentors and fellow modelers who have taken us under their wings to show us the ropes, and to give us the help and critiques that pushed us to dig in and be the best we can. I can only say for myself that I've stood on the shoulders of others in the hobby

Original figure sculpted in O scale 1/48th for a commercial company Converted 54mm figure Italian regiment Revolutionary War 1777

who have truly helped me become a better modeler

I can remember looking at the work of these great artists and just saying "WOW, I wanna be able to do that". So I mustered up the courage and I asked them, can you show me? Can you help me?

To start with, a few people come to mind and it would be a disservice to not mention them before going on. These are artists have truly helped and shaped me in all of my modeling skills.

First and foremost, Shepard Paine comes to my mind as he is probably the best known military modeler in the world. If it wasn't for Shep and all his techniques and articles he did, from Monogram Models, painting classes, personal help, judging at national shows, to the books he had written, I probably would not be where I'm at as a modeler today or any other military modeler I know. Thanks Shep!

Building models as a kid, like most of us, I was looking to build a tank for my father-in-law as a gift and memento to his service in the military. Heading out to the hobby store, I happened to see a book "How to Build Dioramas" by Shepard Paine, and to say the least the rest was history. Now I've built models for years, and in some sense, I thought I was an ok model builder, but after going through that book I was still a beginner. I was both blown away and hooked! What I saw that Shep could do, the realism , the ability to take a basic model and figure and bring it to life was so incredible I never thought you could go to that kinda of level. In the end, this book really impacted me.

British soldier WW2 Flowers for Me Lady

Low and behold, I found out that Shep was from the Chicagoland area, and I set on a quest to meet him and to muster up some questions if I did. But in all honesty, I truly wanted to just meet this master, get to know him and learn from him. Well I was given that opportunity when I found out that he was part of a local military miniature club that met frequently every month, the Military Miniature Society of Illinois. To members it's known as the MMSI. Well, I met Shep and even got his autograph, but what really meant the most to me and stays with me today is that he was willing to talk with me, to share with me and to encourage me on to keep getting better. I've never forgotten that meeting and it reminds me to this day to always remember where I came

O scale figures from Aspen miniatures using McKenzie Brothers trees.

from and what I have learned. To always take the time to thank anyone when given compliments, to listen to concerns or struggles others are having when trying to achieve certain results and to answer any questions when asked. It is that we remember where we came from and to be the mentor to others when given the chance. To whom much is given much is required....the Bible.

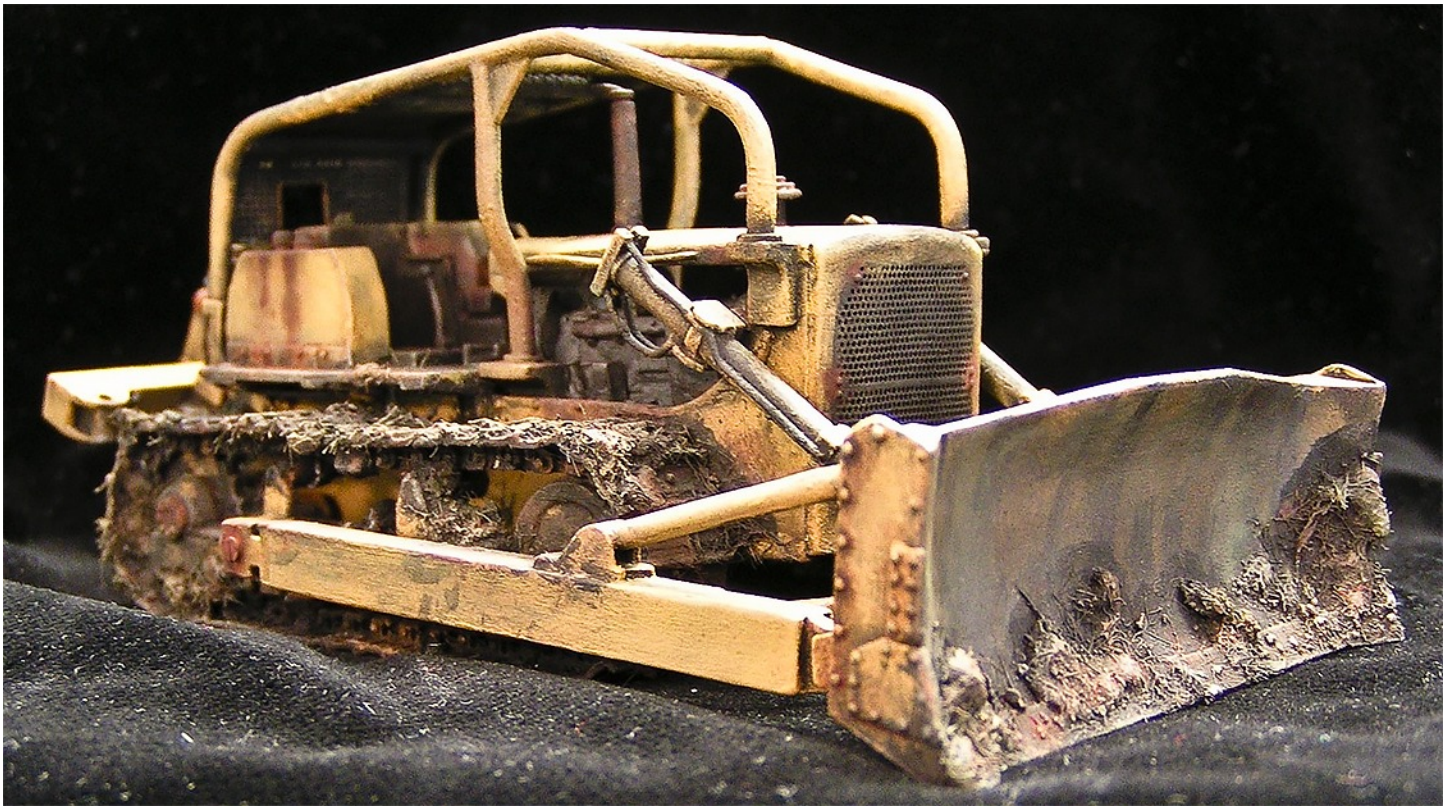
I cannot forget my good buddy and mentor, Mike Blank, from Sweden. Mike personally became my friend and mentor, and would stay with me when going to national shows together. And we also shared the same passion in another hobby, drumming. Mike personally helps me in my sculpting figures and painting. As a beginner painter and sculptor, I always loved Mike's work and was always attracted to it every time I saw it. I believe it was his style, the darker way he painted, that attracted me. It was different from the other styles and it just stood out. As fate would have it, I got to know Mike and became good friends with him Having him staying with me and working on figures for hours at time truly helped. That was true mentoring. Now I know everyone cannot have that same kind of help, but remember this, any help you get is better than no help at all.

A $6.00 Ertle kit with a few extra details

When it came to the model railroading world, I was always amazed at the detail and size of some of the railroads I've seen. I was always attracted to the narrow gauge side of model railroading, and it really intrigued me with the size of these little locomotives how they could ride on the small track in the mountains, forest ,or anywhere they could lay the track.

The big difference between military modeling and model railroading is this, with military modeling you have static displays, with model railroading you get to run the train.

A few gentlemen that are without a doubt the most influential people in model railroading I've come to know, have personally helped and mentored me must be mentioned. So the first, John Mckenzie from the



PBL bulldozer painted and weathered.

Sn3 3 cylinder Overland model, painted and weathered.

McKenzie Brothers tree company. John is the single most influential model railroader I know, and has been with me from the get go of building my first layout to always answering me and helping me in my narrow gauge endeavors. I heard of John when I saw his masterpiece traveling Sn3 Red Mountain Narrow Gauge

A HOn3 MDC shay with NWSL re-gearing and can motor converted to Sn3 detailed interior.

On30 conversion using a Bachmann chassis and a conversion kit and detail parts, weathered and sound added.

layout.

Without John and his incredible knowledge and a passion to help others, I could not have done anything in model railroading. John truly is a great friend and mentor. He is also a fellow Sn3er and narrow gauger as

Two Sn2 engines I converted from HOn3 mechanisms.

PBL stock car built from the box and weathered.

HO scale kit of a gas station built straight from the box.

Sn2 mini layout under construction 4ft x 6ft, 56 inches high, 16 inches of view and 8 inch valance.

myself .

Next, would be Jerry Wilson, a great friend and master modeler in his own right is another mentor. Jerry has single handedly set my feet on the two foot aspect of narrow gauge modeling. Jerry has been, and still is, the single reason I decided to go to two foot in S scale. He has been with me from the beginning of my 2 foot quest. I still rely on his personal skills, expertise and help while working in this scale. He has written many articles and is always one to ask for advice from.

Jim Schwingle was the first true narrow gauger I met and had come to know through buying something on EBAY. Jim is not only a great model railroader, but was kind enough after only meeting him a few times, to

actually allow me to work besides him on his own railroad. Jim truly is a walking encyclopedia of model railroading and narrow gauge knowledge. Jim, in his own right, has been featured in a few model railroad magazines and pretty much knows "Who's Who" in this hobby.

Thank you brothers for all you have done for me and to help and mentor me as I try to be as good as you all are. As with any model railroader, you find the scale you like and then go for it. Now, as destiny would have it, I've switched scales many times and ended up in Sn3 and Sn2. It's not that I didn't like the other scales, it's just that after seeing a few catalogs from master model builders PBL many years back, I took the plunge and I never looked back.

With that said, I think any scale, as long as you enjoy what you, do works out fine. We, as modelers, are trying to achieve realism and a sense of a world in scale. This can be difficult if you are new and don't know where to begin. So if you're able, try to seek out any local model clubs or events and get involved. If you live in an area that is not exclusive to these things, you alway have the internet.

As a modeler I love to help people and to show any of the skills I've learned to others. I really like to show those of us who cannot afford a expensive airbrush or tons of different kind of paints, that we can get inexpensive items from local model businesses and other stores. I believe you can achieve great results with different techniques I've learned and developed over the years with basic materials. I frequently do clinics and share my techniques with others at shows I go to. But, I always leave an open mind to seek out other artists to help my own needs to get better. As a mentor, I would like to help people to weather better, scratch build models that are either too expensive or not commercially available, use simple materials to achieve results other great modelers are achieving without the cost.

I would like to do some future articles in a few areas of modeling. A few of these would be, simple scratch building with optimum results, spray painting from a can with airbrush results, weathering from dark to light, converting and painting figures for realism, groundwork techniques using natural material, painting a dollar model to look like the real thing. And, as time permits, a few others.

I'd like to thank Jim Kellow for allowing me to share my humble story, and to encourage other modelers to continue to build and learn from others and to share their skills and talents with others so the future of modeling continues for generation after generation. Mentoring has a purpose, it's to encourage others as we were once encouraged. Remember this, all of us were beginners once too.

I will be glad to talk with you about your modeling and provide any insights or help I can. Please contact me at warren.judge@sscaleresource.com. Warren Judge Christian, Husband, Father, Grandfather, mentor, modeller, and student.

Seeing Warren's work has led me into looking more in depth at what figures are available, and modelers who specialize in painting them. I am working on a future article which concentrates on this part of our hobby. I am very pleased that Warren has agreed to write a separate article in this publication on figure painting. Keep your eye out for it. Thanks Warren for agreeing to do this.

Lance Mindheim

My interest in the hobby started in the mid-seventies while in high school. Although I didn't have a hobby mentor at the time, I was fortunate to have many rail fan mentors at the local university rail fan club. After a break for a decade or so, I came back to the

hobby in the 1990's and was fortunate to find many excellent modelers in the DC area where I live. My biggest influence/mentor was Paul Dolkos who taught me the value of avoiding heavy handed techniques and details and strive for a delicate touch. I model in N scale and HO and presently have layouts in both scales. My

Portrait shot by Wayland Moore.

learning approach is to study the work of excellent modelers and try to grasp what it is specifically about their approach that stands out. I'll often email them to get additional instruction on how they did things.

In 2002, I received a buyout from my employer at the time. I saw an opening in the custom layout building and design market for the more serious modeler. I used the buyout as seed money to start my own custom building and design firm which caters to all scales (but not three rail O scale or garden layouts). The Shelf Layouts Company, Inc. www.shelflayouts.com.

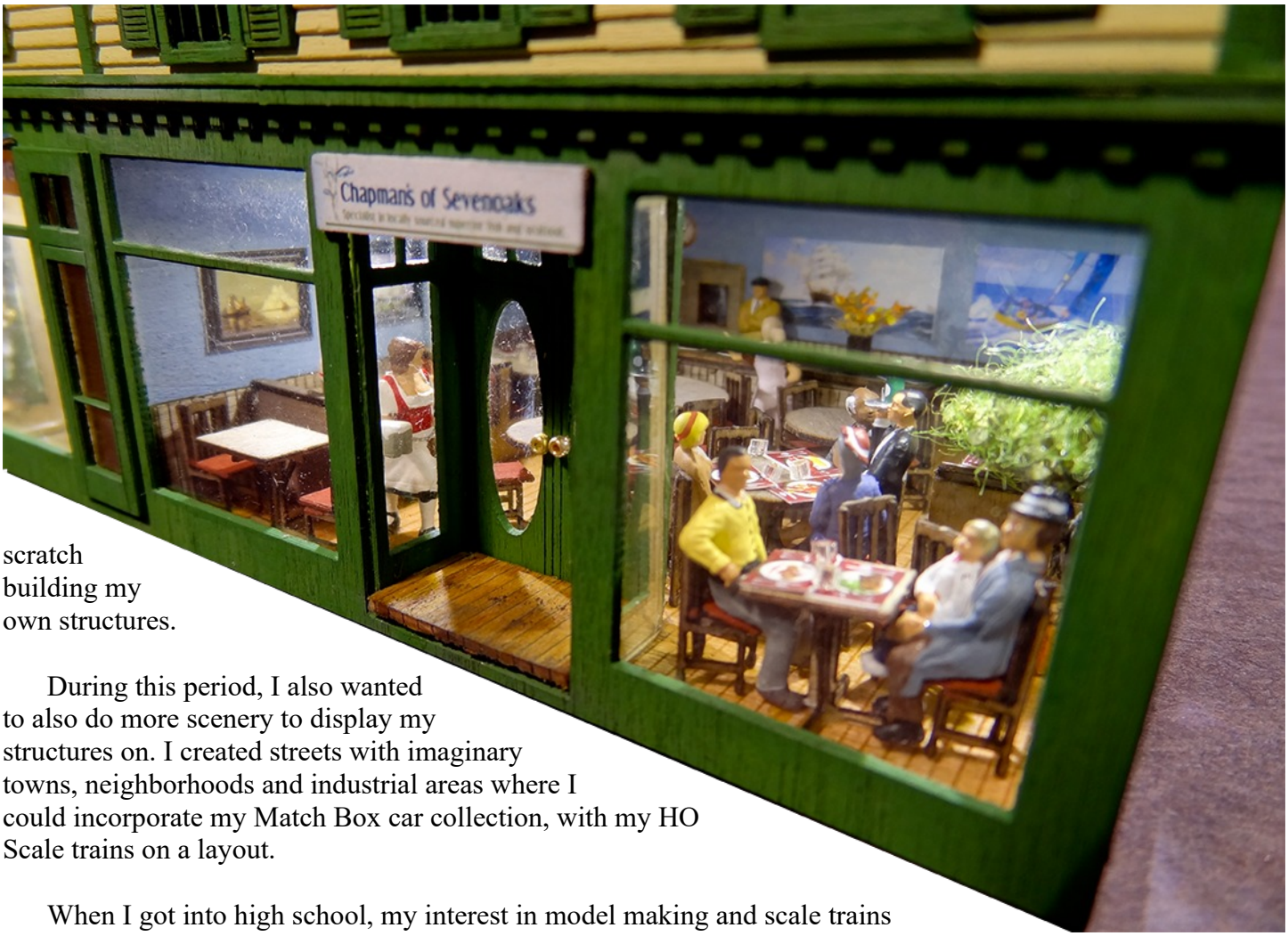
Layout design is something even experienced modelers struggle with, and it's so easy to get bogged down in the minutiae of "x's and o's". A successful design, at it's core, is one that enables a layout owner to wring the maximum amount of enjoyment out of the railroad. I take a step back and try to get a handle on the customer's lifestyle, true interests, and skill level to provide an outside perspective. On the construction side, I do a lot of work for modelers interested in a specific prototype. Many of my clients enjoy building structures and scenery, but feel intimidated by the mechanical aspects of layout construction. Many of my projects are "mechanically complete", but without scenery and structures so the customer can do that themselves. Finally, I also have written a series of six books on track planning, construction, and operations, all of which are sold directly on Amazon.com.

I have a personal website at www.lancemindheim.com and receive many incoming questions through the contact information on that site. If you think I can be of help to your modeling, please contact me directly at Lance.Mindheim@sscaleresource.com.

John M. Sullivan, Bedford Mass

As with many model railroaders of my generation, it all began as a young child one Christmas morning when I discovered that Santa had left me a Lionel train set. In my case, it was a 4x8' layout mounted onto a sheet of ¾" plywood. Like many kids back then, I also grew up with having Lincoln Logs, Kenner Girder and Panel Building Sets, Erector Sets, Revell & AMT plastic kits. We did not have video games, iPhones, and X-Boxes back then. Instead, we had our imaginations and our creativity to keep us occupied, to build and assemble things, as well as hone our skills as we grew up.

I grew older, I gravitated away from the toy-like 'three-rail' O-Scale trains, onto the more realistic looking scale of HO. As my model making abilities also became better, the challenge of wooden structure kits, such as 'Campbell' kits became more interesting and fun for me to build. I even found myself buying Balsa wood at the hobby shop, and attempting to scratch building my own structures.



During this period, I also wanted to also do more scenery to display my structures on. I created streets with imaginary towns, neighborhoods and industrial areas where I could incorporate my Match Box car collection, with my HO Scale trains on a layout.

When I got into high school, my interest in model making and scale trains drifted away. Although my fascination with highly detailed miniature things never did. However, my model making took a hiatus for many years until after I was married. Back then, as a couple, I had no room in the house we were living in for a train layout. But one year I saw an N-Scale train set on sale, and I bought it. Again, it was around Christmas time, and the nostalgia of playing with trains was rekindled, as I would set the tiny circular track on a bar top we had, and when our nephew would come visit, he and I would play with it for hours.

Several years later we then moved to a newer house, which was much larger. Around that same time, *Model Railroader* featured a layout designed to fit onto a flat door that they called the Buzzard's Cove. What fascinated me was the track design, that I could build this on a 30" x 60" door, and it featured an ocean-front beach, with bridges and a lighthouse, and many other cool structures that were different. Again, I always was fascinated with modeling water, and in how to make it look real.

Using MR's drawing, I set out to do a simple track plan, with switch offs and side tracks leading to industry. I also took the liberty of adding my own mountain designs to the MR plan, and I started using new products that I'd read about, like Sculptamold®, plaster cloth, and shaped extruded pink construction foam.

Times sure have changed from the old days! Back then is was using rolls of green grass wallpaper, cutting mesh porch screen covered with plaster of Paris, and then painting and sprinkling on dyed sawdust for ground cover, with fake bottle-brush pine trees, and using Lichen for bushes. Now, we have so many products and choices, from companies like NOCH, Woodland Scenics, Scenic Express, as well as many more. That it's just amazing what you can find to add detail and realism to now any scale layout.

I spent many years working on my Buzzard's Cove layout. The more that I worked on it, the more I learned and got better at my skills. Then the layout was finally done! In a sense, that day is almost a modeler's worst nightmare… So now what? The answer was to add an addition to the back of the length of the layout. So, I added on a 6" x 60" frame, and a raised double parallel track (that BTW went nowhere, but I was thinking ahead towards future expansion). Again, I also wanted to do more water, so this time I added a river with a stone viaduct bridge.

But now working in a den was getting confining, and I still wanted to have a bigger layout. About the same time, *Model Railroader Magazine* featured its yearly 'Greatest Layouts' edition. In it was a fantastic logging layout built by a guy down in Australia, named Geoff Nott. His water making, and waterfalls was among the finest work that I had ever seen! I cannot begin to tell you how inspired I was of this man's work in this article. So, I wrote to Geoff, via MR to learn more and too ask him questions on how he did what he does and the techniques that he uses?

A month or so later I got this large package in the mail back from Geoff. In the package, it contained samples of every product and the paints that he uses. Including step-by-step examples of the phases of the process from start to finish. Also, Geoff wrote nearly ten (10) hand written pages of everything from painting mixes, to creating cascading water, waterfall sections, to dry brushing, varnishing and drawings that all looked

like da Vinci created concept plans. There was everything that I would ever (almost) need to know, and I was ever so grateful to Geoff for sharing all of this!

It then prompted me to create a large N-Scale diorama for a cascading series of waterfalls and a rock wall gorge with a lake at the bottom. I coupled this with a wooden trestle bridge/track going through the center with two tunnel portals. I was possessed like the actor was in the movie 'Close Encounters' who was recreating Tower Rock in his basement, not sure why I was building it. But I had seen what Geoff was able to create, and I had to emulate what I had learned from him. So, the project was born and is now the centerpiece on my latest layout.

Now I had this layout built on a door, and 3 x 3 foot waterfall diorama that were two separate pieces to one another… Now what to do? Well… we had an attic room that was above our two-car garage, which I then finished off to create a train layout hobby room, complete with a large work desk and storage. It also afforded me to build and expand my N-Scale layout that would become 22' x 7' in size, which incorporated the Buzzard's cove layout, and the waterfall/gorge diorama, as well as adding more mountains, an even larger set of waterfalls, an inlet, and a large working harbor. All of which is still not fully completed yet. I settled on N-Scale because of the small size and the extreme detail that it offered, as you can do a lot in a small area.

Over the years with my professional career, I was a Broadcast news videographer, and still photographer. As a result, I got to do tremendous amount of aerial helicopter flying, which also gave me the opportunity to view things from the air, and too capture it in photography for later use as a reference.

I admit that I am a real 'attention to detail' kind of guy, and I like pushing the envelope when it comes to incorporating 'details' in modeling. In my view, the more realistic that you can make a model look, the better it is!

Since I've retired from TV work, I have become more focused on my modeling abilities, which I have become known for. I have also gravitated to making highly detailed dioramas, both in HO & N-Scales, which I've entered my works at various craftsman show completions and won. I am not trying to brag here, but it has gotten me recognition, and noticed by other superb fellow modelers, who were willing to share their skills and techniques in hands on clinics. I highly recommend that if you have an opportunity to attend some of these clinics, that you do so!

As an aside, Geoff Nott and I became good friends from afar, and we would often talk by phone and exchange photos of our projects and family. A few years back, I finally got to meet Geoff, and his gang of Aussie model-making cohorts, at the Narrow-Gauge convention in North Carolina. A few weeks later Geoff came and visited us, and he got to see my layout first hand.

I also arranged to take him up to see George Sellios' famous Franklin & Manchester layout. After our visit, Geoff and his friends toured the New England coastline, which was the inspiration for their Smuggler's Cove layout project. Sadly, after it was completed, Geoff succumbed to cancer and passed away. He was probably one of the greatest modelers of all time. He was also a fantastic mentor to me!

Through these kinds of connections, I have now been making myself available to do professional custom model railroad work for people who need help with a project, or to assemble a kit for others who just do not have the skill or patience. More recently, I have been working with a professional company who builds full custom layouts for museums, displays, or high net worth individuals who want something amazing for their homes.

One larger project we completed was for the Gulliver's Gate Museum, in Times Square, New York. This HO-Scale layout depicts New England, from Connecticut on up to the Nubble Lighthouse in Maine. I was charged with doing all the water areas, the harbors, coastline, wharf structures, beaches and ships seen on this display.

I am willing to help others with doing water scenes and have shared many tips that I have learned through trial and error, as well as experience. Please contact me at John.Sullivan@sscaleresource.com. Regards, John

There you have it for this issue. I hope you have found some motivation from this manufacturer and these outstanding modelers and take advantage of their offers to help you travel some **New Tracks.** Please contact me at jimkellow@sscaleresource.com with any comments or suggestions for future articles.

Thanks for reading this far. It is time for me to return to my work bench. Until next time, good luck with your model building.

Building Second Generation EMD Diesel Locomotives in S Scale

By Bob Frascella

If you model the 1960s, 1970s and early 1980s in S scale, there is a real lack of second generation, EMD diesel locomotives. Aside from the American Models GP 35 there are no currently available EMD models that accurately represent this era in S scale. Overland Models imported the GP 38-2, SD 40-2, and SD 40T-2 in a variety of versions for specific railroads in the 1990s that can occasionally be found for resale. Overland and American Models offered the SD, 60 but it is considered late second generation as they were manufactured in the mid to late 1980s. The EMD 4-axle road switchers pre-Dash 2 GP 38, GP 39 and GP 40 were never produced in S, and neither were the GP 40-2 and GP 39-2. Together with the GP 38-2, these units represent thousands of locomotives owned by dozens of railroads that carried a whole generation of freight across North America. The following table shows the quantities of second generation EMD 4-axle units produced and the years in production:

EMD Model No.	Years in Production	Quantity Produced
GP 38	1966 - 1971	706
GP 39	1969 - 1970	23
GP 40	1965 - 1971	1221
GP 38-2	1972 - 1986	2222
GP 39-2	1974 - 1984	239
GP 40-2	1972 - 1986	1143

Over a twenty year period, more than 5,000 locomotives were produced for US, Canadian, and Mexican railroads, and other than the Overland Models GP 38-2 imported in a limited quantity more than 25-years ago, this entire generation of locomotives is not available in S scale.

I model the Delaware and Hudson Railroad in the era following the formation of Conrail. In 1976, the D&H purchased 20 new GP 39-2 locomotives from EMD and acquired 12 GP 38-2s from the Lehigh Valley Railroad and 20 GP 39-2s from the Reading Railroad. Interestingly, before Conrail, the D&H never owned an EMD locomotive, but after 1976, these Geeps could be found roaming the D&H system-wide. Though the D&H still had a sizable fleet of Alco and GE locomotives, it would be difficult to model the post-1976 era without at least a few representative GP 38-2s and GP 39-2s.

Modeling EMD Four-Axle Locomotives in S Scale

While it is possible to scratch build a second generation EMD diesel in S scale from brass and styrene, the task would be difficult and time consuming, and may not lead to satisfactory results. The real challenge is creating the long hood with the full complement of doors, hinges and door latches. In addition, detail parts are not commercially available for many items, such as the cooling fans, dynamic brakes, radiator grills, and many other important details. Years ago, I began the process of scratch building a GP 40, and successfully constructed

the frame, end pilots, step wells, cab and short hood, but the long hood proved to be too difficult and the project was quickly abandoned.

Then, two years ago I read an article on 3D design and printing for model railroaders, and discovered that it can be a valuable tool to create parts in S that can't otherwise be obtained. I took the time to learn how to design and then print the designs by outsourcing to a 3D printing company, such as Shapeways. Before long, I had developed enough components to assemble a GP 38-2 and a GP 39-2. Though I encourage S scalers to learn 3D design and printing, the purpose of this article is not focused on 3D modeling, but rather upon how to build a fully functional locomotive with 3D printed parts that have already been designed. Those parts can be obtained directly from Shapeways at https://www.shapeways.com/shops/century-models or from others on the Shapeways site.

Building a Locomotive from 3D Printed Components

My 3D printed designs enable anyone with reasonable modeling skills to assemble an accurate version of an EMD second generation 4-axle locomotive. Basically, the process involves creating a locomotive frame built to accommodate commercially available drive components. The locomotive described in this article utilizes power trucks obtained from American Models. The same process could be used for other manufacturers' drive systems, including North West Short Line's Stanton power trucks or the Railmaster North Yard system. I chose to use the American Models power trucks because they are well made and readily available. For purposes of this article, I'll guide you through the construction process using photos with descriptions provided in the captions. A list of 3D printed components and other materials need to complete the project can be found at the end of this article.

Preparing 3D Parts for Assembly

Before assembly of your model, it's important to properly clean and prepare the 3D printed parts received from Shapeways. The parts are printed with a plastic resin that is applied in micro layers to form the 3D object. The material that renders the best results is referred to by Shapeways as Smooth Fine Detail Plastic (SFDP). SFDP requires temporary support during the printing process with a wax substance. Though the wax is removed by Shapeways prior to shipping, a wax residue typically remains on the part. It's important to thoroughly clean the part and remove any remaining wax from the surface otherwise paint will not adhere to the piece. My preferred method is to soak the part in 90% isopropyl alcohol for not more than five minutes followed by rinsing and washing the part with a mild soap. If the wax residue is persistent, repeat the process using a soft brush. Other methods and cleaning processes can be used, and a wealth of information is available on-line, just Google "cleaning Smooth Fine Detail Plastic".

It's also important to recognize that the SFDP material is quite strong, but can be brittle. Care must be taken when handling thin sections as they may break easily. Because the material is brittle, it does not bend easily. If a part is warped or mis-shaped, return it Shapeways for a refund or replacement. Do not try and bend it to shape. Cyanoacrylate (CA) type adhesive wicked into fine details will add strength to the part.

