



Produced by Enthusiasts
for Enthusiasts

TRAIN TALK

July 2023 Volume 35 No 1 Issue 385
A 100% NMRA Affiliated Club





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July 2023
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Please note; schedules for club activities are notified in Train Talk - RAILWAY TIMETABLE - Page 38, and via email, if you have an email address and are not on our members email list, please advise ASAP so you can receive up to date news.
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(*Includes basic NMRA membership

=

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COVER: Great Western Railway diesel railcar No. 24 waits in the bay platform at "Jamestown" station, ready for departure.

SET #4 HOn3½

These Queensland Starter Sets are designed to allow all, young or old, to enter the hobby.

This set contains the following,

1 Original QR Blue 90 Tonne Locomotive

2 Original QR QSC Tautliner Wagons

1 QR QSC Tautliner in Q-LINK Livery

This set is sold Ready To Run in HOn3½

(HOM) gauge and is ready to be used with

ALL brands of HOn3½, HOM and TT gauge track systems.

These sets come with detailed operating

and running in instructions. These sets represent a saving of \$95.00 off the normal recommended retail price.



SET #5 HOn3½

These Queensland Starter Sets are designed to allow all, young or old, to enter the hobby.

This set contains the following,

1 Original QR Blue 90 Tonne Locomotive

3 Original QR HJS Open Wagons in Grey

Livery

This set is sold Ready To Run in HOn3½

(HOM) gauge and is ready to be used with

ALL brands of HOn3½, HOM and TT

gauge track systems. These sets come with detailed operating

and running in instructions. These sets represent a saving of \$95.00 off the normal recommended retail price.



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July 2023

4 President's Report June 2023

Four of us attended the All-Gauge Swap Meet on the 30th.

It was my first time at one of these events and I had a great time. I actually sold some of my unwanted items. We sold quite a bit of surplus club items in N, OO, and HO scales. It's well worth going as there are plenty of bargains on sale.

The Museum received a collection of Trix Twin items that will have Gary moving shelves around for a display.



This month I spent several hours in the library,

shifting the shelves around to accommodate the large selection of British books that arrived last month. I'm going to have to review the magazines, for instance, we have two complete sets of Australian Model Railway magazines taking up three shelves.

In the last week it was discovered that there has been significant rodent damage to the wiring, building structures, and tunnelling through the styrene base of the Twinfalls, I think this was because the layout was covered so it was dark and warm for the mice. I purchased and scattered rodent baits (50) around the club layouts. The next Wednesday only 4 of the baits remained. To date only one dead rat has been found, but the rodents have not been seen.

Library

Several Model Railroader Tips and Tricks brochures added to the library, subjects such as scenery, modelling roads and pavements, backdrops, etc.

I shifted the selves around to accommodate the large selection of British books that arrived last month.

Twin Falls

Track Cleaning after the open days, and test run of club locos and my locos.

In the last Saturday it was discovered that there has been significant rodent damage to the building structures and tunnelling through the styrene base of the layout. On Sunday I purchased and scattered rodent baits around the club layouts.



TEDITORIAL



Gradually catching up after the health hiatus, hope to have August and September to you shortly, of course this is being written after the fact as I am writhing this in September and I do apologise.

As things get back up to speed the AGM and Carnival of Trains will be run and done and with luck and effort will all be good results.

This issue has some fairly in depth articles along with some belated ones and I thank all contributors, it can take quite some time to run articles as I attempt to include a variety of subjects in each issue, this issue in particular has prototype stories along with QR's coverage and is heavy on photos.

In this day and age one has to be cautious in the fact that modern legislation can deal some harsh blows, with Train Talk being a not for profit club communication that is devoted to promoting the hobby of Model Railroading we should have reasonable leeway, but one still has to be wary at all times.

As you can see below I have taken out an advertisement commencing with this issue relating to my decal production, I have been producing decals for over 25years now as part of my hobby and hope to continue doing so for some time yet.



TediDecals

Custom Decals to order as well as a large range of in stock Queensland Railways 'C' Wagon, ABG and Tanker Decals

Also a selection of NSWGR's Decals

Look at eBay under - QR's Decal Set and See other items

Or contact me at teditor@bigpond.com



Tune in for the best of sounds for everyone's likes 4AK and 4WK - Your stations!
July 2023



ON THE FOOTPLATE

Member participation is an important part of the clubs success, become involved and reap the benefits.

There are many projects underway to suit any interests.

Club Shirts: If you wish to obtain a club shirt of the Chambray type, purchase direct from Totally Workwear Toowoomba, 1/37 Prescott St.

There is a policy at the TMRC Inc. You **"MUST HAVE FUN"**, say g'day to everyone and invite them to 'get involved', we are all in this hobby for the same reason - "To have fun"

Model Railroading 'IS' The World's Greatest Hobby.

The production of Train Talk and Construction of the Showgrounds Museum & Display Centre has been made possible through the generosity of the



Marriage Celebrant

Jenny Noble
 Authorised & Qualified
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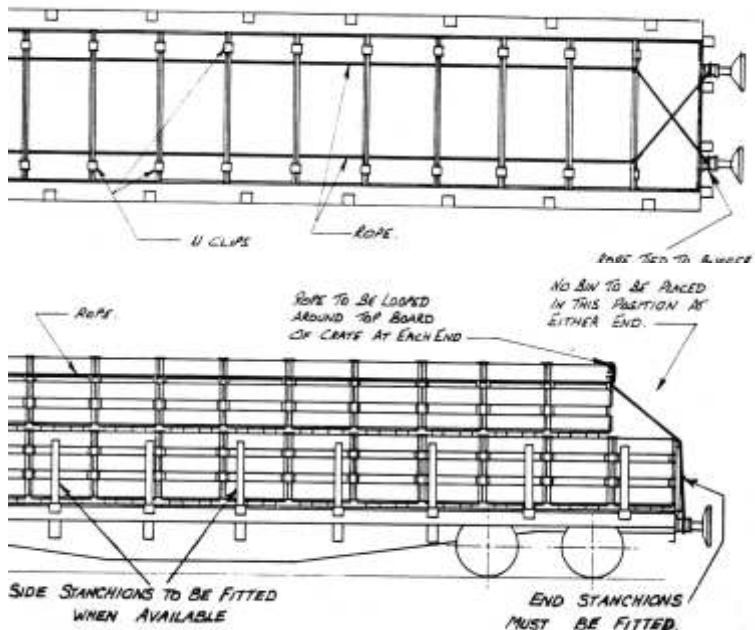


