

FLIMZIE

***The Newsletter of the Rock River Valley Division
Midwest Region, National Model Railroad Association***



June 2022 Volume 55, Number 10

The Rock River Valley Division, RRVD, is a local division of the Midwest Region of the National Model Railroad Association, NMRA. The RRVD serves NMRA members in areas of Green and Rock Counties of Wisconsin, and Boone, Jo Davies, Lee, Ogle, Stephenson, Whiteside, Carol, DeKalb and Winnebago counties in Illinois. The RRVD holds monthly meets typically the first Sunday afternoon of each month, September through May, in Rockford at the at **The Lutheran Church of the Good Shepherd, 1829 North Rockton Avenue, Rockford, IL**. They consist of various clinics on model railroading, model contests, drawings for door prizes for NMRA members. The meets start at 1:00 PM, and the doors open at 12:30 PM.

Mark your Calendar

Gateway 2022

NMRA National Convention and National Show

The **Gateway 2022** NMRA National Convention and National Show will take place Sunday, **August 7, 2022 thru Saturday, August 13, 2022**. The Convention will be held at Marriott Grand, St Louis 800 Washington Ave, St Louis, MO Saint Louis, MO. The train show will be at the Collinsville, IL Gateway Convention Center. The website is https://www.eventsquid.com/event.cfm?preview&event_id=13724

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Office Vacancies**Flimzie Deadlines**

The Flimzie is published once per month on the first of the month. It will be placed on the RRVD website for anyone that wants to read it.

The content for the Flimzie comes from you, our readers. Please submit your articles, pictures and editorial comments to the Editor, Ken Peterson, poplarken53@gmail.com, no later than 10 days before the 1st of the month, i.e., May 20, 2022, for a June 1st publication.

Message From the Superintendent

By Marty Hendrickx

Summer is almost here and I'm sure everyone is looking forward to cookouts and trips to your favorite sites for train watching. RRVD has our June Junket going to Oregon, IL where we can get some train watching in both scale and full size. We will be visiting the Oregon Depot Museum which is on the BNSF main line so hopefully we will see lots of action while at the museum. After lunch at the Spring Valley Restaurant, we will be visiting the Blackhawk Model Railroad Club in the Conover Square. They have invited us to bring our HO power to operate on their layouts. They have both DC and DCC operation, so this is your chance to operate your favorite locomotive or consist on a club layout. The June Junket is open to everyone.

Last week I attended the Indy Junction Convention in Indianapolis. This was a joint convention with the Midwest, North Central and the Mid-Central Regions along with the Railroad Prototype Modelers (RPM) group. Its attendance was more than 500 and went from Wednesday, the 18th of May till Sunday the 22nd. Besides me, Ken Mosny, Ron Johnson, Larry Cich and Tyrone Johnsen attended from our division. There was a lot to do with clinics and op sessions starting on Wednesday and a train show which was open from Friday to Sunday. There were numerous display layouts to see at the convention. There was contest judging and model displays in several of the rooms. Ken Mosny and Ron Johnson both entered the contest judging. Ron with a picture and Ken with a steam locomotive he had kit bashed. Ken got a third-place award with a merit award. I attended two op sessions, one on Wednesday and one on Saturday. Our host was Chuck Tuttle and his Salt Creek and Eastern, and Dan Hinel and his Rail Xpress Railroad (RXRR). Both of these layouts were 95% complete and operated beautifully. Both sessions flew by quickly as before I was ready to go, the sessions were over. It was great to visit these layouts. They both had different operating and construction methods than what we normally see here in the Rockford area. It was fun to be exposed to new ideas on how to operate and build a layout.

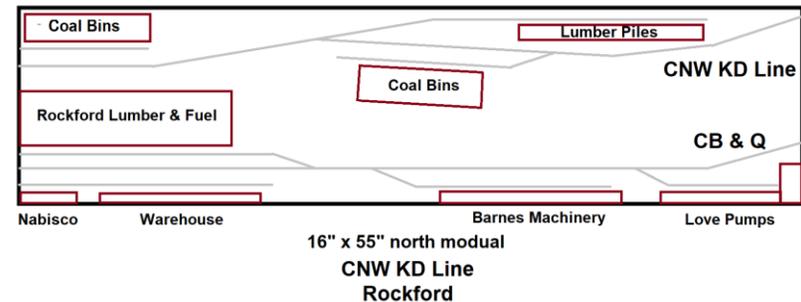
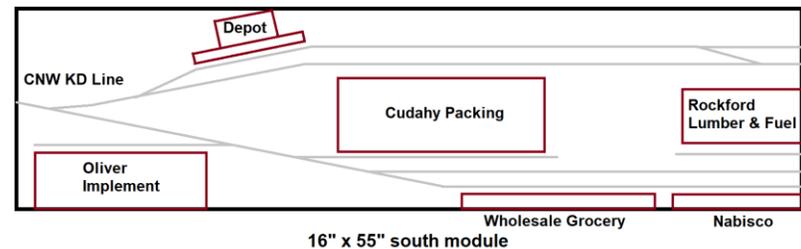
The range of clinics offered was impressive and I'm certain Ron Johnson has made note of some of them for our upcoming 2022/2023 meet schedules. They ranged from detailing cars and locomotives, loads, prototype operations, restoring a ATSF SD45-2, printed circuit board design and scratch building to name just a few. Just attending clinics would have kept you very busy for the 5 days the convention ran.

The Rock River Valley Division will be busy over the next several months planning our upcoming season of meets beginning in September. If you have any ideas for a clinic or have a layout you would like to visit, be sure to let me know as this is your division and I and the rest of the officers and board of directors want you to enjoy and participate in our meets.

