



Newsletter of **THE PALMERSTON NORTH MODEL ENGINEERING CLUB INC**

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TRACK RUNNING

This is held on the **FIRST** and **THIRD** Sunday of each month, from 1 pm to 4 pm Summer and 1 pm to 3 pm during the Winter. All club members are welcome to attend and help out with loco coaling, watering and passenger marshalling - none of the tasks being at all

Visiting club members are always welcome at the track, at the monthly meeting, or if just visiting and wishing to make contact with members, please phone one of the above office bearers.

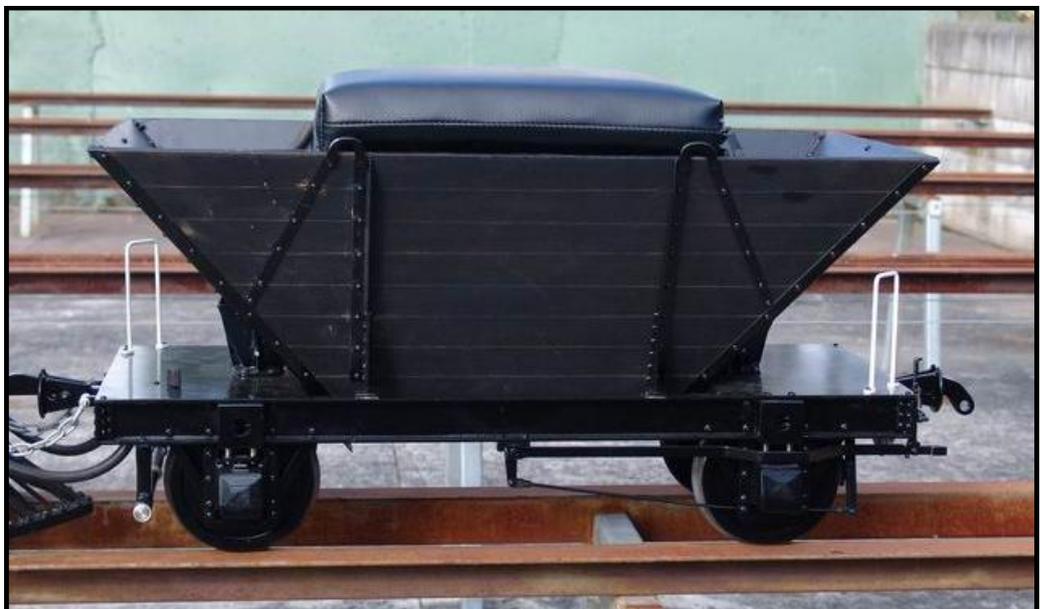
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This Months Featured Model



REPORT on the July Meeting.

Stan Corlett had some patterns for a new cylinder head for his two cylinder Metz car. He also had the first casting which was a failure as the core moved as it was not secured firmly enough.

Murray Bold had three bridges, all different, made for the Gauge 1 display at the upcoming Model Mee Exhibition.

Robert Edwards spoke on his experiences working in the Huntly Power Station (coal-fired), the Marsden Point Power Station (oil-fired) and the hydro station at Tongariro. Robert also had his small Unimat Lathe that he has fitted out with digital readouts taken from cheap digital callipers.



Ian McLellan had the Maintenance logbook for Ab 807, which was the first engine that he got to drive as a fitter. He was able to obtain the logbook when Ab 807 was scrapped.

Ken Neilsen had a drawing that he had done of Princess Elizabeth the present Queen before the Coronation.



Fin Mason showed the card index file he had made with information in 'Model Engineer' relevant to his interests in the hobby.

Chris Morton had three old books, one a engineers text book and another a text book for engine drivers and boiler attendants.

Warwick Leslie had a photo of a tug coming out to assist a small passenger liner to berth.

Dave Newstead had a brochure from a small preserved railway at Kawakawa where a a small Pecket locomotive may be seen running.

Les Fordyce had a small model car which turned out to be a little radio, that was turned on and off by rotating the spare wheel.

Richard Lockett had a photo of a NZR 'U' class locomotive. It is 4 -6 -0 tender engine and was the first tender engine designed by Mr Rotherham in 1983. Richard is studying the 'U' as a possible for the next model to build in his workshop.

AUGUST Monthly Meeting

The August Meeting will be held on the 27th August, at 7.30pm, in the Hearing Association Rooms, Church Street, Palmerston North.