Building the Frame

It should be noted that the basic frame length is the same for all EMD second generation Geeps, though other features may vary such as fuel tank length and various other options ordered by specific railroads. I have not included plans as part of this article. Scale plans can be obtained from various sources, such as magazines or on-line. Reasonably accurate scale drawing can be found on line at www.trainiax.net. They can be downloaded and converted to S scale by enlarging them with a copier. The Trainiax drawings are railroad specific and show the units as delivered with amenities ordered by the original owners.

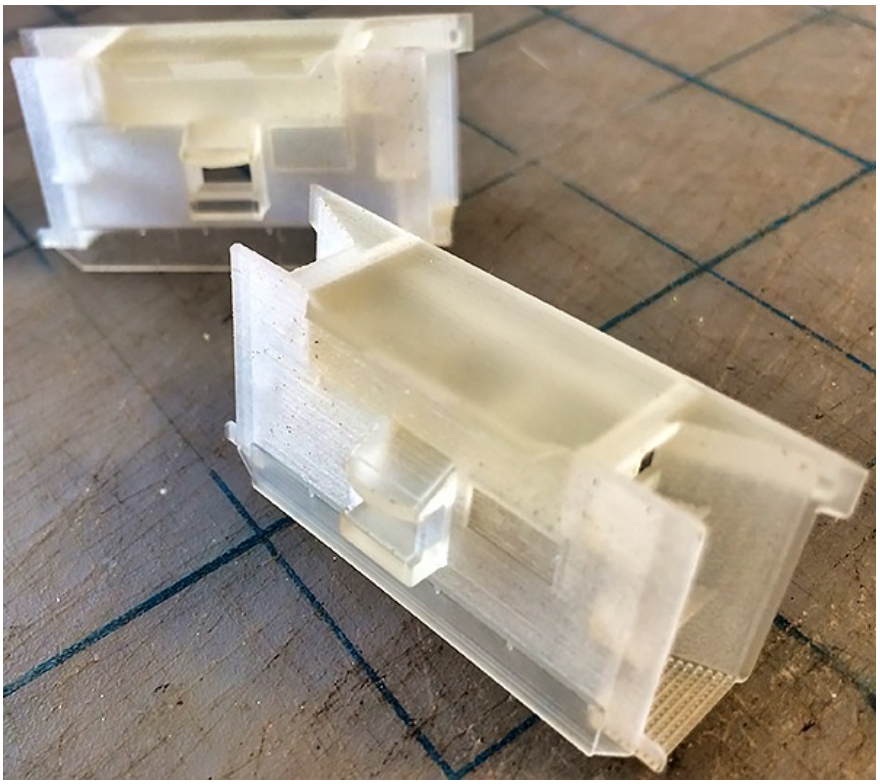


Photo 1 - Most of the difficult work of building the frame is simplified by the 3D printed pilot with the step wells attached. Two are required for each locomotive and they include slots on the back where the structural frame members can be inserted. Two versions are available from Shapeways - the version shown and another with notched corners and a widened bottom step.

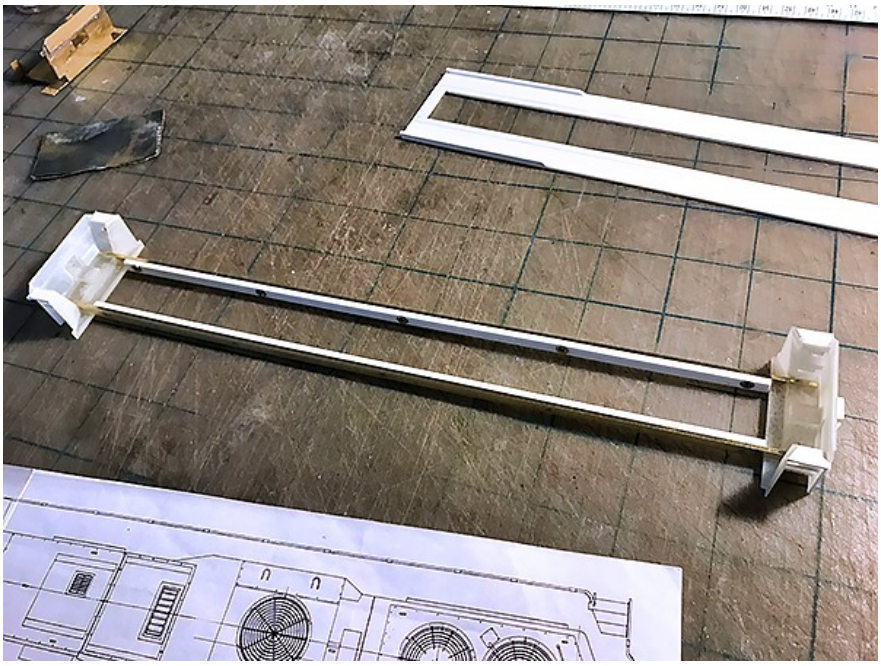


Photo 2 - The basic frame components include two 3D printed pilot/step well combination pieces, the composite brass/styrene beams and styrene deck. (The slots for inserting the brass bar stock into the pilot ends can be seen in Photo 5). The frame consists of two composite beams made of brass and styrene that are mechanically connected using machine screw. This enables the brass beams to be inserted in to the rear of the pilot section and solvent welded to the styrene deck using a styrene adhesive, such as MEK.

Photo 3 (next page)- The brass beams are cut from 3/16” x 1/16” brass bar stock. The bars are trimmed to a length of 54’-8”. I found that 5 machine screws are sufficient to attach the styrene strip to the brass bar. I drilled five holes equally spaced along the bar with a #50 drill. The spacing is not important as long as the first hole is not closer that 3/8” to the end of the brass bar. Tap each hole for a #2-56 thread.(Note: I recently discovered that 3/16” x 1/16” brass bar stock is difficult to find so I have substituted 1/4” x 1/16” brass strips for the frame members. Additional clearance is required above the truck area and some filing is necessary. That issue is further detailed below.)

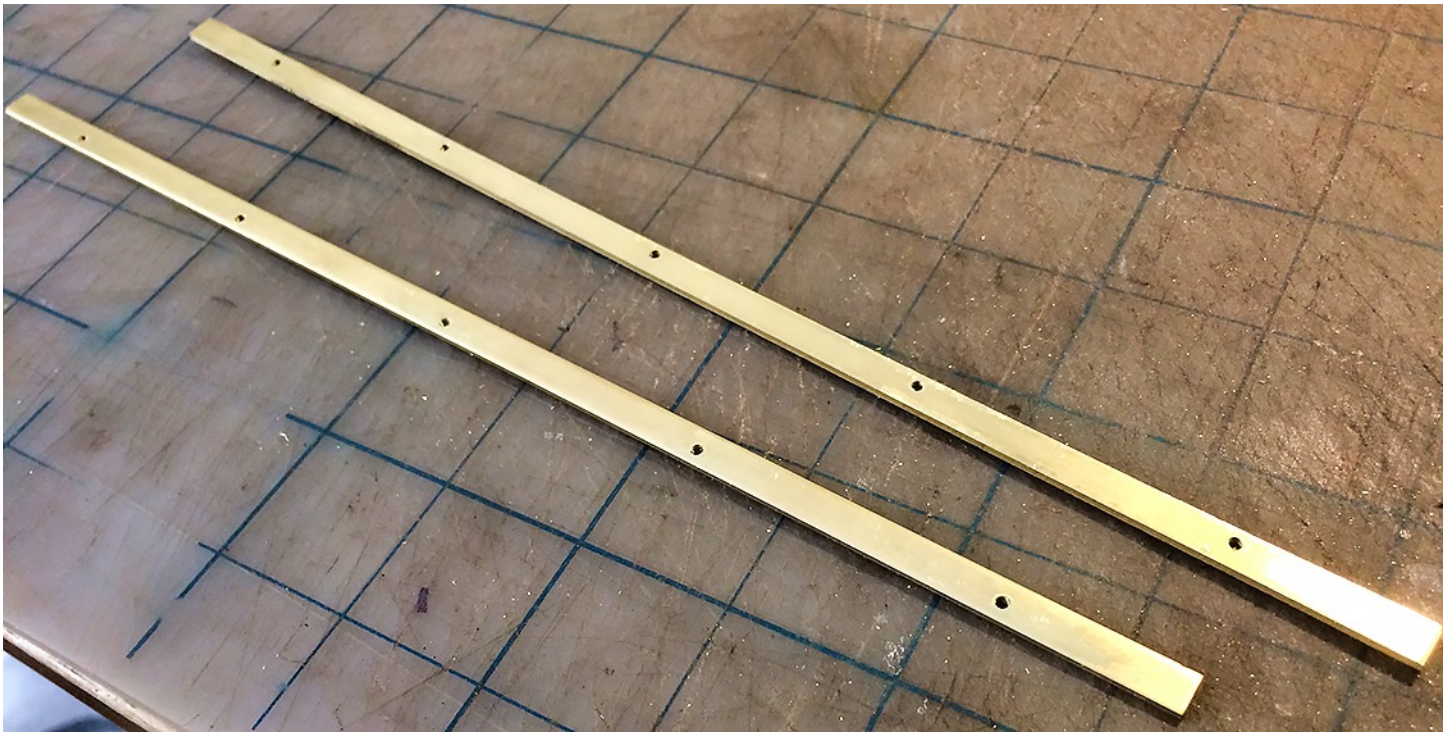


Photo 4 below - Cut a piece of 0.100” x 0.188” styrene to a length of 49’-5”, align it a scale 2’-7 1/2” from the end of the brass bar and drill clearance holes with a #41 bit at the locations that align with the brass bar. Countersink the inside face of the styrene strip to accept a flat head #2-56 machine screw. Fasten the styrene strip to the brass bar stock with 1/4” long #2-56 brass flat head screws. I use a drop of CA adhesive on the screw threads to prevent the screws from backing out of the brass bar stock. I then file the projecting screw threads flush with the brass bar stock. Make sure that the brass bars are straight and not warped in any direction. If an adjustment needs to be made, this is a good time to do so.

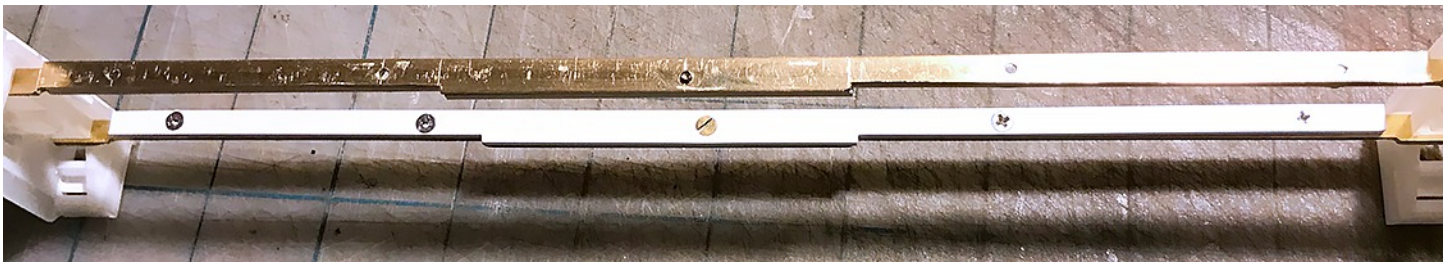
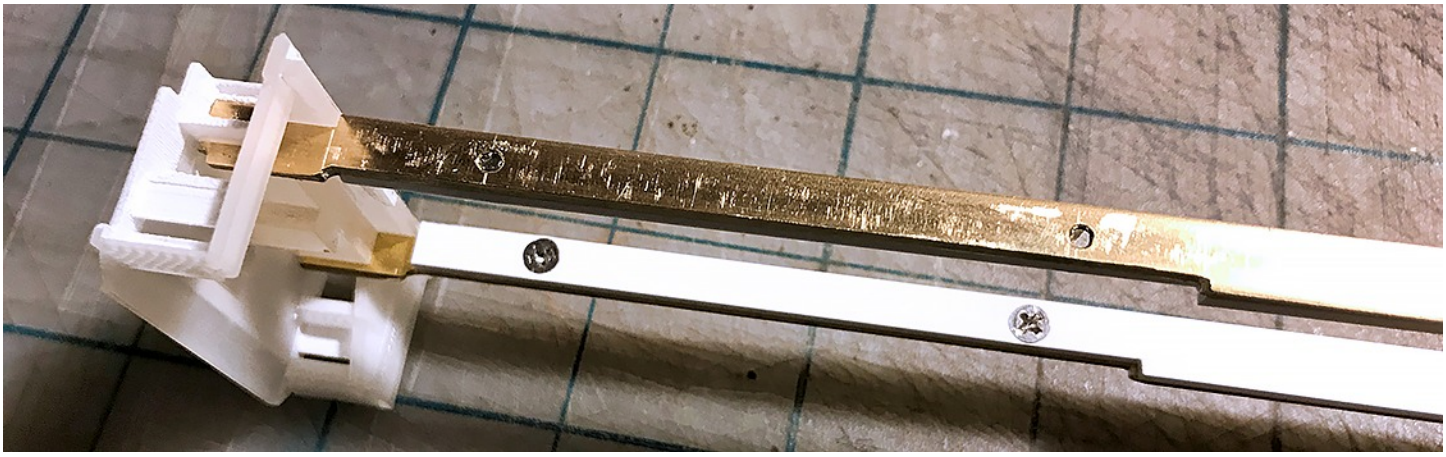


Photo 5 below - This photo shows the alternate composite beam using 1/4” x 1/16" bar stock. I removed 1/16” of material above the locations where the trucks will be to avoid interference with the wheel flanges. To accomplish this, I scribed the area to be removed on the bar stock and set it flush with the top of my bench vise. I then used a rotary grinding bit in my Dremel tool and ground down the brass until it it was close to the scribed



line and finished the rest with a flat file. In this situation, use a 0.100” x 0.250” strip of styrene. Leave the beam depth at 1/4” through the fuel tank area. After the styrene strip is attached, remove the excess styrene with a knife or razor saw.

Photo 6 below - The most critical step in the frame building process is the assembly of the frame pieces. It is important that the components be assembled square in the horizontal and vertical directions. To aide in this process, I use a large sheet of white card stock on which I draw a horizontal line and two perpendicular lines set 55’-0” apart. I align the faces of the pilot with each perpendicular line and align the corners of the step well with the horizontal line and check the fit. If the distance is greater than the distance between the two perpendicular lines you, need to file excess material from the ends of the bars and/or the styrene strip. Once you are satisfied that the alignment is good, use 5-minute epoxy to permanently set the brass bars into the pilot slots. Before the epoxy sets up, make sure that the face of each pilot is square with the lines drawn on the work surface.

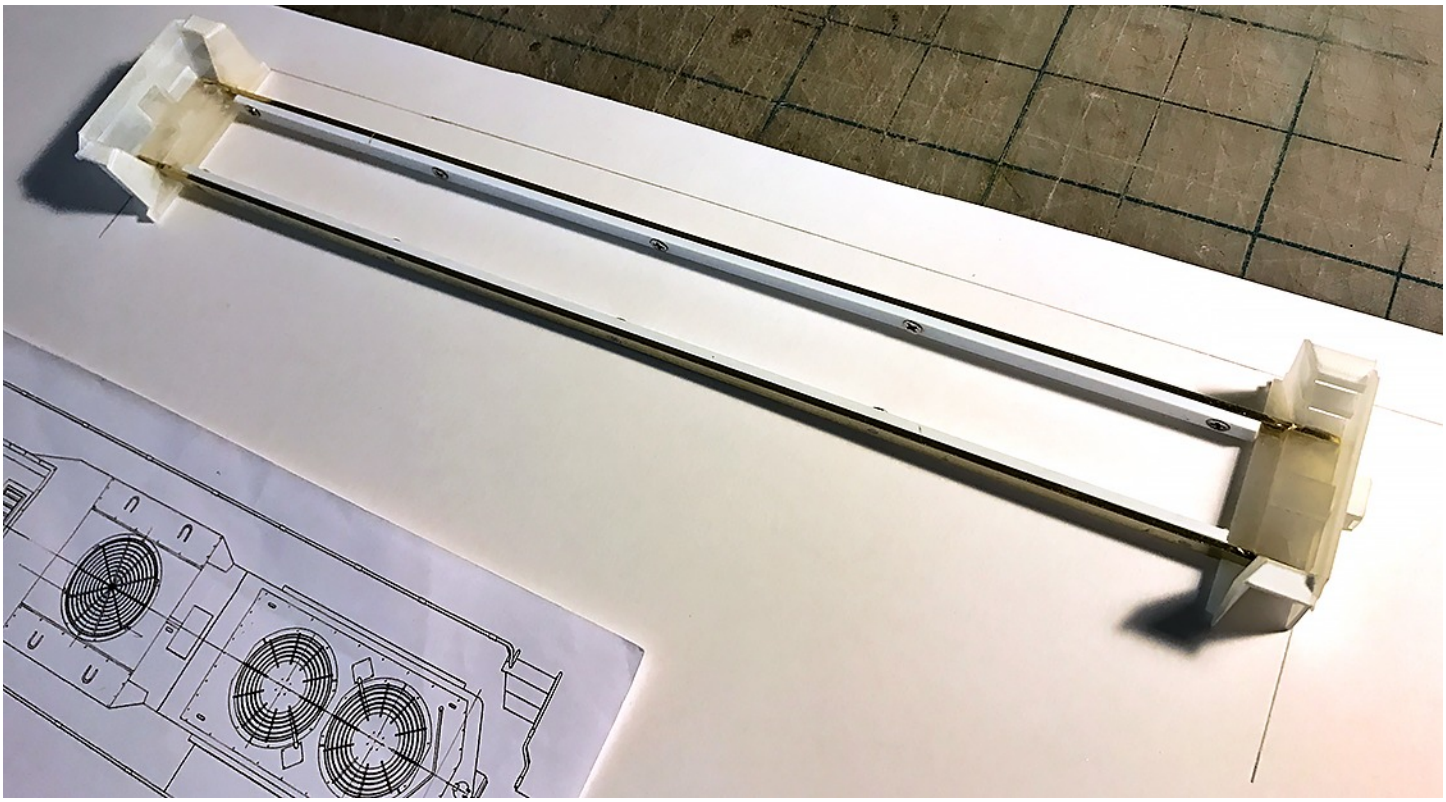


Photo 7 - Cut the deck from a sheet of 0.600” thick styrene the same width as the back of the step well and long enough to span from the end of the step well deck on one pilot to the other. There is a lip cast onto the pilot/step well print to support the edge of the styrene deck that keeps it flush the deck on top of the pilot. Use styrene cement to attach the deck to the styrene strip part of the composite floor beam and CA-type to attach the deck to the lip on the pilot/step well piece. (Note: this frame uses the modified 1/4” deep bars.)

Photo 8 below - Remove the deck material between the two styrene strips of the composite beams leaving approximately 1/2” of the deck in place at each end. The frame is now complete and we’ll move on to the supports for the power trucks.

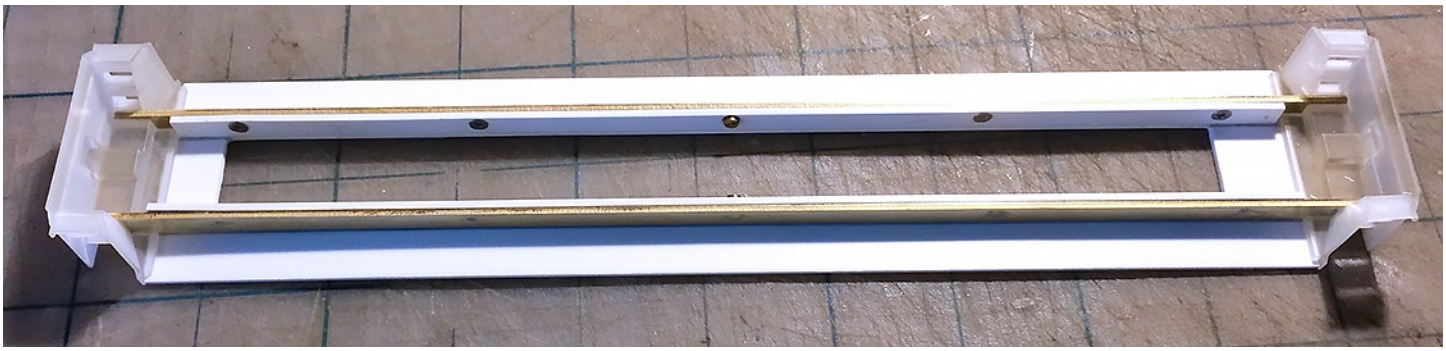
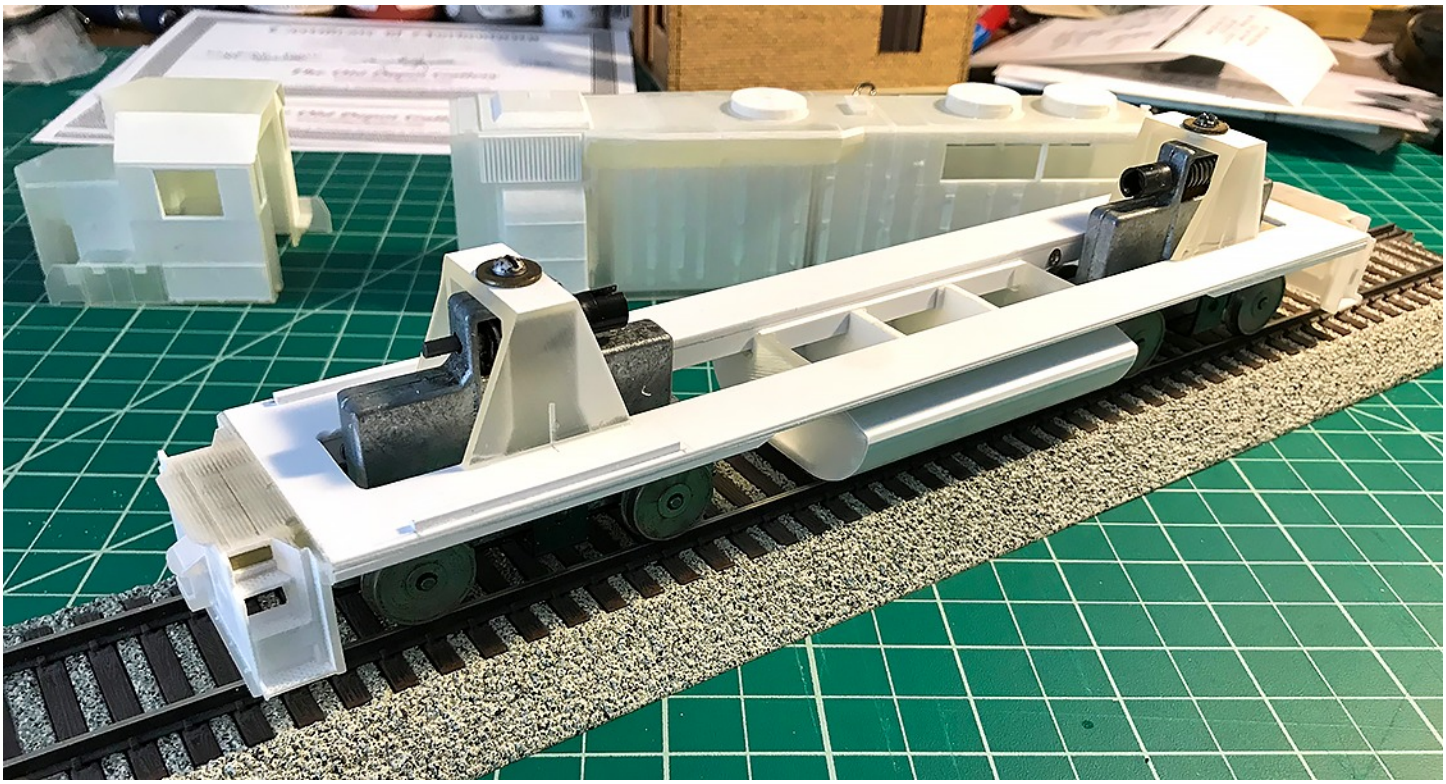


Photo 9 below - This photo shows a completed GP 39-2 frame and the trapezoidal shaped brackets used to support the American Models power trucks. These brackets are 3D printed and attach to the frame. The height is preset so that the deck will be at the correct height above top of rail and the coupler height will meet NASG standards. The truck centers are located at 10’ 6” inward from the face of the pilot. A lining groove is provided at the base of the support tower to aid in lining up the tower at the proper location. Test fit the tower supports in the opening to be sure that the base of the trapezoid is flush with the top of the deck. Also check that the inside face of the deck opening is flush with the floor beams in the area where the supports will be attached.



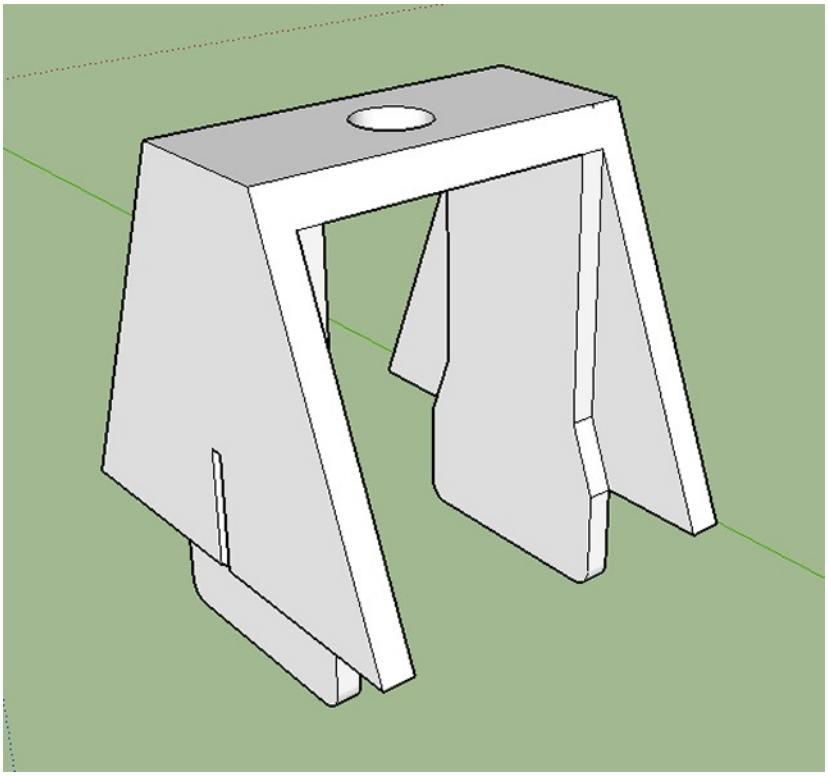
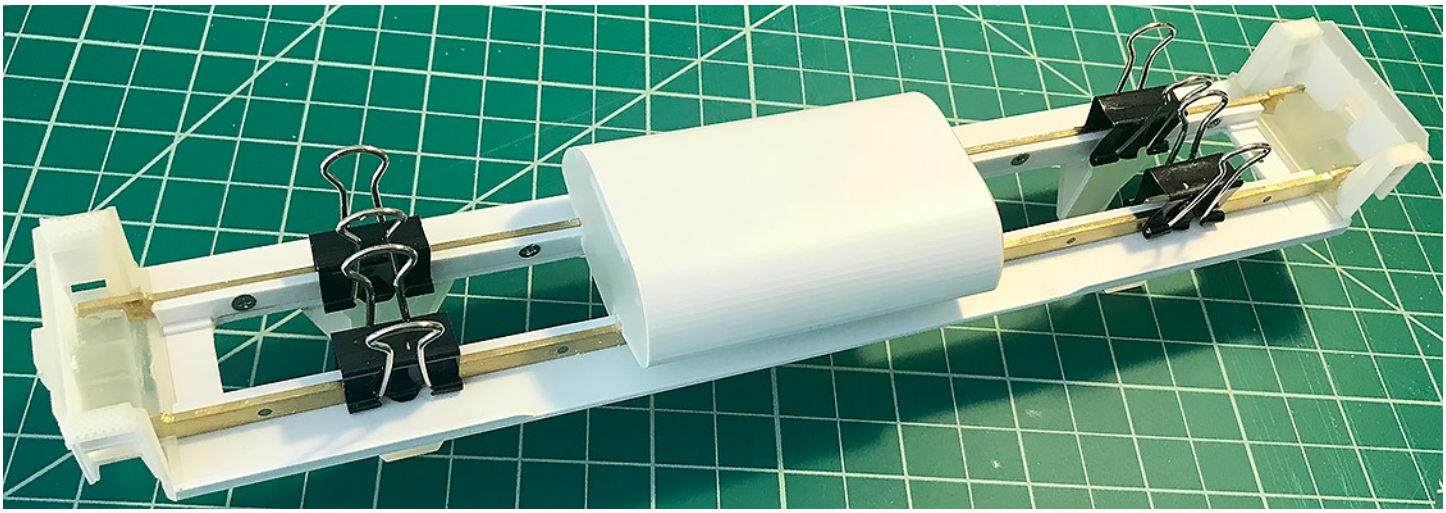


Photo 10 - This is a rendering of the 3D printed American Models truck tower support. The base of the trapezoid rests on top of the deck and the tabs fit against the floor beams. An indexing mark is provided to align the center of the truck with the a mark placed on the deck 10’ 6” from the face of the pilot.

