



The Yardmaster

Southwestern Michigan Division



March 2023

Website: www.ncr-div9.com



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Non-Train Related Special Events

March 17th – St. Patrick’s Day

March 20th – 1st Day of Spring+

March 30th – Baseball Opening Day



From the Desk of the Superintendent – Garry Johnson

Greetings fellow Division 9 members

Hope this report finds all in good health. Spent several days down and out meaning I wore myself out. Been busy with finishing that last section of bench work along with a work area. More on this style of constructing the layout in the future. I've had two additional surgeries which has slowed but not stopped work. Surgeries finished; I hope.

I have been watching a U-Tube video channel called Boomer Diorama/River Road. He has a wealth of modeling experience having done diorama's professionally. What I really like is his attention to detail. He demonstrates and encourages the views by showing step by step and saying don't be afraid to try; mistakes made are learning experiences which is how he learned from other masters. Two projects that I really liked was a fifteen-part scratch build of a diner which he got the idea from a painting called The "Nighthawks Diner". Truly amazing, he built bar stools from scratch which looked like the real deal. Building a jukebox again amazing. The other is "Why do I Model Scale Trees". Check these out as well as his other videos.



Achievement Program:

For those interested in achieving MMR status you may want to take a look at Cinthia Priest's article titled Destination: MMR. **"A travelogue through the NMRA's Achievement Program Part Two: Quick Wins"** as she chronicles her path to achieving MMR status starting on Page 36 of the March NMRA Magazine. For more information on becoming an MMR you can access a lot of information on the NMRA.org website, under the Education Tab. Or you can just contact the Division 9 AP Coordinator Dorman Wilson for more information.

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Yardmaster Submissions: Please send articles, news items, inquiries, photos and comments to the Editor of **The Yardmaster, Alan Bau** alanwbau@gmail.com , **by the 1st of the month** for inclusion in the current month's edition.

Division 9 Officers

Superintendent	- Garry Johnson	elecsprk@gmail.com
Assistant Superintendent	- Joel Pyard	pyardj@comcast.net
Paymaster	- Bob Lawrence	robertlawrence44@msn.com
Scribe & Newsletter Editor	- Alan Bau	alanwbau@gmail.com
Trustee	- Doug Van Meter	vanmeterda@gmail.com
Trustee	- Casey Bartman	Casey@GR-MI.com

Note: Elections are coming up in September. The positions in red are up for election.

Editor's Comments

Jim Glenn has submitted his first article on Operating Systems. I hope all readers of the Yardmaster find this new column informative and especially helpful to those thinking about adding operating sessions to their layout.

We welcome your submissions on anything pertaining to model railroading. Send your articles to alanwbau@gmail.com. If you want it to appear in the next issue, your submission needs to be sent to me no later than the 29th of the month.

We are always looking for ways to improve this publication so any comments, suggestions, ideas, etc. that you have, please forward them to alanwbau@gmail.com.

I want to thank everyone that is in some way connected to the success of the Yardmaster Newsletter. We can't do this without your input and submission of questions, comments, etc.

Alan Bau

Yardmaster Newsletter Editor

Upcoming Division Nine Membership Meetings & Events:

Presenter	Date	Location	Presentation Subject
Dave Vinci	March 18 th	Colonial Kitchen	Some Thoughts on Yard Design for Model Railroads. <u>See page 5 for more details.</u>
GT&I Chapter of the PRRT&HS Meeting	April 1st	Freedom Village, Holland, Mi.	Starts at Noon
Board Meeting	April 2 nd	Zoom Meeting	Starts at 2:00 PM
Ralph Moxley & Thom Post	April 15 th	Location details will be available soon.	Layout Tours
Casey Fisher & Dale & Deb Killarney	May 20 th	305 Hyde Circle Dr., Plainwell 34228 N. Brookwood Gobles	Layout Tours We may stop for lunch at the Club Car
Maynard Mitchell	June 17 th	4228 Fawn Ct, Battle Creek, MI	Layout Tour
No Meeting Scheduled	July & August		Enjoy the summer

Upcoming Train Shows

To encourage our members to support local area train shows the following shows are within reasonable driving distance from Kalamazoo.