The evening is to be a 'Bits and Pieces' plus a short talk by Richard Lockett on making a part common to most boilers.

COMING EVENTS

Mid Week Run at Marriner Reserve Railway

25th August between 10.00 am and 2 pm
22nd September between 10.00 am and 2 pm
Please contact Doug Chambers beforehand.

Track running at Marriner Reserve Railway

September 6th from 1pm to 3pm
September 20th from 1pm to 3pm

Open Weekends

Auckland 50th Celebrations 2nd -4th October
Havelock North 24th -26th October
Labour Weekend
New Plymouth 24th -26th October
Labour Weekend

The closing date for the next issue of The Generator is Friday 11th September

FOR SALE

A Lux drill mill. It has eight speeds, and a three morse taper.
It comes with a stand, 13mm chuck. The table length is 20 ¼", width 6 ½".
Sideways travel 13" and fore and aft travel 6".
It has a 1hp motor, colour is light green.
Asking Price \$1,100 ono.
David Neilsen 06 3551520

THIS MONTH'S FEATURED MODEL

NZR Q Class Coal Hopper Wagon
Richard Lockett

It was always my intention to build a new bum truck to go behind the W192 loco when I got round to completing that project. On a visit to the West Coast back in 1996 I kept running into these old coal wagons on display at the many historic coal mining and railway sites around Greymouth and it got me thinking that a scale one would look good behind the W as a bum truck. The W of course spent most of its life hauling rakes of these wagons loaded with coal down to the wharfs at Greymouth from the mines located up in the Paparoa Ranges. So one evening I drove out to Brunner and ran the tape over one and did some sketches. Many years passed as they tend to do, before I got on the job as they say "good things take time". As a bum truck its 0.9 metres long with a long wheelbase and has a seat height 50 mm higher than its predecessor which was built by Stan Compton many years ago. This should improve my posture and comfort whilst on the job. The removable bin contains a water tank for injector water, coal, space for tools and a vacuum regulating valve for the carriage braking system. I've built two of these one of which is just a straight coal wagon, no extras.

LETTER FROM ENGLAND

by Stan Compton

One of our members recently acquired a 5" gauge 0-4-4 locomotive in a dismantled state. A new copper boiler replaced the original one that was of riveted and soft soldered construction. So we guess this engine could be of pre or just post war construction, but what was the basis of the design? It has inside Stephenson link valve gear and outside cylinders, unusual to see, so my guess it is based on a Lambton, Hetton and Joicy Colliery tank design.

The rounded cab roof and distinct rounded side tank tops gives a clue but maybe in time we will find out who made the locomotive.

It is well built with good provision for lubricating the valve gear, now to see it rebuilt, preferably retaining the original paintwork which is still in quite good order.

I can report that Brian's 'Maid of Kent' had steam raised for the first time. He could have done without a neighbour looking in when he saw some smoke next door!!! There were the inevitable minor leaks but the engine ran, jacked up forwards and backwards with good valve beats, most satisfying and a credit to a man of retired age who had never built a locomotive before.

Terry has been completing a 'Britannia' boiler from a Winson Kit, a pity the rest of the locomotive is not as good as the boiler. The boiler withstood the 200psi hydraulic test with no problems even with the gauge glass in place, this would normally be plugged for the test.

In forty years I have only seen two gauge glasses break under steam pressure. Usually it is a new glass and it has been slightly out of line or tight in the gland nuts. So it was a surprise to see a well fitted glass shatter under steam. It was a new glass, the one with the blue stripe. I had read that the glass was not Pyrex like the clear glass yet it had no green tinge when viewed end on, the usual test for soda glass.

On the same day a visitor with a 'Simplex' was chatting to me as he was opening his injector steam valve, the valve spindle was not captive and it shot out of the fitting. His trousers were soaked while he applied the hand pump to get the boiler pressure down. He never did find the valve spindle and I hope he modifies the valve body so that the spindle can not be screwed right out. This is a requirement for our United Kingdom boiler test.

Last March I told you about the Town Clock, installed about 1890. I have heard that the man who paid for it, was the brother of a local blacksmith who left the town to seek his fortune. Moving to London he set up business as a draper, a person who deals in cloth, after serving an apprenticeship in that trade.

He later became a silk dealer and very wealthy. It goes to show that those of us who worked with our hands are never paid a decent salary, but we do get some satisfaction from our efforts.