Photo 11 - I use 15-minute epoxy to secure the tabs of the tower supports to the frame beams and the top of the deck. I use binder clips to clamp the tower support and leave them in place for several hours until the epoxy cures. The towers could alternatively be secured using machine screws, but provisions for drilling and tapping the brass floor beams would need to occur before the frame is assembled. At this point the basic deck is complete. Next we’ll move onto the fuel tank.



Building the Fuel Tank

The fuel tank is made up by using 3D printed end sections and interior braces with a styrene wrapper to create the curved tank sides. The fuel tank is designed to mount between the frame floor beams. The EMD fuel tank was available in different lengths to accommodate the fuel capacity needs of the individual railroads. The cross-sectional shape was the same but the length determined the capacity. For example, Milwaukee Road GP 38-2 fuel tanks were among the smallest with a capacity of 1,700-gal. These tanks were only 8’ 6” in length. The largest GP fuel tank had a capacity of 4,000-gal. and was 20’ in length. Check the plans and photos of the model that you are building to determine the correct tank length. Using the 3D printed ends and spacers will enable you to build any length fuel tank.

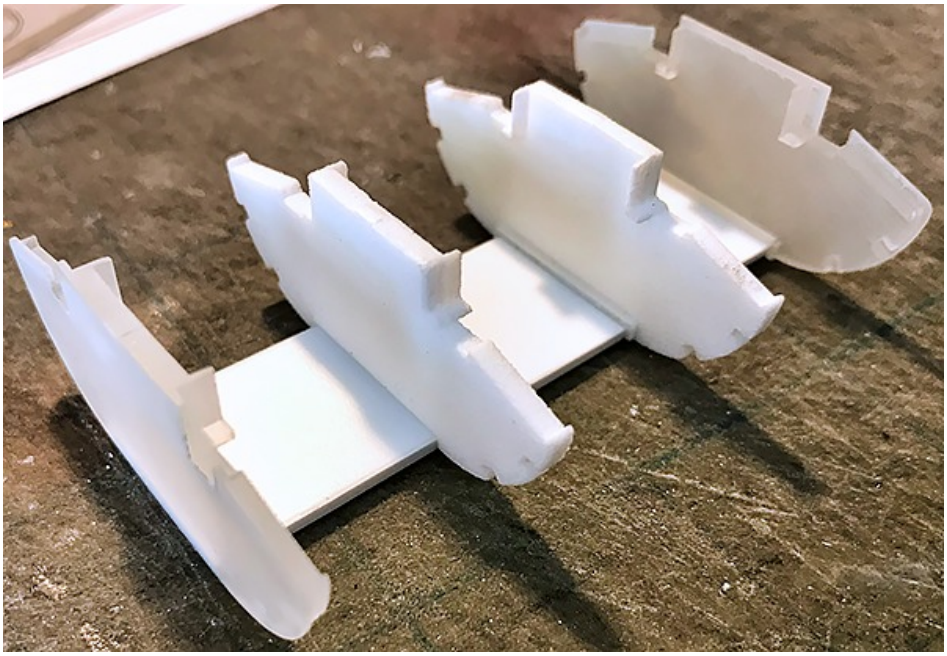


Photo 12 - This photo shows the basic components for a 15’ long fuel tank. It shows two end sections and two interior sections. The interior sections are printed in a less expensive resin which has a rougher texture. Because they will be on the interior of the tank surface, smoothness is not important. The interior sections are equally spaced, but should not be spaced more than 3/4” apart. Shorter tanks will use less interior support, while a 20’ long tank may require 3 interior supports. Cut a bottom section from 0.060” styrene sheet the width of the bottom notch and the length of the tank and glue the end and interior sections to it as shown in the notches at the bottom of each section. CA type cement works well for this purpose.

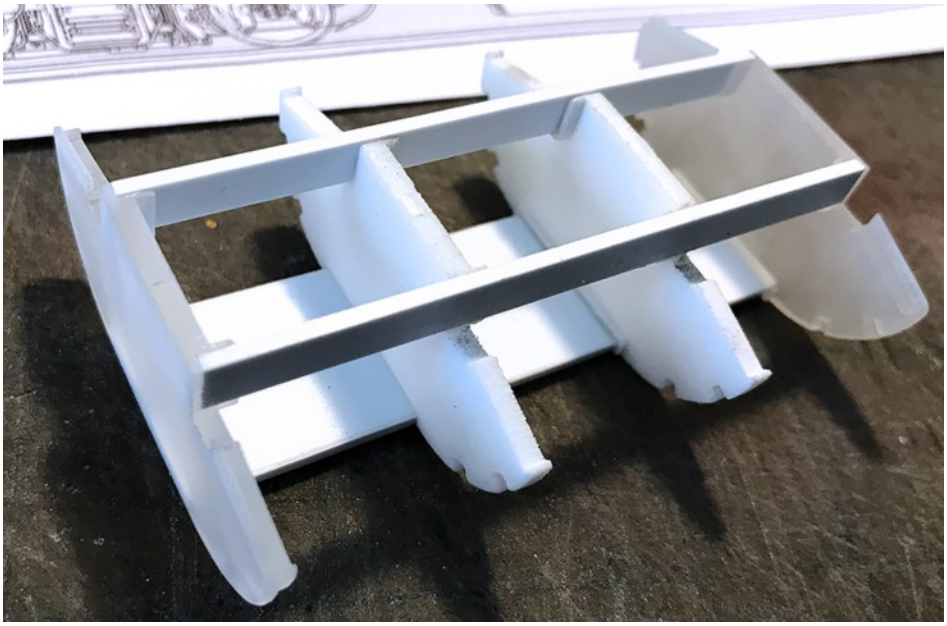


Photo 13 - Glue two 0.060” x 0.188” styrene strips along the upper edge of the fuel tank along the recesses provided on the end pieces and the internal supports. The face of these strips will mate with floor beams on the frame.

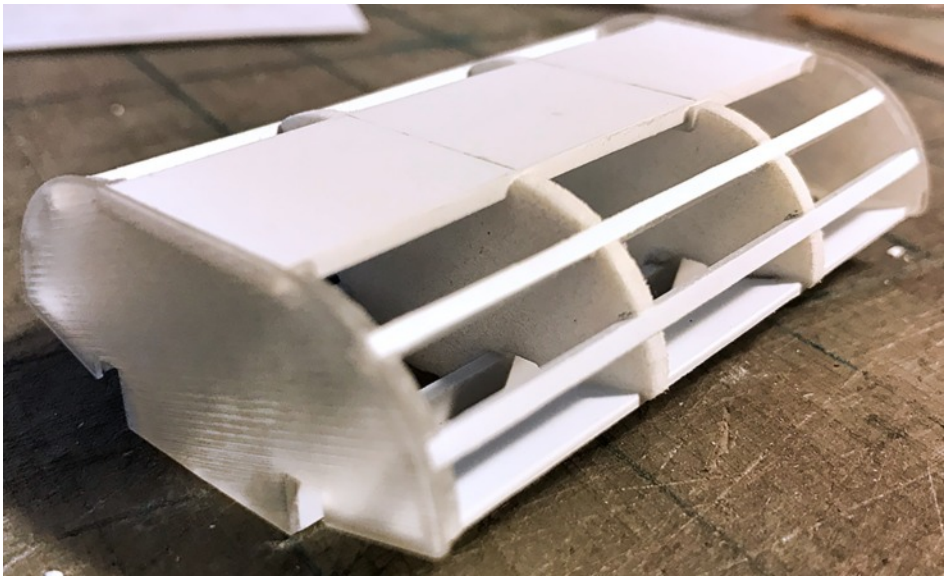


Photo 14 - Glue 0.060” x 0.060” styrene strips in the grooves provided in the end sections and the internal supports as shown.

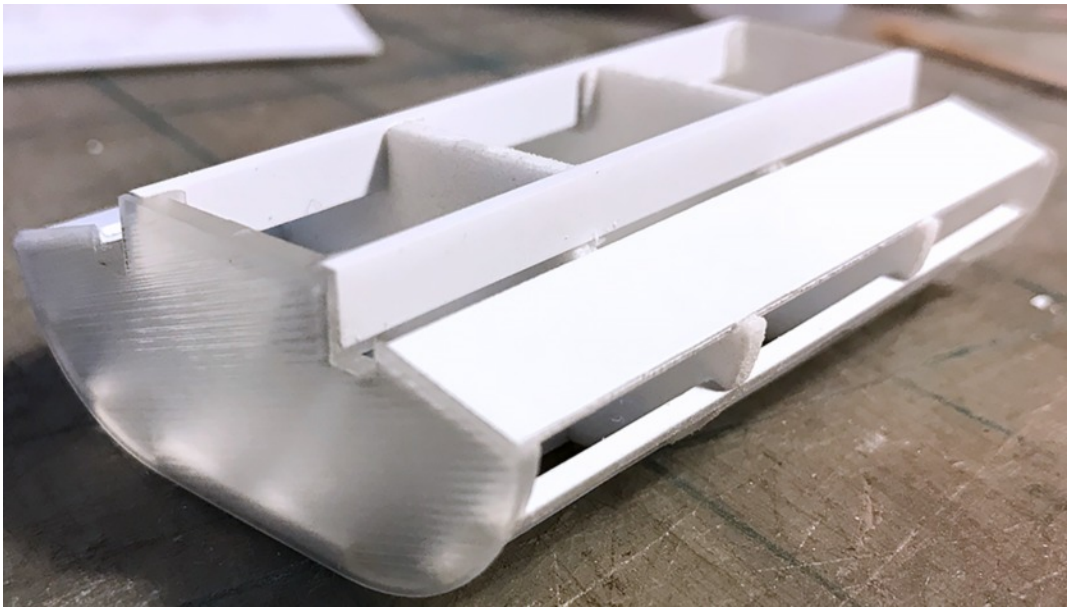
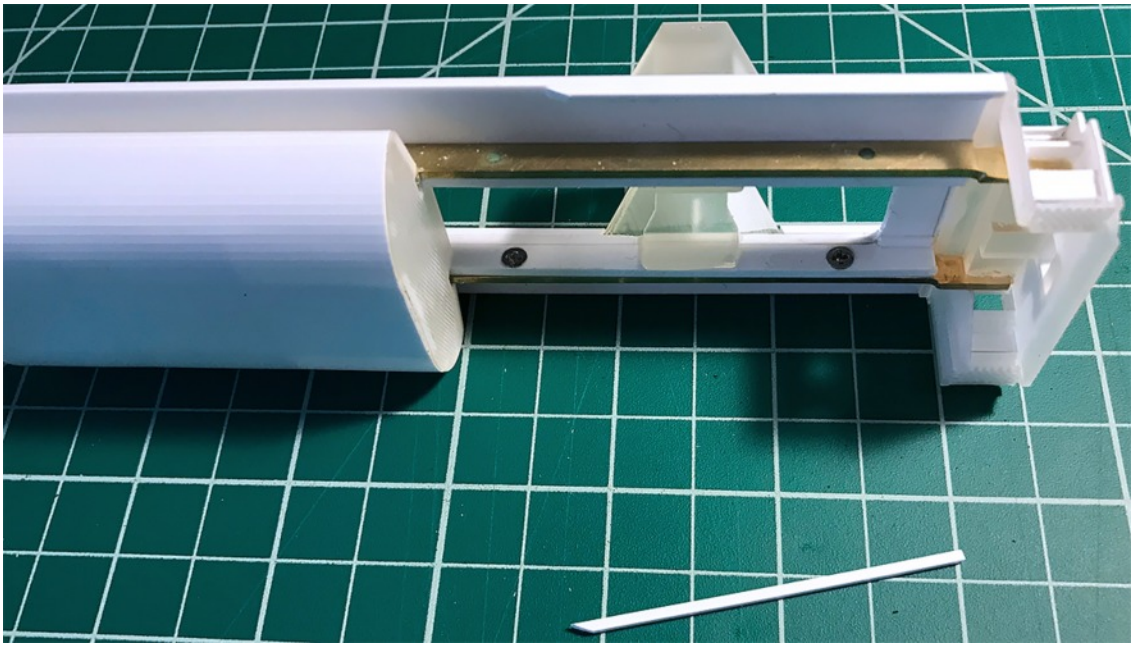


Photo 15 - Add a piece to 0.060” sheet styrene to form the top sloped portion of the fuel tank on both sides of the tank. Leave an adequate gap to insure that a groove is maintained between the floor beams and the sloped edge. It’s advisable to test fit the tank at this time to assure a snug fit on the frame. If the fit is too tight, file the inside edge of the sloped styrene sheet.

The final step in assembling the fuel tank is to cut and install the tank wrapper. I use 0.020” thick Evergreen V-groove siding material for the tank wrapper. The V-grooves will face the inside of the tank and will make it easier to cold form the wrapper and attach it to the tank frame. Cut a sheet of the V-groove sheet so that the V-grooves run along the length of the tank and long enough to wrap all the way around the tank from the top of the sloped piece on one side to the same location on the other side. You will note that the ends of the tank have a 0.020” recess so that when the wrapper is installed, it will sit flush with the tank ends. Once the sheet is cut to size, bend the wrapper to shape around the tank frame and test fit to make sure it aligns well. Once you have a good fit, glue the wrapper in place with styrene cement by aligning it with the edge of the top sloped piece. Glue it to the sloped piece first and let it set. Once it’s secure, glue it to the 0.060” square styrene ribs, and work your way around the tank. It’s important to glue the wrapper in place incrementally, allowing the glue to set up on each rib before gluing to the next attachment point. Take your time and use the glue sparingly to avoid glue marks on the outside of the tank.

Photo 16- This photo shows the completed tank. Note how the edge of the wrapper meets flush with the tank end. There will be visible lines created by the V-grooves on the surface of the wrapper. This actually occurs on the prototype as well. This is a good time to test first the fuel tank by positioning it between the frame members at the correct location. *Do not* glue the tank to the frame at this time.



Frame Details

Photo 17 - The frame edge of all EMD second generation locomotives built after the GP 35 have a thin middle section that tapers to a thicker edge near the truck bolster area. The 0.060” deck section is roughly the same thickness as the thinner portion. The thicker edge section will be created by gluing a 0.060” square piece to the bottom of the deck. There is a small tapered transition section at the location where it meets the thinner section. Consult the plans for the actual model that you’re building as the lengths of these sections vary. Don’t be concerned about the horizontal seam between the deck and 0.060” styrene. The edge will be covered with a thin styrene overlay.

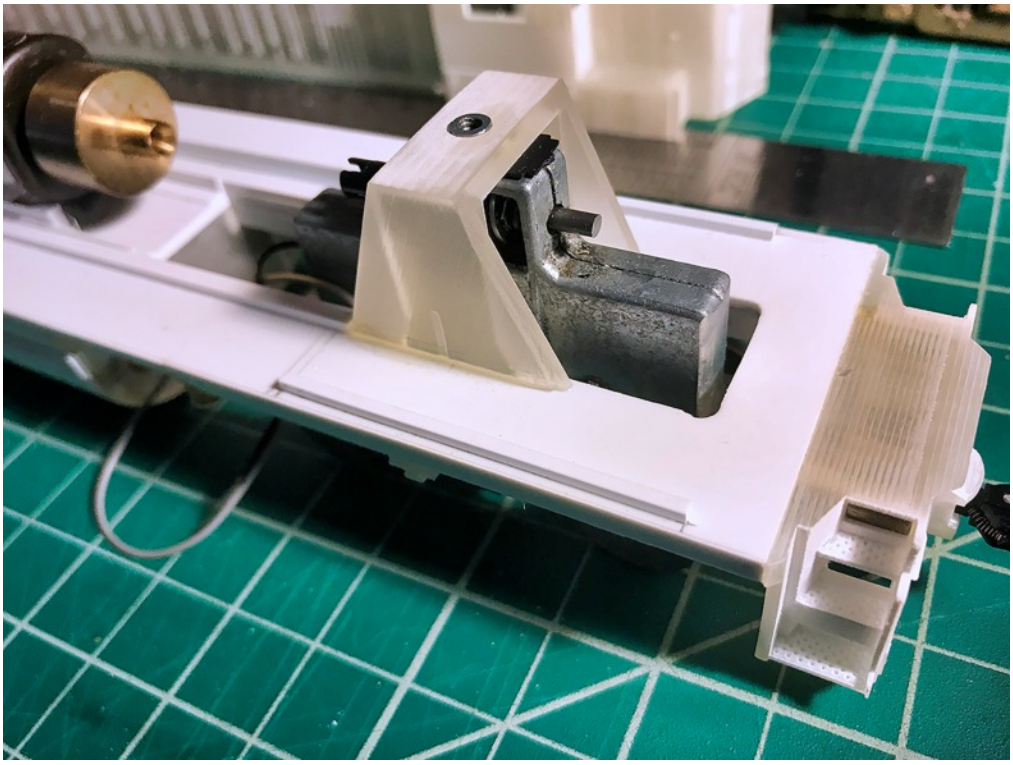


Photo 18 - The 3 D printed cab and hood tend to bow inward at the bottom edge. It’s advisable NOT to try and straighten them by bending them. The brittle material could cause the shell to crack. The best way to correct this issue and provide a tight fit for those pieces against the frame is to glue strips of styrene onto the deck to force the inside edge of the shell outward. This photo shows two strips of 0.060” styrene glued in place to spread the bottom edge of the cab so that it aligns with the frame edge. Similar guide strips will be required along the long hood section as well. The next photo shows the guide strips used to position the long hood.

Photo 19 below - Install 0.060” x 0.060” styrene guide strips for the long hood between the truck tower supports to assure that the long hood bottom is set to the proper width.

Next, behind the cab on fireman’s side of the locomotive is a traction motor blower duct. It appears as a raised section of the walkway and extends rearward to a point just beyond the fuel tank. This is a common element on all second generation locomotives. Once the long hood guide strips are glued to the deck, position the long hood on the frame and draw a pencil line longitudinally along the deck. Set the cab in place and draw another pencil line along the deck at the rear wall of the cab. The length of the blower duct varies from model to model, so consult your plans for the correct length. Draw another pencil line at the limit of the duct’s length.

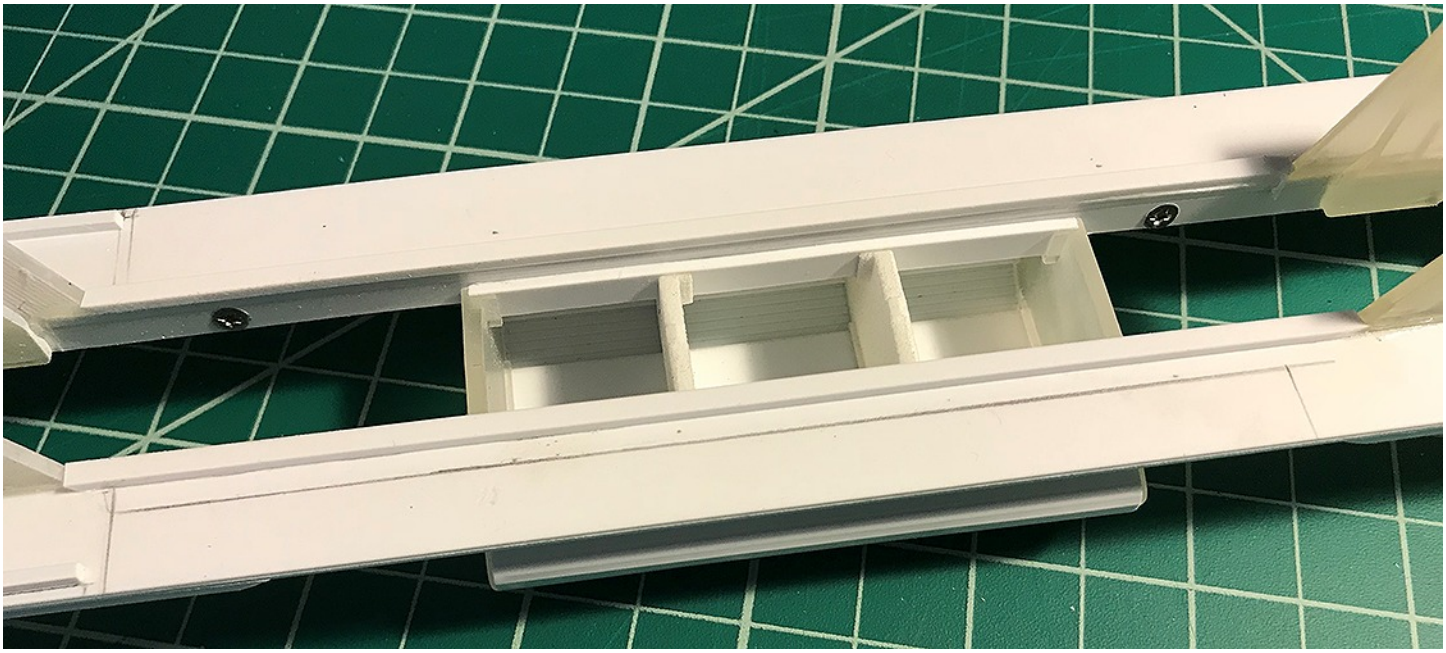


Photo 20 below - Glue 0.125” x 0.060” styrene strips, with the 0.125” dimension vertical, around the perimeter of the duct area inside the pencil lines as shown.

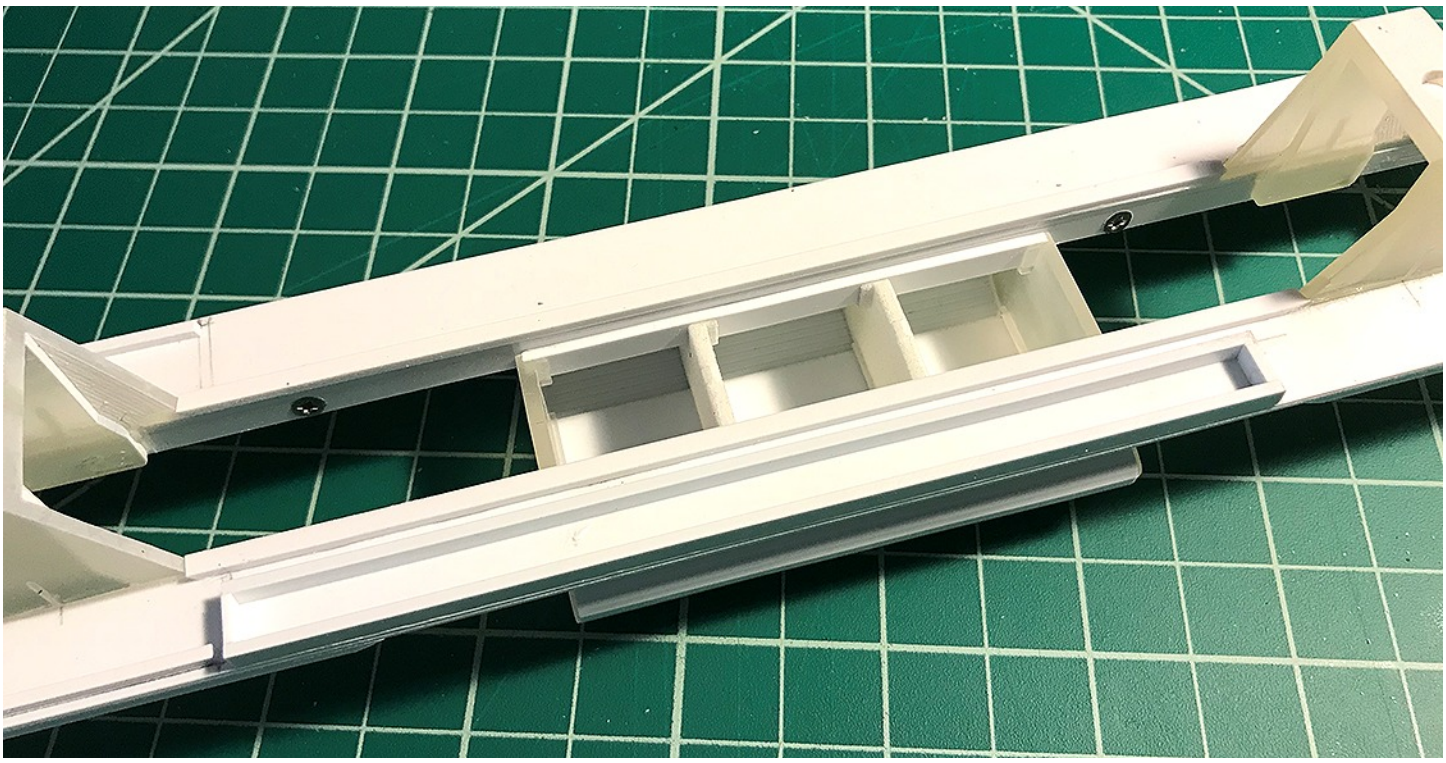


Photo 21 below - Glue a piece of 0.020” thick styrene sheet on top of the raised duct area to form the raised portion of the walkway. You will note that there is now a groove behind the walkway duct which the bottom of the long hood can be inserted.

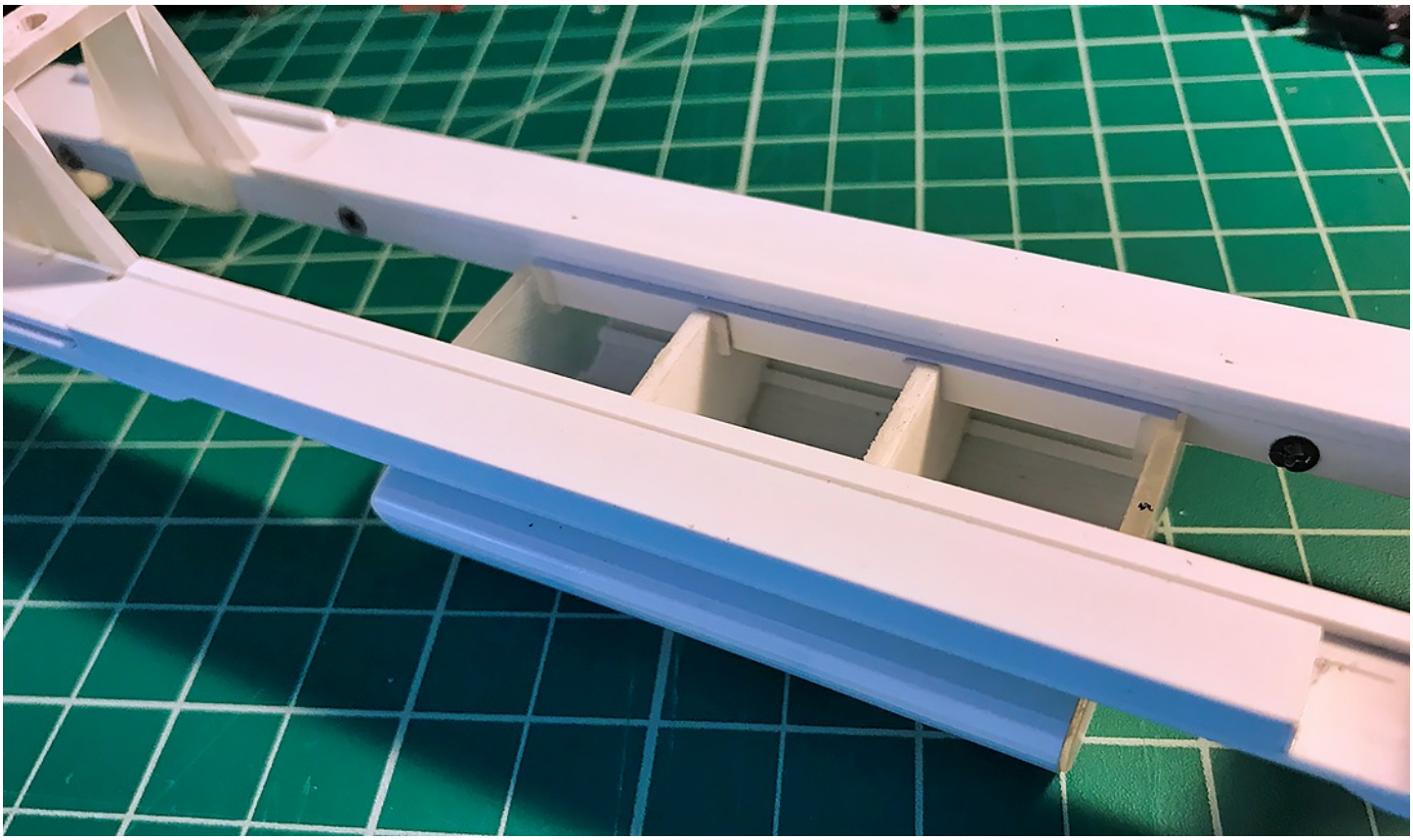
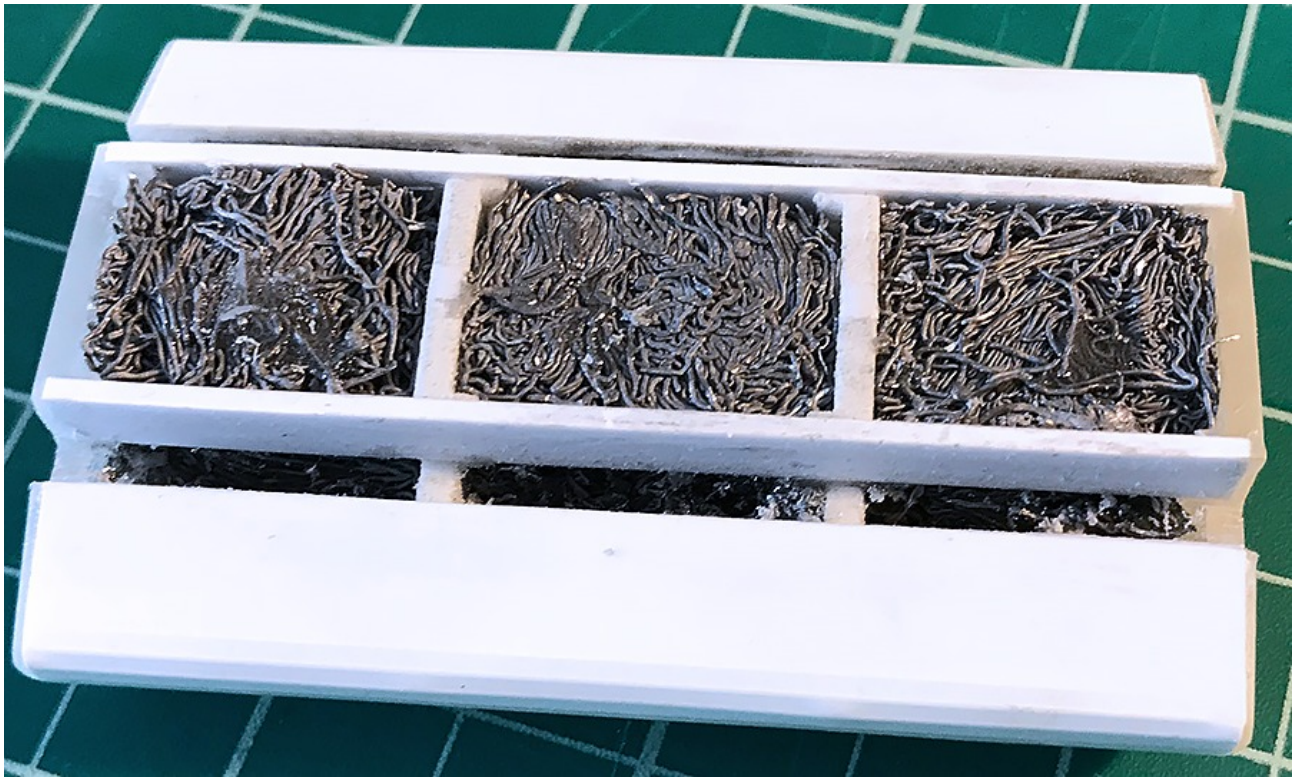


Photo 22 - Now is a good time to add weight to the fuel tank. I stuffed all the voids with lead wool only because that’s what I had on hand. Lead shot or solid lead would work as well. Whatever you use, be sure to keep the groove area clear so that it can be attached to the frame.