Dates	Event Name	Location
March 18	Elkhart Model Railroad Clubs 17th Annual Train Show	Claywood Event Center 13924 N 1100 W- Napanee, In.
April 1	KMRHS Spring Swap Meet	Kalamazoo County Fairgrounds
April 15	Greater Grand Rapids Spring Train Show	Wyoming, MI. HSB, Inc.
April 26	Muskegon Railroad Historical Society Model RR and Hobby Expo	Cardinal Elementary School, 2310 Marquette Ave. Muskegon, MI.



Question of the Month – February Results

Results of February Question: Do You Actually Read the Yardmaster Newsletter

The number of respondents indicating they actually read Yardmaster = 18 or 42% of those on our current distribution list, which includes 4 responses from NMRA Members that are not in Division 9.

Question of the Month for March

What are your suggestions to help us increase Membership in Division Nine and attendance at monthly meetings.

Please send your response to alanwbau@gmail.com.

The overall results will be published in the next issue.



Membership Status

The latest membership report that we received from the NCR indicates that we have 36 Division 9 Members, which is the same as the previous report.

March 18th Membership Meeting

The March 2023 membership meeting will be on Saturday, March 18th at The Colonial Kitchen Pancake House, 330 N. Drake Rd., Kalamazoo. **Dave Vinci will be our presenter about some of his thoughts on designing a Yard for model railroaders.** For those unable to attend in-person, a zoom link will be available. The following is a brief overview of the material Dave will be covering in his presentation.

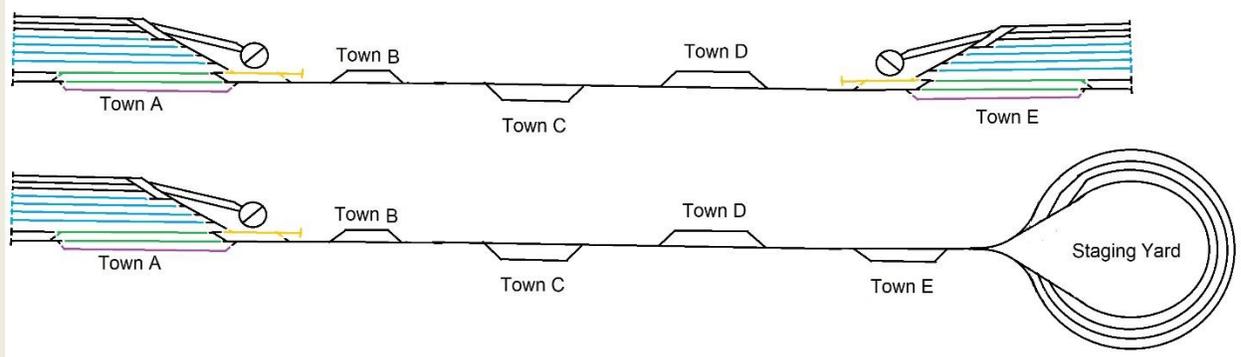
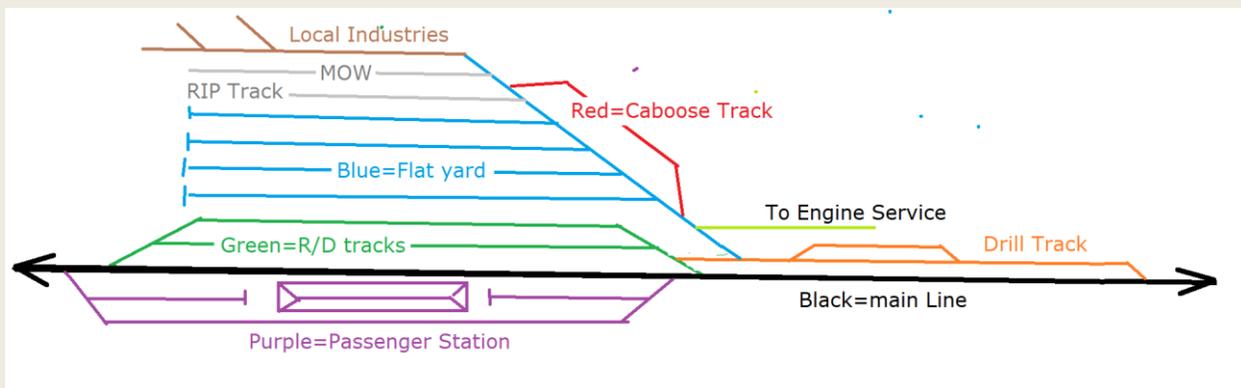
We will cover how your layout and Yard choices affect the Yard design. For example:

