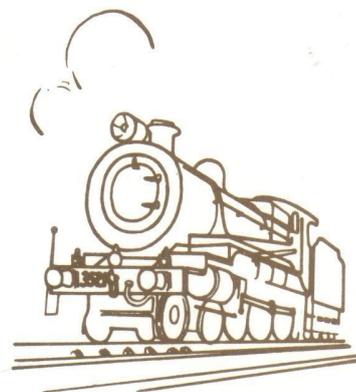


Sydney Live Steam Locomotive Society

Anthony Road, West Ryde, N.S.W.

'Newsletter'

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February 2019



James Sanders' brand new and nicely finished 12 class locomotive seen here prior to the New Year Eve's run. James built this loco using some bits left over from past member Rod Brown's 13 class which was finished by Warwick Allison. Loco wheels, cylinders and some other parts were available but the tender is all new. This must be the first 12 class with a Baldwin tender in 5 inch gauge.

November Running Day

This started as a cool grey day and even though rain was forecast we were lucky and even had some sun. Barry M and Graeme K were setting up early and soon followed by Deven, his son and visiting father in law. One of the cars on the blue set required a bogie change to have the set ready for the afternoon's service. Bernie cleaned the ground level signals, Warwick re-fitted a signal circuit board that had been repaired and as well as his usual

track clearing Graeme K washed the ticket office walls. John H had done considerable work to organise a selection of fuels for members to trial. The selection involved Tarrawonga, Welch anthracite, Welsh soft and Bacchus Marsh. This gave drivers the opportunity to see just what suits their locomotives the best.

Today was our Redkite Charity Day and we had a few of their volunteers present to give support for Paul T our gate keeper and move around the grounds with their collection boxes.

On the elevated track we had John H and 2-8-0 "Nigel Gresley" double heading with Tony K and the ten wheeler. They ran a six car very well all afternoon. Wayne ran his Baldwin 2-6-0 with one car. Near the end of the day Wayne took Janette and Bindi (the dog) for a ride to the amusement of those present. Bindi was much better behaved than some of our human passengers! Mike D had a drive of the 2-6-0 as well. John L was on the station



November running day scenes above Graeme Kirkby and 2401 led by Tony Eyre driving Ray Lee's 3803. Immediately above an Inner Main station scene with Dennis and his Tramfly leading Warwick on V1224 with Ross & Toneya in the platform. Left are our Redkite volunteers Nicola and Amy manning the gate with Theo helping too! Below left, Mike Dumble on the footplate of Wayne's Baldwin.

and David J was guard for the six car train.

On the ground level outer main Jim and Dom Mulholland had the 4-8-2 "Green Machine" out for a run. It ran well for the afternoon with Jim and Dom swapping driver and guard duties. The second train on the outer was made up of the Central West car set hauled by C3803, Ray L and 2401 4-6-2 Graeme K. Brad W was guard for this train and during the afternoon Tony E relieved Ray on the C38. The station was attended to by Tony E, Peter D and Carol

L.

On the inner main the Pullman set was hauled by Warwick's WAGR V 1224 assisted by visitor Dennis and his Sydney Steam Tram engine, a glorified Blowfly. This was an unusual combination but ran well for the afternoon. They had one mishap, a minor derailment when a passenger leaned out just as the train was moving off after a signal check. The second inner train started off with the Shay driven by Scott with Mick as guard. There was an injector problem experienced by the Shay and the locomotive was retired to the depot. The train was then taken over by Ross with his 0-6-2 Fowler "Toneya". Scott sorted out the injector issue and then raised steam again. Late in the afternoon the Shay replaced the Fowler but their run was cut short when a derailment leaving the station finished their afternoon. On the inner station we had Ian T, John S, a prospective member and Bruce H. In the signal box we had Deven, Martin D, Mark G and Barry M controlling the day's running. David T was track superintendent and was as well official photogra-





**Above: Tony and the 10 wheeler with John L as guard on the elevated on our December running day.
Right: Taking shelter from the storm!
Below: Garry and Impala on a one car train.**

pher while Warwick was busy driving. The canteen was well run by Elizabeth, Diane, Kim K and Joy. We gave 2098 rides which was not bad for the afternoon.

December Running Day

The few days before this running day were wet and stormy and cast doubts on whether the running day would be possible. The early morning was relatively clear then dark clouds came and went leaving us with a warm and humid afternoon. Graeme K opened up about 8.30am and the other early arrivals, John H, Barry M, Mark G and Mike worked at getting the grounds ready for the afternoon's activities. When the ground level cars were being checked it was found that there was a blockage in the vacuum line. A way round this problem was found and the testing was completed.

Simon spent some time sitting outside in the shade dealing with the assembly of a hose reel, described as being more complicated than a Rubik's cube. Andrew tested two gauge 1 boilers, one destined for a Z26 class built by James.

On the ground level track there was one train on the inner. This was hauled by Warwick's WAGR V1224. The



train ran well all afternoon with Andrew and Warwick driving in turns. Graham T was guard for the afternoon. On the outer track there were two trains sharing the light loadings. Ray Lee steamed C3506 to haul one train and Mick with the Wolgan Valley Shay ran the other. Guards for these trains were Arthur H with Ray's train and Brad W for the Shay. Station staff were Deven, John S, Ian T, Tony E, Jo-Anne and Carol L while Deven's son Ishan did a lot of train riding sitting right in front of the guard.

The elevated running saw Tony K with his Leishman built 4-6-0 American locomotive hauling three cars and John L riding guard. Wayne ran his Baldwin 2-6-0 with one car and Evan as well ran one car. With the small crowd our loadings were handled with ease. With afternoon tea time approaching Tony ran the 10 wheeler into the station loop and John L provided tea for all the workers. Station attendants were Bernie, Simon, Paul T and Mike D. During the afternoon Mike D had a drive of the Baldwin 2-6-0.

Ticket seller was Peter W assisted by Margo and we pro-



vided 532 rides for the afternoon. This gave us a 2018 total of 28,159 rides just short of the 2010 record total of 28,529. David T was on the gate and had a very easy afternoon even finding time to do some gardening. The canteen was looked after by Elizabeth, Margo, Diane, Joy and Lee. The servery was festooned by a big Merry Christmas sign. The signal box was attended to by Barry M, Mark G and Martin, they had enjoyed an easy day.