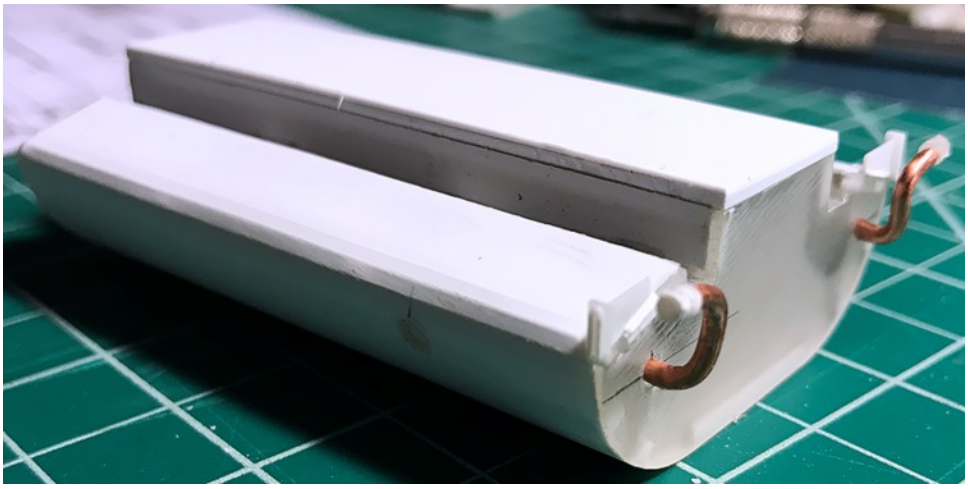


Photo 23 - Add a 0.060” styrene cap to the top of the fuel tank. This will provide a smooth surface for mounting the motor. This is also a good time to add any fuel tank details. The 3D printed parts supplies a fuel gauge, fill pipe, and sight glass, all of which are typical of EMD tanks. Their location varies, so check the plans of the specific locomotive that you are building. Photo 23 shows a D&H GP 39-2 tank which had unusual side entry fuel fill pipes.

Photo 24 below - Next we’ll attach the fuel tank to the frame by gluing it to the styrene portion of the floor beam. Before securing it to the frame, check to see that there is adequate height above top of rail. The clearance should be about 6-8”. To check this, set the frame on the power trucks, set it on a piece of track and measure the clearance. Then, check the location of the tank based upon your plans. Once you are satisfied with the fit, glue it in place. I use 1/8” styrene angle strips for added reinforcement.

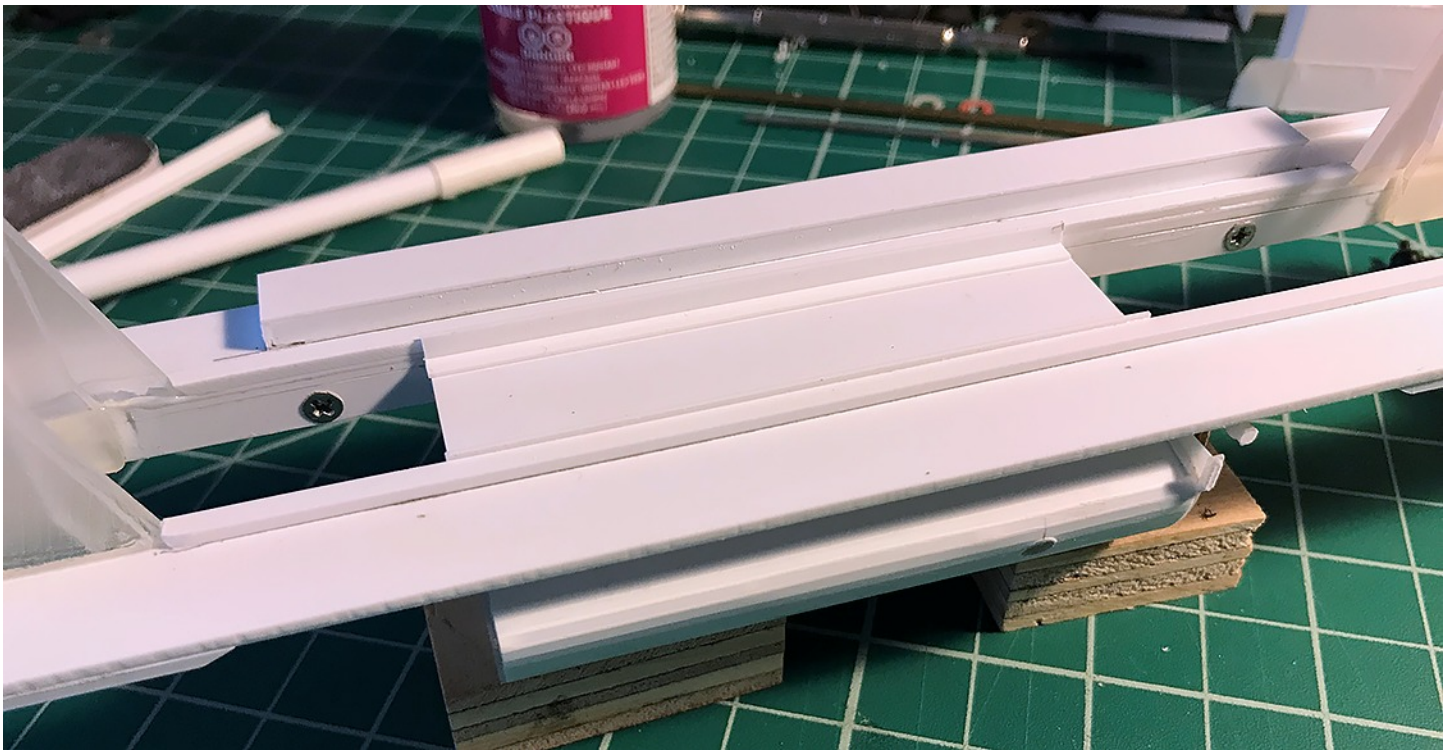


Photo 25 - For the air tanks, cut a piece of 7/32" diameter Evergreen Styrene tube to length, allowing room at the ends for the air tank ends. Glue two strips of 1/8” styrene channel to the tube to use as a means of gluing the air tank to the underside of the deck. Next, glue the 3D printed tank ends in place at each end of the tube.

Photo 26 below - This photo shows the fuel tank mounted to the underside of the deck with added details such as the fuel fill, sight glass, air lines and related piping on the GP 39-2. These details vary by railroad and model so it is important to follow a specific plan and photographs to get the details right.

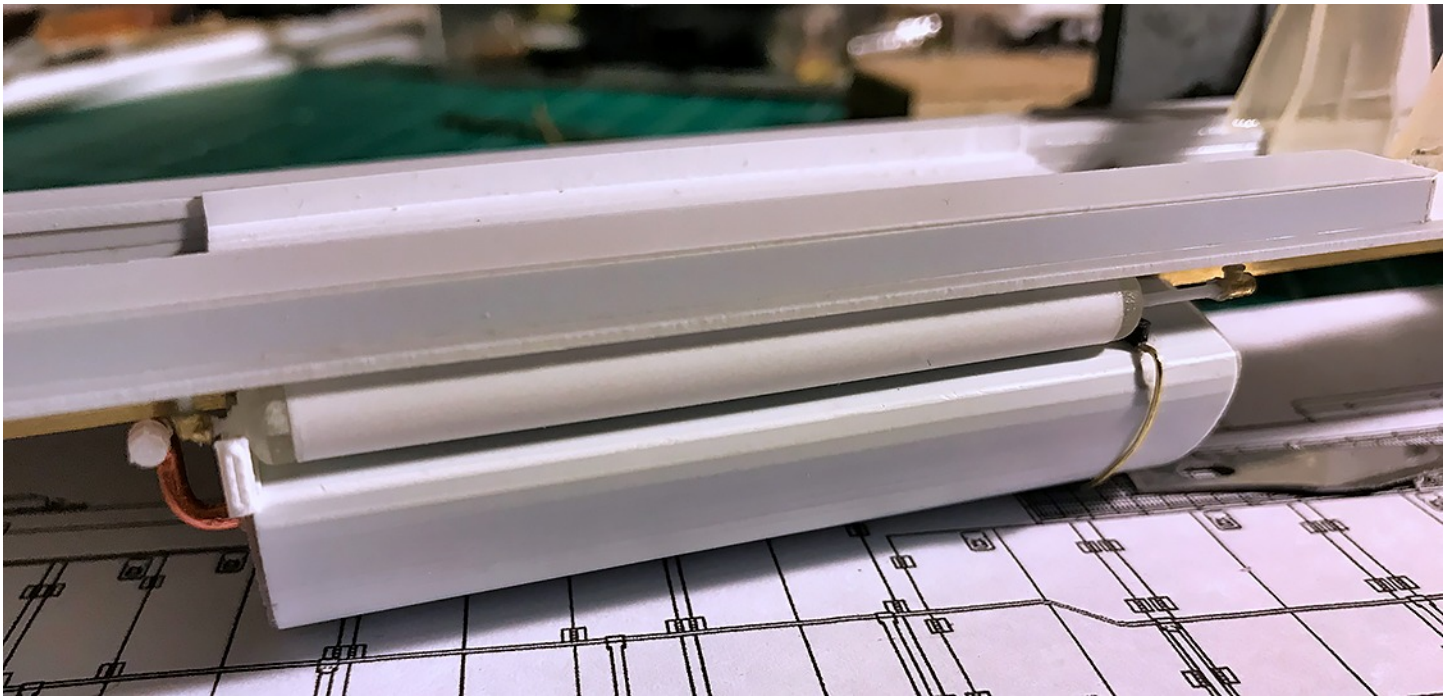
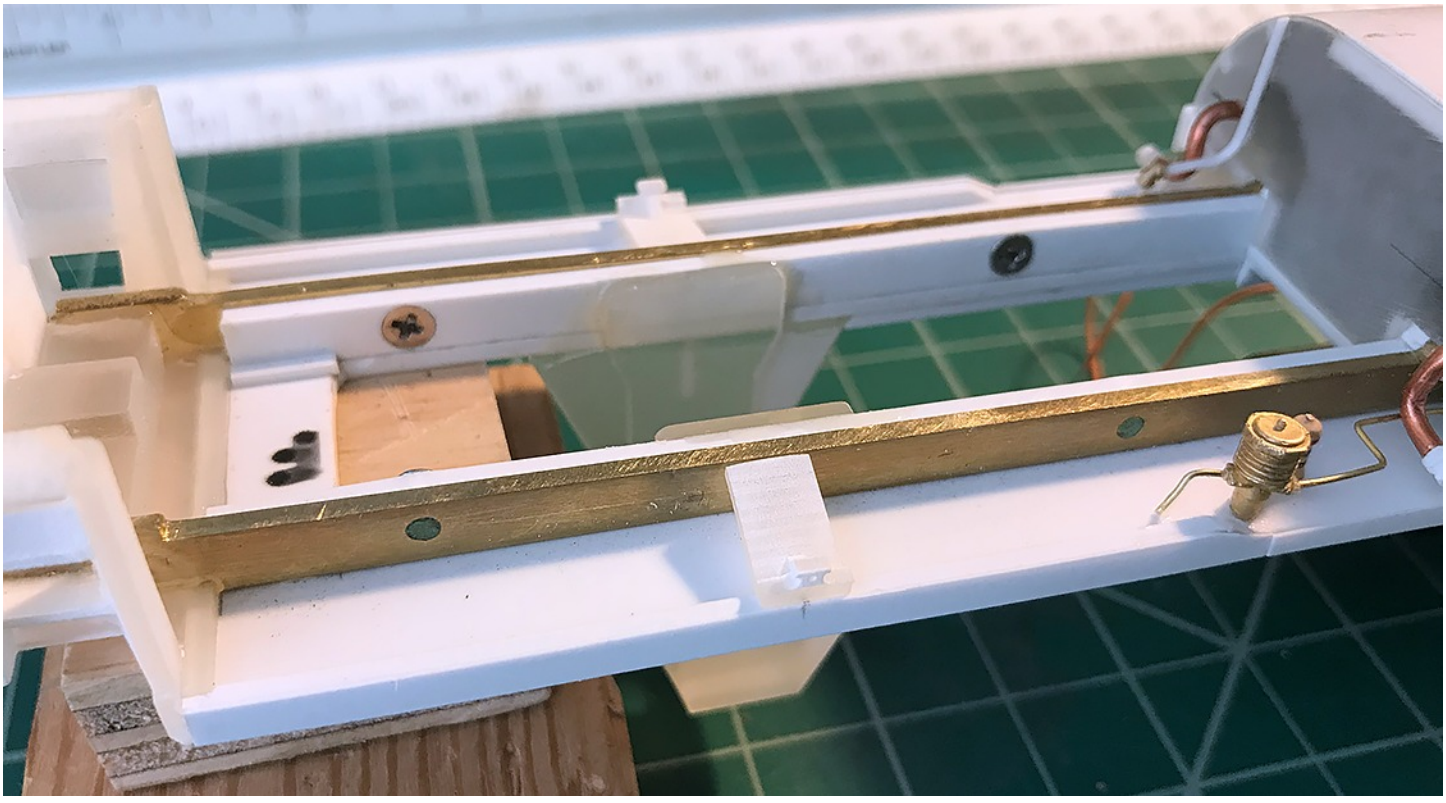
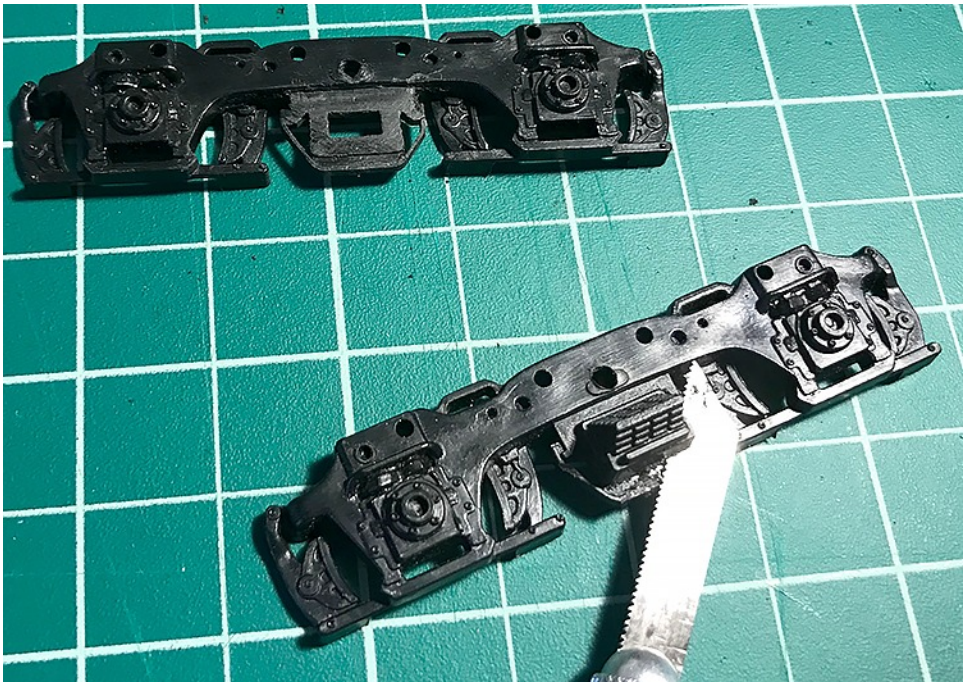


Photo 27 below - Now is a good time to mount the truck bolsters. The 3D printed bolsters include the jacking pads at the ends that are visible as they extend below the side sill. I use CA-type adhesive to adhere the bolsters to the frame and underside of the deck. Now is also a good time to add other details, such as the air filter and bell, depending upon the level of detail that you're trying to achieve.





Truck Side Frames

Most EMD Dash-2 locomotives were ordered with the Blomberg M-type truck. This truck was a modification of the original Blomberg truck design and visibly different than the earlier version. The M-type truck included a rubber diaphragm instead of leaf springs, did not have outside brake shoes and hangers, and had dampening struts on alternating axles. These modifications can be made using 3D printed details applied to the American Models side frame. Some railroads ordered their Dash-2s with the original Blomberg design or had them outfitted with trade-in trucks from older units. If your particular unit used the older design, you can skip this step.

Photo 28 above - Start with two pair of American Models Blomberg side frames, and using a razor saw, remove the molded on leaf springs by cutting them off flush. Repeat the process on all four side frames.

Photo 29 below - Cut the outside brake hangers off on both sides leaving the attachment point at the top and a slight angled portion at the bottom. This will come in handy if you chose to attach sand pipe details. It is also necessary to trim the right side journal bearing flush and remove the ring of simulated bolts as the dampening strut is attached to the right side bearing.

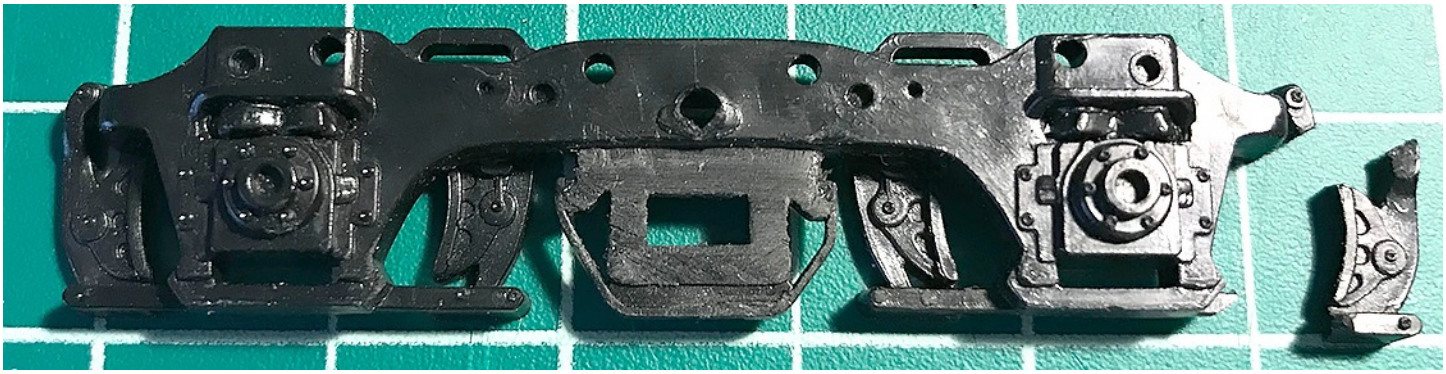


Photo 30 next page - Attach the 3D printed rubber diaphragm to the location where the leaf springs were previously located. Next, attach the dampening strut to the right axle journal and insert the top pin in the upper hole typically used to mount the brake cylinder. Drill a small hole in the right journal center to accept the pin on the back of the 3D printed structure. Mount the American Models brake cylinder on the left side in its normal position. I use 15-minute epoxy to mount the 3D printed materials to the slippery plastic on the side frames. With the outside brake hangers gone, the sander pipes are a visible detail on the M-type truck. I simulate those with a couple of short lengths of 26-gauge electrical wire. I strip the insulation off of one end and epoxy it to the small remnant of the brake hanger at the end of the side frame. The other end is attached to the rear of the side frame making sure that it does not interfere with the wheel movement. The prototype sand hoses are attached to the frame, but this would be difficult to replicate on a scale model. The completed side frame can be attached to the American Models truck and gear tower with the screw supplied, but you may want to paint the completed side frames beforehand.

The Body

The 3D printed body components include a combination Dash-2 short hood and cab, and a long hood. Theses components include all printable details to represent the common elements of the prototype. Additional details are needed such as grab irons, radiator grills, hand brake, electrical cabinet, etc. Most of these items are available as 3D components or need to be supplied separately.

It is highly recommended that you prime the surface of the body components after cleaning with a paint primer. I typically use a Scalecoat primer, and I'm careful to cover the entire surface evenly and thoroughly.

Photo 31 - This photo shows the body components mounted on the locomotive frame. If you look closely, you can see vertical and horizontal lines that typically appear during the printing process. Sometimes these lines disappear once the primer is applied. If lines appear after priming, it's advisable to sand down the surface until they are smooth. That may be difficult to do without affecting small details such as rivets, latches, hinges, etc. I made up a bunch of small sanding sticks with 400 and 500 grit sandpaper attached to work around small details. If it's necessary to sand off some rivet detail, these can be replaced with Archer rivet decals.

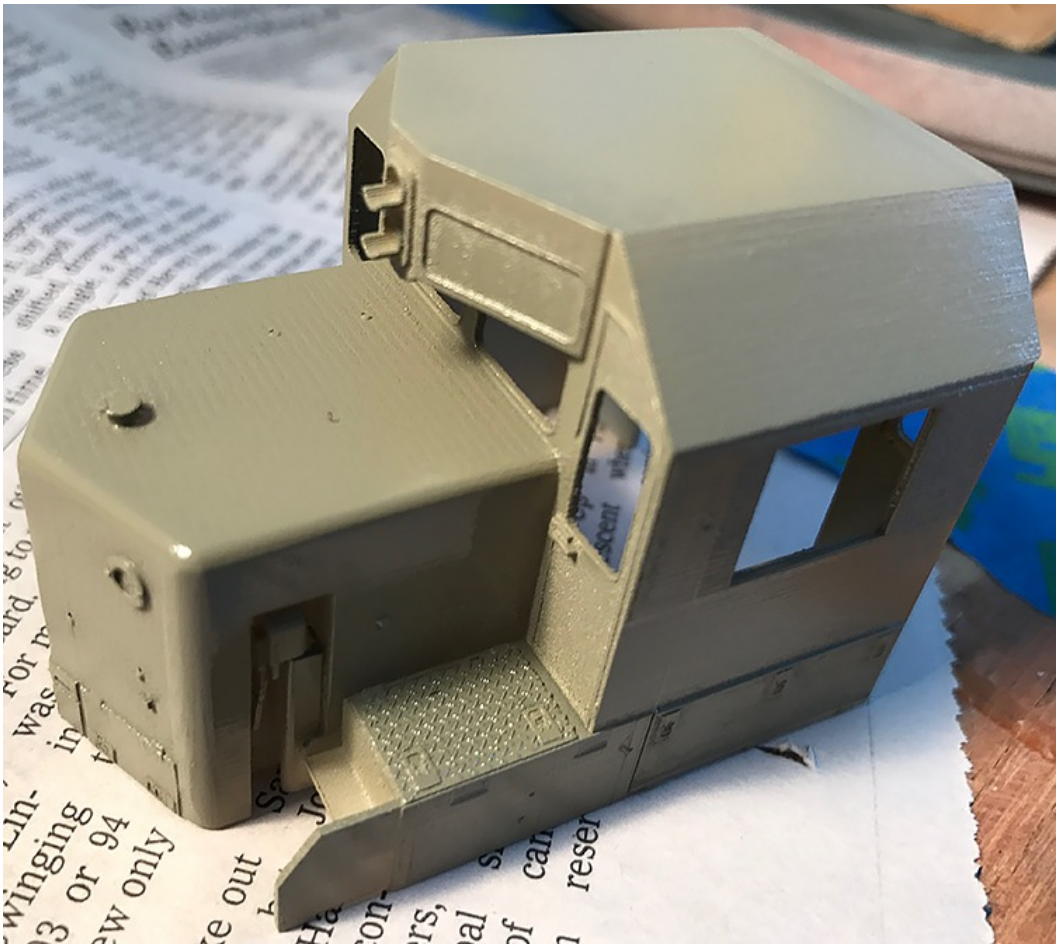


Photo 32 - The cab and long hood are shown here after receiving a coat of primer. You can see horizontal banding lines on the roof, and the top of the short hood. These lines will disappear after some light sanding. The hand brake was installed prior to painting as was the short section of Archer tread plate detail on the battery box cover.