Layout choices:

- Train Length
- Turnout sizes
- Minimum Radius
- Car Length
- Traffic Balance (Through Trains vs Way Freights) and Switching

Yard Choices:

- Staging Yard? (Stub ended, Double Ended or Active?)
- Classification of Cars? (Flat Yard, Hump Yard)
- Bi-directional or primarily just feeding the rest of the layout?
- Locomotive servicing facilities? (Steam, Diesel or Both?)
- How much space will you allow for yard(s)?
- Turnouts in the Yard #4, #4.5, #6 (Depends on car length?)
- What Track spacing? (in HO 2", 2-1/2", more? Less?)
- Turnout controls? (ground throws?, switch machines?)
- How many Yard Operators? (1, 2, none?)
- More?



NMRA NCR Division 9

February 18, 2023

Membership Meeting Minutes

Location – Colonial Inn - Kalamazoo

Attendance:

In-person Casey Bartman, Alan Bau, Jim Fankhauser, Bill Lauritzen, Bob Lawrence, Rich Mahaney, Bob Provot, Joel Pyard, Greg Stonerock

Zoom

David Gunn, Dave Vinci

Call to Order by Joel Pyard 9:34AM

These minutes have not been approved yet.

Officer Reports:

Superintendent: Garry Johnson was unable to attend, but forwarded the following comments, which were read to the group.

“Reminded members that much can be learned from others. I continue to watch “Boomer Diorama” on U-Tube. He shares his experience with the hobby by showing and encouraging viewers to try, learn and grow from doing. He has a gift of explaining not as a master, but in plain language.”

Assistant Superintendent: Joel Pyard had nothing new to report.

Scribe: Alan Bau updated informed everyone that there are several new columns being added to the Yardmaster Newsletter.

Elections will be held at the September annual business meeting. Anyone wishing to become a board member should contact anyone on the nominating committee, which consists of Joel Pyard, Bob Lawrence & Casey Bartman. The following positions are up for election, Superintendent (Garry Johnson), Scribe (Alan Bau) & Trustee (Doug VanMeter).

Old Business:

Joel Pyard reminded everyone that the Michiana Division changed their meeting dates to free up members to participate in our clinic presentations.

New Business: Casey Bartman informed everyone that he is in the process of adding a listing of Train Shows to the website.

Rich Mahaney provided an update to the meeting schedule through June 2023. He informed everyone that he will be unable to attend the May Membership Meeting.

Alan informed the group that Rich Mahaney is the new NCR President effective in April 2023.

There was a brief discussion on the location for the upcoming September Annual Business Meeting. No decision was made.

Rich Mahaney led a discussion on a question if Division 9 wants to make a donation to the people affected by the Ohio Train Derailment. The main concern expressed was an uncertainty that the money would actually go to the people affected. There was no decision made and no vote taken.

Next there was a discussion on what we can do to increase membership and attendance at Membership Meetings. This item was tabled until the April Board Meeting.