Late in the afternoon the clouds started to build up and our visitors started to leave for home, I think a few may have been checking the BOM rain radar. There was a short down pour about 4.20 pm. nearly all the locomotives were back in the depots except Evan and his Simplex which sheltered with many others at the elevated station. Once the down pour cleared the rest of the packing up was completed. There was more rain to come, especially for those heading home to the west. John L reported that it was unusual to see the storm fronts moving in from the north. As he headed for Seven Hills the rain and wind started at James Ruse



**Above: Ray Lee and 3506 drift downgrade on the December running day.
Right: Scott and the Shay pass Matt Lee and 3506 on the January running day.**

cleaned all the ground level carriage seats. Graeme K as well as his usual task clearing the tracks of leaves washed down the Ticket Office walls. There had been considerable vegetation growth despite how hard the garden roster crew had worked the in the heat previous Saturday. Garry B unloaded a pair of cantilever bogie passenger cars fitted with compressed air brakes that will eventually find their way to the Yeoval railway. On the elevated track we had a four car set hauled by Arthur with the Heritage 2-8-2 and John H and 2-8-0 "Nigel Gresley" as train engine. With the 2-8-2 up front John was free to trial a spark arrestor he had fitted in the 2-8-0's smoke box. Some of the coal John shovelled into the tender looked to be very poor quality but the loco ran well and at the end of the afternoon there was a big pile of ash when the smoke box door was opened. We hope to have a full report from this trial. The second train was a three car con-

Drive, there were some tree branches blown on the entry ramp to the M4 luckily not blocking the traffic. Once on the M4 the rain was torrential and care was needed. By Seven Hills and home the sun was out again! Warwick, averting the M4 toll, ventured on to Parramatta Rd from James Ruse Drive to rejoin the M4 and ended up in a serious traffic holdup as things had blown onto vehicles on Parramatta Rd. Such is our summer time weather.

January Running Day

This was a good train running day. It was a bit gloomy to start due to the clouds but the day stayed fine and was relatively comfortable. John H and Barry M opened up the grounds and got things underway. Dennis O'Brien



Now 18, David J takes charge on Tony's 10 wheeler on the January running day.

assist hauled by Tony K's ten wheeler. David J was driver for the afternoon, he has had his 18th birthday and can now control locomotives in passenger service on public running days! John L was guard for the four car train with Mike D guard on the other. Assisting at the station were Bill P, Brian K, Bernie, Paul T and David T. Some of the duties were swapped around. The crowd discovered the elevated station early on and we ran some very full trains.



On the inner main Warwick ran his WAGR V1224 with Andrew starting off at the regulator. A problem developed with the water feed and the locomotive was returned to the depot for attention. With a temporary hose around the problem the locomotive returned to its train with Warwick driving for a short time. There were a lot of passengers in the queue waiting for a chance to travel over the bridge. Brad W was guard and Ian T assisted on the station with a bit of swapped duties occurring. Garry B ran his recently obtained C38 class light engine on the inner. Gary has completed a lot of work improving the appearance of the loco. After running for a reasonable time the lubricator needed some attention so the

Duty Roster.

March E Lister, S Collier, G Buttel, B Millner, S Murray, G Tindale, P Brotchie, M Dumble, D Shirke.
April D Thomas, B Courtenay, G Croudace, S Larkin, L Pascoe, S Sorensen, D Lee, B Wilkinson, G Hague, M Dewhurst.
May John Hurst, J Lieshman, J Lyons, M Lee, J Mulholland, M Yule, W Allison, A Kidson, N Woolley, B Perrin.
June R Bishop, N Bates, J A Topp, R Lee, P Wagner, P Taffa, J Tulloch, Z Lee, N Kane, D Judex.

Gate Roster. March. J. Tulloch **April.** B Wilkinson **May.** N Woolley **June.** M Yule

Track Superintendent: March. M Murray **April.** D Thomas **May.** Neal Bates **June.** S Border

loco returned to the depot and packed away.

On the outer main Mick ran the Shay with Scott driving all afternoon. Mick acted as guard. The second train was the central west set hauled by Ray L's C3506 leading Graeme K with his 2401 4-6-2. Matt Lee was at the regulator of the C35 for the afternoon with Ray being guard. The C35 was cut off late afternoon and with reduced loading Graeme and 2401 continued till the end of the day. Station staff included Peter D, Paul B, Neal B and Bruce H.

The signal box was run by Barry M, Martin D and occasionally Warwick. Track super was Stephen B and the gate was managed by Graham T assisted by Jo-Anne T. The canteen was well run by Diane, Margo, Lee and Christine H. Peter W was our ticket seller, we provided 1669 rides which was well above the average for January.

On cleaning out ash pans there was almost a competition to see who had the largest pieces of Bacchus Marsh clinker!

Model Engineering activities.

At lunch time on the November running day we were able to inspect David J's HG van as it makes good progress to completion. On the table in the club house on our December running day we saw Mike D's recent acquisition, a very nice gauge 1 Glyn Valley tram. Evan had a 5" gauge cattle wagon, a wheel quartering jig and a

Andrew driving V1224 around the inner main curve on the January running day.



John Lyons, retro- fitted eccentric on his Avonside.

cleaned up and painted chassis for a 2 1/2" gauge Uranus, an LBSC designed 4-8-4. Garry showed off a NSWGR fireman's shovel he is restoring. On the January running day visitor David Archibald used our set of rolls to shape some roof pieces for a set of 4 wheel ICV wagons (the predecessor to the SRC).

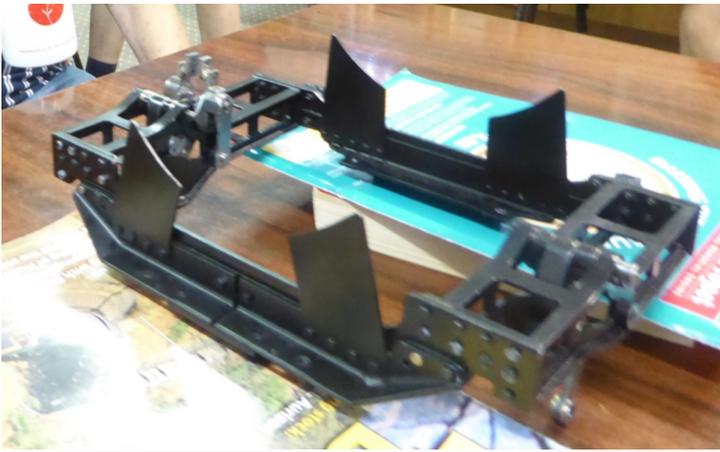
John L brought along the rear buffer beam and rear chassis stretcher for Bill P to examine as he continues with his I of W 0-4-4 tank locomotive. John L also showed the retro fitted eccentric for the mechanical lubricator drive. When you do not plan ahead well enough you can create more difficult design problems! Warwick showed off a six wheel Pullman car bogie, timber and iron construction as per prototype. As there are 12 of these required this one will help see if the assembly can be streamlined.