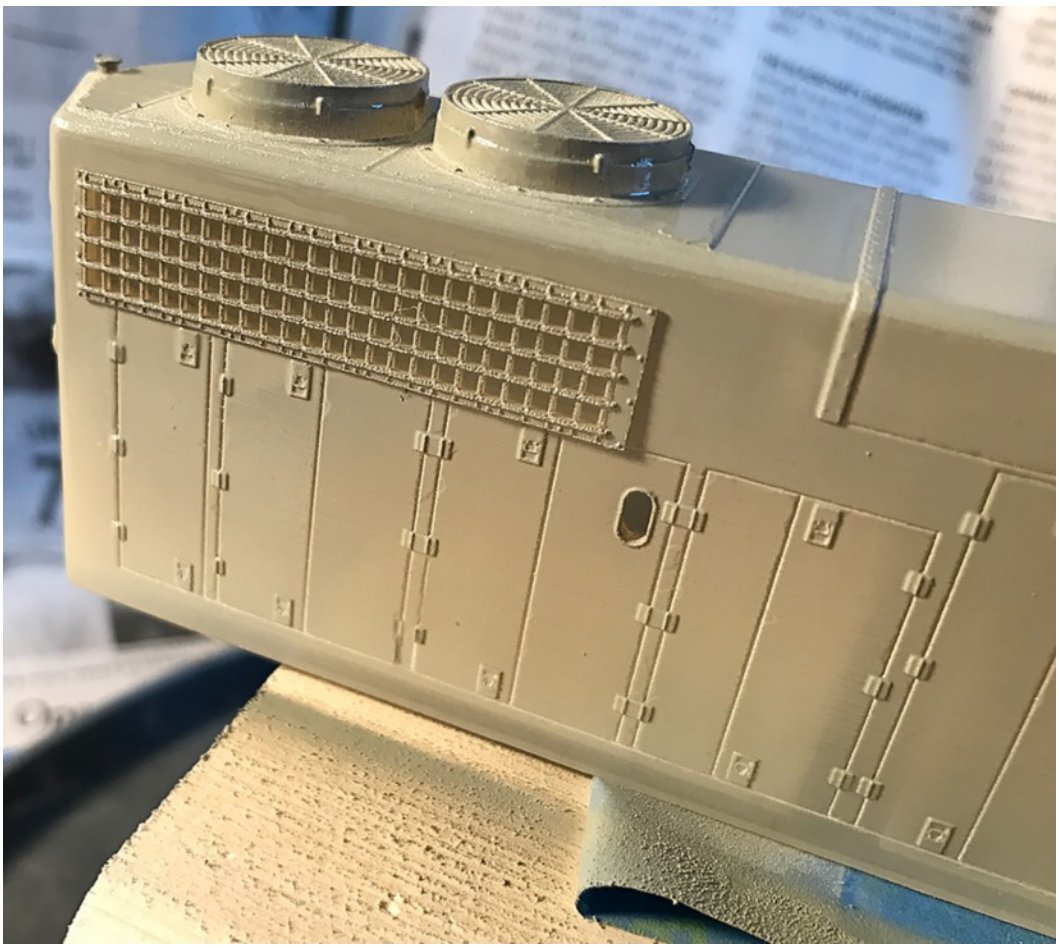
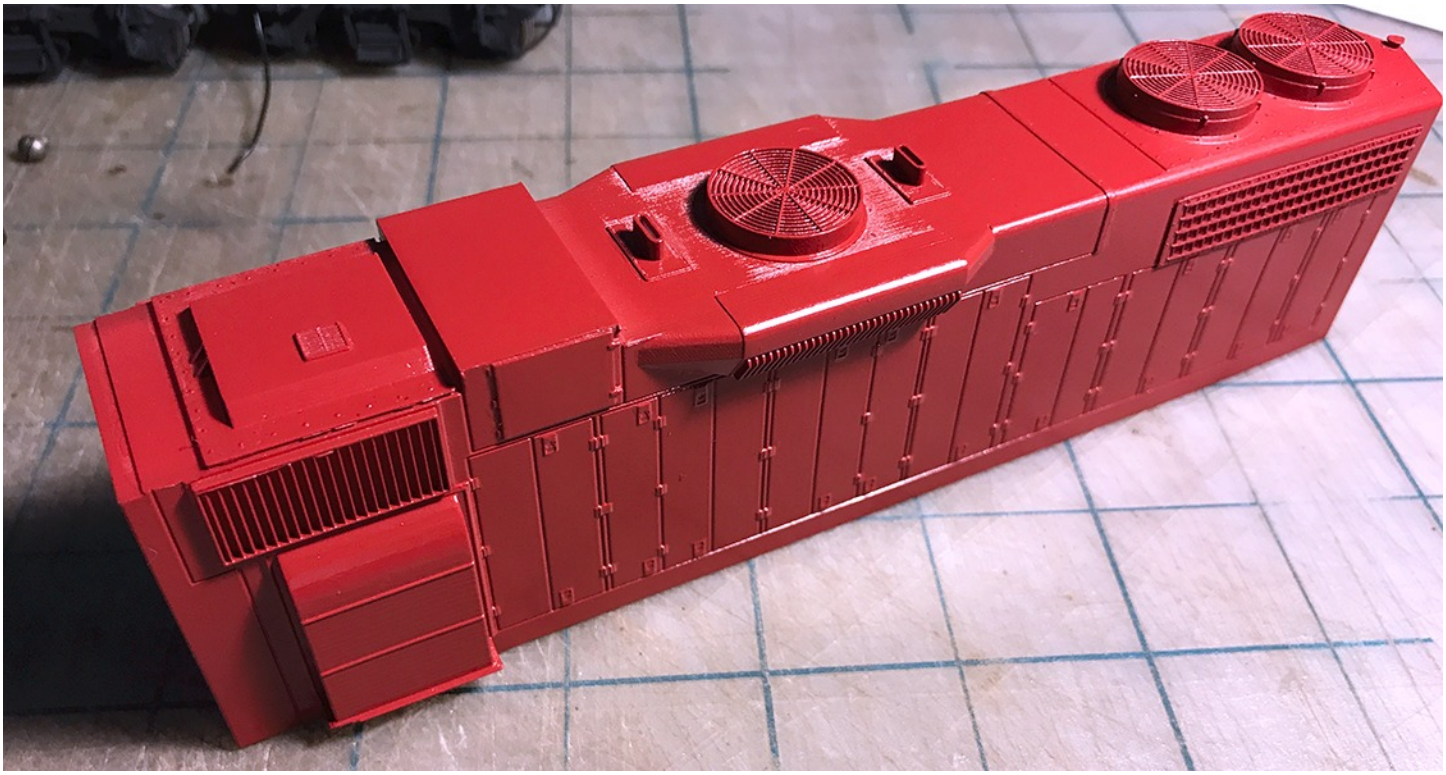


Photo 33 - The long hood required very little sanding. Some light sanding was required around the radiator fan section, but most of the hood sides and ends were relatively smooth. The appearance of lines varies by the direction that the piece is printed. This is not something that the end user can control. My advice is that if the piece is unacceptable, return it to Shapeways and have them try again. This photo also shows the two piece radiator grill installed before priming. The backing piece is installed from the rear and the grill installed from the front. This is also a good time to apply grab irons to the the hoods. A small indent is provided to mark the drill location for a No. 78 drill bit. I typically use Tichy 18" drop grab irons which fit perfectly in the drilled holes.

Photo 34 - Once you are satisfied with the smoothness of your body shell, you can then apply the final coat of the finish color. For this particular GP 38-2, I used True-Color paint. it provides a nice glossy surface for decals.



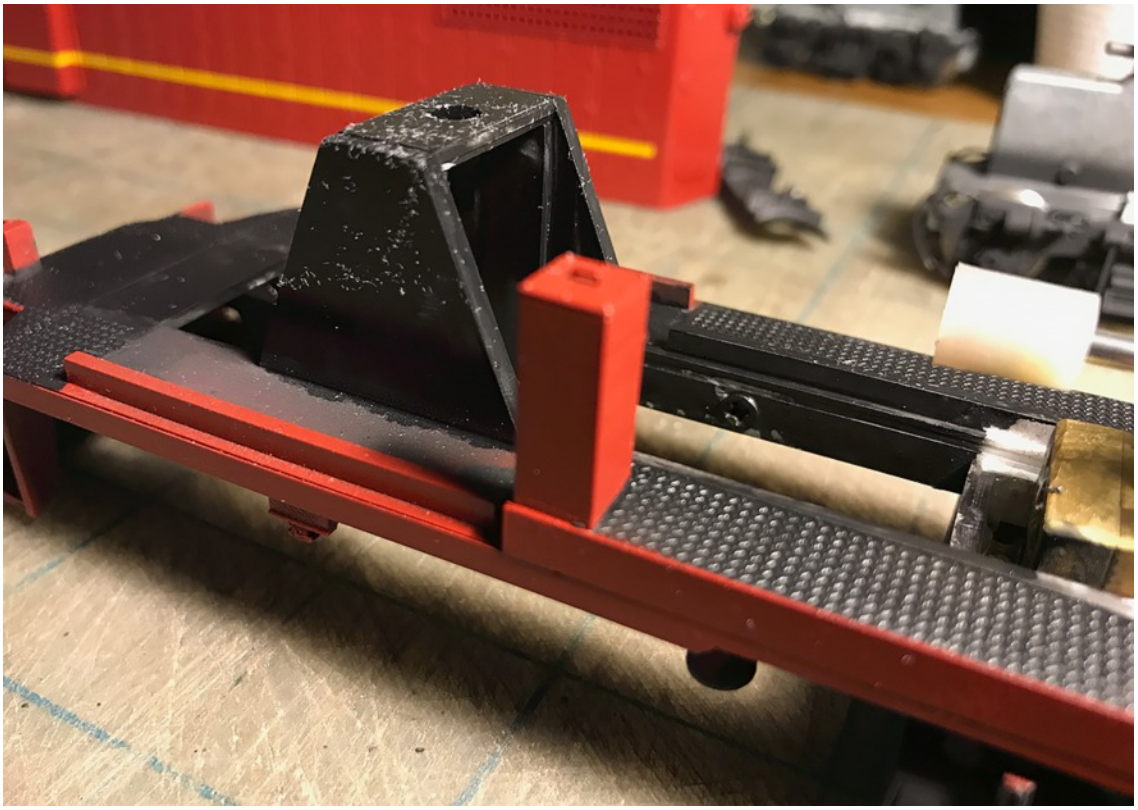


Photo 35 - Some details are mounted on top of the frame including the electrical box that goes behind the fireman's side of the cab and the MU connectors on the pilot deck. I also chose to apply Archer tread plate texture decals to all walkway surfaces.

Photo 36 - This photo shows the completed, painted frame with the motor and drive shafts installed. I used an NWSL motor and some old Hobbytown universals. NWSL makes these as well. I added a simple cradle made from a section of PVC pipe to serve as a motor mount, and then used silicone caulk to mount the motor. Couplers are installed from the underside. It should be noted that the pilot coupler/draft gear box is designed to scale width and, as such, will not accept the Kadee 802 draft gear box without modification. A mounting hole was not provided on the 3D print because of the wide variety of couplers that can be used. I typically cut the Kadee box until it fits the opening and insert the coupler from the front. I then mark the location of the mounting screw and drill and tap a 1-72 thread to mount the coupler.

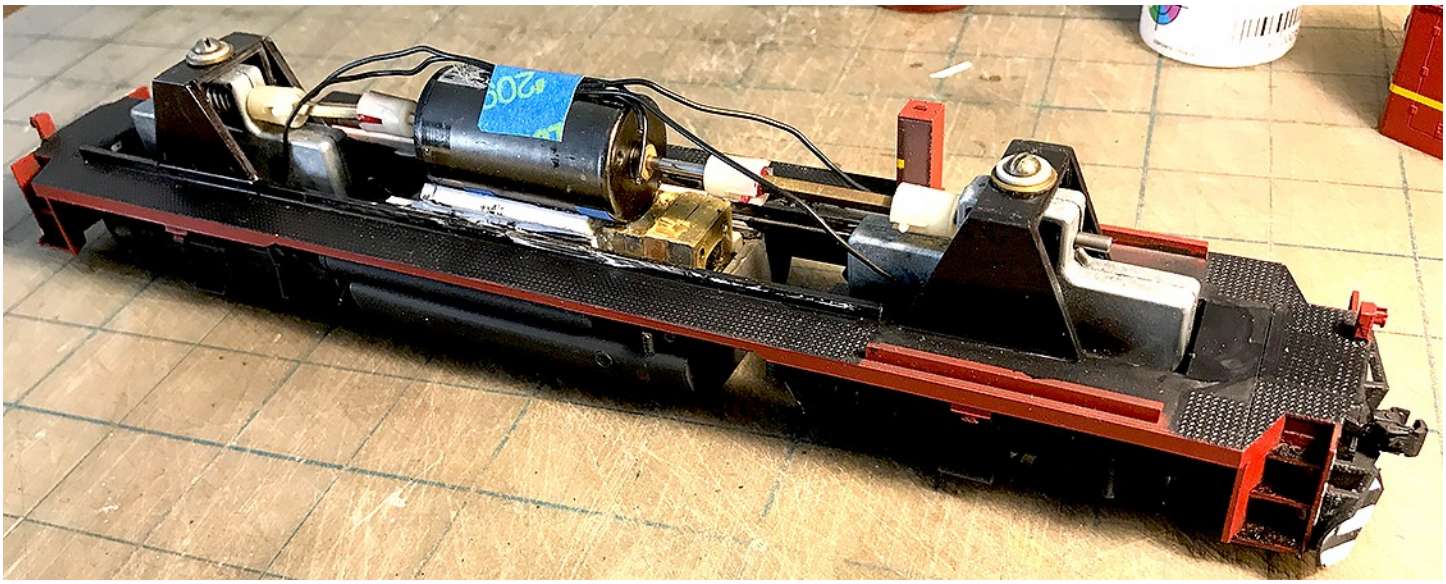


Photo 37 - If your unit has a pilot plow, it can be added prior to painting unless decal stripes extend behind the plow as shown here. There are two mounting tabs on the rear of the plow, and holes must be drilled into the pilot face to accept the pilot. I use S Scale America GP 35 brass handrail stanchions. Here you can see the arrangement for mounting on the pilot face. The two inboard stanchions have to be modified as they sit on top of the pilot deck. Handrails are made from 0.019” wire phosphor bronze or brass wire stock.

Photo 38 - The modified inboard stanchions are cut to length, and a small trapezoidal piece of 0.060” square styrene is secured to the back of the stanchion with a brass wire pin inserted into a hole drilled into the back of the stanchion and the styrene block. A second pin extends from the bottom of the styrene block to secure it to the deck. Do not attempt to merely glue the stanchion to the deck. It will not be secure and could be easily broken.

Photo 39 below - Complete the remainder of the handrail and stanchion installation following the locations indicated on the specific plans that you are using. I paint the completed handrails and stanchions by hand once they are installed. It would be impossible to decal most paint schemes with the handrails in place. Window glazing can be installed using 0.010” clear styrene or whatever you prefer. A recess is provided on the inside of the cab shell to accept the glazing. I use canopy glue to secure the glazing. A strip of 0.010” x 0.030” styrene painted silver is used to create the separator strip in the center of the side cab windows (not shown in this photo). Additional details added include, BTS EMD horn cluster, radio antenna, coupler cut levers, SSA roof top lift rings, SSA MU hoses, and SSA air hoses. Some of these details are best applied before painting.

Photo 40 - Here is the completed GP 38-2 in service on my layout. Soon it will be joined by the GP 39-2 that was featured in some of the construction photos. Some final details include BTS cab sunshades, and windshield wipers. The finished paint job was weathered and patch painted to represent D&H 7324, circa 1977.

Epilogue

Building the second generation Geep is straight forward and not a difficult process using pre-designed 3D printed parts. The cost for the 3D prints are relatively high, but when used in combination with other scratch built assemblies, the total cost can be considered reasonable. The cost to build D&H 7324 was under $400 (not including the cost of adding DCC and speakers). Considering the level of detail and and performance of the locomotive, I would rank it competitive with even HO locomotives similarly outfitted. No. 7324 is the finest running locomotive in my fleet, and I am expecting similar results from the GP 39-2 when completed.

This is my second 3D printed locomotive. The first was an ALCO C420 built using a very similar frame design. Perhaps an article of building a Century series ALCO may be forthcoming. I'm also working on the GP 40 and GP 40-2 long hood designs making this very popular locomotive a reality.

The interesting aspect about the second generation EMDs is that similarities exist for the entire product line, including the SD-series. For example, the same frame design could be lengthened to build an SD 40-2 frame or any other models build in the same era (i.e. - SD 38-2, SD 45-2, SD 39, SD 40T-2, etc.). The limitation with creating an SD locomotive in S scale is obtaining the 3-axle power trucks. American Models produced an SD-type truck for its SD 60 model, but those power trucks are not readily available. Three-axle power trucks can be assembled using NWSL components, so an SD version can be a reality using this design.

Facebook members can follow my layout and future locomotive building projects on my Facebook page: https://www.facebook.com/groups/1689316454712151/

Bill of Materials

Century Models Shapeways Shop

1. EMD Dash-2 cab with 81” nose

2. EMD long hood (available for the GP 38-2 with and without dynamic brakes and the GP 39-2 with dynamic brakes)

3. EMD Dash-2 pilot/step well combination - 2 required (available in two versions)

4. EMD radiator screen and radiator grill

5. EMD air tank ends

6. EMD hand brake

7. EMD fuel tank components set

8. EMD fuel tank ends and middle sections

9. EMD low MU stand

10. EMD pilot plow

11. EMD axle dampening structs (required for the M-type truck)

12. EMD truck snubber (required for the M-type truck)

13. EMD Electrical Equipment Box

14. AM power truck support bracket - 2 required

15. EMD jacking pads and bolster ends, set of 4 - 1 required

S Scale America (SSA)

1. Salem Air Filter - part no. SSA205

2. MU hoses set - part no. SSA398

2 Air hoses set - part no. SSA399

3. GP 28/35 handrail stanchions set - part no. SSA102

4. EMD roof top eyebolt set - part no. SSA172

5. Windshield wiper set - part no. SSA169

6. Top mount bell - part no. SSA209

Bill’s Train Shop (BTS)

1. Air horn, triple chime - part no. 02002

2. Cab shades package of 2 - part no. 02052

3. Drop steps package of 2 - part no. 02062

Bill's Train Shop (BTS) - continued

4. Speed recorder - part no. 02030 (optional)

5. Lift rings, package of 24 - part no. 02025 (These are used as brackets to support coupler cut levers.)

Evergreen Styrene

0.060" Styrene Sheet - part no. 9060

0.010" Styrene Sheet - part no. 9010

0.010" Clear Styrene Sheet - part no. 9006

V-Groove Siding Sheet, 0.020" thick - part no. 2060

Styrene Angle Strip - part no. 294

Styrene Tube 7/32" diameter - part no. 227

0.100" x 0.188" Styrene Strip - part no. 168

0.100" x 0.250" Styrene Strip - part no. 169

0.125" x 0.060" Styrene Strip - part no. 156

0.060" x 0.060" Styrene Strip - part no. 153

Miscellaneous

1. American Models two-axle power trucks with side frames

2. Northwest Short Lines (NWSL) DC motor - part no. 2032D-9, or equivalent

3. NWSL universal drive shafts and components, as required to connect power trucks to motor

4 Archer Transfers , EMD, ALCO, and Baldwin Treadplate - part no. AR88070

5. Tichy Train Group, grab irons, 18" drop type, 100 pieces - part no. 3501

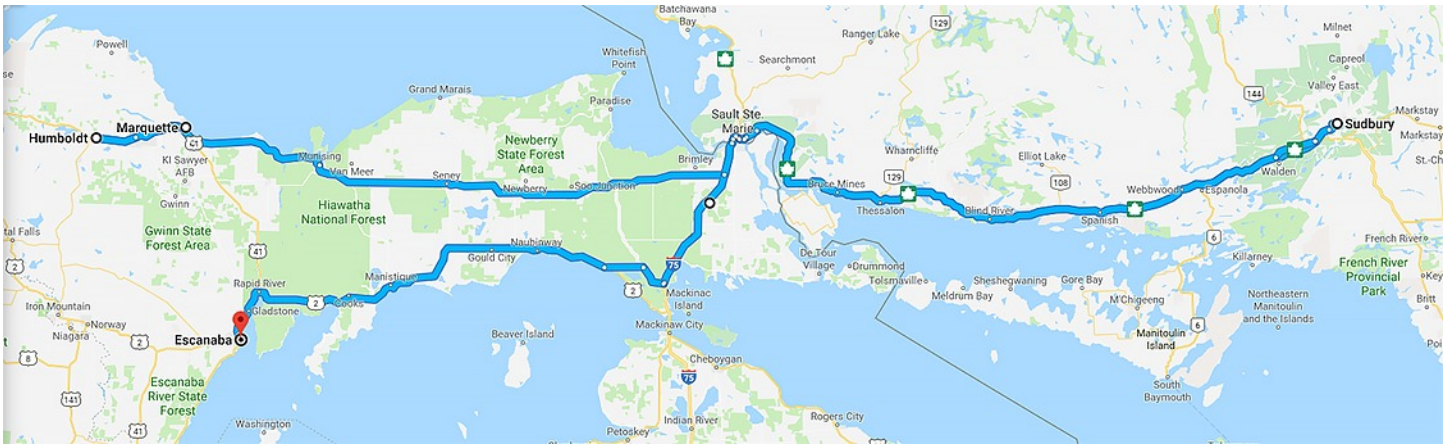
6 K&S Brass Strips 1/16" x 1/4" x 12" long - part no. 8245, 2 required

7. Various sizes of brass or phosphor bronze wire, 0.019" for handrails, 0.015" for cut levers

A Dirt Cover For Your Gondolas

By Glenn Guerra

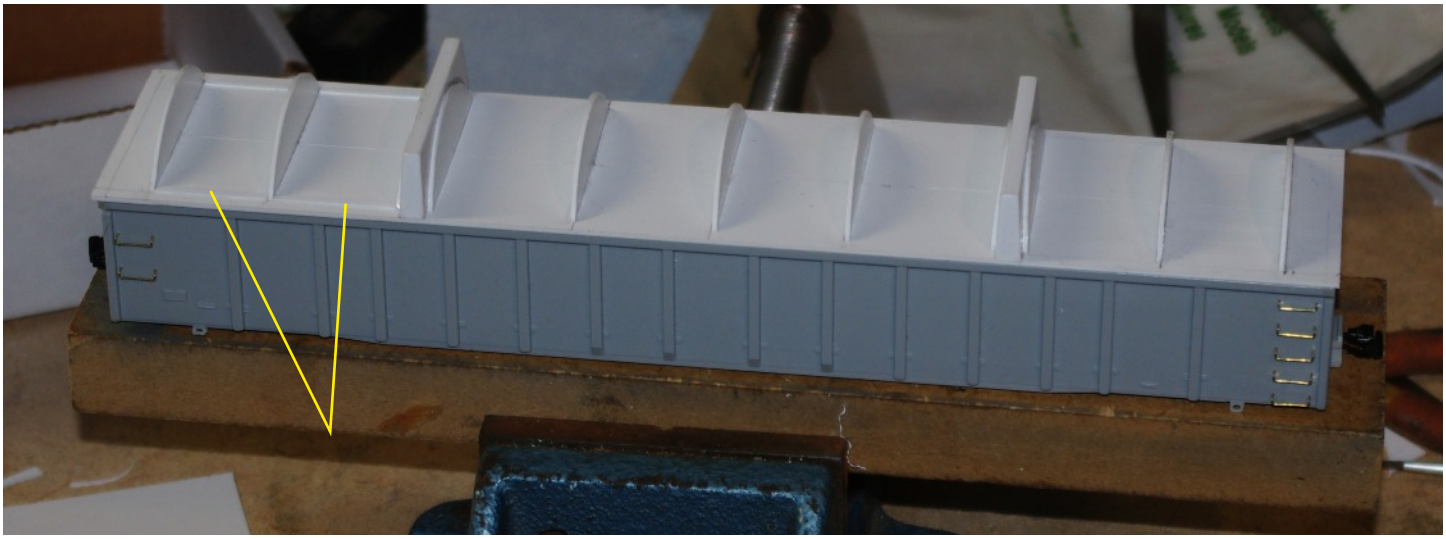
I was working in Escanaba, Michigan and noticed these cars coming by. There is a new mine northwest of Marquette, Michigan and they are mining nickel. The nickel ore is concentrated at Humbolt, Michigan and the concentrate is shipped to smelters in gondolas like this. The covers are to keep the ore from blowing away when the cars are in motion. Some of the ore goes to Sudbury, Canada through Sault St Marie.



The map above is for reference only to show the area that these cars serve in the article. The blue lines are highways and not railroads.

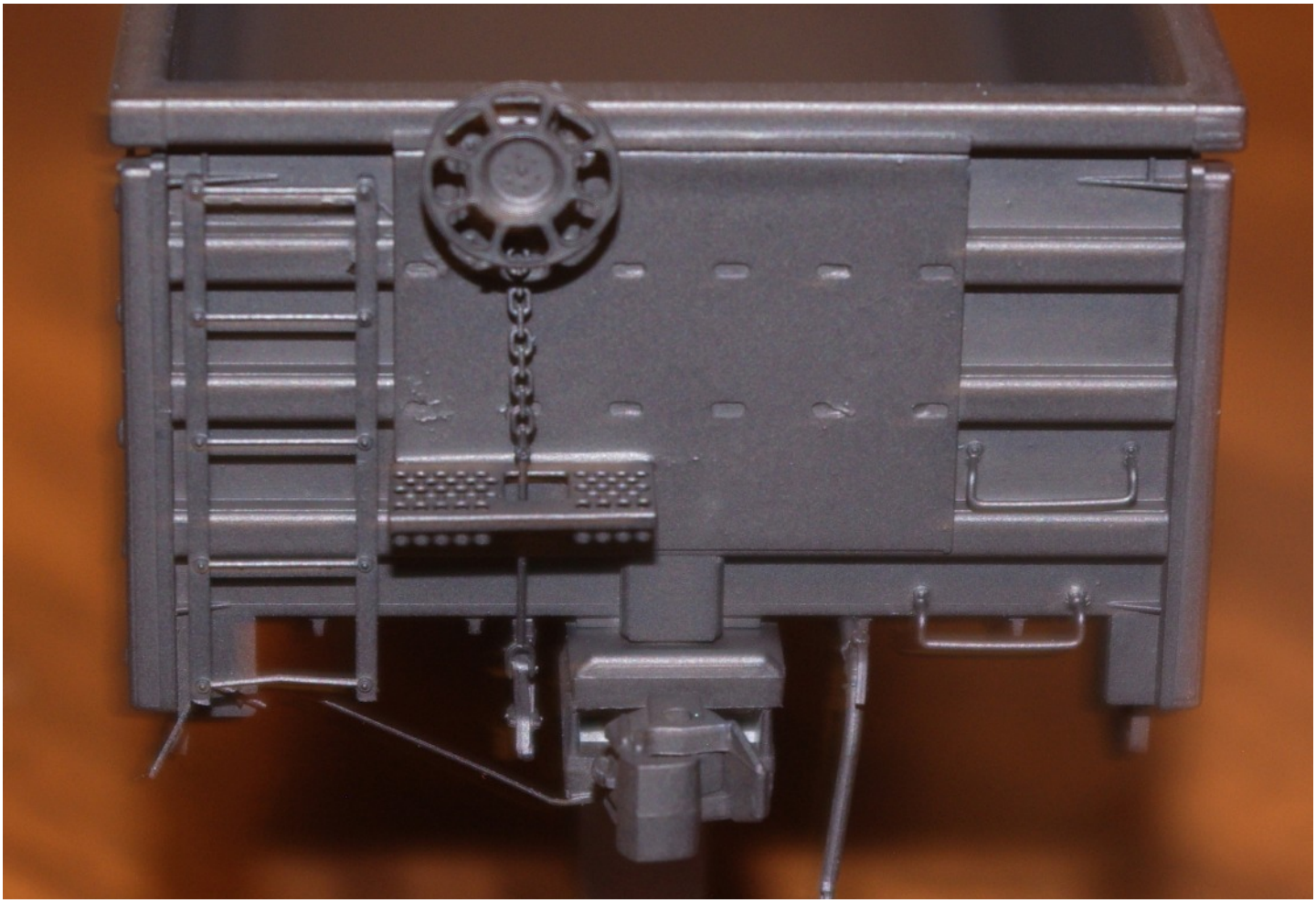
I suspect that the covers also keep the ore dry in case it rains or snows. The gondolas are a mix of types and generally move twelve at a time. Some of the cars are Thrall gondolas like the Des Plaines Hobbies model. I bought one of these, and to spiff up the model a bit, I thought it would be fun to try and make one of these covers.

My plan was to make the cover out of styrene. I would make some bulkheads and wrap a piece of styrene over them. It sounded simple enough, but there were some problems as you shall see. I will show my first attempt, how I built it, and what did not work. My second attempt was better, but even that has some things I would do different. I will do this as photos with detailed captions to help keep the description with the correct photo.

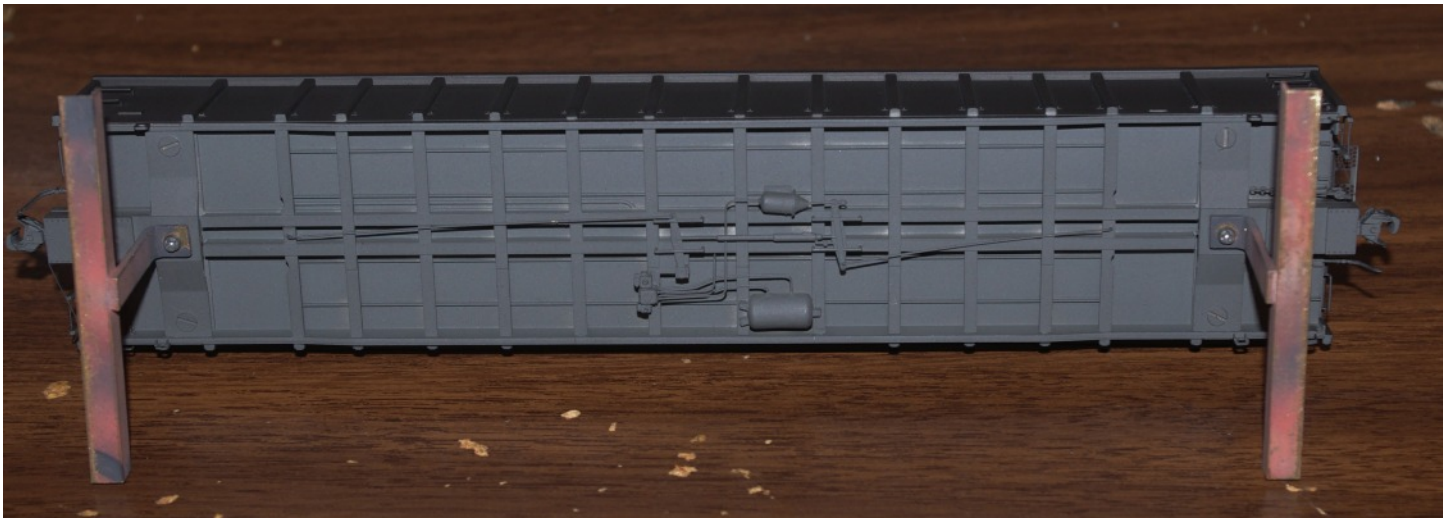


This was the first attempt. I cut a piece of styrene for the base and put some .080” square styrene under it to locate it to the gondola. It’s a snug fit and allows the cover to be removed. I made the two square pieces by gluing them together at the top and putting a .060” spacer at the bottom to get the taper. Then I cut the curved bulkheads and glued them in place. Another photo will show how I made them. The plan was to wrap this with .010” styrene. I wanted to use a thin wrapper so it would bend easier. As I was test fitting the styrene, I started noticing trouble. Where the styrene wrapper met the base, there was nothing to glue to. I decided to add some strips as shown by the yellow lines in the photo. This worked, but was a so so fix at best. At this point I realized I should have glued the bulkheads to a separate piece and that would make the edge I needed. I decided to keep going anyway. The next problem was cutting the wrapper to the correct size. This was a trial and error fit and it didn’t turn out very well. I decided I could fill in with putty. That turned out to be a lot of work and sanding, so I gave up on that. The final problem was the .010” wrapper was not stiff enough and the bulkhead locations showed through. This was not going well.