The same as a person who builds a model from scratch. A primary school teacher showed me a model aeroplane built by one of her pupils out of a toothpaste carton. The child was so proud but the

teacher was told not to use rubbish as a teaching aid and the pupils model-making ceased.

I can report that at last I have got my turret clock driving the gearing leading out through the solid brick wall. The next test is to mount the hands onto their bosses. They are counterbalanced with lead and are heavy and I wonder about the drag on the bronze bushes, these are traditional to exclude rainwater with no rubber seal which would drag. My brother in law bought a new diamond tipped core drill 14" long to drill through the wall for me while I saw to the correct level as he drilled from inside the house. We do not get the winds you get as a rule, but for a short time this spring we had some at our rather exposed track site. Consequently some of our members experienced difficulty trying to raise steam with the fire being drawn out of the grate. Turning the loco around will effect a cure but no one thinks of that !!!!

I have a neighbour who is a volunteer guide at a local Stately Home. He tells me that their takings are down since the banking crisis, meaning less money is available these days. Yet our takings are up at our track site. In fact we are now so busy that on the ground level track there is always a shortage of people to act as guards, required for insurance purposes. In fact over half of our subscription fees go to paying for Public Liability Insurance, so we are obliged to have a volunteer who never gets a chance to drive a locomotive, as he spends his time in a purpose built structure selling tickets to the public. Full marks to Gordon who also keeps us all supplied with hot tea.

Ten members of our club made the trip to Sinshiem in Germany to visit the big model running display. A good article was in our recent newsletter, full marks to Peter Judge. He usually spends hours at our track site painting all the steel structures, no rust there.

PRIMING

By Doug Chambers

Sorry, nothing to do with paint. This is to do with the boiler becoming too full of water and the effect of water carried over with the steam to the cylinders. Over the last forty years I have seen a lot of model steam locomotives and full-size traction engines suffer from priming and I have been interested in the reaction of the drivers. Some tried to ignore the problem and some carried out some actions to diminish the effect of priming, but few carried out all the necessary actions.

Dealing with model steam locomotives first. The engines fitted with slide valves do not have the potential to have severe damage caused by the water

entering the cylinder and being compressed by the piston unless the engine is working hard at speed and then there is the chance that the build up of water in the cylinders will be of too great an amount for it to be forced up the holes to the slide valve. That is when damage will occur.

Usually the slide valve will be lifted off its seat by the compressed water which is then discharged through the exhaust ports.

However, if the engine has piston valves there is no way out for the water being compressed in the cylinder by the piston. If immediate action is not taken then there will be damage to the valve gear and it is quite possible that a cylinder cover may be forced off.

This was not uncommon in the full-size, I remember an NZR 'Ka' blowing a cylinder cover off on the road crossing at Maewa, just north of Feilding. The cause was water carrying over from a too full boiler.

The remains of the cylinder cover were found over in Rasmussen's farm about 200 yards away from where it was blown off the engine.

On March 14th of this year a British Rail Standard 5MT 4 -6 -0 No 73096 was running on the preserved Mid-Hants Railway. Water carried over and the left-hand cylinder was completely destroyed. Not only the cylinder cover, but half the cylinder as well.!!!!!!

O.K. So what action should the driver take when his model locomotive starts issuing water and wet steam from the funnel?

1. Open the cylinder drains, close the throttle and pull up.
2. Get a passenger or guard to walk back to protect the train from being tail-ended by another following.
3. Open the axle by-pass valve and turn off the injector.
4. Open the blow down a little and lower the level in the gauge glass to about half a glass.
5. Turn the blower valve on and get the boiler pressure back up to near normal operating pressure.
6. With the drains open, push the engine forward till water stops running out the drains, then open the throttle very gently and ease the engine away, closing the drains once all sign of water disappears.

I know a lot of drivers just open the drains, turn off the injector or open the by-pass valve for the axle pump and carry on hoping for the best. Inevitably the feed water has caused the boiler pressure to drop and the lower the pressure the worse the boiler will prime, so a pause to regain pressure is worthwhile.

There are other factors that cause boilers to prime (or carry over water).

New copper boilers often still have the salts of flux inside the boiler even after being washed out with hot water. A new boiler should be blown down after the fire is dropped each time the engine is steamed. After being steamed and blown down two or three times the inside of the boiler will be free of the flux salts and will no longer prime unless over filled. Bore water can sometimes contain salts that build up in boilers that are not blown down after every run and this too can cause priming.