Fruit Bins QR's⁷

Arthur Hayes

Central Queensland Bins

Wagon Class	No of Bins On Floor	Loaded Bins Top Tier	Empty Bins Top Tier	Remarks
FJS/FWS	4	4	4	
30' H	6	6	6	
32' H	7	5	7	No loaded bins at end of top tier.
HJS/HSA/HWA	7	7	7	
MTW	9	7	7	No end bins top tier.
SP	7	5	7	No loaded bins at end of top tier.
QFX/OFC	11	9	9	No end bins on top tier.
HWO	11	9	11	All Lines Leave gap at centre on top tier of bins
HWO	11	11	11	Allowed on S & A and B class lines with 12 tonne axle load. Space between bins on top tier to be at centre of wagon



8 *Continued from page 7*

Security of loading of these bins should be ensured by the use of :-

- (1) Rope
- (2) Steel U Clips or “Hairpins”
- (3) End and side stanchions on SP, QFC/QFX wagons.

No less than 2 ropes shall be applied to the full length of each wagon load. The 2 bins at each end of the top tier must be held together and to the other top tier bins when applicable by steel “U” clips or hairpins which are supplied by the consignor. Where part load consignments or other circumstances leave part of the floor space unoccupied on MTW and SP wagons, the free end of the loads to be anchored by chocks nailed to the floor as well as with ropes and hairpins as above.

Tarpaulins are not to be supplied or used for this traffic. When loading a second tier, care must be taken to ensure the carrying capacity of the wagon and the axle load of the wagon on which it is to travel are not exceeded.

Canneries were also located at Newstead and Manly. In the early 1970's I recall oranges from Gayndah being conveyed in the same bins.

During the mid 1980's, QR was moving towards having a modern fleet of steel wagons fitted with auto couples which were capable of operating at 80 km/h. This would allow QR to run faster trains on most services which provided shorter travelling times with a better service for their customer. This resulted in phasing out their wooden wagons and in many cases coming up with replacement wagons.

For the pineapple traffic WHA and WHE grain wagons were converted by removing the sides and classified PWA and PWH class. By keeping the ends is allowed for a full row of bins on the second tier.

PWA QR Drawing P - 454. Tare 10 t, carry 29.7 t.

PWH QR Drawing P – 453. Tare 11.4 t, carry 29.2 t all lines and 33.5 t on some “B”, “A” & “S” lines.

The number board shows the wagon class as PWA, when modified the wagon class became PWH wagon. The wagon is conveying SEQ Bins at Bindha.



These wagons could carry 26 SEQ bins and 18 CQ bins. By adding stanchions rails to the ends of the PWH wagons, a third layer of CQ bins could be loaded, all up a load of 27 bins. This is a great improvement on 12 bins allowed on an SP wagon.



PWH wagon with CQ Bins, Normanby

With changes coming to the container traffic with higher and heavier containers, special container wagons also started entering service, this made most QFC wagons surplus to this traffic. Many of the class were rust effected in the headstocks from carrying salted skins and hides, resulting in a large number of the class

being scrapped. Some remaining were fitted with end stanchions and allocated to pineapple traffic.



QFXS 33010 Bango Nov 1994. (Wamuran Bins)

Others were fitted with 2 x 20' flat rack containers and also saw service in the pineapple traffic. These containers could carry 12 CQ bins subject to track class. (Wagon 20t, containers 6t, 24 bins = 24 t, total 50 t).

QFXC 35751 Rockhampton Dec 1996.

Securing of the bins to the wagons/containers moved from rope to web straps. However, rope did may a return to some loading location where the loading area was adjacent to lines with overhead traction power lines.



PB and PHO class wagons were also used at times in this traffic, loads carried were subject to the track class they operated on. QR transferred the traffic to road around 2002/3.

FJS wagons of Pineapple Bins at Nikenbah on the Pialba Branch Mid 1970's.

Consignments of fruit was conveyed from the Granit Belt in bushel cases. I think there was



half bushel and one and half bushel cases as well, all made from pine wood.



Yard Crane at Cooroy with case lifting adaptor attached.

They were recycled as chips (fire starters) for the old Crown stove at our place. The minimum freight charge

was .42 cents, which just about covered most locations in Queensland for a half bushel case (15kg), the 2 cents was a fruit levy. This traffic was conveyed in louvered box wagons, in later years in CMR refrigerated wagons were used. Tranship locations would move the fruit onto the next available train, often passenger trains. Fruit arriving at Roma Street was taken over the suburban platform and conveyed on the next train to the suburbs. Mangos from north Queensland was conveyed much the same manner. Fruit was consigned from various station on the network, Caboolture – case of Bananas, Eumundi, Cooroy and Pomona would load two or three wagons a day for interstate. Yarwun paw paws

On Westgate I currently running a couple of wagons with bulk fruit.

SP wagon loaded with bins of oranges. The wagon and bins are scratch built, I think the 13 bins on the wagon were built 13 different ways. The oranges at Woodland Scenics T47 Fruit Apples & Oranges product, a block was made from styrene and the apples attached with super glue. After a few months some of the apples turned white, the load was painted with Vallejo Model Colour (acrylic) Light Orange # 70.911. Black cotton was used for the rope to secure the load.



32' H wagon loaded with bins of pineapples. The H wagon was an old epoxy kit which didn't have any inside detail. PGC scale models have a HJ model



with inside detail which could be used. The pineapples were made from long grain rice cut into two. As for the apples, blocks of styrene were made for each bin and the cut down rice glued to the blocks with super glue. The load was painted with Vallejo Model Colour # 70.881 Yellow Green. Vallejo Model Colour Light Orange # 70.911 was dried brushed over the rice. Not sure the rice was a good idea, of late a few pineapples have gone missing overnight just as they did on QR during their journey to the cannery.