David T displayed more components for the Baker valve gear for his SA 620 class. This was the frame that supports the Baker Valve gear. It is a fabricated construction worked on patiently to give the appearance of a casting, excellent work!

Diary

2 March Members Meeting 0900 hrs and Members Day!
5 March Directors Meeting 2000hrs
16 March Public Running Day
19-22 April AALS Convention at QSMEE
20 April Public Running Day
7 May Directors Meeting 2000hrs
18 May Public Running Day & next Newsletter!
1 June President's Breakfast & AGM

Please see AME for other events.



Above: David Thomas' 620 class Baker gear frame, complete with gear on one side. Below: A Pullman car bogie being constructed by Warwick Allison.



On the grounds.

The major signalling work for the inner main has continued despite the very hot weather. David Lee and Peter W with many other members have been working on the various aspects of the project. Over a couple of mornings Peter W spent time in the shade terminating the cable ends. Early February saw more trenching carried out to take the cables to the inner ground level station.

We had a problem with one of the lifting bearings on our set of rolls and a new one was required. John L machined a new cast iron bush and Brad, with some help from Ross

milled the rest into shape. Brad then fitted the bearing and all was well. The rolls then had another misadventure where the threaded spindle that lifts or lowers the bearing on the right hand side was bent limiting the range of



Left: The new bearing for the rollers. Right: Christmas Party BBQing!

movement. Consideration was given to making a new one, 3/4"BSW thread, but after some thought and carefully directed hammer blows by Warwick the needed adjustment was again possible.

After Mick and John L sorted out the alignment problem on the stub points for the carriage shed siding Warwick worked on the levels for the storage siding and the transfer road to the GL depot and now all line up and the locking tongue will engage.

Ground level track work is an ongoing event. Paul D and Paul B are constantly replacing rusted MS sleepers with stainless steel ones to extend the life and reliability of the track.

Gardening is a constant task at this time of the year. David T puts in a lot of time working on plantings and directing the rest of us where mulching and disposal of leaves etc., can be used. Simon tends to the ticket office garden and running days often see a great display of colour. Sheila D and Martin continue to care for the once neglected clubhouse garden.

Christmas Party

The day was under way early with the West Ryde Neighbourhood Children's Centre setting up and preparing for their annual Christmas Party. Neal and Jo had attended on Friday evening and put up the Christmas decorations, which we am told were donated by the Tax Office!

Tony Kidson had the 10 wheeler with his Crate riding car, being train engine with Graeme Kirkby and 2401 as lead loco on the outer main. Ross Bishop and Toneya ran the service on the inner main. In both cases full loads were the order of the day. Ray had 3803 in steam and which David T drove for a while until the brake handle came adrift fairly early in the day. Garry Buttell had 3807 in steam and running light on the inner main. Eventually Tony and the 10 wheeler came off and then Garry returned to loco, turned and became lead loco in front of Graeme K and 2401. After the party was over Graeme came off and left Garry and 3807 to pull the cars themselves. I think he gained a lot of experience with the loco today! Emma also had some driv-



Election of our 2019 Board – Request for nominations

As required by our Rules, all current members of the board retire at the Annual General Meeting held in June each year. Nominations are required for all board positions for the incoming year.

Nominations need to be in writing, and provided well in advance so that all members can be advised of who is standing for election to the board.

Nomination forms are available in the clubhouse, and will be provided to all members for whom we have an email address. A form can be provided by mail on request to any Board member.

The nomination form gives an overview of the roles and responsibilities of each position. Each nomination must be signed by two members, and the person being nominated. The completed form **must** be provided to Simon Collier by **Thursday 2nd May**.

If you wish to stand, or intend to nominate another member to stand, you must follow this process. At the meeting itself, nominations from the floor will **not** be accepted, unless there are insufficient formal nominations. A vote will only be taken where there are more nominations than required for a position. There are a total of seven board positions: President, Vice President, Secretary, Treasurer, and three Directors.

Details of all nominees will be provided to all members with the formal Notice of Annual General Meeting, sent a few weeks before the meeting itself. Should there be multiple nominations for any position, then a Proxy Form will also be included, enabling you to vote for your Board even if you cannot physically attend the meeting.

Of the current board, the following have or intend to nominate for next year:

- Mick Murray President
- Evan Lister Vice President
- John Hurst Treasurer
- David Thomas Director
- Neal Bates Director
- Ross Bishop Director

Simon Collier, our secretary, having been a member of the board for nine years, is not re-nominating for 2019.

ing experience.

New Years Eve

Our New Years Eve run was fairly warm but not unbearable and was attended by about 25 members, family and friends. Four locos were in attendance, James 12 class, Warwick's 3609, Tony's 14XX and Neal's Butch. A derailment of the 12 + 36 double header ended those locos outing, while Tony suffered a seized axle box. Neal however ran very well! A nice BBQ tea was had with us moving inside to eat just as rain started to fall, however it didn't last long nor did it unduly affect proceedings. Lots of talk and a good time was had by all. We watched the 9pm fireworks on the TV and then headed home.

Below: Peter Wagner and David Lee digging holes to bury cable.