The Layout Design Column

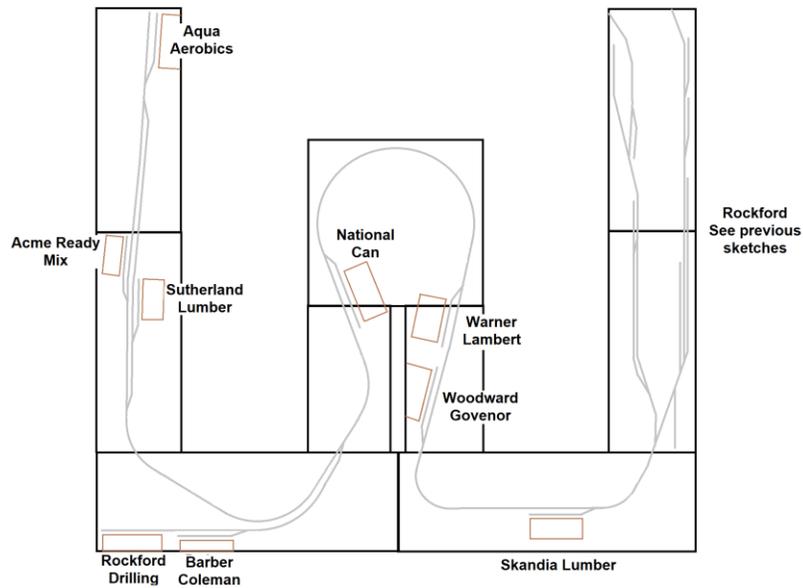
By Ken Peterson

Last month I started a design series on the CNW KD Line. I wanted to show aspiring model railroaders they don't have to have a large basement to start building a model railroad. All they need is a room in the house, basement, or garage. Some have even built a shed for their layouts. I believe homes in the southern half of this country don't even have basements and are forced to use garages, spare rooms, or sheds. I have created two different designs. One to fit in our dining room (10'-10" x 13'-10"), and the other to fit in our master bedroom (12'-10" x 17'-3"). I know, no spouse will give up her master bedroom for a model railroad. Humor me, maybe this modeler isn't married. Both designs are shelf styles. Last month I showed sketches of Rockford for the larger master bedroom layout. This month the sketches of Rockford to fit in the smaller dining room are shown below. They are reduced from two 96" long modules to two 55" long modules (16' to 9'-2"). This latter design required a great deal more "selective compression" to fit as much as possible into the smaller space. See the sketches below.

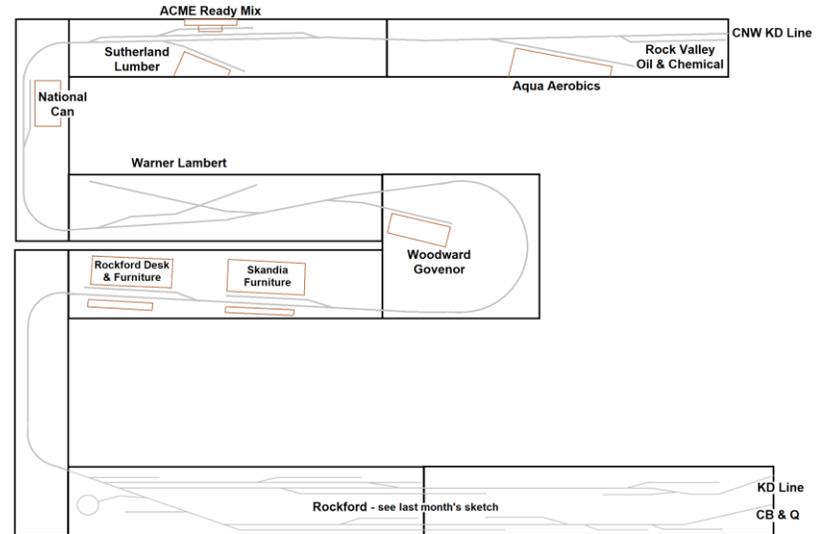


The right side of the top module connects to the left side of the bottom module. The bottom of both modules is the Rock River and sits against the wall.

The following sketch is the dining room layout. I included track from Rockford to Loves Park. The time span is from the 1930's on to provide more switching opportunities. Rockford Drilling became Borg Warner, Woodward Governor became Woodward, Inc. Warner Lamber became Mondelez and National Can became Fastenal.



The next sketch is the Master Bedroom Version. It has a longer run. There are the same number of industries north of Rockford as the dining room layout. I changed the mix of industries. I expanded Warner Lambert and added an additional spur.



4. FINAL DRAWING

The next phase, FINAL DRAWING, requires a drawing program, or drafting tools and paper. After spending many years of my career on a drafting board, I have the skill set to produce a detailed scale pencil and paper drawing of the layout. I also have an old version of AutoCAD. I have used it since the late 1990's when I bought it for all my layout design drawings. I have created a library of symbols/blocks that can be used over-and-over on new layout designs. I purchased each track component I planned on using and drew it to scale. Once I "blocked" it and placed in my symbol library it can be used in any and all drawings I choose to create. I strongly recommend investing in a drafting program. It makes producing the final drawing much easier. Making revisions is simple compared to a paper and pencil drawing.

In this phase, I start with the table structure. I put it on its own layer allowing me to turn it on or off (make it visible or invisible in the view screen). The table design includes making a detailed drawing of each section complete with a list of materials to take to the lumber yard.

With the table design done, I start to layout the track design to scale. To get proper locations of the track it is necessary to make sketches of the structures that are planned. The Sanborn maps I referred to previously, have the foundation dimensions of each structure shown and the materials of construction. This information makes placing the structures much easier. Selective compression may be used to make the structures fit the space allowed. Using building flats against the backdrop or the front of the layout will allow more structures to fit in the modelled space. It will allow the structures to be much larger in the width direction. If I am going to kit bash a structure from several kits, I will buy the kits and tape them together in the size/shape to fit the site. Then draw that to scale and insert it into the drawing. When I scratch build a structure, I make a drawing of the structure and place the plan view into the layout drawing. That also allows me to have a plan to build the structure from.