The 1962 General Appendix states the following;

Consignments of apples and pears must not be accepted for conveyance to stations between Wallan-garra and Warwick (both inclusive) unless accompanied by a certificate signed by an Inspector of the Department of Agriculture and Stock setting forth that the fruit has been examined and found free from the presence of "Black Spot", and the apples and/or pears for the abovementioned area have been repacked under the supervision of an Inspector at the Picking-over Shed, William Street, Brisbane.

Photo:- History of Agriculture, PIRSA History of Agriculture, PIRSA Website.

Factory fruit for the Granit Belt was conveyed in bins in box wagons.

On the Granit Belt bulk loading of apples for juice commenced in the mid 1990's, VAO class coal was used for this traffic. Bin fruit was loaded into QLX type wagons.



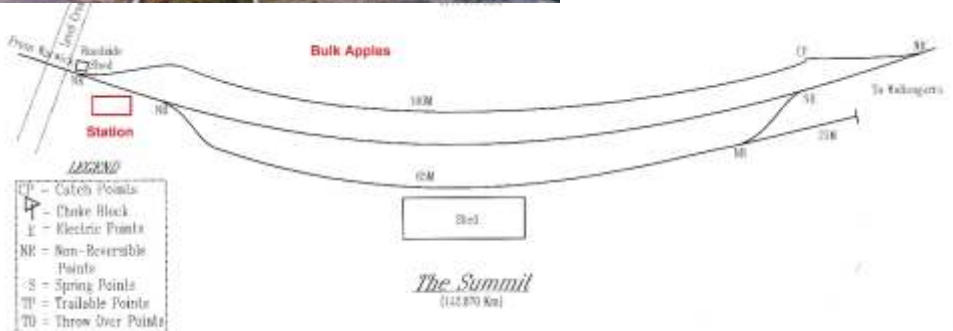
Apples arriving at The Summit. July 1995. *I just love farm trucks.*



Empty VAOA wagons arriving at The Summit.



Sidings at The Summit were not that big, often loaded and empty wagons were conveyed to Wallangarra, some day's loaded 12 wagons came to Brisbane. (100 metre = 6 wagons).





Empty wagons being placed at The Summit.



The Summit Yard, cases of Apples being loaded into VAOA wagons. (Eastern side of the Main Line).



As much as possible, red and green apples were loaded into separate wagons.

Likewise at the cannery red apples were unloaded first before the green apples to save on cleaning the plant between two types of apples.

14 *Continued from page 13*

The Summit western side of the main line, loading bank, station and fruit shed.



QLW in the fruit shed for factory fruit.



VAOA Wagons at Wallangarra





Wagons of apples leaving Acacia Ridge



Golden Circle Cannery Rail Vehicle Placer shunts a QLX of apples.



SMALL DETAILS

Mick Wise

S scale 20 lt drum



July 2023



QR's A and ABG Kits

Gary Sardonì

A couple of pics of two of the built QR wagons that I bought at the Brisbane show.

The Class A Build was a nice kit to make, despite having a lot of delicate underframe detail. The transfers that came with it had only one running number, so if I decide at some future time to build another, I assume I can obtain other running numbers? According to Gary's instruction sheet they were numbered 19526 (which is the number I've got) to 19535. I assume all have the prefix A.

I found the ABG van much harder to build and get more-or-less right, despite it being a simpler kit in some respects. Looking at the pics I can see how cruel the camera is as there are a few things I can still tidy up with it.



I know transfers for advertisements to put on the side of the ABG are available. I see the wagon you built with something "BALTIC" on the side from what I recall. That looks good and I assume there are others as well? I haven't put any handrails on the sides yet. I assume that transfers should go on first.

I hope to get the ABG transfers on before our Expo, so it can get some action during the show.

I have heard mentioned that these sort of wagons are difficult to get to run well. I feel confident that these will run OK. All the wheels rotate smoothly and I believe that I have got them all square, so hopefully that will run well.

My subconscious had been thinking about what a separator actually is. My guess was that it was a device on a dairy farm for separating cream from milk. The separator does separate cream from milk, with a type of funnel at the top where you pour in the milk. Then you turn the handle near the bottom and something comes out the side through a couple of tubes; maybe the milk and maybe the cream stays inside. I assume it works by spinning when you turn the handle.

Jenny can vaguely remember when she was a small child that they had one on their dairy farm in the days before milking machines. She says that what was left inside was buttermilk which was emptied into cream cans which went to the local butter factory.

It appears that the best know brands were: Baltic, Princess and De Laval.





2023 CARNIVAL of TRAINS

September

16th-17th 9am-4pm

23rd-24th 9am-4pm

Toowoomba Showgrounds

Operating Model Train Layouts in Z, N,
HOn3½, HO Standard Gauge and
OO Scale.

QLD Railways, Australian, British, U.S.A.
Baillie Boys Carnival & Extensive
Museum.

Admission \$5.00 Adult
\$2.00 Children - \$10.00 Family

Proudly supported by;



18 **A Nothing to do with Trains joke!**

Bob claydon

An Aussie Blonde was sent on her way to Heaven. Upon arrival, a concerned St Peter met her at the Pearly Gates.

'I'm sorry, 'St Peter said; 'But Heaven is suffering from an overload of godly souls and we have been forced to put up an Entrance Exam for new arrivals to ease the burden of Heavenly Arrivals.'

'That's cool' said the Blonde, 'What does the Entrance Exam consist of?'

'Just three questions' said St Peter.

'Which are?' asked the Blonde.

The first,' said St Peter, 'is, which two days of the week start with the letter 'T'?

The second is 'How many seconds are there in a year?'

The third is 'What was the name of the swagman in Waltzing Matilda?'

'Now,' said St Peter, 'Go away and think about those questions and when I call upon you, I shall expect you to have those answers for me.'

So the Blonde went away and gave those three questions some considerable thought (I expect you to do the same).

The following morning, St Peter called upon the Blonde and asked if she had considered the questions, to which she replied, 'I have.'

'Well then,' said St Peter, 'Which two days of the week start with the letter T?'

The Blonde said, 'Today and Tomorrow.'