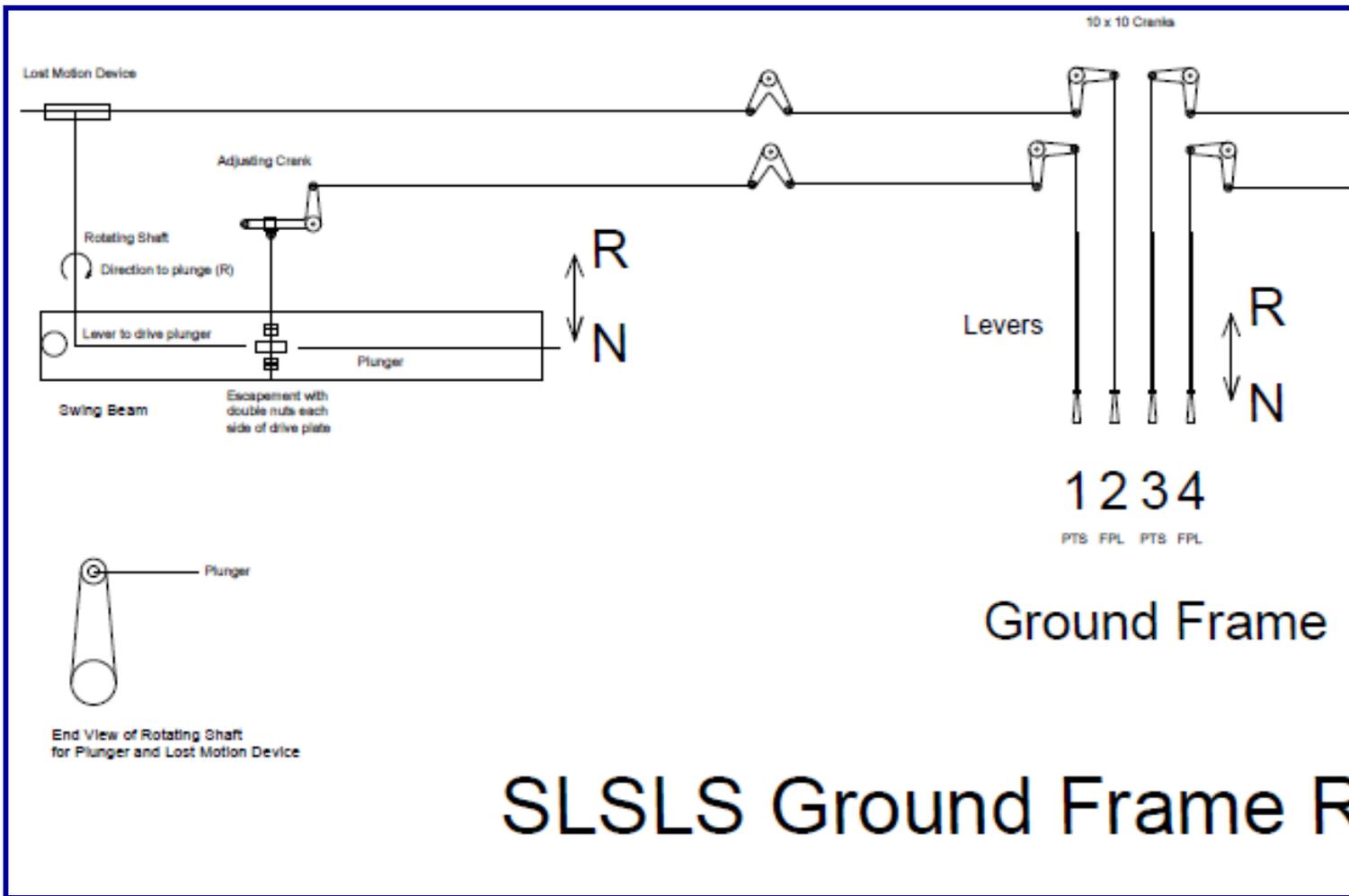
Editorial

Happy New Year and welcome to first SLSLS Newsletter for 2019. With the impending sorting out of our lease and various projects to renew and improve our grounds we can look towards a busy year. Our running days are the source of income to fund these activities. With the changes in demographic and advertising gained from social media, Facebook etc., etc., the running day is no longer just an easy afternoon carrying a few passengers! We are basically running a very intense small business activity in that time.

To make each of these public running days a success and enjoyable for ourselves we need a big roll up of members, actively involved in the running of the afternoon's railway operation.

I hope 2019 will be a very successful year for the SLSLS and one that we enjoy being part of and contributing to.

John Lyons Fill in Editor



SLSLS Ground Frame R

Elevated Track Ground Frame. Warwick Allison

Scope

These instructions describe how to adjust the channel rodding and cranks to achieve the correct operation of the swing stub points.

Description of Operation.

The ground frame is a NSW Type G. The levers impart a nominal 200mm (8 inches) travel to the channel rodding, depending on the hole they are connected to in the lower part of the lever.

On the full size railway, points have a throw of about 125mm. In the case of the stub points, we can theoretically drive the points at any location between the pivot and the end of the point. However as the cranks and compensators used are designed for a maximum of 200mm, (the cranks are 250mm (or 10 inches by 10 inches) and as the point movement should match the lever movement as far as possible, we drive the points at a location which can utilise the 200mm travel. As some adjustment is needed this attachment point should provide for (say) 150mm throw. As the drive plate is bolted to the stub point frame, no adjustment of this should be required. An adjusting crank near the points can increase or decrease the throw at the points. This works equally on both sides of the throw.

Below the stub points the operating rod has 4 nuts that allows for some escapement. It is important these are not tight against the drive plate as the plate changes orientation during operation, and it is important the drive rod does not jam.

There is no automatic compensation for expansion. Thus some adjustment changes could be expected in extremes of temperature. Thus adjustments are best made at a median ambient temperature (say 25C).

Points Travel Stops

Ensure the travel stops on the points are correctly adjusted.

Setting Up.