I include scale roads, water features, elevation changes, trees, and other features of scenery in the final drawing.

With all the information complete on the drawing, construction can begin. The most complicated part of this design is Rockford. I would start building there.

5. OPERATIONS DESIGN PHASE

Since my goal of building a MR is to have a RR to operate, I would complete Rockford first. I would create temporary staging/fiddle yards on each end of the modules so I could get started with operations ASAP. The structures can be cardboard mockups with labels. One problem with this approach is that sometimes the mockups stay on the layout much longer than originally intended.

On the dining room layout sketches Rockford, is on the right. You stand in the aisle facing geographically West, the Rock River is behind the tracks (against the dining room wall). Geographical North is to the right, but right is timetable East. Trains set up in the temporary staging/fiddle yard on the right end are representing Caledonia, Harvard, Belvedere, and Madison. The left end has two tracks going off the layout south. The track closest to the aisle is the CNW Galena Division (GD). The track near the back is the CB&Q

with spurs and interchange with the CNW KD Line. All locomotive turning and fueling was done on the GD on the west side of the river.

Around the late 1800's to early 1900's there were (5) eastbound (EB) and (4) westbound (WB) passenger trains daily. All trains went through Caledonia or Caledonia junction. There was one EB and one WB freight train daily, except Sundays. The WB passenger trains were going to Caledonia, Harvard, Janesville, Spring Valley, and Belvidere. In the timetable at this time WB trains stopped at the original KD depot on the east side of the river, and then across the river at the main CNW depot. On the timetable the east depot was called out as Rockford KD, and the west depot was Rockford GD. Eastbound passenger trains originated at Rockford GD depot, backed across the river, and pulled forward to the Rockford KD depot. Then they left for Caledonia.

The passenger trains were pulled by class C-2 4-4-0's. They were wood burners at the turn of the century. Class R and R-1 ten wheelers were used for freight.

Operation will be sequential, starting with WB passenger train 413 from Caledonia. Originating on the temporary staging/fiddle track on the right end of the Rockford module, it pulls into the Rockford KD depot, pauses for 5 minutes to drop off passengers and LCL freight, and then pulls forward to the staging track on the left end of the Rockford module. After a suitable time, the train is reversed by the 0-5-0 switcher, and returns as EB passenger train 428. It pulls into the KD depot and pauses for five minutes for passengers to board and LCL to be picked up. Then 428 moves on to the temporary staging track on the right end of the layout. The 0-5-0 removes it. WB passenger train 431 is set up on the temporary staging on the right end of the layout. It pulls forward to the KD depot for passengers depart and drop off LCL. The train then pulls to the GD interchange on the right end of the layout. The 0-5-0 removes it and builds EB train 416 on the GD interchange track. This train will pull forward to the KD depot and pause for passengers to climb on board and to load LCL. It will the run to the fiddle/staging track on the right end of the layout.

Freight cars will be staged on the CB&Q track at the left edge of the table. A 4-6-0 ten-wheeler will start its day making up freight train 420 with a few cars and caboose staged on the left edge of the CWN KD Line (GD interchange). It will start grabbing the cars from the GD interchange, spotting, and pulling cars as needed in East Rockford. The pulled cars are either left off-spot for the next EB or on the departure track opposite the depot for 420 the next WB train. Then the locomotive will go to the CB&Q interchange, grab those cars to spot, and pull local cars as needed. Some of the cars pulled will go to the GD interchange and the rest to the WB KD departure track to make up train 420. When the caboose is added the train must wait for its scheduled departure time. The KD did not have signals to control its operation. It ran completely by the timetable. Trains were spaced out over the road by the departure and arrival times stated in the timetable. When the time is correct train 420 departs Rockford KD station to go to Caledonia on the temporary staging track on the right end of the layout. The 0-5-0 removes it and builds the next WB passenger train.

As more modules are completed the runs become longer. The freight train operation becomes much more involved from the many more industries that need servicing. As the layout grows it will need more cars and locomotives to service the freight and passenger train requirements. Ultimately you will need nine passenger train sets and two freight train locomotives. You could operate a 0-6-0 switcher on the East side of Rockford to switch out the industries and put together the EB freights, and then bring the road locomotive and caboose from the West side over to finish the train for departure.

The larger bedroom sized layout will operate the same as the smaller dining room layout. With nine passenger trains per day and two freight trains per day this layout offers a lot of operation. With more space the layout could be expanded to include Caledonia, a major hub of train activity. Trains from Kenosha, Belvidere, Spring Valley, Madison, Harvard, and Janesville ran through Caledonia daily. Building a layout around Caledonia would be a challenging, basement filling layout.

Next month at modelling an Eastern Iowa Milwaukee Road Branch that started out as a narrow gauge road.

Making a Silk Purse

Part Two: The Drivers

By Ken Mosny

MDC steam locomotives generally have good basics. They are rugged, die cast, well-made mechanisms typical of the 1950-1970 era. Quality is decent, but they need TLC to operate well. MDC skipped a lot of refinements to keep the price affordable. Detail is spartan with cast on piping, and basic rods, bell, whistle, headlight, valves, tanks with lots of appearance compromises to what the die casting process was capable of. Axles are poorly finished. You were expected to browse the lost wax section of your hobby shop to upgrade the details if you wanted. Indeed, the lost wax manufacturers even offered complete sets of parts to detail specific MDC kits. Some motors, depending on the vintage, leave much to be desired by today's standards. The large open frame motors are amperage hogs which require large, stiff brushes making smooth performance almost nonexistent and fitting decoders iffy at best without frying them. The last MDC kits did come with much better open frame motors that are probably as good as today's "can" motors. If you are looking for an MDC locomotive to buy, choose one with the 2:1 reduction gear for an overall ration of 72:1 because they can perform much better and had better motors. The basic design was state of the art for a die cast kit of 1960's vintage. We bought them and built them to pull our \$1.50 shake-a-box freight cars. We were content-until now.