Meeting was adjourned 10:27 AM

Rich Mahaney then presented a clinic on "Big Pipes" dealing with Modeling Details"

Respectfully submitted,
Alan Bau
Division 9 Scribe



For Sale Items – Do you have an excess inventory of cars, supplies, etc. which are just taking up space and most likely will never be used? You can list these items here and try to sell them, so you can buy more train stuff.

To list your for-sale items here, send your list of items along with a picture if one is available, a description of your item(s) along with your asking price and contact information. If you wish your item(s) to be listed in the upcoming newsletter, you need to submit them along with needed information no later than the 25th of the month.

Send your information to alanwbau@gmail.com.

Ask Dave – March – 2023

Alan Bau asked this question. "I am looking for opinions on how best to clean HO track." This question was submitted a few years ago. Dave responded then and has now updated his response and added a few pictures.

This is one of those topics where I think everyone has an opinion based on either what they've read or their experience with their railroad. So, here's my opinion:

Use all metal wheels on all of the rolling stock. Plastic wheels seem to make crud on the rails and wheels. This gunk will build up next to the wheel flange and will cause derailments. The dirt will still accumulate on metal wheels, but in my experience, it takes much longer, years in some cases. Check to see if your cars are close to the NMRA weight standard (RP-20.1 Car Weight) as I think that helps.

SCALE	INITIAL WEIGHT (ounces)	+	ADDITIONAL WEIGHT per inch of car body length (Ounces)
O	5	+	1
O _n 3	1-1/2	+	3/4
S	2	+	1/2
Sn3	1	+	1/2
HO	1	+	1/2
HOn3	3/4	+	3/8
TT	3/4	+	3/8
N	1/2	+	.15

In HO that means a 40' car is 6" long, so $1\text{oz} + (6 * 0.5\text{oz}) = 4\text{oz}$ total

Figure 1

Inspect the rolling stock wheels at least annually and clean as needed. I use a piece of flex track covered with an old t-shirt soaked with 70% alcohol and run the car back and forth by hand. Try it, you'll be amazed how well that works. Just relocate the cloth when it gets dirty. When you're done, dispose of the cloth carefully because it is now a fire hazard.

Some folks use lacquer thinner to clean metal wheels, but you must have good ventilation as the vapors are harmful. If you have a paint spray booth that vents to the outside, that should be effective. Maybe sitting outside on your back porch in the spring or summer is a better time/place to clean wheels.

There isn't too much brass track around anymore but if you still have some installed on your layout, this may help... The only effective way to get good performance on brass track is the abrasive pad called Brite-Boy. That's the Brite-

boy that Walther's sells, the other ones don't work and are a waste of time and money. Although lacquer thinner cleans it nicely, but I don't recommend it for use on the layout. (See paragraph above)

With Nickel-silver track, I do the following: I lay the track, solder the wire connections, solder the rail-joiners. I try and limit the soldered sections to a maximum length of 9 feet. Then I use a non-soldered rail-joiner with a small piece of very flexible wire soldered on either side of the joint.



Figure 2

This gives a very serviceable expansion joint while maintaining conductivity. The next step is to get the rail painted which I did by hand with a small cheap brush, and Floquil paint. It works with acrylic paints too. I do this for 12" then wipe the top of the rail with a rag before the paint dries. Then I do the next 12" ad nauseum. Also, I only paint the sides of the rail you can see. Then, let the paint set for a few days. Next is a quick swipe with a Brite-boy I kept for new track only, so you don't spread nasty stuff around. Now to remove the oils and other stuff, I wipe to top of the rail down with 70% alcohol and use gloves.

Then every 5 years or so, I have wiped all the rail down with 70% or 90% alcohol on a cotton rag wrapped around a finger that has a latex glove. It's a lot of work and I do have a few spots I just can't reach. Those haven't been touched since they were laid, 39 years ago. I have been thinking this could be done with track-cleaning car that carries a liquid cleaner, but I don't have one.