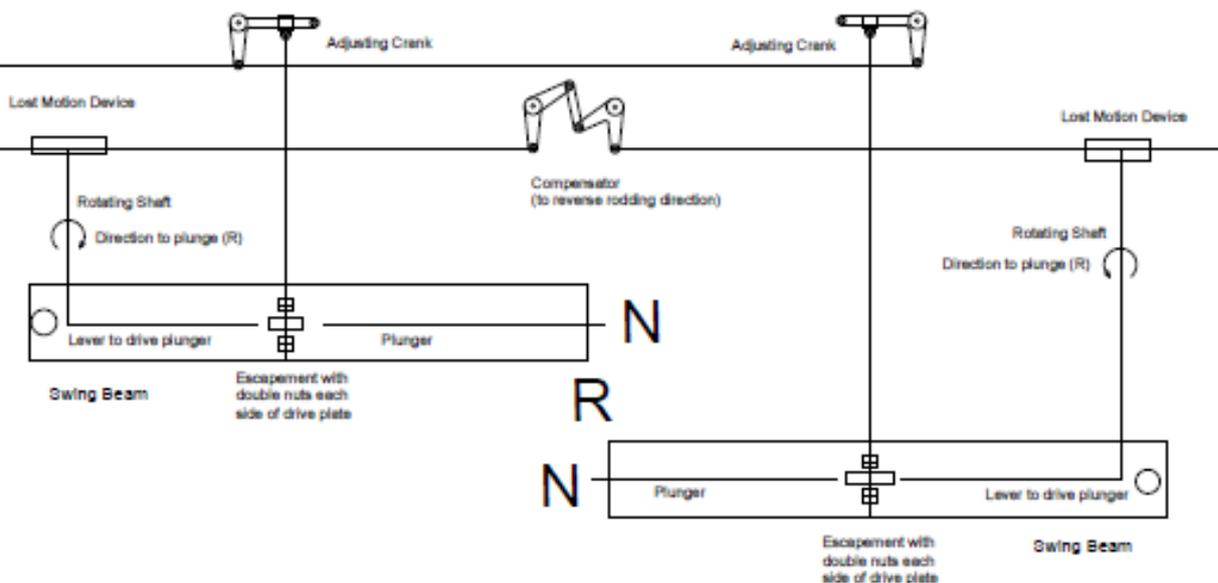
Initially all rodding and cranks should be set 'on centre'. Set the points lever mid stroke (vertical). At this position the points should be mid stroke and all cranks should be at right angles to their operating rodding. This should have been the result of all rod lengths being correctly built during construction. As the rod lengths are all fixed, the only adjustment is at the escapement beneath the points. Adjust this so the points are midstroke when the lever is vertical.

The adjusting cranks should be set about equal to the fixed arm length.

Ensure all joints are oiled and the area around the points is clear of any rubbish or obstruction.

Adjustments

The aim is to initially have the points move in direct relation



Crossover

Rodding Arrangement

RWA 05012019

to the lever. i.e. when the lever is over the points should just be fully over.

Move the lever to the full normal position. Adjust the operating rod nuts so that the rod drive has pushed the points to the closed position. Do not overtighten.

Move the lever to the full reverse position. Adjust the nuts on the other side to also ensure the point is pushed closed.

If there is insufficient escapement such that the drive plate binds during operation, then move the adjusting crank outwards to increase the operating rod travel. Repeat the nut adjustments. An escapement of 25mm or so is OK. (Escapement is where the nuts are clear of the drive plate on one side when the points are fully over. This gap needs to be taken up by the initial lever movement before the points move).

Testing

Operate the points several times over and back. Operate the lever firmly, slowly and smoothly. Do not yank or jerk or pull it violently. If the points do not make their full movement, then adjust the nuts on the operating rod until they do so. Once satisfied move the adjusting crank arm outwards slightly to place a small amount of 'spring' into the movement. Do not overdo the spring.

Excessive spring will put undue stress on the stops.

The adjusting crank is moved by releasing the securing screws and gently tapping with a large hammer.

Retighten the screws after adjustment.

Facing Point Locks

There is less adjustment required on the facing point locks as the amount of entry of the lock into the slot is not critical. An escapement is provided in the channel rodding to reduce the travel from the 200mm to the 50 mm or so required by the lock.

Unless dismantled this should require no adjustment, however does require occasional greasing.

Maintenance.

Corrosion is the main issue especially on the components that are needed for adjustment. Generous oiling of the adjusting cranks (especially the movable part of the crank and its locking screws) will assist in resisting corrosion.

Keep the FPL drives and stub point wheels clear of rubbish.

With temperature changes it can be expected that the 'spring' will change slightly. If the 'spring' is done correctly even though one side may end up biased more than the other, the point should still travel to its full extent. Equal spring should return when the temperature becomes closer to the adjustment temperature.

Over time, some movement of the cranks etc may occur from ground movements. This will require a re-setup as per these instructions.

Distance to a track....

James Sanders

Since moving to Yeoval, being an hour from the Orange Society of Model Engineers, steam ups have become a bit of an involved process, that is if you wanted to steam anything bigger than gauge one or go up and down the driveway on a section of 5" straight track without having to drive an hour. When we moved I schemed about whether it was possible to have an oval of track either in the backyard or going around the house. The ground isn't level, it is on a slightly falling block, but not extreme. I wanted somewhere that I could test or have a little continuous run without having to reverse all the time.

Whenever a steam friend came to visit, the vexing question would be raised. Did they think it possible? Secondly the domestic authorities had to be accounted for. In November schemes neared closer to reality when following a visit from Andrew I got my tape measure and measured the house block. Following this I transferred my envelope paper sketches to Autocad and then had a clear picture of the constraints I was operating with. With the location of the garage separate to the house in the backyard, maximum radius would be 8m. A little too tight for a 12 class.... No point going to the trouble of making curved track if your locomotive with the longer wheelbase won't fit around it. The second option was a little more involved, but permitted 9.7m radius curves, down the side of the house on one side and down the driveway on the other, joined by curves at front and back. Tight but not too tight. The domestic authorities stipulated that track in the front yard had to be temporary so that a non-train section of the property could be maintained. The track would have to be made so that it could be assembled and dismantled anticipating moving down the track...which would mean welded construction following SLSLS practice.

Construction

Having made plenty of straight sections of track already I realised that jiggging was the best method of construction. 10 x 25mm MS bar would be the rail of choice. Sections of 6m were purchased from Edcon Steel in Orange and cut in half. With 9.7m radius I calculated that I could make a circle of track made up of 3m arcs on the outer



rail, thus minimising waste. To make the first bit of track a jig was needed and I utilised the school workshop. In the workshop there are set of bar rollers with a crank. A student remarked when I was rolling rail sections that this was the first time he had ever seen anyone use the virtually brand new device! I think there hadn't been a need for making 5" track sections in Yeoval previously. An online calculator allowed me to work out several constraints, arc length, tangent length, offset and sector angle. Armed with these I used a straight section of steel and marked the length of the tangent and the midpoint. I rolled the outer rail and checked it against my "measuring" stick. Once I had the correct offset and tangent length (the rail had already been cut to arc length) I proceeded to roll the inner rail. I used track gauges to weld the section up, this was checked again and found to comply with the design.