St Peter pondered this answer for some time, and decided that indeed the answer can be applied to the question.

'Well then, could I have your answer to the second of the three questions' St Peter went on, 'how many seconds in a year?'

The Blonde replied, 'Twelve!'

'Only twelve' exclaimed St Peter, 'How did you arrive at that figure?'

'Easy,' said the Blonde, 'there's the second of January, the second of February, right through to the second of December, giving a total of twelve seconds.'

St Peter looked at the Blonde and said, 'I need some time to consider your answer before I can give you a decision.' And he walked away shaking his head.

A short time later, St Peter returned to the Blonde. 'I'll allow the answer to stand, but you need to get the third and final question absolutely correct to be allowed into Heaven. Now, can you tell me the name of the swagman in Waltzing Matilda?'

The blonde replied: 'Of the three questions, I found this the easiest to answer.'

'Really!' exclaimed St Peter, 'And what is the answer?'

'It's Andy.'

'Andy??'

'Yes, Andy,' said the Blonde.

This totally floored St Peter, and he paced this way and that, deliberating the answer. Finally, he could not stand the suspense any longer, and turning to the blonde, asked 'How in God's name did you arrive at THAT answer?'

Easy' said the Blonde, 'Andy sat, Andy watched, Andy waited till his billy boiled.'

And the Blonde entered Heaven...

... you're singing it now, aren't you...??*

July 2023



Byers Junction Turnout Repair

19

Text Teditor - Photos David Cook

Laying on a sheet of cardboard on top of a layout to repair a turnout is a less than ideal experience.

This was the challenge faced when the East end passing loop turnout failed on Byers Junction, the Peco turnout throw-bar had sheared through the actuating hole and required either a turnout replacement or throw-bar repair.

The decision made was to remove the plastic throw-bar and install a (PCB) Printed Circuit Board throw-bar in its place.

Somewhat of a challenge considering the turnout is located in a far back corner area where scenery had to be breached to gain access.



With David Cooks assistance we set up a sheet of cardboard so I could straddle the scenery and tracks with hopefully no damage.

Balancing on the layout was a challenge as I had to place the PCB in place, hold it with a screw driver and solder the point blades to the PCB.

During all this it was necessary to ensure the gaps between switch blades and stock rails were within tolerance.

The difficulty encountered gave a less than perfect result that does work but a replacement turnout is on the books.

July 2023



20 RAILWAY PICS

All photos Western Australia

S3304 and S3301 at Forrestfield Loco Depot on 17 November 2006 still in full Westrail colours. Photo: Jim Bisdee.



Photo: Jim Bisdee

© Phil Manning

<http://www.RailPic.com/raibee>

Hotham Valley Railway (HVR) Prospector special at Cockburn Junction in February 1984. Photo: Jim Bisdee.



Photo: Jim Bisdee

© Phil Manning

<http://www.RailPic.com/raibee>

AB1531 hauling ex New South Wales Government Railway 7920 on a flattop on the Geraldton Freighter passing Millendon in December 1974. 7920 was heading to Christmas Island. Photo: Jim Bisdee.



G536/ G526/ XR555 on 3MP9 SCT freight at 0716 just north of Forrestfield on 17 November 2006. Photo: Jim Bisdee.



22 Lubricating Railway Track

www

What Lubricants are used in Railway Tracks and Why are they Important?

Railway lubricant was first invented in the late 1800s by Elijah McCoy. Ever since, scientists have been working on developing several new rail lubrication techniques and effective lubricants for smooth and reliable railway operations.

In general, lubrication can be divided into three regimes, namely, full-film, mixed, and boundary lubrication. In full-film lubrication, the surfaces in contact are totally separated by a lubricant. When the lubricating film is not adequately thick compared to the surface's roughness, it is known as mixed lubrication. Therefore, in this regime, the friction increases when more asperities get in contact. For the boundary lubrication regime, the lubricating film is not sufficiently thick compared to the surface's roughness. The key objective with this lubrication regime is to reduce both wheel and rail wear, which in turn would reduce energy usage and sometimes lessens noise.

Importance of the Application of Lubricants on Railway Tracks Extended rail life

One of the most important functions for which lubrication of railway tracks is important is the minimization of friction between the wheel flange and rail interface. Lubrication is extremely important in the curves in the railway tracks, where side cutting of rails often occurs. If the rail tracks are unlubricated, the longevity of the rails will suffer, and they will need to be replaced frequently. Regular rail lubrication increases the longevity of these rails.

A study from Railway Tie Association has revealed that the act of lubricating railway tracks could reduce rail wear by a factor of 100 when compared with the unlubricated railway tracks. However, under real conditions, the lubricated rails can endure approximately twice the tonnage of an unlubricated rail before requiring any replacement. The potential life span of the rails can be increased significantly by lubrication. This report revealed the importance of routine rail lubrication as per its maintenance regime.

Decrease in fuel consumption

Studies have shown that the use of rail lubrication improves fuel economy manifold and significantly reduces the annual fuel cost.

The average fuel consumption for trains running on unlubricated rail is 5900 gallons of fuel per million gross tons (MGT). On the contrary, researchers found that trains running on lubricated rail consume 31% less fuel, i.e., 4100 gallons per MGT.

A similar study conducted by the Federal Railroad Administration, where top-of-the-line rail lubrication systems were used, reported an average fuel saving of 7.7%.

Reduction in noise

Another important attribute of rail lubrication is noise reduction.

Maintenance benefits

Lubrication reduces labor costs and extends repair intervals.

Other operational benefits

Lubrication reduces unplanned downtime, increases the reliability of equipment, and reduces the risk of derailments.

Negative Effects of Lubricants on Railway Tracks

Lubricants are used to reduce wear and tear. The use of the wrong lubricant can also have a negative effect. For example, if the lubricant settles down to the rail ball, it will reduce friction. Lubricants can also cause crack tip pressurization.