Before I get started, a word about tools. These articles will refer to using a lathe for some operations. When you get really serious about building steam locomotives or any other mechanical scratch building projects, you should consider buying a small model maker's lathe. I own a Unimat SL series type lathe. Although 50 years old, dated by today's standards and hasn't been manufactured in many years, it still serves me well. There are much better small lathes available for the hobbyist now. A lathe is a very basic tool for my hobby work for making shafts, bushings, reboring wheels and

drivers, turning detail parts and lots of other things. Only you can decide if the \$1000 or so is worth it to buy a lathe and tooling or to spend the money on some other aspect of the hobby. I have a lathe because I like to build rather than buy things. Northwest Short Line (NWSL) makes a quartering jig and wheel puller for model work. You can do much more yourself with them in hand. Other than these special tools, you can do the rest of the work with tools you probably have or can easily acquire.

Today we start to make the bones of this 50-year-old MDC 0-6-0 run well. I have lavished TLC like this on at least four locomotives in the last ten years or so. These techniques do work. You don't have to do everything I describe. The effect of each improvement is incremental so each one helps a little. Many of the procedures are more inspection than actual "fixing" so don't be intimidated. Do them all, and you will have a steam locomotive that runs as well as any.

MDC supplied #2 sheet metal screws to hold their later locomotives together. This avoided tapping holes in the die cast parts. Forcing a sheet metal screw into a die cast locomotive frame is, in my opinion, very poor workmanship. I strongly recommend that you tap all these holes with a 2-56 tap and use 2-56 machine screws instead. If these holes have been threaded with the sheet metal screws but aren't stripped, you should be able to tap them satisfactorily. Make sure you lubricate the tap with oil and only turn it one quarter to one half turn and then reverse the tap to break the chips. NOS frames already have holes correctly sized to tap 2-56. For stripped holes, you can buy a 2-56 insert repair kit for about \$35.00 online or make your own repair plugs on a lathe as I do. You could also drill and tap for the next larger screw, but I consider this poor practice.

Let's start with the drivers. Sometime in the 1970's, MDC began to make their drivers with plastic rather than diecast zinc metal centers. Later, MDC went back to diecast centers on one side and plastic insulated on the other. You don't have to, but I always start with a locomotive has the plastic center drivers on both sides for reasons that will become apparent. I also select MDC locomotives using 0-80 screws to retain the rods instead of plastic plugs because the screws are easier to service than prying out the plugs. The metal center drivers on the non-insulated side electrically connects the locomotive frame to one of the rails which, if a metal Kadee coupler is used on

the pilot, makes the coupler also electrically connected to that rail. This can cause a short circuit if the locomotive is coupled to a piece of equipment whose coupler is also non-insulated to the opposite rail. Two locomotives coupled nose to nose could cause this short circuit, for example, or nose to tender if the cast in coupler pocket of the diecast tender frame is retained. NMRA S-9 requires insulated couplers for his reason. It is very difficult to incorporate an insulated coupler pocket in a steam locomotive pilot due to space constraints. One solution is to use an all-plastic coupler like a McHenry, but I like metal Kadee couplers better. I usually use a metal Kadee #156 scale head long shank whisker coupler, photo 1.

This metal coupler clears most pilots and requires the frame of the locomotive to be electrically isolated. It is for this reason that I always use drivers that completely insulate the frame from the rails. You may notice that one of the driver centers in the photos is white. This is because I replaced the only zinc center on this locomotive with a 3D printed plastic one. For some reason this locomotive had one metal driver center and the other five plastic. This is the only time I have ever seen this. I will show the making of the required driver wipers in a future installment. You could also use a plastic pilot either purchased, scratch built, 3d printed or cast resin to insulate a metal coupler, but I prefer to isolate the frame.



While it is unlikely that you will find all the problems described below on a single set of drivers, I have encountered all of them at one time or another. Getting into the project and finding you missed something at the beginning can involve a lot of backtracking, so I have conditioned myself to a checklist.

Start by inspecting the drivers and frame. Assemble the drivers only without the rods to the frame and make sure they rotate freely. Oil the axles while testing. The axles must fit the frame slots with minimum play. On a used locomotive, has someone filed the slots with excess clearance? That is a flag that something else might be wrong. You should never need the axle slots larger than required for free running. Screw on the cover plate. Does this cause a drag? Push the drivers side to side to see if they are free to

rotate in all axial positions. Sometimes it helps if the frame is rolled back and forth on the bench while pressing down on it to “run it in” a little. Frame slots can be carefully filed deeper, or the cover plate shimmed if the cover causes drag, but this usually means that someone has filed the bottom of the frame too much reducing the slot depths. Too wide of a slot can be shimmed, but if this is the result of filing and if someone filed the frame that much, they probably did a sloppy job and the frame might be ruined. Unmolested MDC frames are generally quite good and require only filing of flash, not filing the slot clearances. In particular, the frame slot that holds the geared driver must have as little clearance as possible. If you need to file on the frame, make sure that the frame is clean, scrubbed in soapy hot water with a toothbrush, when checking because even a minute metal chip in an axle slot can seem like a bind. If there is drag, but not binding, likely the axles need to be polished. I'll describe how to do that later. The bottom line is that all the drivers must rotate freely with minimal clearance. At this point, I would err on the side of a seemingly tight clearance and see how it is after you polish the axles.