Prior to doing any rolling or welding, rail lengths were prepared by cutting to final arc length and drilling the rail joiner holes utilising a jig set to West Ryde standards. Holes were drilled prior to rolling the rail sections. Sleepers were cut from 25 x 5mm MS flat bar by stacking lengths together and cutting on my HAFCO bandsaw. Fabrication of the 20 sections of track to make the curves took 2 - 3 days. Several hours were spent cutting the sleepers, thankfully the bandsaw stops automatically so I could busy myself with other jobs in the garage whilst keeping an eye on proceedings.

Laying and assembly

Laying track was fairly straightforward but a

couple of snags were encountered. I started laying out the curves where they needed to negotiate pinch points, such as the side gate and down the side of the house. The backyard section was laid first and gradually bolted together once I thought I had it in the right place. Track was jacked up to height where necessary with timber blocks and a trip down the road 8 kms towards Orange found a couple of utefulls of spoil to build the ground up to height. Our farming friends recommended it! The only catch was having to shovel them on to my tray without mechanical aid. This allowed the track to “climb” up evenly through the backyard. Track was tamped to ensure stability and where it went over the drive way a few tent pegs were used nearby to secure the “unballasted” sections.

The front yard required a bit of digging here and there to allow the track to rise and fall evenly. Thankfully the ground out the front was fairly sandy, especially under the big tree. When laying the front yard section I noted that it was going to foul the tree roots, I couldn't dig them out! So I considered what any self respecting user of Peco set track would do, that is removing a couple of straights to reduce the oval. There was one thing for it, shorten two straights that were down the sides of the house between the backyard section to move the track clear. This worked and much less digging was required.

Final bolting in the last spot required some help from my brother in law due to it being tight, there must have been some manufacturing error! We got it together on Christmas Eve. That same evening the Manning Wardle was steamed up and the first train ran over the newly completed track. A few joints had their bolts adjusted to ensure bumps were eliminated.

One can leave coal, shovel and fire irons trackside near the garage and fill up after many laps making driving fairly stress free. It was certainly worth the effort, it is quite enjoyable to be able to have tea, head outside in the evening light, steam up in front of your garage and have a few laps before shutting down just after sunset without having to travel too far.

What's next?

Since the track is just laid on the ground without ballast it moves, some dips and kinks are noticeable and more “sandy ballast” will need to be added to even things out. The next job will be to make up a set of points and put in a siding to spur off to the garage to allow locomotives to be stabled inside the garage and left to cool down. I also need to attend to some timber boards to make a level crossing to permit easier access to the clothes line as requested by the domestic authorities!

Visiting locos are most welcome. A bum truck with brakes is recommended as the track is up and down and track sections are short. Barracks are available. The new track doesn't replace the club track but certainly means that testing and playing can be done without having to wait till a Saturday or Wednesday during the school holidays. Another added bonus is that it allows adjustments to be carried out immediately whilst in steam just outside the workshop.

Railways of the Czech Republic

David Judex

The Czech Republic. A reasonably-sized country located within the heart of Europe and within the former borders of the Iron Curtain. It shares its western border with Germany, the northern border with Poland and its southern and eastern borders with Austria and Slovakia respectively. Established out of the collapse of the Austro-Hungarian Empire following the events of World War I as Czechoslovakia, it was invaded by Nazi Germany, early in the Second World War. From 1918 the railways in the country were operated by Československé státní dráhy (Czechoslovak State Railways, abbreviated as ČSD), however, after the Nazi invasion, the country was dissolved into the regions of Bohemia-Moravia and Slovakia with each having their own rail operators. After both regions were liberated by the Allies in 1945, ČSD was reinstated. In 1968 the country was invaded again, however, this time by the Soviet Union and it wasn't until 1990 that it was free from foreign control. It left an influence on the country's railways in the station design being plain, simplistic and purely functional.

All Czech locomotives at the time had a Soviet star fitted to the smokebox door on steam locomotives or one painted underneath the front windscreen on diesel and electric locomotives. In 1993, Czechoslovakia was peacefully dissolved into the separate states of the Czech Republic and Slovakia. Today the railways in the Czech Republic are run by the government owned operator of České dráhy (Czech Railways, abbreviated as ČD) and freight trains are run by the government subsidiary ČD Cargo both employing the latest livery of a two tone blue and white. Several small private companies such as Regiojet (Yellow livery) and Leo Express (Black & Gold livery) operate competitive luxury services between main cities and other private companies operate limited freight services.

The Czech Republic boasts Europe's first horse-drawn railway between the cities of České Budějovice and Linz (today within Austria) and first locomotive-hauled railway between Břeclav and Vienna, Austria. It is also the birthplace of the brand Škoda. In Australia it is known as the car manufacturer but in Europe it manufactures locomotives, rolling stock, trams and trolleybuses on top of automobiles. The auto sector of the company, however, is owned by Volkswagen and is now separate from the rest of the brand. Českomoravská Kolben-Daněk (ČKD) was another manufacturer that built steam and diesel locomotives, metro trains and trams that were exported to the USSR and its allies, including China, North Korea, Syria, Iraq and many of the other Eastern Block countries. It also manufactured electrical equipment for Škoda and another auto company called Tatra before these companies became self-sufficient. This government owned manufacturer has since been divided up and sold to private companies.

On a recent trip to the country in late 2018 with family to visit relatives that live there, the rail system was well utilised to get around. After touching down in Prague Airport and catching a bus to Praha hlavní nádraží (Prague Main Railway Station, often abbreviated as Praha hl.n) my first exposure to Czech trains, after almost 10 years, was catching the train from Prague to the town of Otrokovice. Praha hl.n is one of four significant stations in Prague and one of two that international trains operate out of. On the way through the city on the bus we went through the city centre which was made up the typical European buildings which you would see in an Australian coffee advertisement, with rows of adjoined shops of European style and cobblestone roads. Prague utilises an extensive tram system alongside buses and a Metro train network comprising of three lines (A, B and C) and is the fifth busiest Metro system in Europe.



Photo 1: A Czech Railways class 371 dual-voltage electric locomotive rests with its train at Praha hl.n with the station building serving as a backdrop. The locomotive is in an older ČD livery and has a given name of 'Pepin' written above the left set of marker lights.