Different Methods of Lubrication in Railways and their Importance

In the world's railway system, three different methods are used for lubricating the railway tracks. These are: **Wayside- On-board and Hi-rail lubrication**

Wayside lubrication system

This is the most popular method of rail lubrication. This system of lubrication allows a consistent and controlled volume application of lubricants on the rail. They hold grease or friction modifier in place, allowing the wheels to grab and carry it around the track curve. Some of the advantages of the wayside lubrication system with drilled channels are no clog lubrication, cost-effective, and accurate metering of grease.

On-board lubrication systems

In this system of lubrication, two lubricants are used, for example, grease and solid stick. The spray grease system is the most commonly used method of rail lubrication across Europe where lubricants are applied in a thin layer by direct contact. Two of the advantages of an on-board lubrication system are easy maintenance and inspection.

Hi-rail lubrication

This system of lubrication uses a sophisticated mobile truck for grease application via a nozzle, which allows a thin bead of lubricant along the rail gauge face.

Some of the Commonly Used Lubricants in the Railway Tracks

Interflon lubricants

Interflon lubricants are used to maintain Network Rail tracks. Interflon has successfully devised a technology to lubricate (Interflon Lube EP) without dismantling them. This significantly saves time as previously such maintenance would require several months.

After Interflon Lube EP penetrates the joints, it provides a long-term low friction coating, which, in turn, improves the performance of the joint by reducing the friction by 91%. Application of another product along the switch rail, i.e., Interflon Grease OG, a hard-wearing transparent coating, makes inspection for defects easier and keeps the rail well lubricated.

SKF and Lincoln automatic lubrication systems

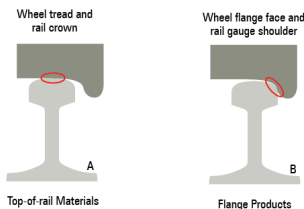
Thousands of trains operate smoothly owing to SKF and Lincoln automatic lubrication systems. SKF EasyRail on-board systems provide flexibility with variable setting options for railway operators and are highly effective.

DropsA lubrication system

Track-Lube is a lubricating system that is highly effective for the rail curve. This is a reliable system that can withstand severe environmental conditions and whose control system is connected to a network connection, such that it can communicate with a remote laptop, PC, or PLC (programmable logic controller).



Wheel-Rail Contact Points



Source: Ingram Tibology
LubzerGreases.com



Getting the train moving 25

www

The adhesion railway relies on a combination of friction and weight to start a train.

The heaviest trains require the highest friction and the heaviest locomotive. The friction can vary a great deal, but it was known on early railways that sand helped, and it is still used today, even on locomotives with modern traction controls. To start the heaviest trains, the locomotive must be as heavy as can be tolerated by the bridges along the route and the track itself. The weight of the locomotive must be shared equally by the wheels that are driven, with no weight transfer as the starting force builds. The wheels must turn with a steady driving force on the very small contact area of about 1 cm² between each wheel and the top of the rail. The top of the rail must be dry, with no man-made or weather-related contamination, such as oil or rain. Friction-enhancing sand or an equivalent is needed. The driving wheels must turn faster than the locomotive is moving (known as creep control) to generate the maximum coefficient of friction, and the axles must be driven independently with their own controller because different axles will see different conditions. The maximum available friction occurs when the wheels are slipping/creeping. If contamination is unavoidable the wheels must be driven with more creep because, although friction is lowered with contamination, the maximum obtainable under those conditions occurs at greater values of creep. The controllers must respond to different friction conditions along the track.

Some of the starting requirements were a challenge for steam locomotive designers – "sanding systems that did not work, controls that were inconvenient to operate, lubrication that spewed oil everywhere, drains that wetted the rails, and so on.." Others had to wait for modern electric transmissions on diesel and electric locomotives.

The frictional force on the rails and the amount of wheel slip drops steadily as the train picks up speed.

A driven wheel does not roll freely but turns faster than the corresponding locomotive velocity. The difference between the two is known as the "slip velocity". "Slip" is the "slip velocity" compared to the "vehicle velocity". When a wheel rolls freely along the rail the contact patch is in what is known as a "stick" condition. If the wheel is driven or braked the proportion of the contact patch with the "stick" condition gets smaller and a gradually increasing proportion is in what is known as a "slip condition". This diminishing "stick" area and increasing "slip" area supports a gradual increase in the traction or braking torque that can be sustained as the force at the wheel rim increases until the whole area is "slip". The "slip" area provides the traction. During the transition from the "all-stick" no-torque to the "all-slip" condition the wheel has had a gradual increase in slip, also known as creep and creepage.

High adhesion locomotives control wheel creep to give maximum effort when starting and pulling a heavy train slowly.

Slip is the additional speed that the wheel has and creep is the slip level divided by the locomotive speed. These parameters are those that are measured and which go into the creep controller.

Sanding

On an adhesion railway, most locomotives will have a sand containment vessel. Properly dried sand can be dropped onto the rail to improve traction under slippery conditions.



The sand is most often applied using compressed air via tower, crane, silo or train. When an engine slips, particularly when starting a heavy train, sand applied at the front of the driving wheels greatly aids in tractive effort causing the train to "lift", or to commence the motion intended by the engine driver.

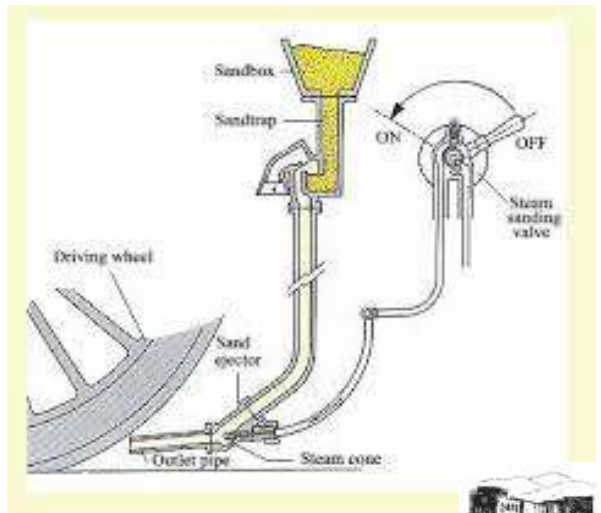
Sanding however also has some negative effects. It can cause a "sandfilm", which consists of crushed sand, that is compressed to a film on the track where the wheels make contact.