Examine the drive gear as you roll the frame on the bench. If it wobbles, I have been able to pry a plastic gear back into alignment with my fingers. For the 72:1 ratio gear set with the molded reduction gear, see photo 2, rotate the drive axle meshed with the reduction gear and the motor removed making sure the gears do not bind. I have seen these molded gears far enough out of true that they bind. Sometimes, you can rotate the driver to a different mesh position of the reduction gear and fix this. Then you will have to mark the gears to get the correct mesh again if you take the gears apart. Make sure that the bind isn't caused by a piece of debris stuck in the root of a tooth. Feeling a “tick” as the gears are rotated can be caused by debris or a bit of flash. Pick out any debris with needle or hobby knife tip and trim flash with a sharp hobby knife. It is important that the geared axle and reduction gear have minimal side play, or the gears may rub each other. Make sure that rubbing of the axle gear on the frame isn't causing a snag. File, scrape or sand places where they snag but be careful that this doesn't cause more roughness. I reduce the side play and center the geared driver by inserting a thin washer on the axle between the wheel and frame. Installing this washer involves removing a driver at the risk of

disturbing the quarter. You will also have to push the axle gear to one side to get the assembly centered on the frame without play. Since the axles on MDC locomotives are knurled, they usually press back on in quarter after installing this washer. If you do not want to risk pulling the driver, a shim washer made from a Kadee fiber washer cut in half may be glued to the outside of the frame. I also put shim washers on the sides of the reduction gear to keep it from sliding axially and rubbing the frame or axle gear. These shim washers are from NWSL. If the gears bind in spite of all your efforts, you may need to look for another MDC gear set or buy high quality machined sets from NWSL. I have bought the NWSL sets for \$10-\$15 on eBay, but they are not for sale often. New sets are available from NWSL for \$40. Photo 3 shows the placements of these washers.

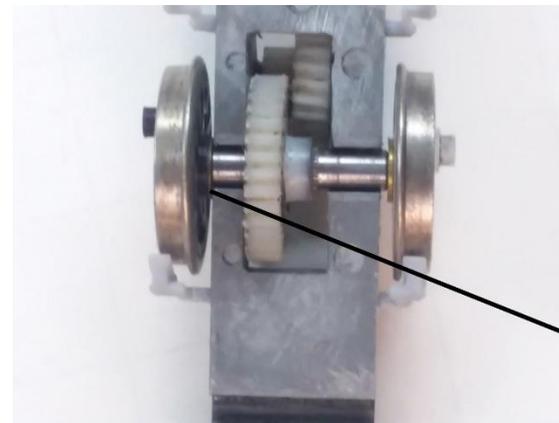
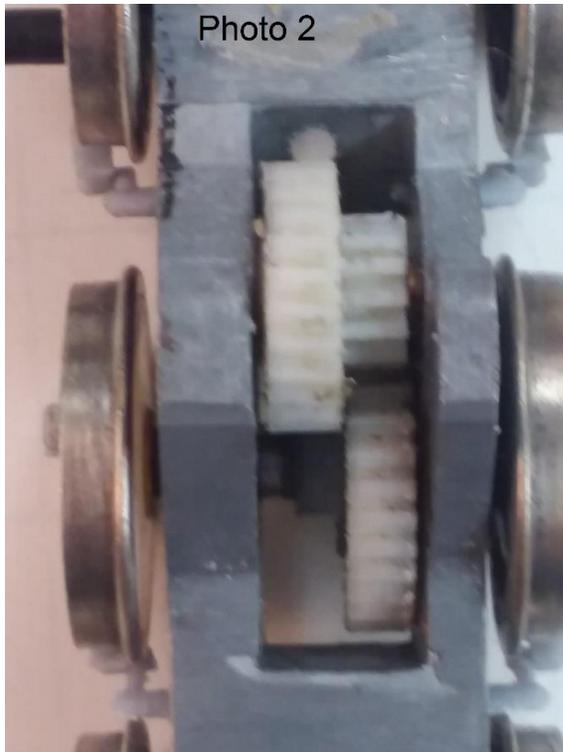
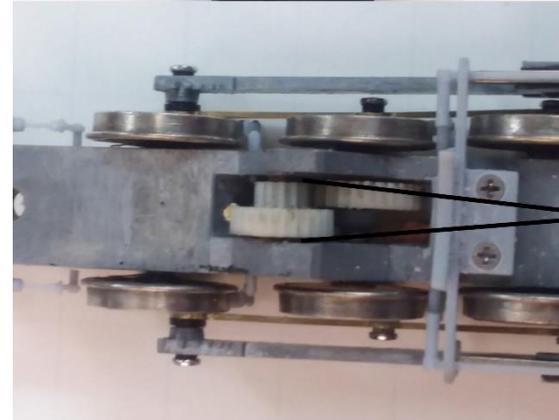


Photo 3

Axle Washer



Reduction Gear Washers

The main driver is the one that has an extended crank pin for the main rod bearing. Is this crank pin cracked or swollen? Used MDC drivers that use 0-80 screws in the crank pins very often have these extended pins damaged. This is because the screws were simply threaded into the holes without tapping them first. The screws expand the holes larger and eventually swell or crack the pins. Always, always tap the crank pin holes even on used drivers! If you are starting this project with a NOS kit, tap these holes before inserting the screws. If the main journal pin is cracked, I repair it, photo 4.