The station architecture of Praha hl.n itself was marvelous, featuring a wonderful architecturally decorated main hall. It was something that Michael Portillo would be impressed by! On the platforms I could only see locomotive hauled passenger trains with both diesel and electric locos pulling sets of carriages. Despite this local electric multiple units, railmotors, international trains and Czech Pendolino trains operate out of this station. On several occasions I spotted locomotives running around their trains to start new services. Our particular train was made up of a Czech Railways class 371 dual-voltage (15kV AC & 3kV DC) electric locomotive hauling 5 compartment and saloon type carriages, bound for Slovakia. After finding our seats it was a 3 hour journey to the other side of the country. As is similar for many European countries the towns and cities are evenly spread. Even though we caught the government run service I still found it quite luxurious in

comparison to Sydney's trains! The carriage attendants on each long distance train were equipped with a refreshments trolley that would come around every so often. This was only introduced to compete with RegioJet's offer of a free beverage on every service!

The trip itself was never boring as the scenery switched between spectacular European scenery consisting of forests and villages to busy railway yards. Not to mention other passing trains. Just about every town had an active rail yard, varying in size, with some of the larger yards having rakes of wagons or a line up of standby locomotives or both. It was good to see that the railways are utilised well here. We passed at least two major rail workshops with dozens of carriages, rail motors and locomotives being serviced, both of which had multiple operational turntables.

We got off at the station of Otrokovice on the way to the town of Zlín. Zlín is served by a single line branch line from Otrokovice with a less frequent service so it was easier to disembark here. Otrokovice is on the international rail corridor between Poland and Austria.

The city of Zlín can brag a light aircraft manufacturing plant of Zlín Aviation and the famous footwear brand of Baťa established by Czech entrepreneur Tomáš Baťa. Tomáš also founded Zlín Aviation, as he was a keen aviator who also established the local flying club and donated a plane to the city. Unfortunately, he was killed in an aircraft accident in Otrokovice in 1932. During Soviet occupation Zlín was renamed Gottwaldov in honour of Klement Gottwald, the former Secretary of the Communist Party of the Czechoslovakia.

Photo 2: The main hall of Praha hl.n, featuring the coat of arms of various Czech cities and a number of sculptures of Czech saints.





Photo 3: Otrokovice station basks in the European winter sun as a Regio Nova idles shortly after arriving from Vizovice.

After having a chance to catch trains on the branch line I got on at the closest station to where we were staying, which was Zlín-střed (střed meaning 'centre' - centre of Zlín). The naming system of Czech railway stations works as follows; the name on the left of the hyphen is the town name and is common for all of the stations within that particular town. If it is the only station for that town it will just be called the town's name alone. The name on the right of the hyphen is the suburb or the location of the station within the town. Within larger cities such as Prague and Brno with multiple large stations the city's name would be followed by the station's status or its location within the city and then followed by 'nádraží', meaning station. For example Praha hlavní nádraží, Prague Main Railway Station.

Zlín-střed is located roughly halfway down the line (as the name suggests). Vizovice, the terminus of the line, is within the Zlín district and as a result the rail maps say that the line just goes to "Zlín". The line has a total of 9 stations. Zlín-střed station itself has several sidings and loops that were fairly overgrown but still in use. It also had a rundown goods shed but 100m up the line was a network of active

Photo 4: A RegioShark pauses at Zlín-střed station, en route to Vizovice. The name of this class of articulated diesel railcar owes to the unusual cab shape. The smoke stacks of the power station can be seen in the background.



sidings for a coal fired power station and other smaller factories in the area. There were usually several consists of open coal wagons waiting to be unloaded and typically a yard pilot carrying out the shunting operations. Further down the line towards Vizovice at a town called Lípa was a series of sidings for a container terminal and as a result light engines and container trains traversed the line in both directions several times a day. Vizovice, has two loops around the main platform and a logging siding, which appeared to be disused as the logs were stacked across the rails.

After purchasing tickets there was already a train waiting on the 'platform' - a raised ballast mound next to the tracks. It was a class 814/914 rail motor set known as a RegioNova ('Nova' meaning new, as a noun). It was quite an interesting ride going past several disused factories with overgrown sidings adding an eerie feel to the place, not to mention the power station. Eventually the tracks ran parallel to the main road with a handful of level crossings at the road intersections. At this section of track the trains would often run parallel to the city's trolley-buses. There were several stops right next to the road with tiny, often graffitied, corrugated iron shelters and concrete slabs as platforms that were around sleeper height. These were request stops and the late evening services rarely stopped at any of these.

After arriving at Otrokovice I had a chance to see the station and yard properly. The station had a raised concrete island platform and three other platforms that were half height. Opposite these platforms was the marshalling yard. At any given day it was common to see a variety of freight trains including trains carrying; logs, brand new cars on transporter wagons, oil tankers, mineral and coal wagons and not to mention the containers trains from Lípa. There was also a goods shed next to the station building, commonly where the yard pilots and light engines would be stabled. Further up the yard past the goods shed was where some of the rail-motors for the branch line were stored. The RegioNova stopped alongside the platform closest to the station building. It began to become clear that rail safety was quite relaxed in comparison to Sydney. An example of this was that, even if you were 5 minutes away from the centre of Prague, lineside fencing was minimal - even if the tracks were quadruplicated with a speed limit of 160km/h! At Otrokovice, one major observation that I made was that no one cared if you walked on the tracks, provided you didn't get hit by a train, that is! There were several large groups of people crossing both ends of the yards and the main lines where there were no paths or crossings. Just straight over the tracks. These were around 10 tracks in total! It appears to me that the general public here have more common sense when it comes to moving trains. When crossing to get to another platform I definitely had to have a heightened sense of awareness, as the speed limit was also 160 km/h and electric locomotives are very quiet! For the trip back I had a RegioShark which had quite a strong heating system! Being winter at this time of year temperatures were around 0°C during most of the day.