Together with some moisture on the track, which acts as a light adhesive and keeps the applied sand on the track, the wheels "bake" the crushed sand into a more solid layer of sand.

Because the sand is applied to the first wheels on the locomotive, the following wheels

may run, at least partially and for a limited time, on a layer of sand (sandfilm).

While travelling this means that electric locomotives may lose contact to the track-ground, causing the locomotive to create electromagnetic interference and currents through the couplers. In standstill, when the locomotive is parked, track circuits may detect an empty track because the locomotive is electrically isolated from the track.



RailMishaps

www

A driver is facing charges after his car was struck by a train in downtown Newark on March 9, police said.

The crash happened just before 5 p.m. at the CSX rail crossing at West Main Street, according to Lt. Andrew Rubin, a spokesman for the Newark Police Department.

The driver, a 31-year-old New Castle man whose name police did not release, was heading east on West Main Street and attempted to turn left onto the dogleg roadway that leads to New London Road, Rubin said. Instead, he turned left onto the railroad tracks, and his Nissan Altima got stuck.

The railroad gates activated, alerting the driver that a train was approaching. With the help of University of Delaware police officers and Good Samaritans, the



driver and two passengers were able to get out of the car before the train arrived.

A westbound train struck the car, pushing it off the tracks and damaging a railroad gate arm. No one was injured.

The road was closed for four and a half hours while the car was removed and the damaged railroad equipment was repaired.

The driver was cited for driving with a suspended license, inattentive driving and driving off the roadway.

The crash came just four days after an earlier incident at the same rail crossing. Shortly after 1 a.m. March 5, a drunk woman drove off the roadway and got her car stuck on the tracks, police said. She abandoned the car and started to walk away toward the Deer Park Tavern and then hit a police officer who was trying to detain her.

The woman was charged with DUI and offensive touching of a police officer.

Train strikes at that location are nothing new. Since 1978, at least 15 crashes have occurred at the railroad crossing at West Main Street and New London Road.

After a 2015 incident, officials installed orange bollards, additional pavement markings and new signage to better delineate the crossing.



28 PATHETIC

Arthur Hayes

Great works of Art. Can't call them a railway. Boy, I'm glad I don't model today's railways.



July 2023

Full Frontal ²⁹

Www

Southern Pacific EMD SD70M



T. McAdams Photo

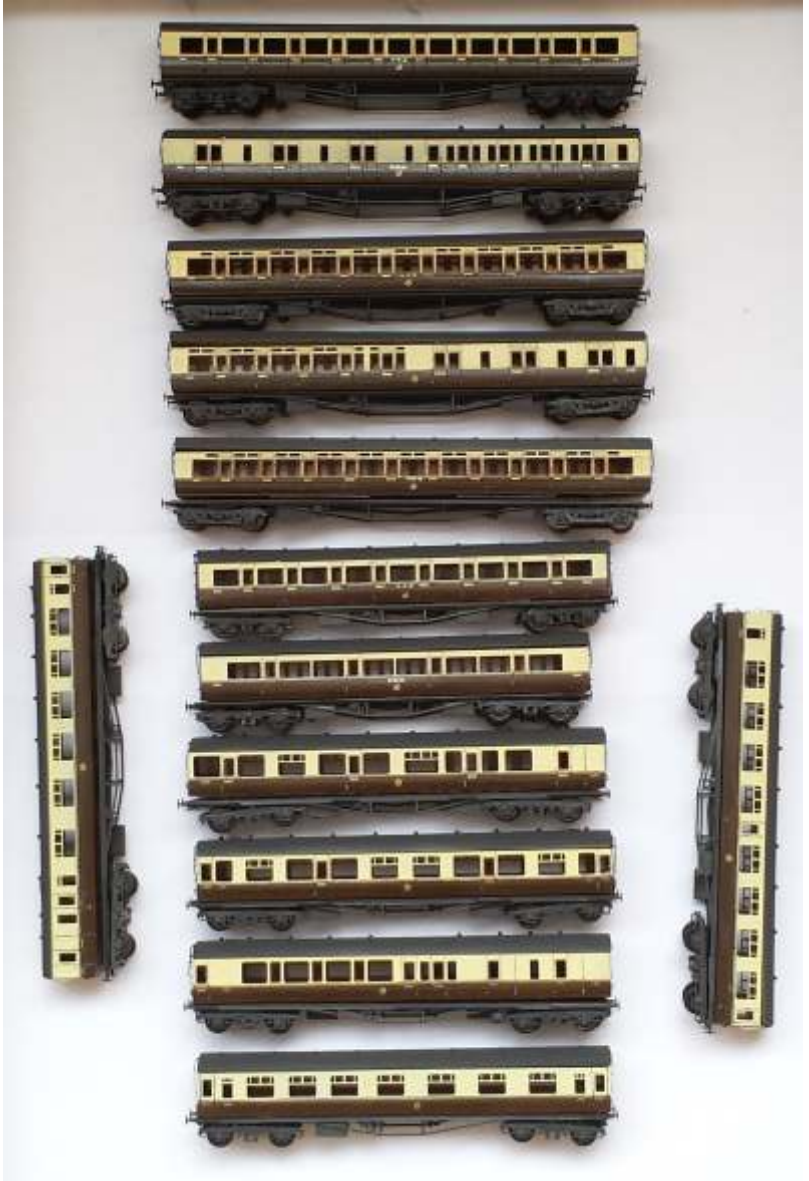
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MODELLERS CORNER

Here is a pic of the coaches I completed at the start of the virus lockdown. The GWR roundel on some of the coaches from Fox transfers, which I already had – but the rest are from your printing.

All the LNER decals have sold – mostly to 2 modellers who are building mainline LNER 1930's layouts, and they are after more. Part of the reason for my getting in touch. One of them is my colleague involved in Ivybridge.