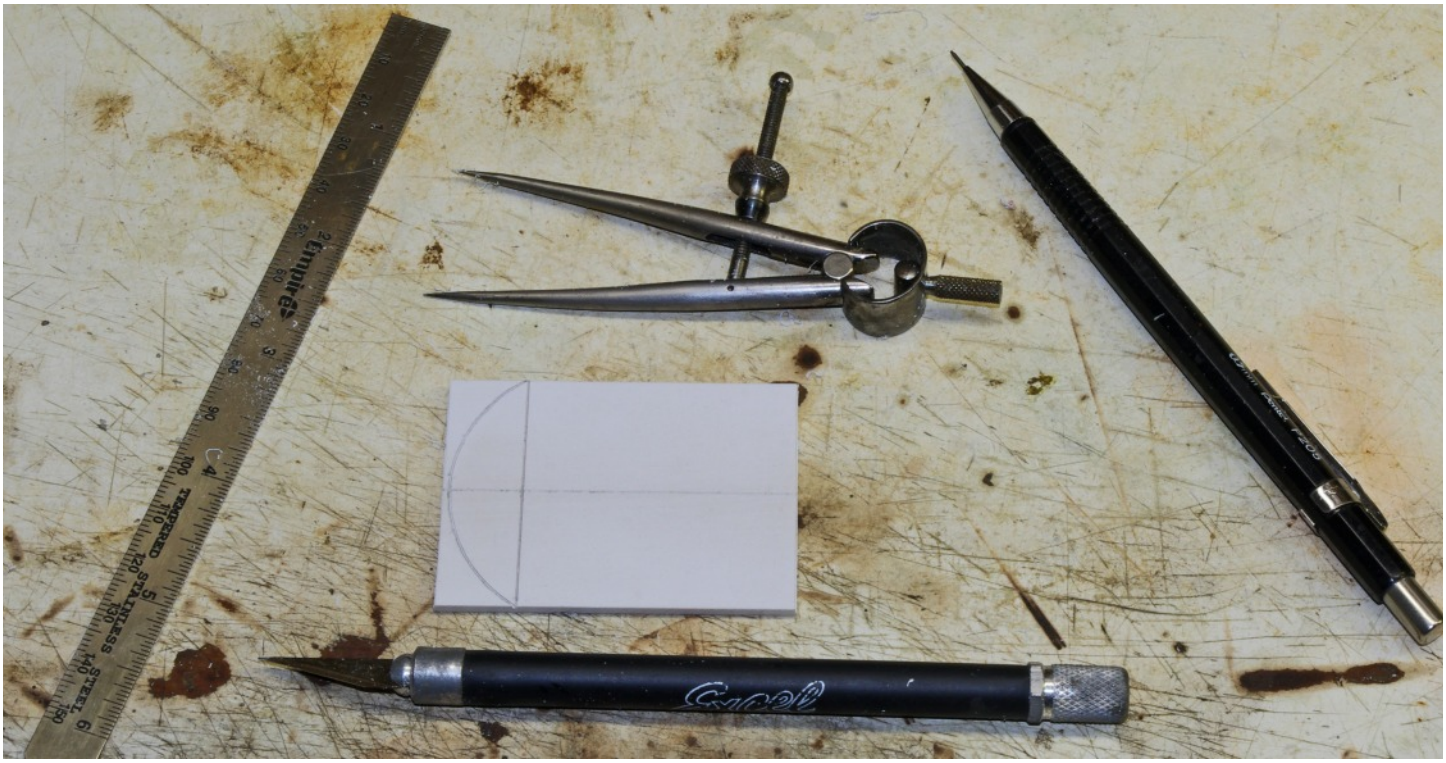
This is how the first cover looked after the wrappers were on. You can see how the bulkheads show and the joint where the wrapper meets the base is not straight. At this point, I decided I had enough of this project and it was time to put it aside. I worked on the Funaro and Camerlengo gondola instead. As a diversion, I finished the basic gondola here and painted it. This gave me time to think about what I would do different.



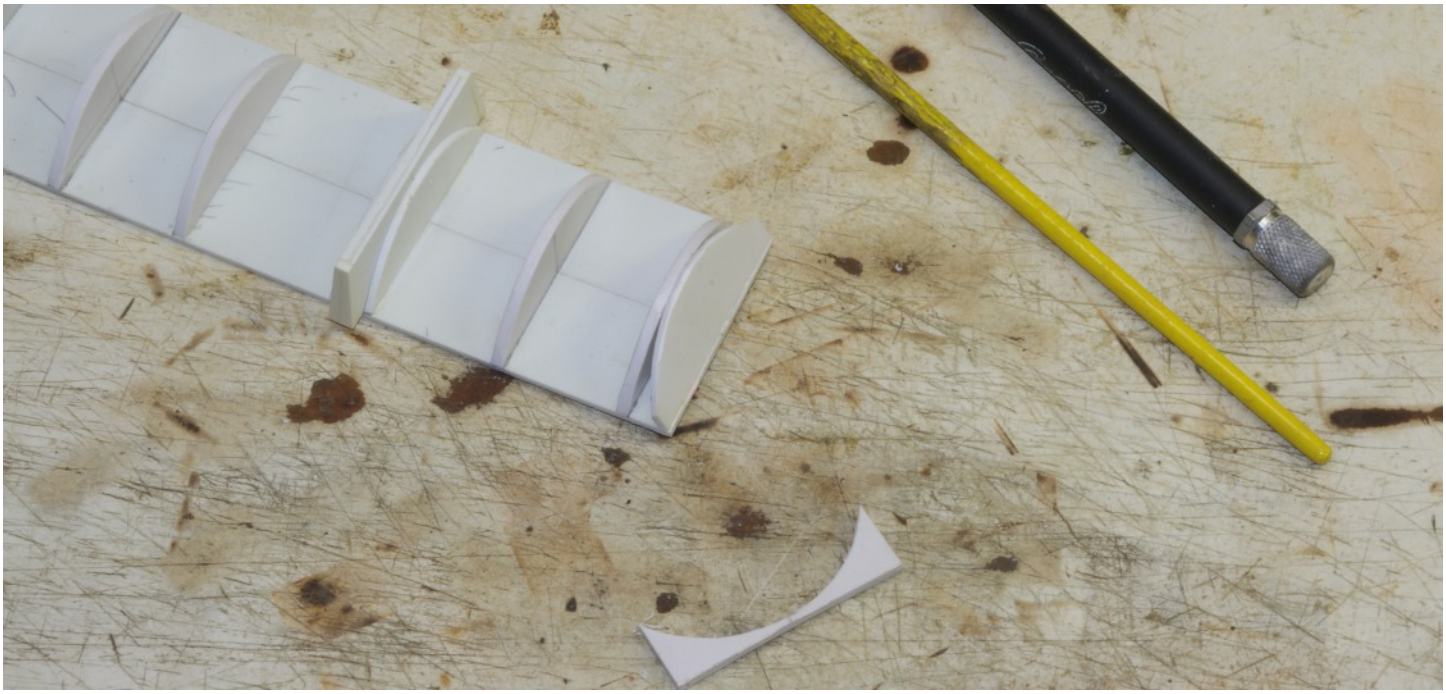
Here are a few photos of the car after I had it painted. I very seldom build a kit as it comes, and this one was no exception. This is a good kit and makes a nice car, but still, I just could not leave it alone. The kit came with ladders for the side and that was one thing I wanted to change. I felt it would look a little different than the stock kit and would add some variety to the train. Since the car would have a cover, I did not get too concerned with the wire grab irons showing on the inside. I made the steps out brass because I thought they would be more durable.



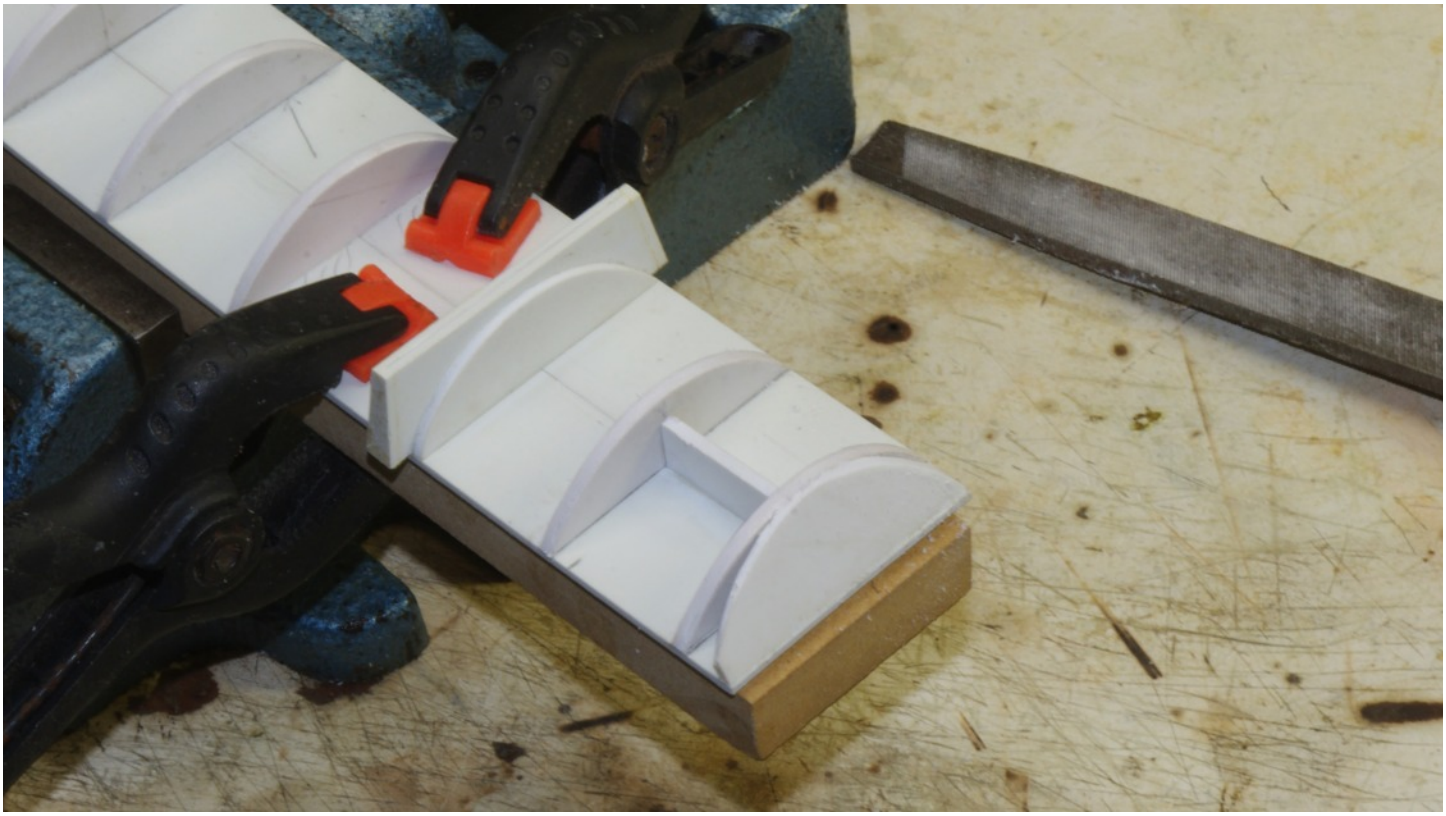
The kit comes with some nice brake detail. I added the piping using wire. Take a look at the car stands. I made these a few years ago out of some 1/4" brass angle. I made them wide enough so my O Scale models will not lay on their sides. They work good on my S Scale models also, and keep the side of the model from resting flat on the table.



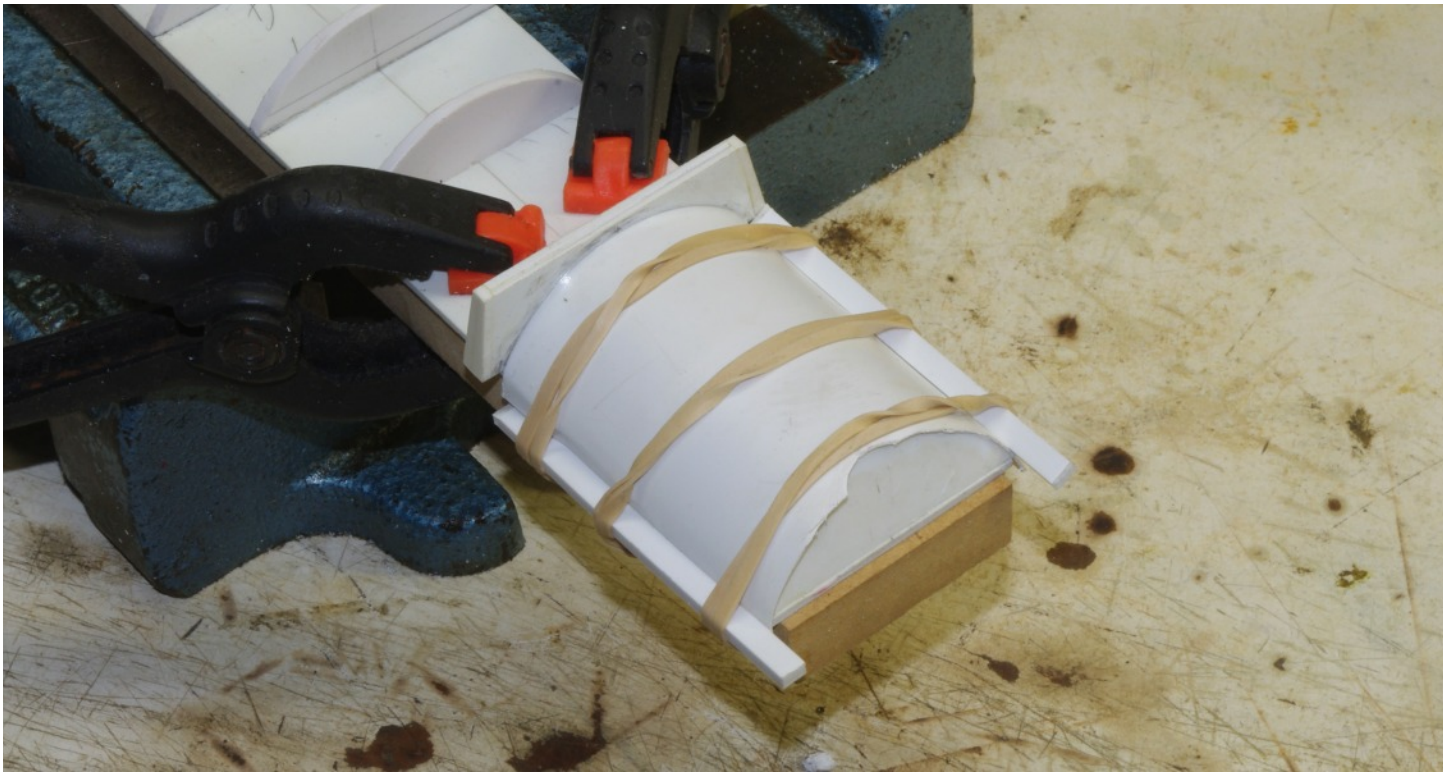
This is how I made the bulkheads in both cases. Cut a piece of styrene to the width you want the bulkheads to be. Then mark a centerline. I decided that I wanted the bulkheads to be .5" tall. I adjusted the scribing compass so it would hit the two corners and the height with an arc. You can see the arc on the styrene. Once the compass is set don't change it. Scribe a line on the styrene using your square. Now measure up .5" from the line on the centerline you drew. That will give you the top of the arc. Now put one point of the scribing compass on that point. Where the other compass point meets the centerline will be the center of your arc. Now, scratch the styrene a few times with the scribing compass. After a few strokes, I found I was able to follow the scribe with the knife and cut deeper. Take your time. After you cut about half way through the styrene you, should be able to break it off. I used .080" styrene for these which was an improvement over the .060" I used the first time. You will need to file the corners of the bulkhead a bit with a file to clean them up.



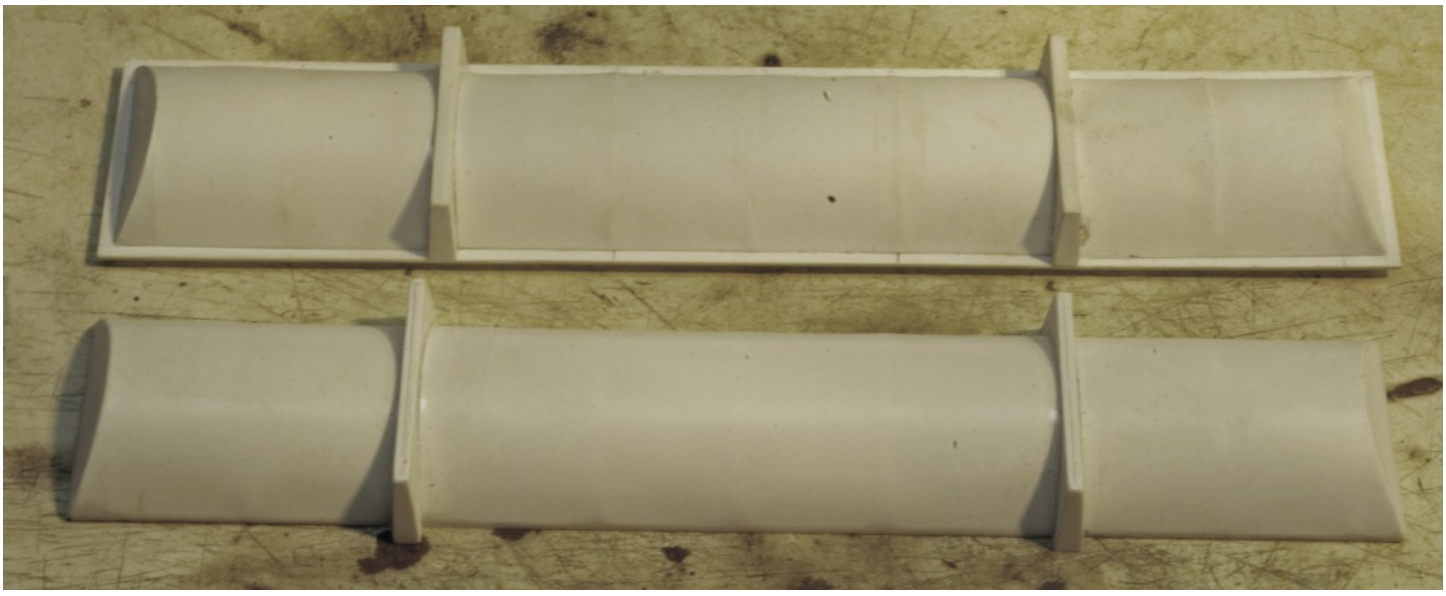
Once I had located the vertical bulkheads, I worked on the ends. You need to cut the sloped ends bigger. The true shape is parabolic, but that is difficult to lay out. What I did in both cases was cut the sloped one larger and file it to fit after it was glued in place. The piece at the bottom is what I broke off after scribing and scoring the arc.



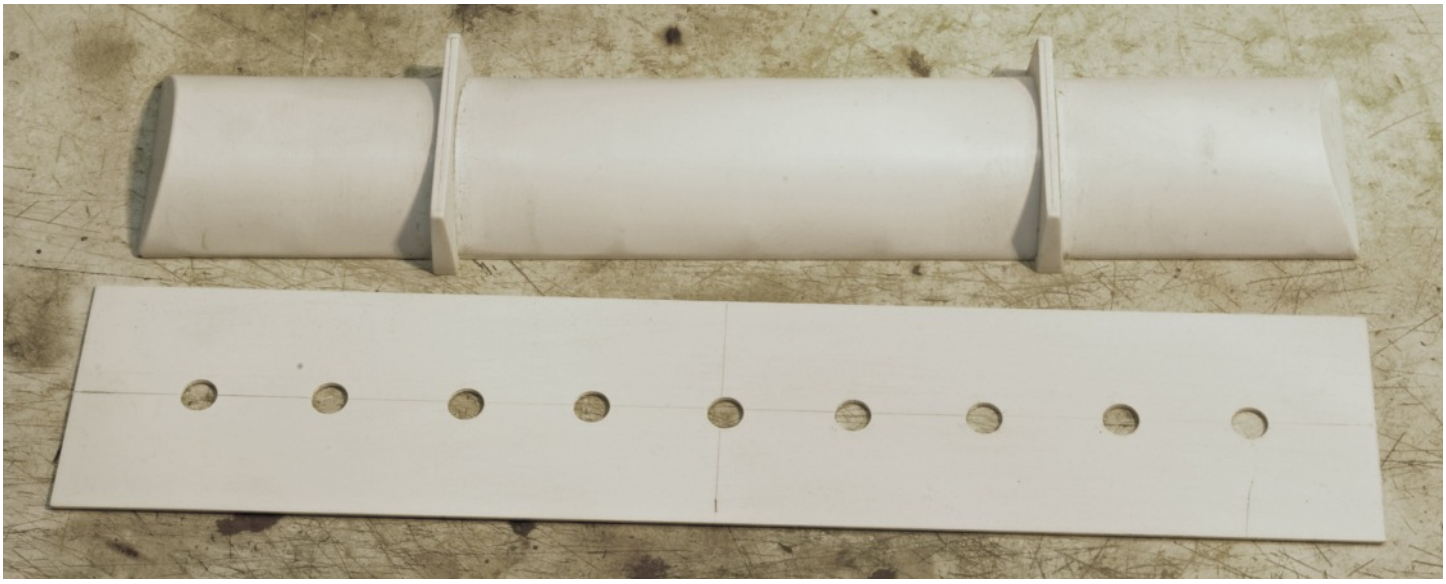
I held the assembly flat on a scrap of wood as shown. As I was filing the sloped end, it looked a bit fragile so I added the spacer between the two end bulkheads. Take your time and work it down close. Then finish it so the end is the same contour as the bulkheads. The right side here is almost done, and I will work the left side down next. Try to keep the file from hitting the other bulkheads, but still use them as a reference. When you get close, file so you hit all bulkheads on the same pass



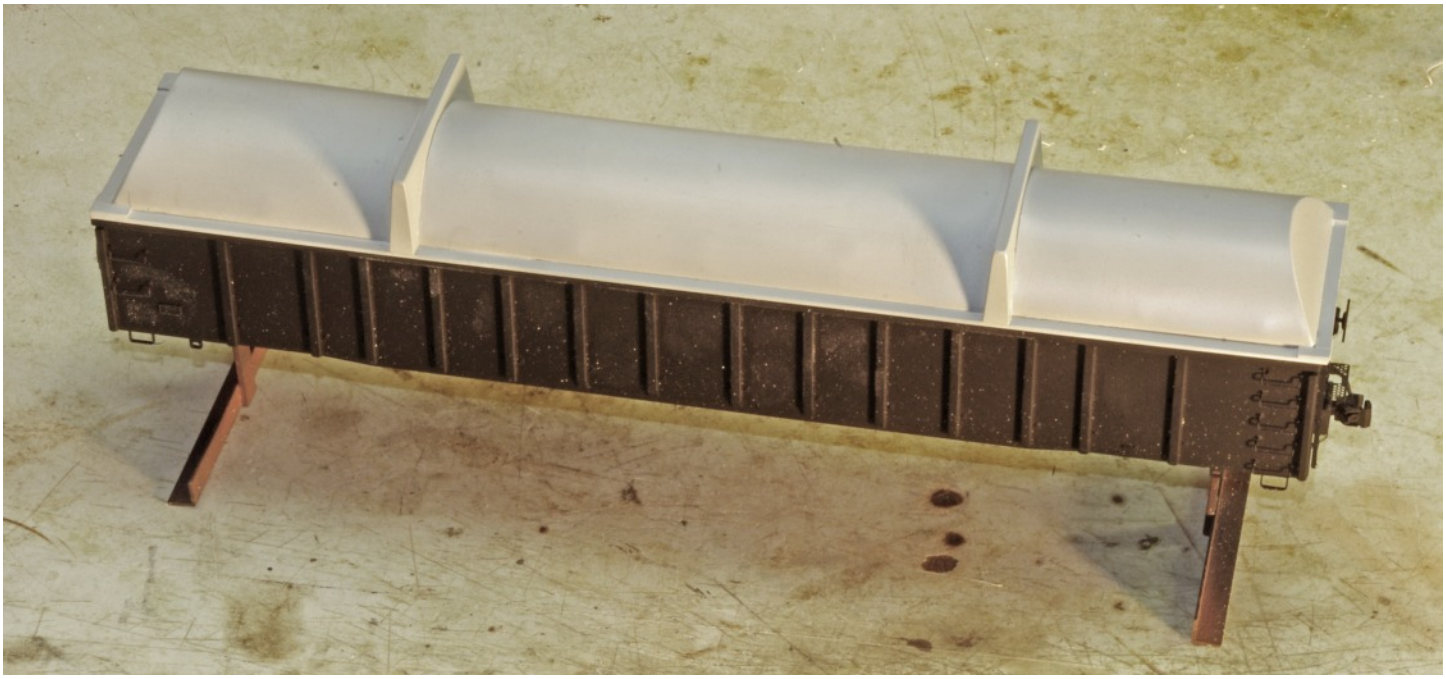
This was the big improvement over the first time. I used .015” styrene which was a little stiffer which helped it hold it’s shape. I was able to leave it long and wide to trim off later. It still was not perfect. I should have put an angle on the base so it matched the bulkheads better. Oh well, next time.



The second attempt is on the bottom. The .015” styrene held the curve much better and yet was flexible enough to work with. I was able to sand off the excess to make the cover flush on the bottom and edges. The next step was to glue some spacers under the rectangle pieces to make them flush with the bottom edge, and then glue my new cover to a base.



Now it was time to glue the curved section to the base. I put some holes in the base so I could get some glue into the center for a better bond. I thought that gluing only around the edges would not be enough. After gluing around the edges, I turned it over and glued each hole.



I added some pads to the corners, and gave it a light coat of primer. I think it looks much better than the first attempt. Next, I need to figure out how to make the latches that hold the cover down. When I think of a way of doing that, I will write an article about that and the lettering.

That is a quick explanation of making my dirt cover. I think the real message here is to not give up if it does not turn out right. Set it aside for a while and think about what did not come out right, then come up with a new plan. Even at this point, I think there are things I could do which would work better, but this will do for now. We learn from our trials. Don't look at a bad outcome as a failure, but rather as a learning experience. Remember this is just a hobby, and no one will punish you if they don't like your work. Have fun!

Thoughts On Decals, A Few Techniques...

By Jim Kindraka

Putting decals on a finished model is one of the final steps and can be rewarding, as well as frustrating, for a modeler. In S Scale, many times we need to use older decals or decals of unknown origin and quality to complete things Over the years, I've developed a few techniques that work well for me in achieving good results. I thought I would share a few of them here.

As with any discussion of modeling techniques, these are not meant as absolutes. You may use other techniques that work just as well for your own modeling. In fact, I would urge others to share, we can all learn from each other's work! It would be interesting to hear what you are using for your decal techniques. What follows are a series of captioned photos to outline the kinds of things I do.

Photo 1

Photo 1: I try and start every lettering project with a prototype photo or two. Lettering diagrams are a good alternative if that is all that is available, but nothing beats a prototype photo to show what really existed. Also, sometimes the photos are clear enough you can actually count rivets to see exactly where the decals should be placed.