On multiple occasions, to see the other side of the fam-



Photo 5: Night begins to fall on Brno hlavní nádraží (Brno Main Railway Station). This photo was taken a number of days before the station was partially closed for upgrades.

ily, we travelled to the city of Brno. Brno is the largest city in the Republic after Prague and is 90 kilometres west of Otrokovice. There is no direct rail link and to get there it involved boarding a train originating at Olomouc (a historic city north-west of Otrokovice) at Otrokovice heading south-west which would arrive at Břeclav, the closest rail hub to the Austrian border, and change direction without passengers having to alight, heading north-west to Brno hlavní nádraží (Brno Main Railway Station, also often abbreviated as Brno hl.n). The took approximately 1.5 hours in each direction. To complicate things further after the first time arriving at Brno hl.n, the station was partially shut down for upgrades that would span 1 year. This would include the upgrading of the station's security systems and upgrading of existing track, points and associated signalling. Trains from Břeclav, Prague and other main centres were, as a result, diverted to the smaller station of Brno dolní nádraží (Brno Lower Station) - a stark contrast from a station

Photo 6: With light snowfall earlier in the day setting the scene, this RegioJet train pulls into Brno dolní nádraží (Brno Lower Station). This service is one of many that were diverted from Brno hl.n due to the upgrades.



with 10 platforms to a station with 3. Local Brno trains still arrived and departed from Brno hl.n.

The way that platforms are ordered in Europe is also quite different. Instead of finding what platform a train is departing from, the departure boards show what 'track' a train will arrive and depart from. The tracks are numbered and the platforms are also divided up into multiple sections, however, this only applies to larger stations such as in Prague and Brno. A train would be allocated a track and a section (or sections depending of the length of the train) to collect passengers from. Although unusual to non-Europeans, it is a quite a clever arrangement as it enables multiple trains to depart from the same 'track' in the same or opposite directions simultaneously. Sometimes the track that a train would arrive and depart from would only be determined within 5 minutes before it was due to arrive, depending on the availability of platforms. It was sometimes confusing as you would be standing on

the correct platform and a rail motor would then pull up, when you are expecting a 5-car EMU and then you realise that you are in the wrong section of the platform!

There has been a debate surrounding Brno hl.n, for close to 100 years, whether or not to move the entire station from its current location to one of several proposed locations as the station is fast approaching its full operating capacity. This is in order to cope with the expanding patronage and population as longer trains are running and more of them, especially due to increasing competition between rail operators. Brno hl.n receives trains operated by ČD, RegioJet, Železničná spoločnosť Slovensko (Slovakian Railways, ZSSK), Austrian Federal Railways (OBB) all utilising the station as well as local ČD trains. This goes to show that even sophisticated and well organised railway networks can have capacity problems of this nature.

Railway preservation is also notably more extensive and present in the Czech Republic. The Czech Railways own approximately 570 historic rail vehicles in total under the brand of ČD Nostalgie (Czech Railways Nostalgia). The National Technical Museum (NTM) in Prague also owns several steam locomotives that are on loan to ČD Nostalgie which are operational. ČD Nostalgie has a museum complex in the village of Lužná, which is west of Prague. Here, close to 30 steam locomotives are maintained, operated and well utilised on tours and special trips. This museum also restores and operates diesel and electric locomotives, railmotors, passenger EMUs, and rolling stock. It also happened to be the 100th year anniversary of the Czech Railways and to commemorate, there were many scheduled heritage runs throughout the year of 2018 of not just steam, but preserved diesel locomotives, railmotors, electric locomotives and passenger EMUs. Some brand new ČD electric locomotives were also painted in commemorative liveries.



Photo 7: The Mikado tank engine numbered 433.002 arrives at the station of Vsetín, with six former ČSD carriages in tow, running bunker first. This locomotive was built by ČKD in 1948 and was in service until the late 1970's.

During my time there I had a chance to see some preserved Czech steam at the town of Vsetín, which is close to the Slovakian border. It has a large yard with a locomotive shed and it is electrified. Oddly, waiting in the yard, was a fire truck and a police car. They didn't seem to be there for any emergency. The good thing (for me) was that the tour was 20 minutes late, giving me some extra time to scope out the station for a good spot for some arrival photos. The locomotive was in the form of a pretty Mikado branch line tank engine of the ČSD 433 class. This particular engine is the second in the class numbered 433.002 (001 is also preserved). It was fitted with a Geisel ejector and roller bearings - quite a modern design. It arrived rather quietly with a soft, high-pitched whistle wrapped in steam with 6 former ČSD carriages, running bunker first. Shortly after arriving, it then uncoupled from its carriages and proceeded to move off to one of the sidings next to the station car park. This was to rake the fire and top up the side tanks with water. With no water column in sight, this was done using a fire hose from the fire truck parked in the yard. The police car just drove off. Because of the relaxed safety of Czech railways there were no hi-visibility vests to spoil photos and I could get right up to the engine and take some more detailed photos. The engine was also decorated with a wreath on the smoke box door and a headboard that reads: "70 years of service". Around the side of the cab, around the number plate in particular, some decorative pine tree branches were fixed in place and under the number itself a small sign

reading: "Today for the last time...?". Unfortunately it appeared that this was this particular locomotive's last run.

During my time in the country, I enjoyed experiencing how differently the railways are run in comparison to anywhere in Australia. The rich history behind the railways intertwined with influence from foreign powers and regimes over the decades have added layers of interest and fascination that manifest themselves through both subtle ways such as derelict, line side buildings being reclaimed by nature or in plain sight such as a Soviet star attached to a smokebox door. This being accompanied by the country's own unique rail history helped by the design and development of the region's own locomotives and rolling stock and the way that the network developed. This, to me, being more interesting than a pass down of state-owned rail assets through various railway authorities into eventual privatisation, a situation facing NSW railways today.

As the Czech Republic looks to expand the railway network by increasing the average speed limit, upgrading existing infrastructure and introduce newer locomotives and rolling stock to keep up with European standards it looks as though the railways can only get better!

I do hope that this article has provided an insight into the railway system of another country and I would highly recommend a visit!



Photo 8: 433.002 sizzles in a siding at Vsetín as a firefighter prepares to attach the fire hose in order top up the side tanks. The wreath can be seen hung on the smokebox door in front of the Soviet star, which was fitted to the majority of standard gauge engines in the Czech Republic. Here is a good website that explains the history of the 433 class well, including technical history: http://lokomotivy.webzdarma.cz/433_0.htm Below: Garry Buttel testing his recent acquisition on our Christmas party day.



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Public Running Day is the **THIRD** Saturday in each month from 1.30pm. Entry is \$4 adults, \$2 children. Rides are \$2 each.

To ride on the trains, enclosed footwear must be worn.