Photo 4

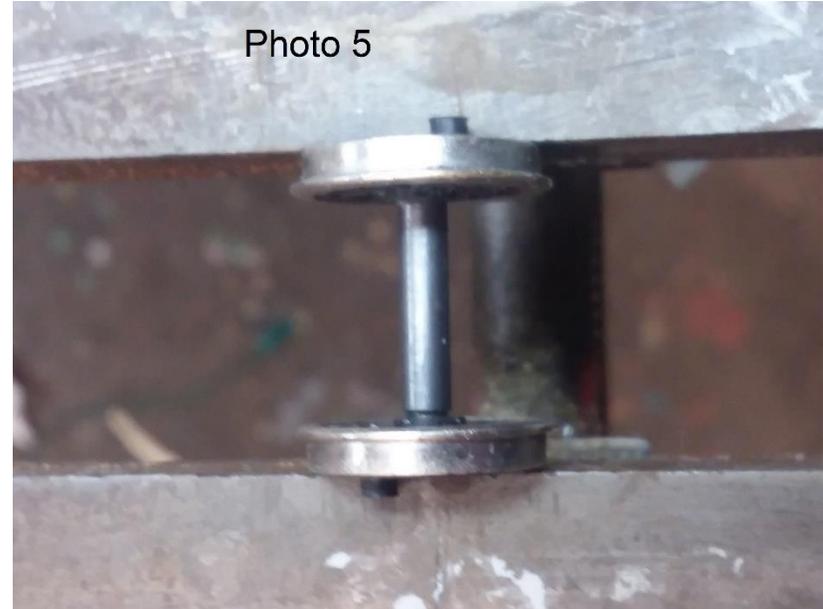


This is an advanced operation requiring pulling the driver and cutting off the damaged crank pin. A hole just under the pin size is drilled in the driver carefully centered on the screw hole in the driver. Then a new brass pin is turned to size, tapped 0-80 and pressed into the driver. To do this you need a lathe, drill press and probably a quartering jig. If you can't replace the journal or get another driver,

try to carefully file the pin to make sure it turns freely on the main rod, but this is not the best.

The next thing that needs to be checked is whether the drivers run true and are in gauge. Turn the drivers in the frame one by one to see if they wobble. These plastic center drivers can usually be trued by carefully forcing them with your fingers. I have seen metal centered drivers have a wobbly tire which I have crimped true with flat nosed pliers. Using an NMRA gauge, check the flange gauge at several places around each driver. The axles are shouldered so the gauge is usually not a problem, but it needs to be checked, nevertheless. Wide gauge can be corrected by pressing in a small vice or sometimes just squeezed with your fingers, see photo 5.

Photo 5



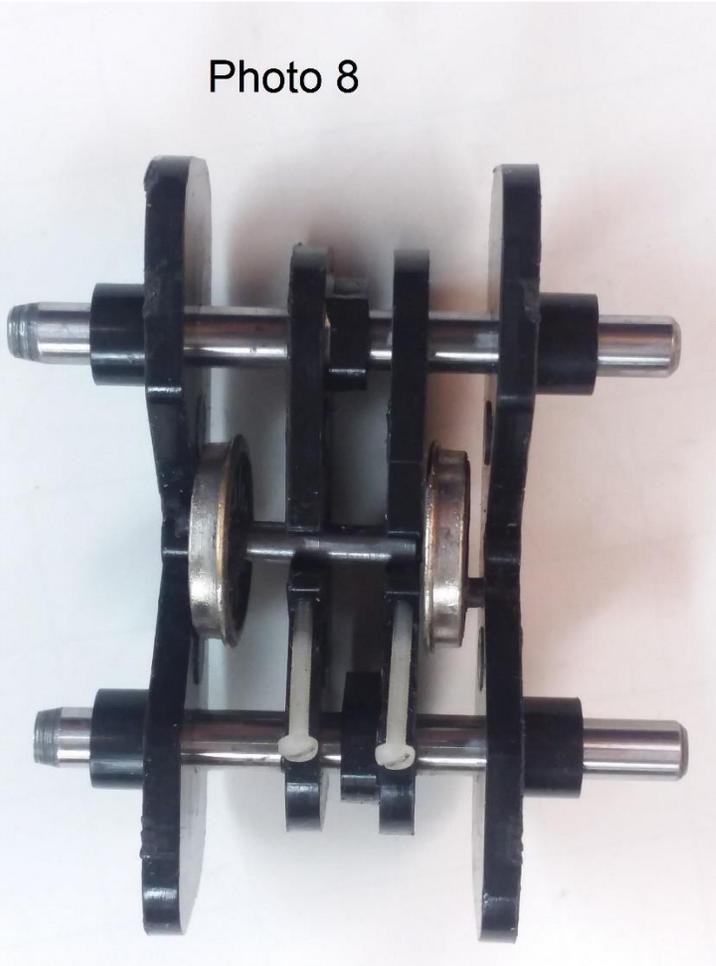
Narrow gauge can be fixed by tapping the axle end with a punch with the driver in the frame, photo 6 or, better yet, use a puller, photo 7. If I can't true a wobbly driver, I will rebores the entire set to accept new 0.125" drill rod axles and reassemble the set.



Next on the checklist is inspecting whether the drivers are all quartered alike. Quartering of drivers refers to the driver crank holes on one side of the locomotive being rotated 90 degrees, one quarter turn, from the other side. It is critical that all drivers of a set have exactly the same offset rotation even if it is not exactly 90 degrees, or the mechanism **will** bind. Common North American practice is that the right driver crank pin is rotated 90 degrees ahead, clockwise facing the outside of the driver, of the left driver. One major road, the