After that the only other liquid cleaner I use is electrical contact cleaner. I got mine from Radio Shack and a spray can seems to last forever. I believe that CRC makes one also. Check at an auto-parts store. It's also great for cleaning switch points with a pipe cleaner as an applicator. It works well to remove the carbon build-up on the commutator of open frame motors, if you still have any.



Figure 3



Figure 4

I built a track-cleaning car that is just a freight car with a piece of Masonite (rough side down) that rests on the rail under the car. This lives on a MOW train that I run before every OPS session. Some folks advocate having 3 or 4 cars equipped with this rig wandering around the layout. This is an old technique that's been around since the 1950s, I think.



Figure 5

Nickel-silver track will maintain its conductivity very well if it stays dry. The dirt that builds up over time is from micro sparking between the loco (and other powered rolling stock) wheels and the track. This is where the use of a tiny bit of graphite works wonders in preventing the micro-sparking because graphite is conductive. The best way to apply the graphite is to rub a 2B pencil lead on the inside top corner of the rail over a 12" section of track. Don't do both rails you might create a slippery spot. Do one rail and then do the other rail say 3 ft down track. My main line is 127 ft and I did this in just 3 spots. The running trains will spread the graphite around. You can renew this treatment every couple of years.

Some folks advocate using Wahl Clipper oil or Automatic transmission fluid but I have always preferred to keep the rails dry. Just the thought of house dust combining with the oil and arcing dust... all I can see is a sticky sludge that may be harder to remove and getting in the way of conductivity. But that's just me.



Figure 6

These processes that I use, seem to work pretty well. I think it also helps keep things clean by just running the trains. That keeps the cobwebs from building up and may scare away the spiders and other insect residents of the layout.

I hope you find this helpful.

The following is a new column authored by Jim Glenn on Operating Systems

Choosing an Operating System Jim Glenn

Once you decide to operate on you layout, you will need to decide on an operating system. The system needs to keep track of industries, cars, towns, trains, and routes. There are four types of operating systems that I tried: **layout owner created**, **Ship It**, **car cards**, and **JMRI Operations Pro**. There are many kinds of layout owner operating systems. Right now, KMRHS is using a system created by Frank Zajac. Each month he makes out train orders and switch lists. It is long time-consuming job, and the club appreciates his dedication. (Once the new railroad is further along, he will switch to using JMRI Operations Pro.) Some people use colored tacks or tabs placed on top of cars to show that they are to be set out or picked up. Using color tabs is the system I first tried on my layout. Another system uses no numbers or specific cars. When the engineer arrives at a location, he or she picks up any car and leaves another car of the same type in the same place. Most of these layout owner systems create random car movement and allows switching of cars. So, create a system of you own, **or** choose a system that has been tried by many others, gives car movement a purpose, and where there is help available.

I purchased **Ship It** sometime in the 1990s. It did everything that I wanted. I set up data bases for all my towns, industries, trains, routes, and cars. This is a lot of work, but it gives a clear picture of your layout and the rolling stock that you own. It will also give you an idea of the rolling stock you need to add to your roster to meet the needs of your industries.

There were many benefits to using Ship It. First there is no random movement of cars. Now every car move has a purpose. The empty cars are going to industries that needs to ship goods, or they are carrying goods to industries that ordered the products. I had a switch list for each train telling the engineer where to set out and pick up specific cars. I had 20 different reports I could print telling me the status of industries, etc.

In addition:

- The program kept track of cars that were loaded or empty,
- The program kept track of what each industry needed for cars loaded or unloaded,
- Arrival times were listed for trains,
- The program supported the use of fiddle yards and staging,
- Through trains were allowed,
- Passenger trains were scheduled
- It provided a fast clock to schedule the trains.