I remember reading about a fireman on the Norfolk and Western telling about having to go to another area to help out at a time when many drivers and firemen of that area were stricken with flu. He was unfamiliar with the track, and the huge Mallet locomotive was of a type he had not been on before. His first rostered run was at night. The water available for the engines was of very poor quality being from bores and full of salts. During the run the boiler blowdown had to be opened several times to clear the foundation ring of the build up of these salts which if left would cause the boiler to prime. The blowdown opening was of six inch diameter and shot out horizontally. Obviously the blast of hot water and steam at 250psi was capable of doing severe damage so at intervals a concrete wall was built alongside the track.

Travelling in the dark the fireman could not see the beginning of the wall. On receiving a nod from the driver (who knew the road) our fireman opened the blowdown and looked out the window just in time to see a small unmanned wooden station building demolished by the blast of water and steam. He turned the valve off and looked across at the driver whose face was as dismayed as the fireman. A few hundred yards on they passed the concrete wall where the blowdown should have been opened. There was a quick conference on the footplate and it was decided that not a word would be said by either of them and as another twenty engines would pass that station that night they might get away without recriminations.

They heard nothing about it, although the stationmaster must have been shocked when he found the wrecked building on his arrival at work next morning.!!!!

SYNERGY V8 KIWI MADE

This engine was brought into being from ideas of Simon Longdill. Lightweight alloy cylinder heads from the 4 cylinder engines powering Kawasaki

ZX12R motorcycles have been used on a purpose built crankcase. Capacities range from 2400cc to 3100cc giving the naturally aspirated engine horsepower outputs of 390 to 500.

The engines light weight and rev range up to 12,000rpm makes it very suitable for a range of competition and recreational use.

The Synergy V8 powered a midget car series winner at Western Springs, it was the winner of the Australian Speedcar (midget) Championship winner



in Perth and also powered the fastest qualifier at the Magic Man 34 Speedcar (midget) event in Perth. There are plans to take the Synergy V8 to the United States in 2010.

The Synergy V8 will be displayed at Speedshow 09 at the ASB Showgrounds in Auckland over the weekend of 19 -20 September.



Robyn's Rebuild Part One

Richard Lockett

The Locomotive "Robyn" Built by Doug Chambers back in 1994 has given sterling service at the Marriner Reserve Railway and other locations over the last 15 years but for the last year has been laid up in my workshop, sad and neglected, while its owner had a fling with a younger and more glamorous model. A settlement has been reached and Robyn is off to a new home in Palmerston North. It was always my intention to give Robyn a total

rebuild when time permitted and that time has arrived, so a list of items to be repaired, replaced, discarded, etc was drawn up before Robyn was completely dismantled. With parts cleaned the list continues to grow but with the spell of good weather of late good progress has been made with the frames and smokebox receiving coats of black paint. Axle box springing has been modified to remove an issue when the loco is derailed and now the wheels are back on the chassis. Piston and slide valve glands have been remade to house O rings instead of soft packing, the motion can now be reassembled.

A decision on Robyn's new colour scheme is awaited but Doug has decreed that she is not to be painted purple, Allis Chalmers orange or Fordson blue or even McCormick red.

To be continued

STAN COMPTON'S CLOCK

The photos below show Stan's clock face now set on the wall of his house. Stan tells me that his neighbours are delighted and use "Stan's Clock" to check the time of day.



A few photos from the Wairarapa Model Railway Exhibition



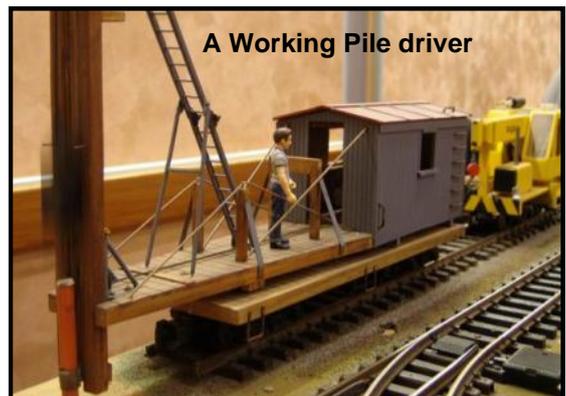
A very animated "G Scale" layout



Chris Rogers new Tram



GN15 Layout



A Working Pile driver

The Generator