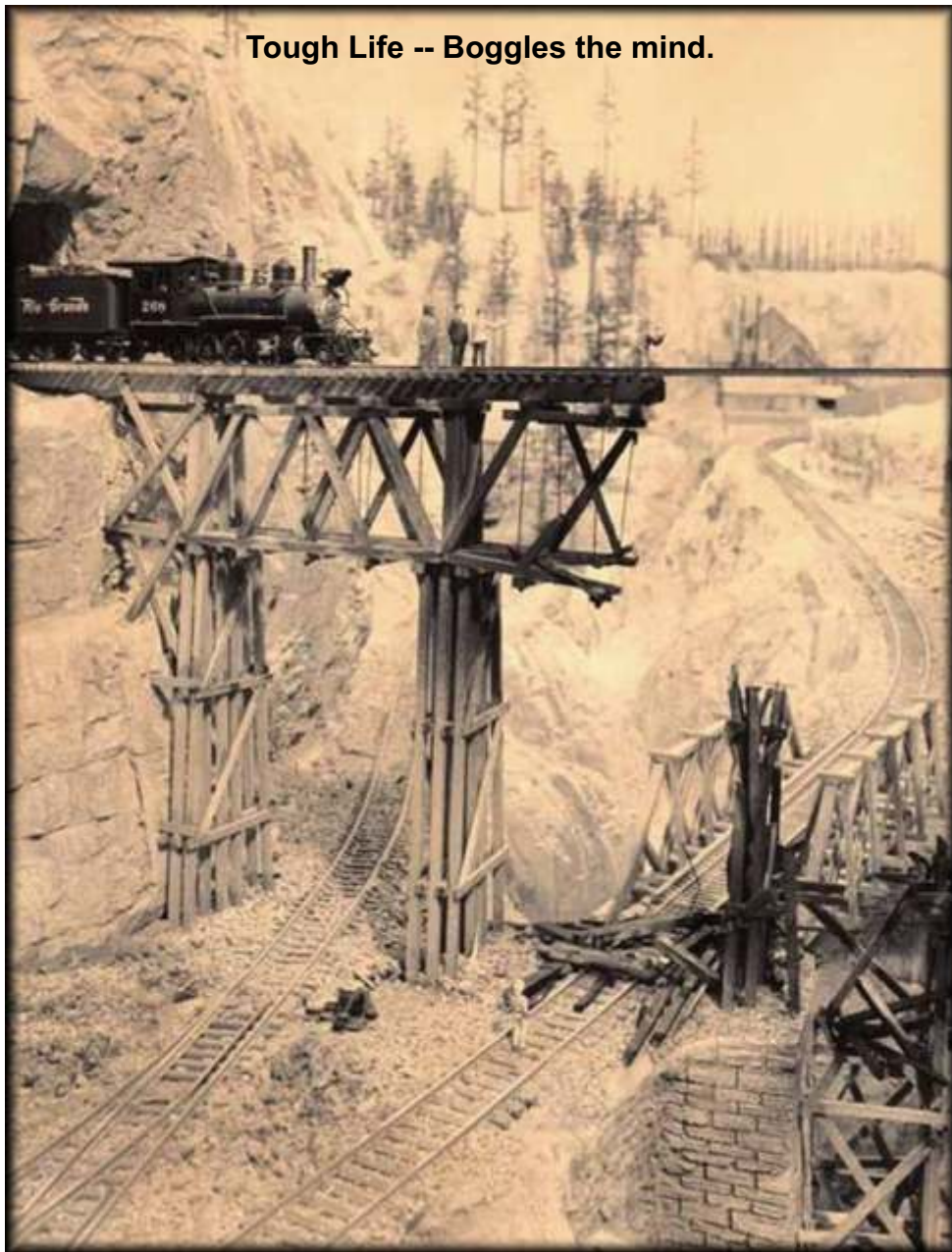


Lumber jacks, forestry, & trains, Pac NW

31

John Lebsant

Tough Life -- Boggles the mind.



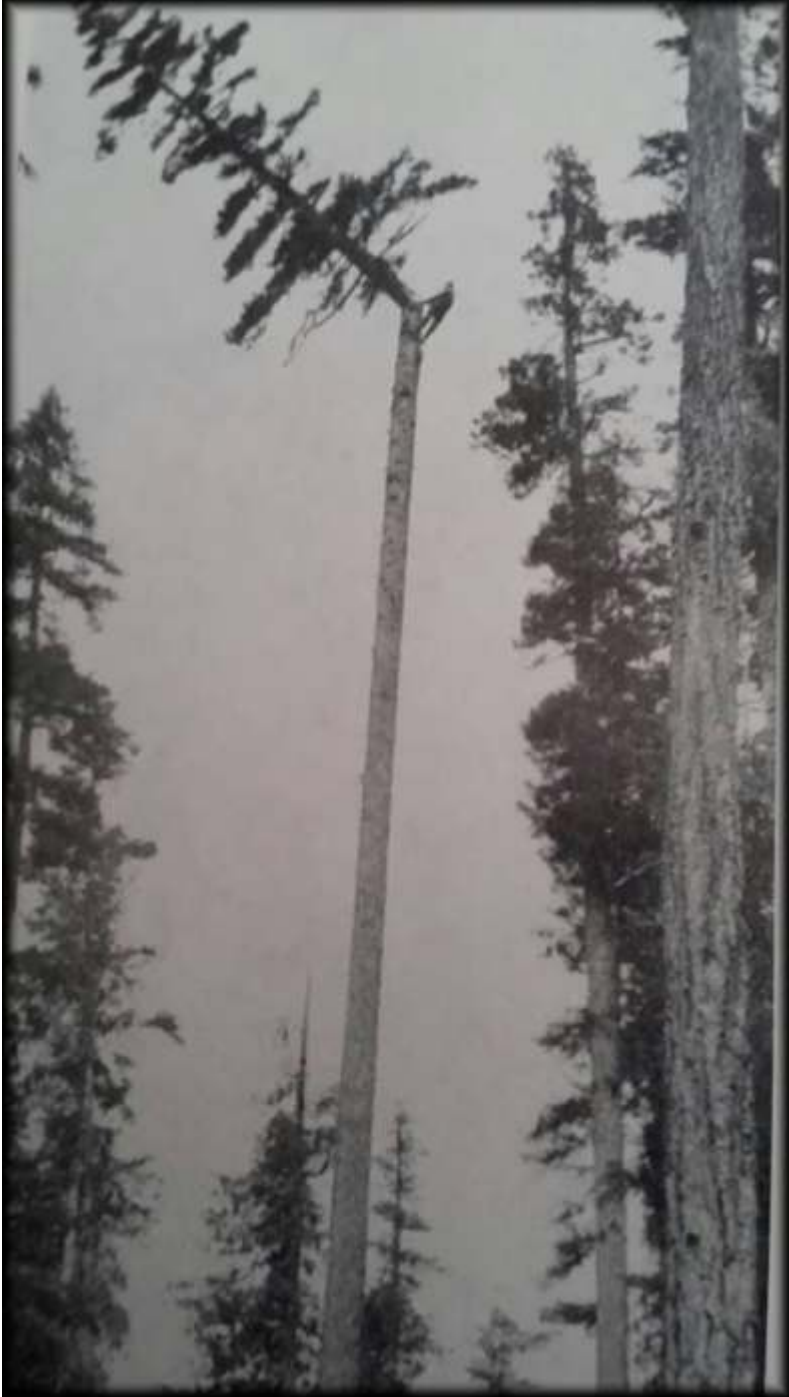
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Continued on page 36