Industry Name[+]	Town Name	Product Name	AAR Coc	Car Type	Train type	Duration	Amount	Frequency
Alta Vista Yard	Alta Vista	gold ore	GB	Gondola	General Freight	12	6	24
Alta Vista Yard	Alta Vista	refined gold	XM	Boxcar	General Freight	12	1	24
Cripple Creek Yard	Cripple Creek/Victor	explosives	XM	Boxcar	General Freight	24	1	24
Cripple Creek Yard	Cripple Creek/Victor	meat	RP	Reefer	General Freight	24	1	24
Cripple Creek Yard	Cripple Creek/Victor	livestock feed	XM	Boxcar	General Freight	24	1	24
Cripple Creek Yard	Cripple Creek/Victor	mercantile items	XM	Boxcar	General Freight	24	1	24
Elkton Mine	Cripple Creek/Victor	coal	GB	Gondola	General Freight	24	1	24
GF Loading Dock	Goldfield	livestock feed	XM	Boxcar	General Freight	24	1	24
GF Stampmill	Goldfield	gold ore	GB	Gondola	General Freight	24	1	24
Golden Cycle Mill	Bull Hill	coal	GB	Gondola	General Freight	24	1	24
Golden Cycle Mill	Bull Hill	gold ore	GB	Gondola	General Freight	24	2	24
Golden Cycle Mill	Bull Hill	machinery	XM	Boxcar	General Freight	24	1	24

So, if it did all these neat things, why did I switch to car cards? During my early operating sessions, things went well. By the tenth session I noticed that fewer cars were moving during an operating session. By the fourteenth session only about fifty cars moved when over one hundred moved in the first sessions. In each session fewer cars moved. Many cars were not moving at all or infrequently. I contacted Albion Software and was told that I would need to purchase an additional program. I decided that I did not want to get into the always updating game and additional cost. I switched to car cards.

The current download price of **Ship it** is \$129.95 and the add on is \$49.95.

If you have questions, call me at 269 290 2800 or email at btrailroad@sbcglobal.net. **Next time- Car Cards**



The following is another new column submitted

by Frank Zajac

KMRHS NEWS

Progress continues to be made on building the new layout at Kalamazoo Model Railroad Historical Society. Early fall saw the construction of supporting the deck of the peninsula. Three inch square steel tubing was used for the legs and various size angle iron for deck supports. All parts are welded in place. The deck was installed using 3/4" plywood. The scenery divider is being made of hardboard. The north side of the deck is the location of Kalamazoo, the south side is Grand Rapids, and the end is Cooper Park. Preliminary work is being done to determine the placement of streets, buildings, and industries.

Late in the Fall, a temporary track connection was made from the lower gauntlet track to the north wall where Battle Creek is located. Completed in time for our annual December Open House, it allows full use of both decks of the layout bypassing the peninsula. Track has been laid for Battle Creek yard and the industries to the west wall.

Operations have taken several large steps forward. At our Op Session of February 20, the Dispatcher was moved into the Dispatch Office using the new monitors. Walkie-talkies are being used for communication between train engineers and the dispatcher. We had a good first session.

The photos show the steel support system for the peninsula and Battle Creek Yard



Article By NCR President - Rich Mahaney

Rich Mahaney of Division 9 gave the clinic at our last Division 9 meeting on Feb 18th. Rich's presentation on "big pipes" that are found on many industries. These pipes transport solid materials, liquids and gases. Steam is commonly transported through pipes, as is dust in "dust collection" system. Rich showed lots of photos he has taken of "big pipes" on industries from his travels. At the end of his presentation showing real pipes of industries, Rich showed some examples on model railroad layouts. Big pipes can add some interesting details on industries that are modeled. Here are a few photos from Rich's presentation.





Big Pipes on Dave Vinci's Layout



Pressure Tank Cars by Rich Mahaney

Tank Cars are grouped into three groups by most instructors. Last month I wrote about "low pressure" or "general service" tank cars, this month I want to talk the features of what are called "Pressure Tank Cars". Next month, I will talk about "cryogenic tank cars" which are actually low-pressure tank cars.

Pressure Tank Cars have several designs, which are marked in the speciation area on the right end of the tank car when you are facing the tank car. Their designs are based on their construction, the metals used for construction, valves and fittings and other things. I am only going to focus on some of the basic features.