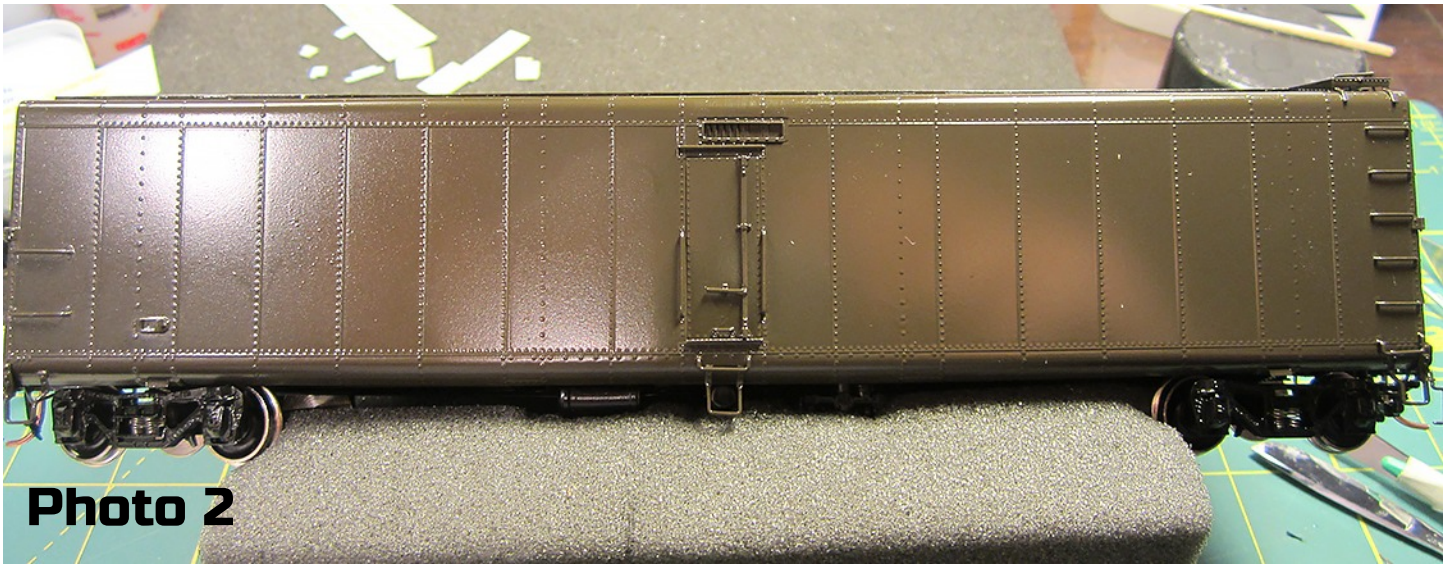


Photo 2

Photo 2: Whatever model being worked on is supported by a foam cradle. It's always nice, and sometimes essential, to have a spot to rest a model that is clean and free of the clutter that invariably inhabits my work bench! I buy the cradles from Port Lines Hobbies and then cut them to a 6" length with an electric knife. Letting the trucks hang free can save catching and bending small end details as you move the model in and out of the cradle. If a model's finish is dull, I'll spray it with a glossy, clear finish before I start. I usually let those overspray finishes rest a few days before starting to apply lettering.

Photo 3: Tools… There really aren't many required, but two key things drive my selection of tools: "sharp" and "comfortable"! The sharper your knife blades and scissors, the better your results will be. I find having two types of forceps, a pair that is normally closed and a pair that is normally open, is essential. I want both to have sharp tips and fit comfortably in my hand. Straight edges to check decal placement and a good supply of toothpicks to move decals around on the car. Once I have a decal on a model, I try and minimize touching it with sharp metal objects!

Photo 4: Solutions… Watching decal setting solutions wick under a decal is pure "black magic" to me. Sometimes the solution works great, other times you need some extra power to get the job done. These are the setting solutions I use, from left to right the strength (power) increases. For most applications, the Micro Sol and Micro Set combination works fine, but I use Solvaset to get decals to conform tighter to wood or very rough flat surfaces. The Testor's products get used to soften thicker decal films and to get better adherence to curved or irregular surfaces. All should be available at your local hobby shop. I have also heard about a Tamiya product, "Mark Fit Decal Solution", Item #87102, but have not yet tried it. It is considered equivalent to the Testor's product and both solutions come recommended by military modelers. Some solutions come with their own brush applicator and I keep a couple of soft brushes around for the Microscale solutions, always being careful that each solution has its own dedicated brush.

Photo 5: Equipment… Years ago, one of my modeling mentors impressed on me two key things about the decal process. You should always use Distilled Water to float decals and you get a faster, cleaner break from decal backing paper using warm, not hot(!), water. Distilled water eliminates minerals that can cause spotting or white powdery deposits around finished decals and warm water dissolves chemicals on the paper that potentially can cloud the final decal. I use a small candle warmer to heat the distilled water, a coffee cup warmer also works. The large metal washer insures good heat transfer to the water bowl. I use a rather flat bowl marked for a fill line and with a small piece of double stick carpet tape attached (upper right in photo).

Photo 6: The distilled water in the bowl is now warm and ready to soak and release decals. The normally closed forceps hold a decal under the warm water. A small piece of double stick tape holds the forceps, keeping them from sliding into the water. A gentle twist on the end of the forceps will release them from the tape. I have a mark on the bowl, so additional water can be added as the decal session progresses. Also, at the end of the day, I dump any remaining water so the bowl is refilled with fresh distilled water the next time it's used.

Photo 7, 8 & 9: O.K., let's apply some decals! Cut the decal you want to apply with sharp scissors or a knife, trim as much excess away as you can but maintaining a square or rectangle is a good idea. "Dot" the area where the decal will be placed with a bit of Micro Set as in Photo 8 and place the decal. If you need to move it a bit for proper placement, use a toothpick. You can dot a drop of water at the decal's edge to help it float more while you move it into place. Then wick, don't wipe(!), away excess water and solution, wait 6 to 8 minutes before painting the decal over with Micro Sol. Usually I apply a few additional decals, and then come back for the Micro Sol application. You're done, let the decal dry thoroughly.

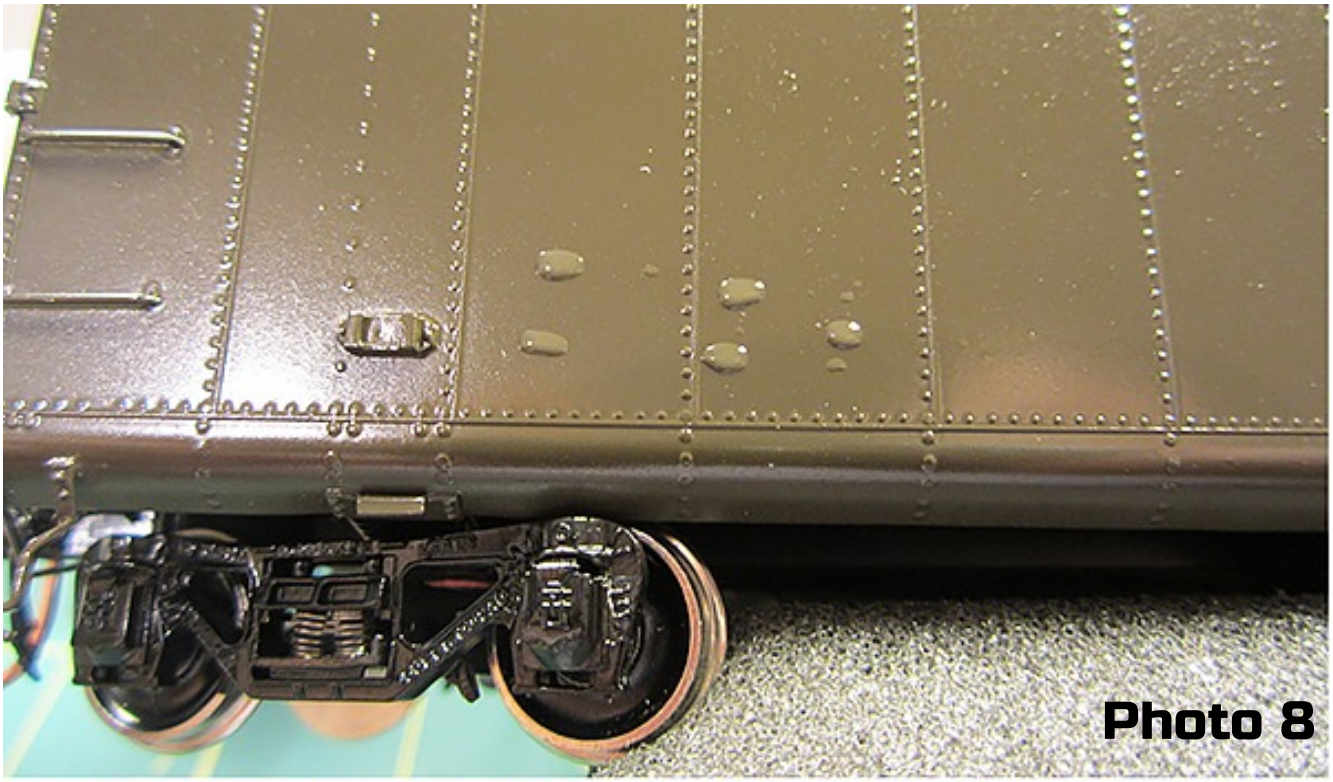


Photo 8

Photo 9

Photo 10

Photo 10, 11 & 12: Letter the model with the number you want. Personally, I always work to use prototype numbers whenever possible. In my early years in the hobby, I saw far too many freight cars with the same number because that was all that was on a decal sheet or with "creative" numbers like "12345" or "67890"! This is where having very sharp knives comes in; Photo 10 shows the only number on this sheet of decals while Photo 11 shows how I cut it to achieve my goal of two prototype numbers, 1029 & 1030. Photo 12 has the reporting marks applied and the other necessary numbers being added.

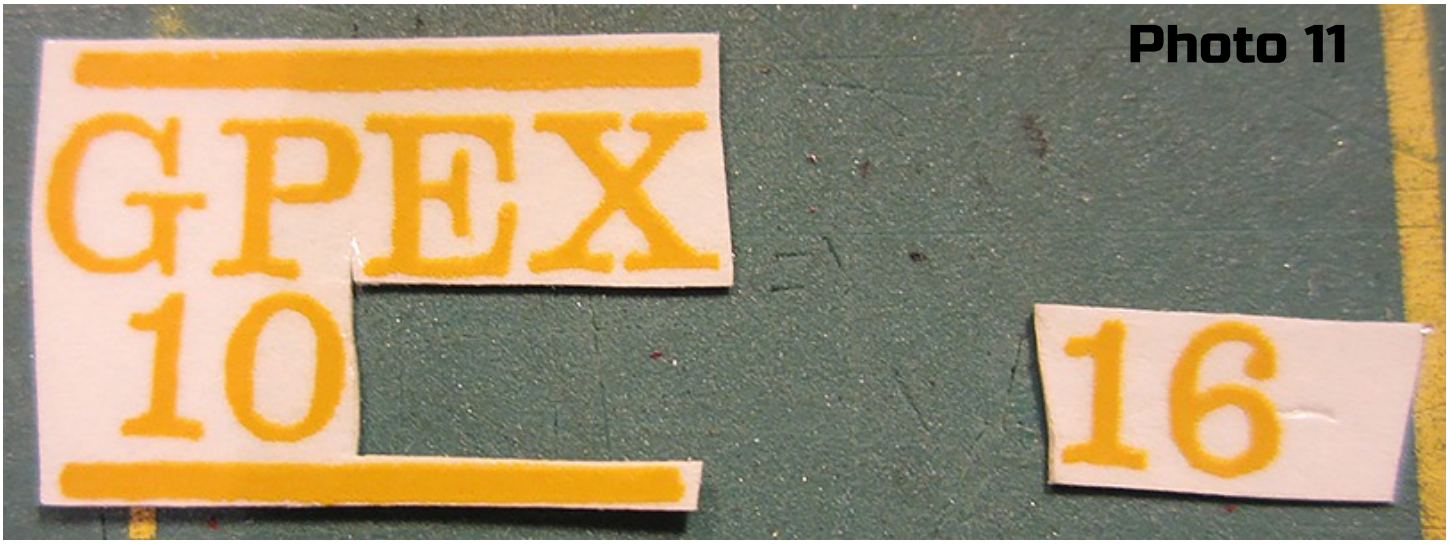


Photo 11

Photo 12

Photo 13: Do some Rivet Counting! In this case, two cars – GPEX 1029 and 1030, are being lettered. Many times you can letter multiple cars with identical lettering, just different reporting marks. To me, nothing sticks out as much as two identical cars in a train with reporting marks, railroad names, heralds or slogans crooked or at differing heights. Use a straight edge to both line up lettering on a single car so it is even and straight and also to measure heights for subsequent lettering jobs. The car side shown here has plenty of rivets, so don't hesitate to "rivet count" to get your lettering straight across the model and measured for the correct height on future models. There is another detail in this photo worth mentioning too. Behind the cradle you see a flat piece of soft foam with bits of decal on it. In many cases, several decals are cut in advance and laid out on the foam. It keeps things organized, and it also provides a surface where decals won't get lost from by an errant breeze or movement of tools.

Photo 13

Photo 14: After finishing all the decals and letting everything dry at least overnight, go back and wipe the car down gently with a wet paper towel to dissolve any water spots or dried setting solution. Then use a light over spray. If the model is to be operated or weathered, use a dull or flat finish. Gloss coat oversprays are better if the model is for display.

Photo 14

Photo 15, 16 & 17: This prototype photo of a gondola highlights where the railroad has simply painted over existing reporting marks using a mask and black paint, then applied new white lettering. Microscale makes a product called "Trim Film" which allows a modeler to cut (in this case) solid black shapes and use them as decals, as shown in Photo 16. Photo 17 shows the final work with white lettering applied on top of the Trim Film black decal, much simpler than masking and painting. Microscale's black Trim Film is item TF-2. Trim Film products are also made in other colors such as white, box car red, etc. Additionally, in the background, Photo 16 shows a couple of lettered tank cars. The decals on these cars had thicker film and the Testor's Decal Solvent Solution for Complex Surfaces was used to get everything snuggled down in place.

Photo 15

Photo 16

Photo 17

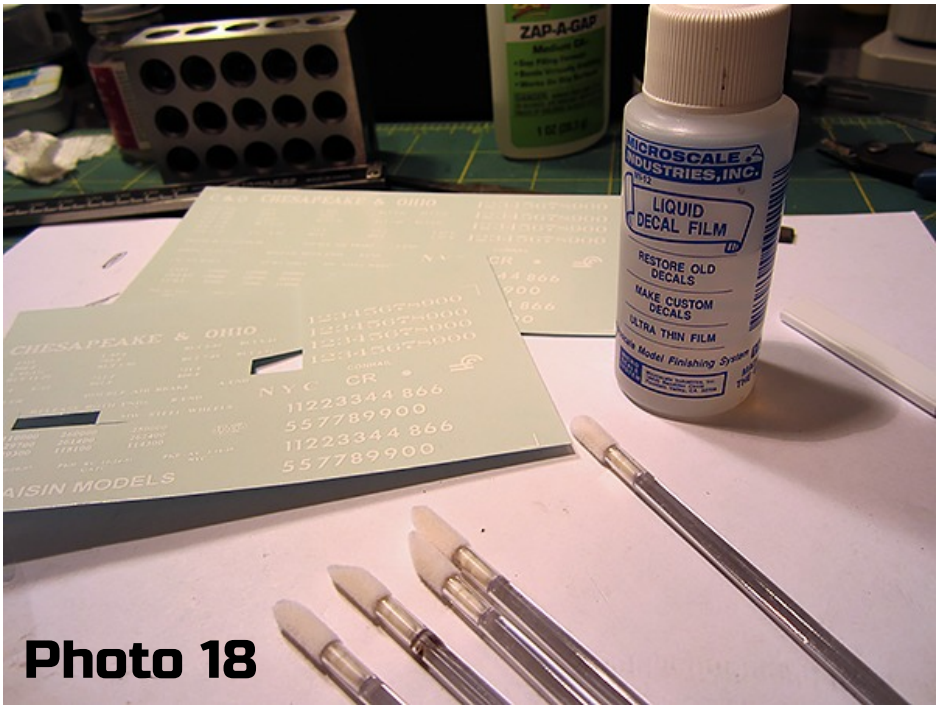


Photo 18

Photo 18: One final suggestion and I'll let you get back to *The S Scale Resource*…! Old decals are just like old modelers – dried up, wrinkled and cracked! O.K., that's a joke, but I do not recommend using old decals, ever! I routinely throw away ancient Enhorning decals; with all the great on-line graphics and modern decal services, why mess with obsolete artwork on old paper! I realize some of you won't agree, and in rare cases, old decals are the only alternative. In those cases, I recommend using a liquid decal film to hold things together. I purchase lipstick gloss applicators, available in pharmacy cosmetic aisles or from Sally Beauty Supply. These soft flocked applicators that minimize damage to the old decal surface to spread a thin decal film evenly and quickly. Allow treated decals to dry 4 or 6 hours (preferably overnight) before use.

Mentor Definition: A Trusted Counselor or Guide

By Contrubiting Editor Jim Kellow MMR

Sn3 How It Got Started Big Time, What is its Future?

I recently had a dedicated S Scale Modeler ask me; "What is Sn3 all about?" I did not know what to tell him, so I decided to try to find out. I found out that there are Facebook pages for Sn3 modelers both in the US and in Australia. I joined both and just looked for modelers I could talk to. I found several, including the two I have profiled in this article. Don Wilde, and through him, Bruce Blalock. Bruce gave me a fantastic education in the History of how Sn3 started and what he sees as its future. Don and others gave me their perspectives on its future and thus this "New Tracks" article was written. First the History of Sn3 and then its future.

Bruce Blalock, graduated from Texas Tech in 1967. He married Sallie in 1966 and has two children and seven grandchildren. Bruce practiced graphic design and marketing for 24 years, and owned the Katy House Bed & Breakfast for 20 years. He became a qualified steam engineer on the Austin & Texas Central October, 1993, and still runs steam when possible. He was hired by Union Pacific in 1995, promoted to engineer in 1998 and retired in 2010. His interests include O and On3 railroad models of Missouri-Kansas-Texas and Denver & Rio Grande Western, photography, history, nature and bicycling.

Bruce Blalock

While Bruce wrote the history he told me that Wayne Weiss, a long-time hobby shop owner and model railroader contributed a lot of information and proofread the copy as well. Thank you Wayne for your help and contributions. Read on for a brief history of the beginning of Sn3 by Bruce Blalock with help from Wayne Weiss

In 1967, my last year at Texas Tech, I was building an HOn3 layout in my apartment, then the Lubbock Model Railroad Club held its annual open house. One display immediately caught my attention, a small narrow gauge layout built in S Scale. I had never heard of anyone modeling the narrow gauge in S Scale and it was fascinating! The size was large enough to have just about any detail one could see in O Scale, but it ran on track that was sized about the same as HO. Ken Pruitt had been involved in narrow gauge railroading and modeling for a long time. He had drawn plans of a lot of the Rio Grande narrow gauge equipment and was a good model builder as well. Ken had come to Lubbock from his home in Sandia, New Mexico to show his new Sn3 models of Rio Grande equipment to encourage modeling in the scale. In ten minutes, I was hooked! Ken and I became friends, and stayed in touch until his untimely death.

Tom Lindholm lived in Houston and created Tomalco, the Tom Lindholm Company. Tom was a geophysicist for one of the big Houston oil companies. He built patterns and sold castings in TT under the Tomalco name, and he could machine just about anything on his jewelers lathe. He almost finished a TTn3 Climax

In 1970, I started having an annual gathering of model railroaders at my house, the BullShoot. In that year, 15 very talented modelers came for the fun and festivities of modeling show and tell. Pictured are: Left to right, top row: Avery Norlin (Tomalco), John Weiss, Gil Freitag (amazing talent), Tom Lindholm, Wayne Weiss (Bellaire Roundhouse), Gus Freitag (G&G Model Shop), Jess Patton, Bruce Blalock. Bottom row: Mike Koch, Charles Morrill, David Ray, Delwyn Amerine (S Gauge Herald editor), RD Evans, Hal Hutchinson.

one time with the gears cut to scale! One day Tom saw a Rio Grande narrow gauge box car plan printed in *Model Railroad Craftsman*, published in 1/64 scale to fit horizontally on one page. He pondered that for a while, decided that the scale had a lot of merit, and then did patterns for the brake cylinder, truck side frame, retainer, brake wheel and stirrup, striker plate and a couple of more, but he never did anything with it. Tom moved from Houston to Covington, Louisiana in the late 1970s and died there in the early 1980s.

In the early 1960s, Avery (Swede, or, Sn3wede as he later signed) Norlin wanted to buy Tom's TT patterns for his own casting line, and after the deal was made, he came to Houston to get everything. Swede saw the Sn3 patterns and Tom included them in the deal, as well as the Tomalco name. Swede made some castings from those patterns and Sn3 was born. I moved to Houston in 1967 and had the pleasure of knowing Tom and Swede, who lived in McCracken Kansas. Swede liked my work, so I was put to the modeling thing to help him out. At that time, you could practically count the Sn3 people on both hands. The Tomalco C-16 was the very first imported Sn3 engine, and until then, we had to re-build HO Tyco Ten Wheelers into T-12s. I still have my T-12 and two cars that Swede used for pilot models and photographs. Swede used Ken Pruitt's plans in his kits, and I designed and produced the first Tomalco catalog.

Putting this in context: this started happening more or less concurrently with creation of the Cumbres & Toltec Scenic line. The Rio Grande abandoned the narrow gauge in 1968 and Ken Pruitt was connected with the advisory board of the states' operation and he designed the first excursions cars, first used in 1971. He used the 3000-series box cars, took the top half of the sheathing off for windows and replaced the doors with a hinged step. Ken built Sn3 T-12s, K-36 and K-37s using Mantua 2-8-2 mechanisms and Uintah Mallets using Mantua 2-6-6-2Ts along with C&S 2-6-0s using MDC 0-6-0s. Ken had all of them. They were quite good as he was a master with brass. Ken, like some Sn3 converts, was using HO track and trucks without modification for a very easy transition (Sn3 1/2). I used the prototype gauge dimension and made my own flat brass bolsters, used Kadee passenger wheelsets on which I split the axles and drilled out in a friend's lathe for brass rod axles inserted in the back. The Central Valley HO four-wheel passenger truck worked very well in Sn3.

The first Sn3 brass loco import, a C-16, D&RGW 278, was a Tomalco project with tender drive, and when this sold out, Tomalco made some more patterns and had a second run made with an open frame motor in the boiler, another C-16, D&RGW 268. Both were short quantity runs by small builders with the castings Tomalco had at the time and were produced in both Sn3 and Sn3 1/2 (HO). Both were arranged by Dick Truesdale (a Pan Am pilot and owner of Westside Models) who started very small himself and also did the leg work in Japan for Balboa (Ted Hollow). Truesdale, flying to Japan regularly, had contacts with small builders and individual modelers and could get short runs done. I believe the first Tomalco C-16 was created about 1970.

Bill Peter and P-B-L. When I went to the first run of the C&TS rotary snowplow in Chama in 1975, I had the pleasure of meeting Bill Peter, who did custom detailing and finishing on SP prototype HO models under the Foreground Models name. These models had improved mechanisms with Faulhauber motors and a fabulous paint job with PFM sound. He gave me holy hell for "wasting my time in the dead-end scale of Sn3."

Some years later PFM decide they wanted to do a nice Sn3 model but needed a factory more flexible (custom made gearbox, odd gauge etc.) than the factories with which they usually dealt. PFM then borrowed from Westside the Nakamura factory (Westside HO K-37, K-27, Class A Climax etc.) to make another C-16, the D&RGW 223. They had more patterns made by Tomalco to make a great looking model with both the PFM and Tomalco name on the box. At the time, the only can motor available wouldn't fit in the Sn3 C-16 boiler so it came with very good quality, but disappointing, fast running, Pittman-style open frame motor.

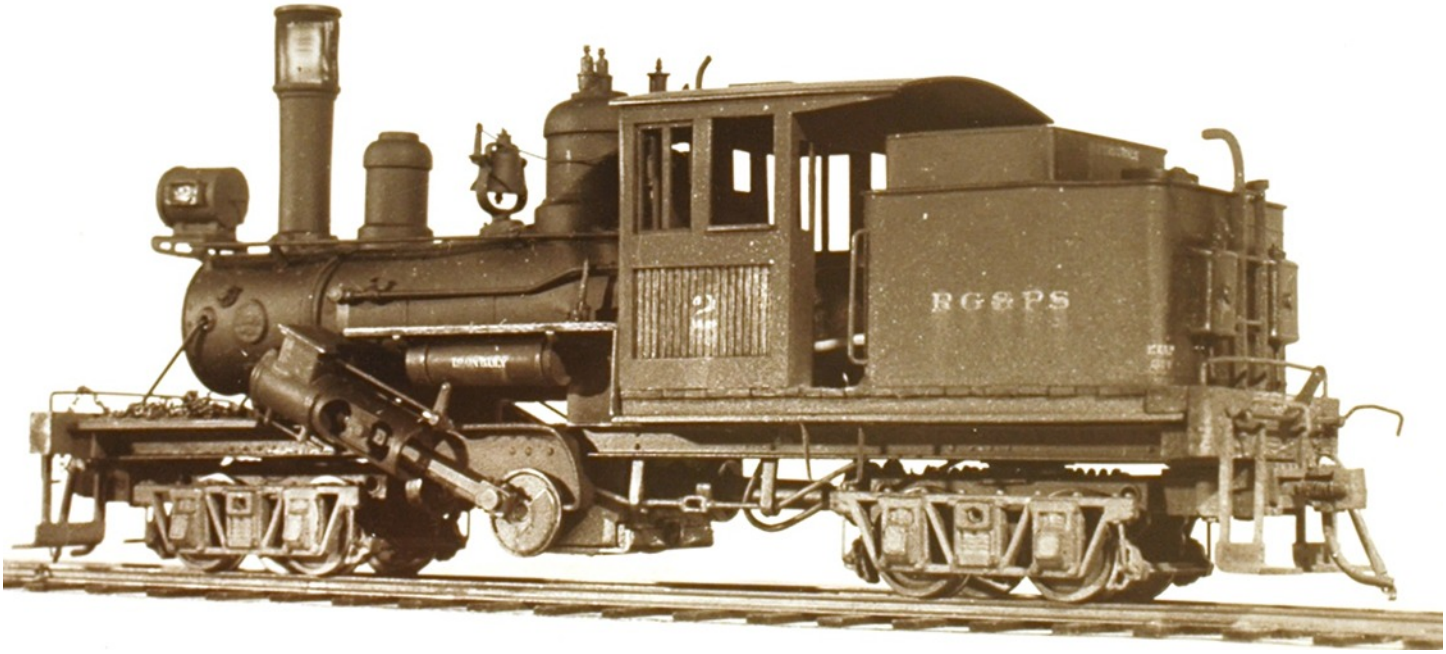
PFM had a large number of the Sn3 engines left, and they had a dealer sale of excessive inventory. C-16s with a list of $500 were $99. Bill Peter bought them at fire sale prices and started selling Sn3 train sets combining the PFM C-16 engines with car kits or anything Sn3 that would make sense. Bill must have seen the light because after he sold the PFM engines he started importing K-series engines in Sn3 built by Samhongsa, I think about 1980. Since Bill started his Sn3 production I would guess that he’s done more in the scale than anyone else. His quality is as good as it gets, and partner Jimmy Booth is a huge reason for that. They offer not only ready-to-run engines, but cars and kits as well.

Heavy hitters arrive: About the time P-B-L got Sn3 going, PFM became really interested in Sn3. They produced at least one version of the C-19, an RGS 4-6-0, some K-27s with inside and outside valves and a Pagosa Junction combine, all by SKI I believe. There were probably more. Later, Overland Models did the C&S 9, C&S 22, C&S 65, 74 and 75 and at least one K-27 version (probably with both cylinder arrangements). Somewhat later, Berlyn Locomotive Works produced some very nice models in Sn3. All of the later PFM and Overland models had can motors. Banta produced some of their great structure kits in the scale as well completing the picture.