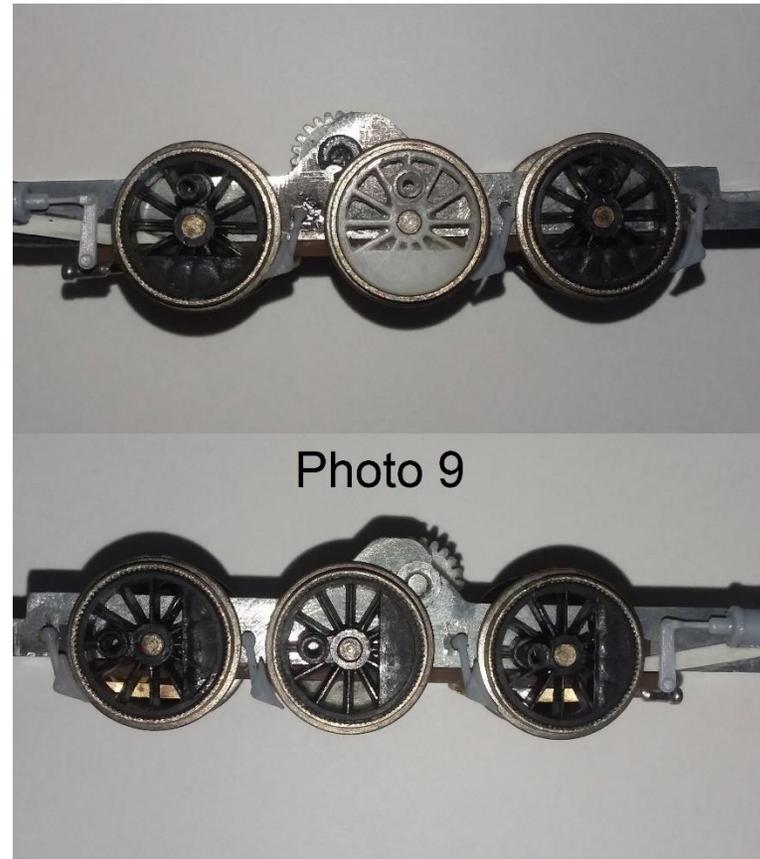
Pennsylvania, reversed this and rotated the left driver crank pin ahead. I wonder how many Pennsy models are actually this way? Most of the time the quartering is OK, but derelict locomotives may have been set aside because of binding caused by being out of quarter. Some causes of out of quarter are someone replacing a gear, mixing up drivers from different locomotives or just abuse. The best way to check quarter is to use a quartering jig like the one from NWSL, photo 8.

Photo 8



In the absence of a quartering jig, you can check the drivers by eye fairly well, though. I do this as a quick check and only use a jig if I encounter a problem later. Assemble the drivers in the bare frame with the cover plate. Line up all the spokes horizontally on one side. Carefully turn the frame around without disturbing the drivers, sometimes easier said than done, and inspect if the all the spokes line up on the other side. They may be rotated a little askew on the other side, but they must all be askew equally. Photo 9 shows both sides.

Photo 9



Your eye can actually be pretty good at spotting an out of quarter driver. If you have trouble disturbing the driver positions as you manipulate the frame, try some grease on the axles to hold them. Rotate the drivers to several positions to see if the result is the same. Repeat the procedure lining up the opposite side drivers and inspecting. Move the axles to different slots and check again if you suspect a driver is out of quarter, but you are not sure. To fix an out of quarter driver, you really need a puller and a quartering jig. You use the puller to remove the driver and the quartering jig to hold the driver in position as it is pressed back on. You might try to do this by eye, but good luck. You can only fix it if the axle end is not knurled, but MDC drivers, and many others, have knurled axle ends. This keeps the drivers in quarter since they can't be twisted on the axle, but it also makes it impossible to fix them if a driver is not accurately quartered to begin with. To fix knurled sets, you must make new unknurled axles and rebore the drivers to fit. Back to an expensive tool, a lathe. At this point, if you don't have or want to invest in a jig, a puller and lathe to fix the quartering of the drivers, you probably have to find another set of drivers or find a friend that can fit new axles for you. Steam locomotives will absolutely not run smoothly if the quartering of all the drivers is not the same.



Now to nickel plate the drivers, photo 10. Assuming that the driver tires are bare brass, nickel plating the tires will greatly improve the electrical pickup and keep track cleaner. Note that I only have had complete success nickel plating the plastic center drivers. Apparently, the zinc driver contaminates the plating solution. This is another reason I only use drivers with plastic centers. There has been a seller on eBay that plates driver tires with zinc centers. It might be possible to press the driver tires off to plate them and then back on. I remove driver tires to do repairs to the insulation at the rim but not to plate rims, but I would try it if I had to. Plated drivers will stay cleaner than bare brass and have far superior electrical performance. The plating is harder than brass and wears better as long as you do not use abrasives to clean the wheels. Plating is also renewable when worn. Nickel plating is something you can do yourself. I will not detail the plating procedure here as I have done clinics on it, and the procedure description is a whole article by itself. You can download my clinic using the URL at the end of this article.