The Pressure Tank Car classes are DOT-105, DOT-109, DOT-112, DOT-114, DOT-120. Probably the most common of those tank cars to see are the DOT-105 and the DOT-112. The DOT-120 is a new tank car designed for transporting flammable liquid products like crude oil, denatured ethanol and other "High-Hazard Flammable Liquids" which I talked about last month. The DOT-120 tank cars came from the failures in derailments involving the low-pressure DOT-111 tank cars.

These pressure tank cars will normally use a "J" in their specifications designations because they have shelf couplers, full head shield protection on their ends, their insulation wrapped around the tank to help against flame impingement and a metal jacket wrapped around the insulation and the tank.

DOT-112 is a tank car that is seen much of the time on trains transporting liquified petroleum gas (LPG), anhydrous ammonia, and many other industrial chemicals. Primarily they transport liquified compressed gases, poison/toxic inhalation hazard materials, reactive materials and/or corrosive materials requiring additional protection. There are no "equivalent AAR-type pressure tank car specifications like there are with the DOT-111 and AAR-211 (Association of American railroads).

The DOT-105 tank car is considered the "king of the fleet" for its top-of-the-line construction and pressure rating. It is the tank car that transports the "worst of the worst" products. The tank test pressure is rated for 100 to 600psi. This tank car transports chlorine, sulfur dioxide, methyl mercaptan (provides the odor in natural gas and LPG), and many other nasty products.

The DOT-112 tank car is an "everyday" transporter of hazardous materials. Transporting anhydrous ammonia, liquid petroleum gas (LPG), propane, butane, anhydrous hydrogen fluoride, chlorosulfonic acid, vinyl chloride and other products. The tank test pressure is rated for 200 to 600 psi.

Remembering an important concept: "you can always ship things in a better package", I have seen gasoline transported in a DOT-112 tank car, which is normally transported in a DOT-111 or similar tank car. The DOT-112 tank car is a "stronger" car, than the DOT-111 tank car.

DOT-114 tank cars are similar to DOT-112, but might have bottom outlets. Normally pressure tank cars don't have bottom outlets, there were some in the older days.

Normally pressure tank cars are unloaded and loaded through valves/outlets on the top of the tank cars. There will also be a "pressure relief device (PRD)" device on the top of the tank car to "vent" the tank car of pressure automatically when the car is being heated in a derailment or other type of accident. The PRD must be sitting upright to operate or work, it will not work when the tank car is sitting upside down. Pressure tank cars are loaded and unloaded in a "closed loop" system, the actual tank car is not opened to the atmosphere, by opening a "manway cover". There is an opening into the top of a tank car, but it is covered by a cover plate and the loading and unloading valves (same valves), the liquid and vapor lines, safety/pressure relief devices, and maybe a sample line and a thermometer device. All of these items are inside of a "protective housing" that sits on top of the tank car. Also inside the protective housing on top of the cover is a "gauging" device to help determine the quantity of product inside the tank car. There are several types of designs of gauging devices. The two liquid loading or unloading piping are on the center line in the top of the car. There are going to be one or two "vapor" lines off to the side of the top of the car inside the protective housing.

Inside of a pressure car housing that is transporting chlorine or carbon dioxide the valving, pressure relief devices and other piping will look a little different than the "typical" equipment and piping on a DOT-112 and a DOT-105 tank car.

A number of years ago (the 1960's) there was a pressure tank car design where the tank diameter and size got smaller on the ends. This was known as the "whale belly" car. The design did not do well in derailments and was phased out or removed from service. Models of this style of tank car were made by Atlas.

The largest pressure tank car was produced (by GATX) and is on display at the National Museum Of Transportation in the St. Louis, MO area. It was capable of transporting 60,200 gallons. It was over 96 feet long. The Association of American Railroads has since adopted a maximum length of 89 feet for railroad cars. The design of this large tank car was to transport LP Gas and Anhydrous Ammonia.