OOPS!

Track Failures

www



Explore

NOTE: - Dimensions ascertained by photogrammetry
exact accuracy not guaranteed

Queensland's Narrower Gauges

<https://www.zelmeroz.com/canesig/>
 scale 1/4 inch = 1 foot
<https://www.zelmeroz.com/mrgc/>

drawn by Jim Fairgus, 2007
 information John Dennis
 Designer Jim Fairgus, 2007

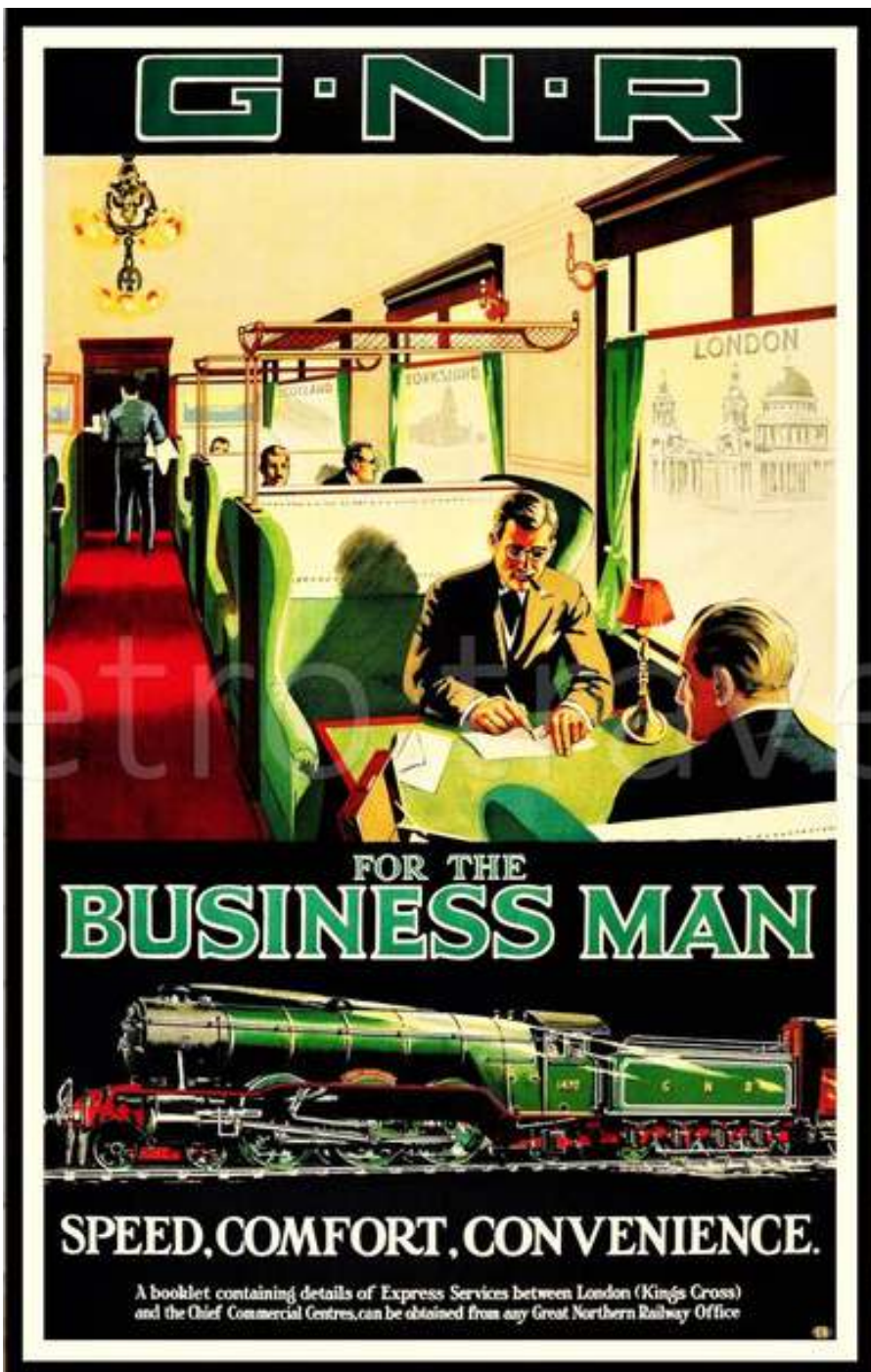


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<https://www.angrms.org.au/>
<https://lrrsa.wildapricot.org/>



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G·N·R

LONDON

FOR THE
BUSINESS MAN

SPEED, COMFORT, CONVENIENCE.

A booklet containing details of Express Services between London (Kings Cross) and the Chief Commercial Centres, can be obtained from any Great Northern Railway Office

The advertisement features a central illustration of a train carriage interior. A man in a suit is seated at a table, writing, while another man sits opposite him. The carriage has green seats and a red carpet. A window shows a view of London with St. Paul's Cathedral. The G.N.R. logo is at the top, and a steam locomotive is at the bottom.