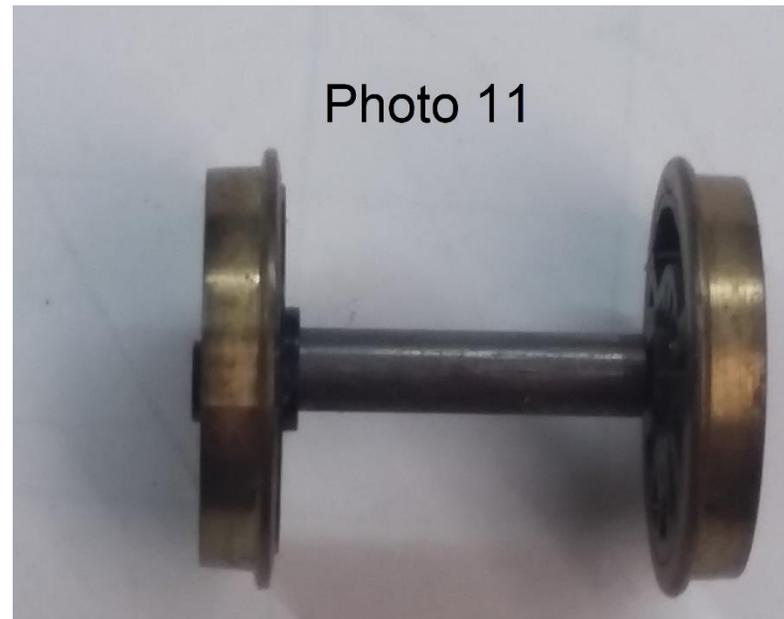


Photo 11 shows an out of the box MDC driver set. Note how dull the axle is. MDC is noted for poorly finished axles. Most other manufacturers are better. Plating of the driver tires can also etch the axles dull. For shafts and bearings, dull sliding surfaces mean friction, and friction is not our friend here. I have used two ways to fix these axles. I have replaced the axle with a polished steel rod or polished the axle in place without taking apart the driver set. Replacing the axle with a nice shiny 0.125" diameter drill rod is a lot of work. I only do it to fix other problems like a knurled driver out of quarter, wobbly driver, or driver out of round. Drill rod is very accurate ground and polished tool steel, usually O-1 alloy. You can buy a 36" length of suitable drill rod for less than \$10 at industrial supply houses, good hardware stores or online. You will also need a lathe, wheel puller and quartering jig to fit a new axle. You will have to accurately cut the rod to length, pull the drivers off the old axles, rebore the driver centers to fit the new axle and hold the drivers in quarter as you press the drivers back on the axles. This is an advanced procedure out of scope of the average modeler. By the way, keep drivers to locos as a set and don't mix them up with other sets from other locomotives. Sometimes the quartering angles from set to set are a little off but the same within a set. Crankpin hole radii, size and type can be different, too. MDC has three or four styles of drivers that I know of that are not interchangeable.



Photo 12

To polish the axles without removing them, you can use strips of polishing paper or cloth working it back and forth by hand, but it is much easier to build a simple polishing machine, see photo 12. If you downloaded my plating clinic, the handout shows the construction and usage of this machine in detail. Instead of using the wood dowel to hold the wheelset down as described in the plating clinic, use a polishing stick made from a wooden stick with wet or dry abrasive paper affixed to it. Hold the driver against the rubber sleeved shafts with the abrasive stick and spin the driver at a moderate speed. I start with around 400 grit on the stick and work up to 2000 grit in three or four steps lubricating the process with soapy water. Rub the abrasive stick side to side and back and forth with each grit. This will result in a highly polished axle. After polishing, I recheck and correct any wheel wobble. If you want to try nickel plating, here is a link to a clinic I have done.
<https://drive.google.com/drive/folders/1aUXU4nj1d4cuKhW66aEVDWg-DqRKpfUt?usp=sharing>

What Are Friends For?

Gary D. Loiseau

For new readers I should tell you that in my first installment of "What Are Friends For?" I explained that this project began with the dismantling and disbursement of the model railroad layout of my (our) friend Charlie Wickhorst. Needless to say, it has been interesting, and sometimes challenging, to reflect and remember our shared interests in this hobby of model railroading and our times spent rail fanning.

In chapter one, shall we say, I told of the industries on my layout that have a "Charlie" connection. These include C & D Wickhorst Scrap and Salvage and Swenson Spreader. I now have been able to include St. Charles Pipe (Photo 1) which I was able to transfer from Charlie's layout to mine. I needed to move two other structures to make room, but it brought some improvements to both of them.



I also have a non-industrial “Charlie” connection in the form of a city scene building “Charlie’s Trackside Inn” (Photo 2). This building is part of a lighted scene, and the structure is anchored down and so are the trees between the tracks and the building. (Photo as good as it gets).



Charlie had a small building on his layout with a big sign on the roof advertising ‘CHARLIES CAFÉ’ (Photo 3). I have a spot for it on my layout but I’m not sure it’s where I will keep it. If you are wondering why I would want to squeeze in ‘CHARLIES CAFE’ when I already have “Charlie’s Trackside Inn’, let me explain.



In 2017, my wife and I went to the annual SOO Line Historical and Technical Society convention in Minot, North Dakota. We took a northern route going from Grand Forks to Minot, and a more southern route coming home. We were hoping for more to see. I do not remember exactly why we got off the Interstate, but we did. I might have spotted some tracks or just to say we were in "FREEPORT". (So close to home).

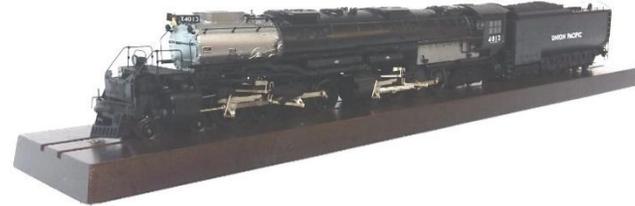


Freeport, MN is off I-94 at exit 137, population 632 (Photo 4). One of the things that caught my eye was the shop next to the post office ...CHARLIE'S CAFÉ (Photo 5).



The sign on the roof of the little building from Charlie's layout is a copy of the picture I took in Freeport, MN to bring home and give to my friend. "WHAT ARE FRIENDS FOR? "TIL NEXT TIME, GARY

For Sale



You, too, can own an HO scale model of the iconic Union Pacific class 4000 4-8-8-4 "Big Boy" so named when a worker at the Alco factory chalked those enduring words across the smokebox front. Arguably the most powerful steam locomotive type in the world, they were originally built with one purpose in mind - to roam the Wasatch range with ease. This gently used Trix model of UP 4013 in its magnificent wooden presentation case is equipped with DCC and sound. It is ready to roam your HO railroad, too.

The sale of this locomotive is the result of the generosity of Steve Faivre and all proceeds of the sale go to the Rock River Valley Division. Contact Ken Mosny, uiop999@comcast.net or 815-566-0595.

\$550.00

(offers considered)

For Sale



Offered is a Lionel catalog number 6-18203 Canadian Pacific SD-40-2 diesel locomotive with dual motors, Magne-Traction, AC drive, lights, and horn. I believe it was first cataloged in 1989 and appears on the cover of that catalog. It appears to be in as new cosmetic condition, intact with instructions and original box. It has just been serviced with new lubricants and look only in test run condition.

All proceeds of the sale go to the Rock River Valley Division-NMRA. Contact Ken Mosny, uiop999@comcast.net or 815-566-0595

\$175.00

(offers considered)