There were even models built of this car for model railroads. This tank car was also a "whale belly" design.

I mentioned the DOT-120 tank car design last month. It is a pressure car design, that is transporting liquid products that would normally be transported in the DOT tank cars (general service) with the specifications of 111, 1232, and 117. Because these tank cars with these specifications in derailments have failed at times, work continues on designing a tank car that can transport these non-pressure products like crude oil and denatured alcohol safely, which lead to the DOT-120.

High Pressure Tank Cars Protective Housing Contents— common for LP gas and anhydrous ammonia

- Two liquid valves (top and bottom) and one vapor valve (to the left side)
- One pressure relief device (center)
- One gauging device (to the right)
- One sample line for the product (upper right)
- One temperature well for checking product temperature (upper left, by orange flag)



Pressure Tank Car Valve Examples – common for LP gas and anhydrous ammonia. Liquid valves, vapor valve, pressure relief device, gauging devices, sample line, thermometer well



Pressure Tank Car Valves and Piping On Top Of A Carbon Dioxide Tank Car



Example of piping for a pressure car under the cover— long pipes are for liquids (in and out), magnetic gauging device (silver ball), short pipe at top is the vapor line, two smaller pipes are the sample line and the thermometer well.



Chlorine Valves On Top Of A DOT-105 Tank Car In The Protective Housing

- Two vapor valves and two liquid valves
- Liquid valves are the top and bottom, vapor valves are to each side
- One pressure relief device in the center
- No other devices installed in housing



Oops!

The following picture was supposed to appear at the end of page 23 in the February Yardmaster, however, it got lost in the shuffle. Sorry about the mishap. Thanks to Rich Mahaney for pointing this out. Rich has never seen a tank car with a W-4 marking on it, otherwise there would be a photo.

W4, W5, W6, W7

- No photo of a W4 tank specification

DOT 111A100W-5			
	ISS	QUALIFIED	DOE
TANK QUALIFICATION	REQT	2004	2011
TANK THICKNESS TEST	REQT	2004	2011
SERVICE EQUIPMENT			
PRO VENT (16.1.1)			
CONTING LHMED	HCPY	3901	3908
TYPE	4055		
APPLIED	3-01		
US RS INSPECTION	REQT	2004	2011
EVER TILL INSPECTION	REQT	2001	2011

2 INCH HP COMP BRAKE SHD

DOT 111A100W-6			
	ISS	QUALIFIED	DOE
TANK QUALIFICATION	REQT	2000	2010
THICKNESS TEST	REQT	2000	2010
SERVICE EQUIPMENT	REQT	2000	2010
PRO VENT (16.1.1)	N/A	N/A	N/A
CONTING LHMED	N/A	N/A	N/A
US RS INSPECTION	REQT	2000	2010
EVER TILL INSPECTION	REQT	2000	2010

HYDROGEN PEROXIDE			
DOT - TRAINING 7			
	ISS	QUALIFIED	DOE
TANK QUALIFICATION	UTL	883	893
THICKNESS TEST	UTL	883	893
SERVICE EQUIPMENT	UTL	883	893
PRO VENT (16.1.1)			
LHMED			
US RS INSPECTION	REQT	1997	2011
EVER TILL INSPECTION			

Sorry about that. Alan Bau

Train Photos taken by Jill Dustin in Grand Junction Michigan.



Wrap-up

Well, I guess that's it for another month.

Thanks again for all your support and encouragement.

Hope to see you all soon.

Remember our next Membership Meeting is on Saturday March 18th at 9:30AM at the Colonial Kitchen.

On a personal note, do you know of anyone that would like to learn how to play Bridge? I will be teaching beginning bridge at the Kalamazoo Bridge Club starting in late April. Contact me for more details.

Finally, our next board meeting will be a zoom Meeting on Sunday April 2nd at 2:00 PM. Anyone can join in on the fun. If any non-board members want to attend, contact me for the zoom link.

Alan Bau