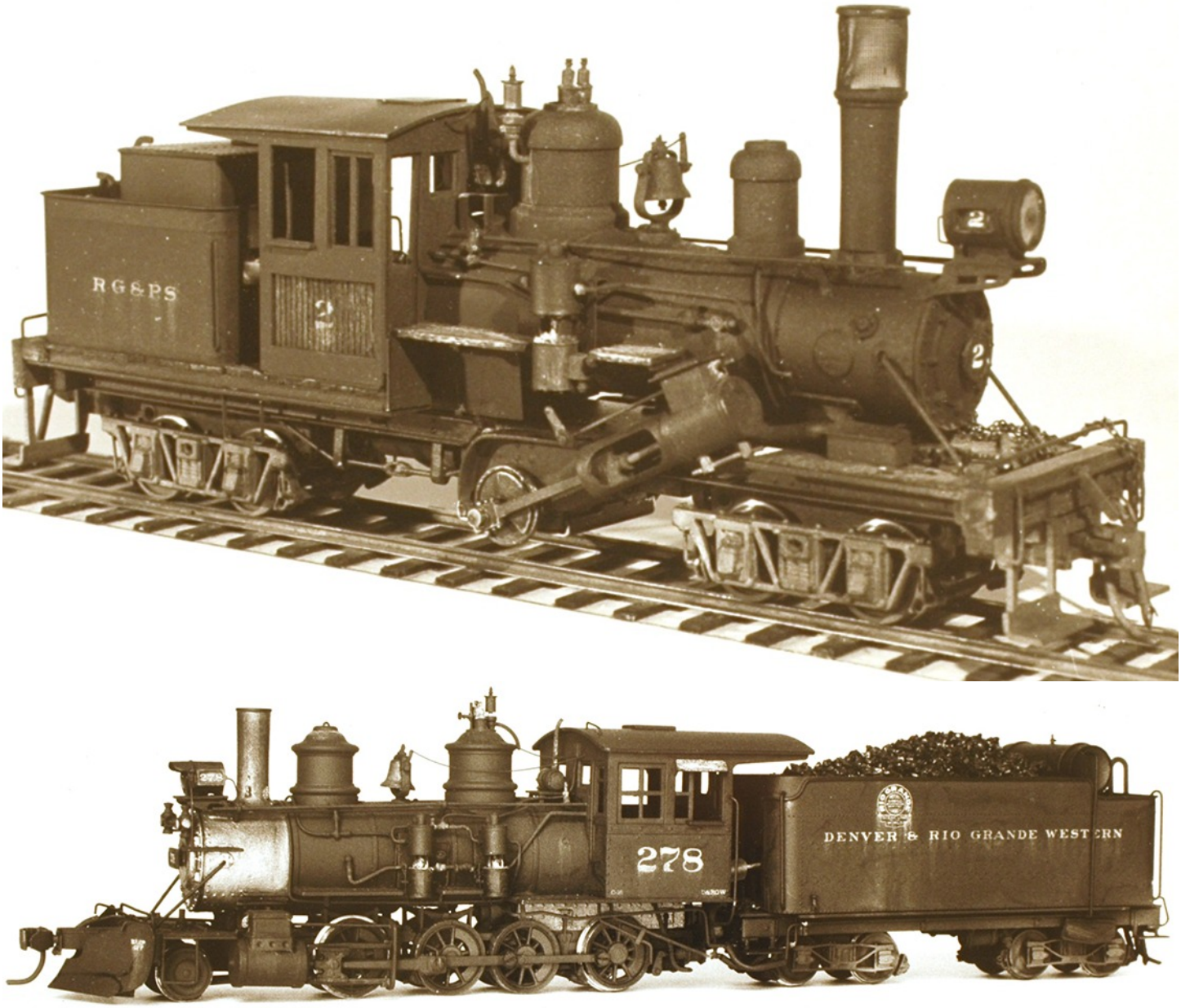
Now Sn3 has come of age. It has an almost 50-year legacy of beautiful, ready-to-run engines and cars. The models have come available slowly, but steadily, which I regard as good practice as to not flood the market, (again). Big time manufacturers have produced some fabulous models and kit builders have produced well designed and engineered pieces of rolling stock and structures. Sn3 is a safe harbor for people who want the ability to bring detail to the front and to be able to display and operate in reasonable space. I believe Sn3 will prosper as long as it has the attention and support of quality-minded manufacturers. And it all started from a scale box car drawing reproduced to fit on a single page. Enjoy!

Stock car: Swede sent me the stock car plans he was going to use for his kit, and I built the car from scratch. It was painted gray to show more detail in b/w photos. Swede got the photos for ads and catalog, and I kept the car.

Swede sent the stock car plans he was going to use for his kit and I built the car from scratch. It was painted gray to show more detail in b/w photos. Swede got the photos for ads and catalog, and I kept the car.



RG&PS 2 Climax was converted from an HO Climax by PFM and lettered for the Rio Grande & Pagosa Springs. The cab was constructed of wood. Swede got this engine as well.

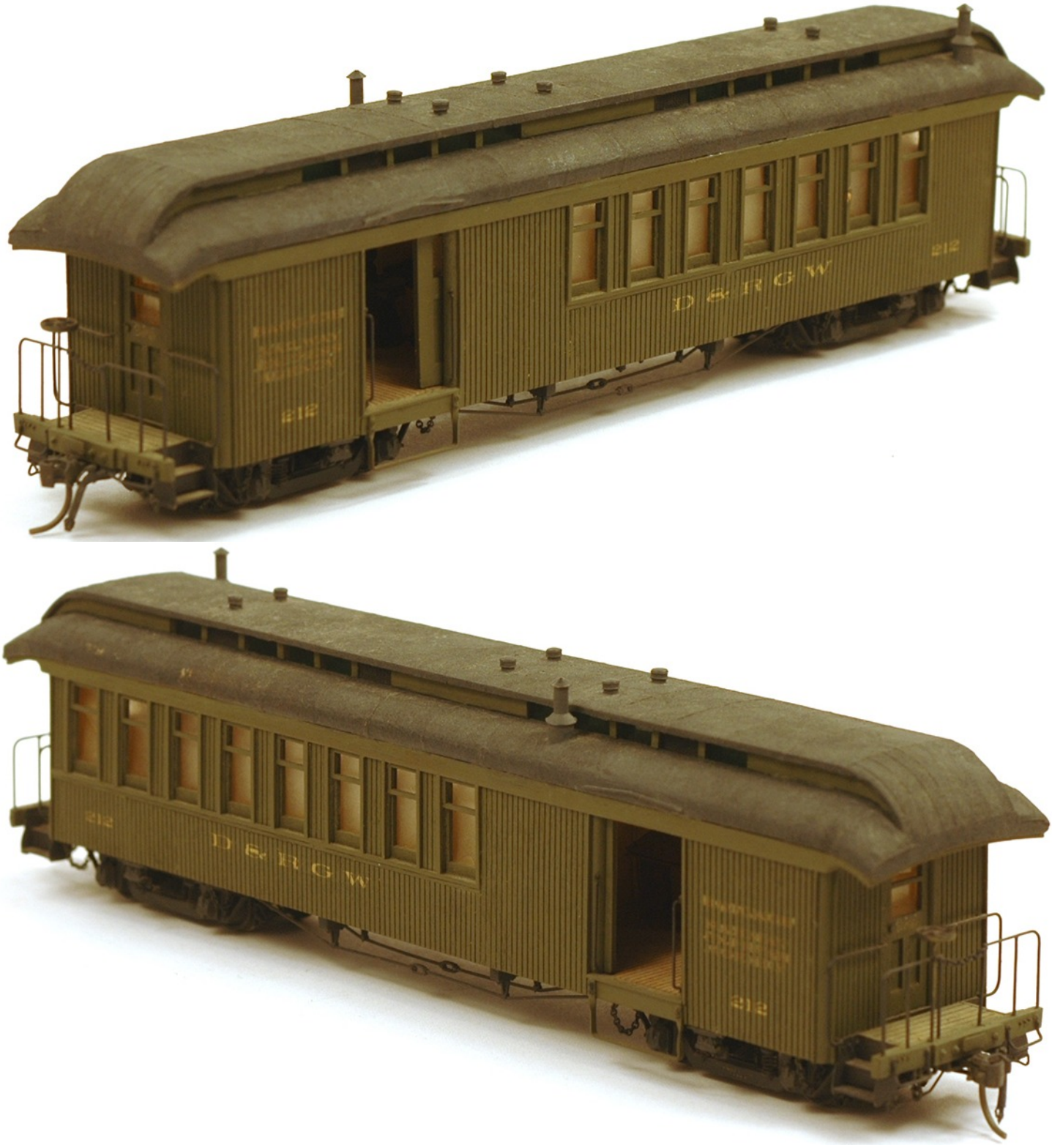


Tomalco Rio Grande C-16 D&RGW 278. I painted, lettered and weathered and added a small snowplow to my C-16. The driveshaft is clearly visible between engine and tender. This photo was used in Tomalco promotional materials. When I got out of Sn3, Swede wanted the engine, so it went back to him.

When I got Bruce's comments, I thanked him for his help and asked him several questions about Sn3 and its future.

Question 1. Based on your history with Sn3 what do you see as its future?

Bruce answered: I see the future as bright, but not large. I believe that Sn3 has carved a niche in the model railroad market that is unique. I don't believe that it will ever become a huge market, and the reason is that most people who enjoy that scale are there because it may be more of a loner, not a joiner thing. Face it, HO rules the roost in numbers. HO appeal is many fold, and it has been the big kid in the market for a long time. It is so big that someone starting in model railroading generally doesn't know about anything else until they've been in it for a while. HO also holds the keys to both ends of the dollar market: top and bottom. One can start at the bottom and progress as taste, ability and discretionary spending increase. O Scale has a small part of that concept with Weaver and Atlas, Key and Glacier Park, but those market numbers are too small to compare to HO.



Combine 212. This was basically scratch built with the plans that Swede sent. When finished I sent photos of it to Swede for his ads and I used those photos when I made his 1970(?) catalog. The car was entered in the NMRA contest in Houston and won first place and the judge was no other than John Allen. Mr Allen invited me to visit his HO Scale empire, which I did during the summer of 1972.

Question 2. Do you believe On30 is competition for Sn3?

Bruce answered: We may be talking apples and oranges here. I don't see On30 as a competitor. To me, a lot of On30 appeals to the freelance, off-the-wall modeler who wants to march at their own pace on a very low budget that shows talent and creativity, almost more of an anti-prototype operation. If there is a true competitor for Maine-centric On30, I would guess that is On2, which is inherently more expensive and comes with more prototypical constraints and has no current support in the marketplace. It seems to me as if the Colorado prototype On30 pieces are really designed to be entry level for On3 since the trucks are the same and are interchangeable. Mountain Model Imports are the only ones who have produced large power in On30. People who want bigger power will probably drift toward Sn3 because it is available and they probably lean toward Colorado equipment anyway and size matters. To me, the people who model in Sn3 have a mission: to represent specific prototypes accurately and be a part of the process. I don't remember much freelancing in Sn3. I'm afraid that marketing Sn3 is the real problem, no one really does it, except Bill Peter in the Narrow Gauge Gazette. Bill covers the high end, and, with his kits there is an opportunity to start with something reasonable and creep into the area. The biggest threat to Sn3 that I see is that if P-B-L stopped supporting it and no one else stepped up.

Question 3: Isn't the NASG promoting Sn3?

Bruce answered: If NASG promoted Sn3, then S Scale overall would benefit as well. For too long, NASG has looked at Sn3 as something that they didn't want to embrace or saw it as a competitor. For those of us in marketing, that's backwards and self defeating. A rising tide lifts all boats, NASG doesn't admit, or recognize, that we're all in the same boat. It is the scale, and not the gauge that counts. That works both ways, at some point the narrow gauge modeler realizes that everything looks the same until there is a different gauge for comparison. Bingo! Dual gauge track appears with an F-7 and a standard gauge box car. Everybody wins. The appeal of narrow gauge is that it isn't standard gauge.

Question 4: Do you have any ideas About how to promote Sn3?

Bruce answered: To me, promotion of Sn3 in your publication should emphasize what is doable on a budget and in reasonable space. The results speak for themselves. There is nothing better than a well-done model. A construction or painting or weathering article on a car, engine, structure or layout would go a long way to show people what can be done and how to do it. The real problem is showing people that it really exists, almost a credibility issue. I'd find some good builders and look over their shoulder at any project and show how its done and remove the mystery. People like Craig Raymond in the Houston area has a really nice layout, builds a lot of his structures and has fun doing it. We're just in it for fun, show that. Maybe a narrow gauge column or two each month would help, one featuring a layout, preferably with operation, which seems to be more popular all the time. When I was working on the Union Pacific, I enjoyed running more than switching, but that's why there's chocolate and vanilla, everyone stays happy. I hope this helps. Keep up the good work Bruce, and thanks so much for your willingness to share your history of Sn3

Everyone I have talked with agrees we need skilled modelers to write construction articles not only in Sn3, but in all areas of S Scale. I know they are out there, and I am finding some of them. I encourage the showing of their modeling and writing construction articles. If I have not yet found you, please contact me and let's talk JimKellow@sscaleresource.com. If I have found you, and you told me you were not interested in sharing your skills and knowledge at that time, I hope you will reconsider and contact me now.

When I started looking for Sn3 modelers who could help me understand this part of the S Scale market, I first found Don Wilde who was kind enough to get me introduced to Bruce and I was off. I like Don's enthusiasm for Sn3, and look forward to his help in encouraging the growth in this S Scale sector as well as other model railroad sectors. Don, we look forward to your "creative genius" ideas helping promote our hobby.

Don Wilde

When I was a little boy, my Dad started my journey in model railroading. My Christmas presents were an Athearn GP-7 and train, and Dad built me a little loop-with-a-siding HO layout to run it on. Further presents followed, of course, expanding my empire.

My empire could not match his empire, for half our basement was full of his HO empire, but more important to me was a pair of incredibly heavy steel file cabinets full of *Model Railroader* and *RMC* magazines. Over time, I evolved to become an N Scale modeler, with a sophisticated track plan and late steam / early diesel models like PA-1's and a NKP Berkshire. I established a timetable and car cards, converted everything to Kadee couplers for operation, and dreamed of controlling my trains with the new embedded computers that I taught myself to program starting in 1980.

Fast forward through a career that combined movie script-writing and computers. I still drew track plans in spare moments and maintained my *MR* subscription, but much of my time was spent attempting to get beyond 'starving' screenwriter and doing the embedded computing work that paid for all of it. I eventually ended up in the Austin area, and, fascinated by On30, I joined the Hill Country Outlaws modular On30 club and we displayed at numerous shows.

Continuing my embedded computing career, I managed to get a position with Intel. I've worked as a contractor and an employee with various Intel groups since 2010, and I continued collecting On30. I ended up in Mesa, AZ, where I have supported my family in caring for my declining Dad.

In my exploration of his hobby stuff, I discovered some Railmaster Exports and P-B-L kits. In an epiphany, I realized that Sn3 offered me solutions to many of the problems I had seen in the On30 world. I now model the 1880s, and I love to build even though I'm not very good at it… yet. Nearly all On30 is R-T-R and very little is modeled after prototypes earlier than 1920. Also, I shudder at what O/On30 dual gauge track would look like!

S, on the other hand, has what many consider the perfect scale ratio. 1/64" = one inch, and yet, in 3' narrow gauge, the track is slimmer than HO standard gauge! I can fit an Sn3 1880s layout in roughly the same space as HO standard, but the details are larger and more substantial. Wow, light-bulb moment!

More importantly, S scale is a culture of model builders. We have to be! I'm currently experimenting with hand-laid stub switches and human figures, a la Jack Work, for two small modules that will fit in my apartment. My goal is to take on the NMRA Achievement Program, starting with the Golden Spike Award.

I encourage all of you to join some of the Facebook groups devoted to your interests in model railroading! My two favorites are Sn3 Model Railroaders and Micro/Small Model RR Layouts, and I've already virtually 'met' six Sn3 modelers within easy driving range (for Arizona :))! Through the connection I've maintained with the Hill Country Outlaws, I met Bruce Blalock, one of the early – and talented – Sn3 builders. He's profiled as well in this issue of New Tracks in *The S Scale Resource*.

We can use the Internet for so much more than we are! Besides local groups of modelers who speak 1:64 together, and conventions such as NASG and S Scale West, we can begin having live video chats using technology from ZOOM.us to share our modeling and ideas. So much we can do!

As for what I am as a mentor, I've helped kids for years with STEM and LEGO robots. I'm a creative genius (modest, too!) who is an idea generator. I have ten thumbs as a modeler, but my Dad was a true craftsman and I'm working to develop the patience to keep trying until I get my project done right. I'm an enthusiastic motivator, and you're welcome to contact me through Jim Kellow or *The S Scale Resource* team. I'll be glad to kibitz your latest project and connect you to resources who can further your dreams. I've had many mentors in my own life and I fully believe in "paying it forward!"

I am so pleased that Don has agreed to write a S scale construction article for a future issue of this magazine. Thank you Don for your leadership in my project to get more construction articles to promote S scale. Now who wants to be next? Unfortunately. Don was unable to provide modeling photos as his camera is broken and his older photos are packed up.

Ok, I believe Don has opened up the discussion for promoting Sn3. What do you think? Please contact him at Don.Wilde@sscaleresource.com.

I would also like to offer the NASG an opportunity in my "New Tracks" articles to talk about the Association's efforts both past and future to promote S Scale and particularly Sn3. I have written several articles for the *NASG Dispatch* magazine and believe the leaders do want to promote all aspects of S Scale, but at the moment, their efforts seem to me, largely aimed toward the American Flyer Modeler. I look forward to their comments and will be glad to include them in my next "New Tracks" article.

I am personally very positive about the NASG and its leaders and am only offering them an opportunity to talk directly to the S Scale market through this magazine. Maybe there is a way that this magazine and the *NASG Dispatch* magazine can even share S Scale promotions? I do not know and certainly do not represent or speak for either publication.

I am talking as just a scale modeler who loves this hobby and writes the "New Tracks" series of articles in this magazine in hopes of getting modeling skills shared, mentoring to increase, and more model building by model railroaders. I truly believe that after writing my series for a year and talking with a lot of modelers that aggressive promotion of S Scale is needed and may be critical to its future.

That's all for now. Thanks for reading this far. Time for me to get back to my work bench. Good luck with your modeling.

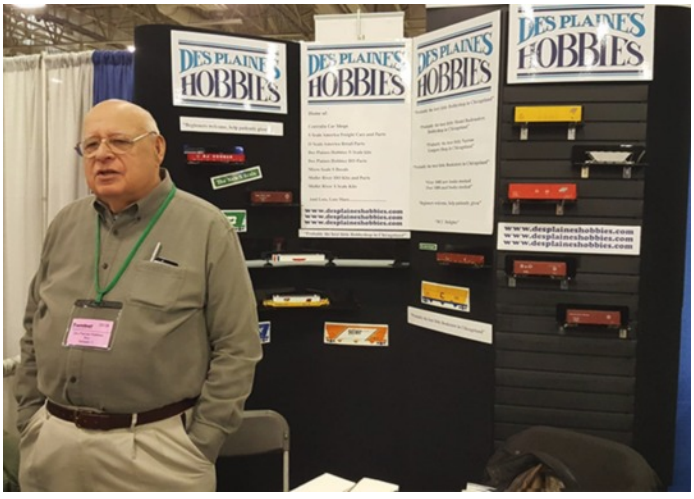
Railroad Prototype Modelers Conference Chicagoland / Trainfest in Milwaukee

John Mann attended this year's RPM in Lisle, IL and sent us a few images of the S scale representation. John also traveled up to Milwaukee, WI for Trainfest 2018 and sent some pictures over to us for this issue.


290
300
RPM25
CHICAGOLAND


780
RPM25
CHICAGOLAND
Model displayed by:
MATT GAWDYNSKI
Prototype Represented:
MILW FM # 780
Prototype Era:
1950's
Model modifications and/or additions:
SMOKEY MOUNTAIN MODEL WORKS RESIN
KIT BUILT + PAINTED BY BILL DENTON
Scale:
S
Year Built:
2018

Trainfest below...



Badgerland S layout at Trainfest.

Ron Schlicht's S layout at Trainfest. Ron has recreated real movie scenes in S.

MTH was also at Trainfest.

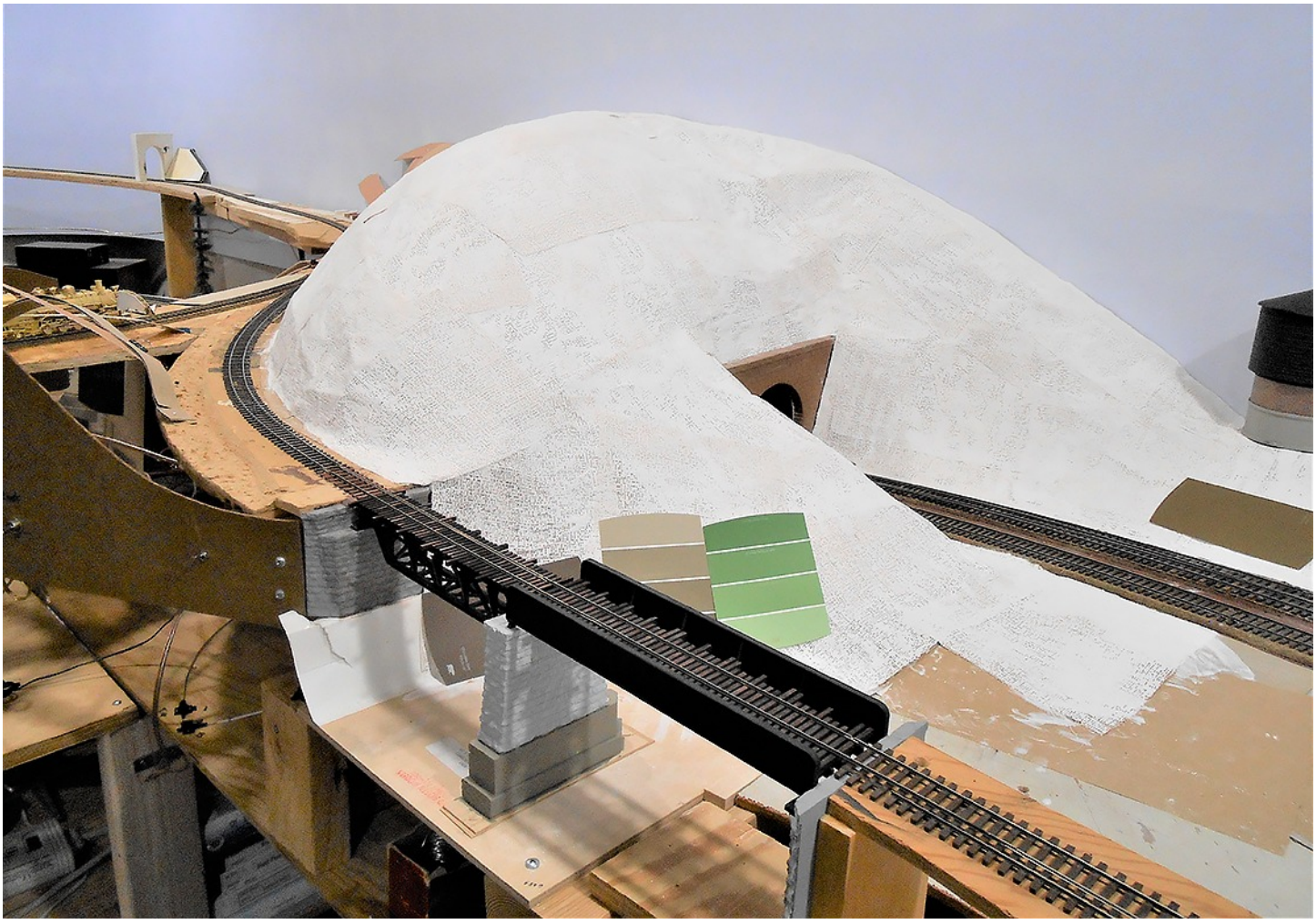
What's on your workbench today?

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

Three different coil car covers sit on Jim Kindraka's work bench. All are 3D rendered parts drawn by Scott MacKenzie. After drawing in SolidWorks, the top two were created using Stereolithography (SLA) and the bottom one was done by Shapeway's in their Fine Detail Plastic. Jim's been working to get all the eye bolt holes prepared and the eye bolts in place. He's also providing feed back to Scott so future versions of the program will have all the holes automatically positioned and cored through. Once the eye bolts have all been installed on a side, 0.015" wire is used for the railings. The next step will be to begin the process of detailing the different frames for each car.

Scene Around the Layout

Bill Winans send us some updated pictures of his beautiful layout.



I liked the picture Bill sent above. It shows construction in progress. We all like beautifully finished scenes, but we all have to get to that point.

We are proud to feature readers' work. So get those cameras and cell phones out and start shooting!
High quality JPG or TIF files only.
Email to daniel@modelrailroadresource.com with a description of your pictures.

0-6-0 number 12 comes around the curve.

All track has been laid in and around the narrow gauge town of Coal Creek, including into the engine house.

This picture, along with the rear cover, show the ash pit clean out track and the turntable and whisker tracks. Note that the diesel fuel tank and pump house have been relocated from next to the sand house to near the turntable. This allowed me to put in graveled parking and grade crossings for the employees (and let me put a few of the many little cars I have to use).

S Scale Shows & Meets

The S Scale Resource Magazine will now be providing a free listing of upcoming events. This small, text only listing will include the Event, Date, Location, Type of Event, and Contact Information. Click here to go to the sign up form. This form will take your information, and we will publish it in our next issue. If it is an annual event, you will need to submit your information every year.

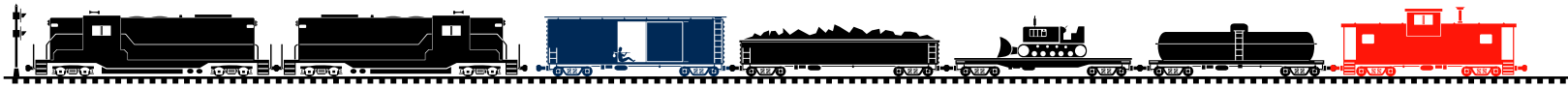
Pacific Model Loggers' Congress
March 2nd, 2019
Camp 18 Restaurant and Logging Museum, 42362 Highway 26, Elsie, Oregon 97138
This one-day convention is aimed at those interested in logging railroad and wood product industry modeling. Model contest with awards given out the day of, logging-specific vendors, technical and history clinics, terrific museum displays of logging hardware and photos. All scales and gauges welcome
Email: splco-mwry@comcast.net
Web Address:
http://www.pacificmodelloggerscongress.com

2019 NASG Convention
July 30 through August 3, 2019
"Queen City Express" Hosted by the Central Ohio S Gaugers
NASG comes to the midwest! The 2019 NASG Convention has a beautiful hotel, wonderful tours, exciting events, plus all the fun and excitement that can only be found with a gathering of fellow model railroad fans.
Website: https://2019nasgconvention.com

O & S Scale Midwest Show
September 20-22, 2019
Wyndham Indianapolis West
2544 Executive Dr, Indianapolis, IN
Formerly the Indianapolis O Scale Show / S Scale Midwest Show
New name but the same great show!
This year, Friday set-up & show Saturday 9am-5pm Sunday 9am-2pm.

It's September! Time to kick off your modeling season. Come and enjoy the O and S Scale Midwest Show. This is a dedicated 2 rail O Scale and S Scale show; however, we encourage and welcome the many modelers and collectors from the 3 rail and high rail side of the hobby to attend. There are many aspects of the hobby, including building, scenery and more that applies to any scale. Moreover, this show is a great place to get inspired while meeting old friends and making new ones!

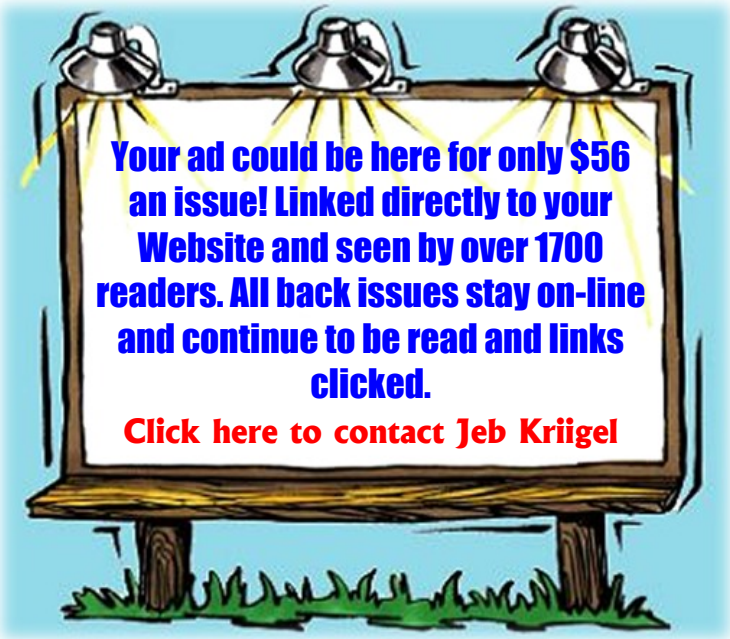
Website: oscalemidwest.com/
Email: info@oscalemidwest.com



The S Scale Resource — Classified Listings

Manufacturers **Dealers** **Pre Owned**

To advertise in The S Scale Resource classified listings contact us for our rates. Your classified ad will appear in the section you want for 6 issues. If you do not see a section that you think would fit your products or services, let us know. We can add a category that better suits you. Your ad is hot linked to your website which puts your customers one click away from you.



Yes, we now have a Facebook page to help keep you up to date on new products and ideas. And, even in an on-line magazine, we sometimes have more pictures than we can use so we'll post them on Facebook.

Advertiser Index