



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

Managers of the "MARRINER RESERVE RAILWAY"

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November
2015
No 417

T H E G E N E R A T O R

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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 difficult. We may even offer you a cuppa.

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.

Sender:- PNMEC
22b Haydon St,
Palmerston North 4414

Place
stamp
here

This Months Featured Model



Report on the October Meeting.

Members had been invited to bring along and talk about a magazine that they had subscribed to.

Murray Bold said that he subscribed to the 'Garden Railway Magazine'. However a magazine on knitting was seen on his chair and several members asked if he had taken up knitting. Murray denied this saying that the knitting magazine had been given to him by Janice Hall to pass onto his wife.

Bruce Geange has for many years collected the 'Meccano Magazine' and of later years has been a contributor of articles.

Cynthia Cooper subscribes to the 'Puget Sound Garden Railway Magazine' a club of which she is a founding member. She also subscribes to the 'International Hornby Railway Collector', the 'International Hornby Rail Trains' and the 'Near Death Studies Magazine'.

Chris Morton had a book 'Architecture on the Carpet' on modelling buildings for the modeller.

Robert Edwards showed us a video of a man making small connecting rods. How the man didn't get his fingers ground up in the milling cutter, well I don't know. A good title would have been 'How not to machine connecting rods in a milling machine'!!!!

Graeme Hall had his seven cylinder radial engine with him and it now has the barrels and cylinder heads in place. Some of the cylinders had the pushrods in place and as the crankshaft was rotated we could see the cam ring lifting the valves in turn.

Chris Bjerga is altering a Chinese tool holder to suit his lathe.

Philip Bealing has been refurbishing a well made three inch machine vice.

Eddie Bleakley had a recently completed Stuart 10 with him; see 'This Months Featured Model'.

Club End of Year Dinner

PN Cosmopolitan Club

22 Linton Street
Palmerston North

Thursday 26 November 2015

Drinks 6pm Dinner 7pm

The cost is \$25 per person. (Pay as you arrive.)

They also have a licensed bar for you to purchase innervating liquids.

Bring the family and join us for a relaxing lead into the summer.

We look forward to seeing you there.

We need to give the restaurant an idea of numbers.

Please let us know if you plan to attend and how many there will be in your party.

Dave, 027-457-6175, newstead@clear.net.nz

Murray 326-9665, engineer@inspire.net.nz

Cynthia, 354-7100, cynthia@trains.net.nz

COMING EVENTS

Track running at Marriner Reserve Railway

December 6 th	from 1pm to 4pm
December 20 th	from 1pm to 4pm
January 3 rd	from 1pm to 4pm
January 17 th	from 1pm to 4pm

Open Weekends Model Engineering International Convention at Tauranga 7th - 11th January 2016

As of 6th November there were 14 unpaid subs. These members will now be removed from the database and will need to pay all outstanding subs and a \$10 "Joining fee" to rejoin the **Palmerston North Model Engineering Club**.

The closing date for the January Generator is Friday 11th December

January Club Night

The January Club night will be the
Presidents BBQ
 on **28 January 2016**
 It is the same location as last year.
 All members, partners and kids are
 welcome from 4.30pm
 See the map for directions.



Robert and Margaret's Home is at
 the junction of Hansens Line and
 Te Arakura Road.
 This is off the end of Milson line.



The Driveway to the BBQ.
 Please park on the street if able bodied.

THIS MONTH'S FEATURED MODEL

By Eddie Bleakley and Doug Chambers

Eddie Bleakley recently bought a British Rail 4MT tank engine from the late Alan Gasteen's estate. He was offered two small Stuart Turner stationary engines, a single cylinder vertical and a twin cylinder vertical.

He accepted the offer and brought the castings home with him. The 5" 'Britannia' that Eddie has been rebuilding is now ready for stripping down for painting but the weather is not really suitable for painting yet.

Although he had already built a Stuart No10 he pulled out the casting set and found that Alan had made a start on machining some of the parts. Eddie carried on and in a little over a fortnight he had completed and painted the engine. He says it runs very sweetly on compressed air.

THE SAGA OF TR 38 Part 2

By Neil Burn

I attended a lawn mower auction at Tahuna Auctions in Nelson and there I found an old British reel mower which had a JAP two stroke petrol engine. When it came up for auction it didn't get any bids and just before it got passed in I raised my arm and called out \$5.00 . The auctioneer pointed at me and said "Sold". I removed the motor from the mower and tried it on the locomotive chassis- it fitted. I removed the carburettor and laid the engine in a horizontal position with the cylinder in the engine bay and the crankcase in the cab. This layout allowed for enough room in the cab to fit a reduction box, petrol tank, clutch and engine controls etc.

I then made a new inlet manifold for the carburettor and mounted it below the petrol tank. The exhaust pipe and muffler went beneath the motor between the locomotive chassis rails. The starting rope pulley went out the right-hand side of the cab as seen in the photo on the front page of the October 'Generator'. Next I

designed and built the reduction box which was mounted on the cab floor next to the engine. I made a 'slipping belt' clutch from the motor to the deduction box and made the clutch lever.

I used an 'M' section 'V' belt for the clutch and a five-sixteenth British Standard chain for the drive from the reduction box to the sprocket on the rear axle. The throttle control was now made and the petrol tank was fitted in the cab on a dummy floor. The drive unit now complete, next came the panel work for the cab and engine bonnet.

To be continued.

PRICE LOCOMOTIVES Tr 38 and Tr 39

By Doug Chambers

In 1938 Way and Works were given authority to buy two locomotives to be used on construction of the duplication of the Auckland- Frankton track. The order was placed with A and G Price of Thames and the two locomotives were delivered in 1939. Each weighed 6 ½ tons and were powered by a Perkins P6 diesel engine of 56 bhp. Transmission was via a Borg and Beck dry plate clutch to a four speed Fuller gearbox with a final drive of Price's design using Ford components. Tr 39 was scrapped in 1962.

There was another locomotive built to the



same design for Whakatane Board Mills for use on their bush tramway on Matakana Island.

Four further locomotives to the same design except having 87hp petrol engines were built by A and G Price for the RNZAF. These

were originally based at Weedons, Te Rapa, Mangaroa and Te Awamutu. One of these is preserved at Ormondville Station and one of our past members John Comrie, built a 5" gauge model of one which was duly gifted to the people responsible for the restoration of the Ormondville Railway Station

Editor's Note.

The first time I came across a Perkins P6 diesel engine was about 57 years ago at Opiki which is some ten kilometres south and west of Palmerston North. It was all swamp country, but was being drained and the peaty soil was found to grow good potato and onion crops.

One problem was that the logs of trees that had been buried in the swamps started rising to the ground surface making it difficult to cultivate the soil for cropping. The method of getting rid of these logs and stumps was to get in one of two local contractors with bulldozers. The bulldozer blade had been removed and in its place was a 'root rake'. This device was pushed through the ground to a depth of about 450mm. When a log or stump was hit the dozer driver then worked around it until he could get it on the surface. One contractor had an old Caterpillar D4 and the other had two Allis Chalmers, an HD 5 and an HD 7. The family friends had several Ferguson wheel tractors and an old Fordson County bulldozer. During the Christmas holidays the two Allis Chalmers dozers were busy in the back two paddocks stumping and I was told to take the Fordson County down and start pushing the logs and stumps into heaps where they would dry out over a couple of years and then burnt. The Fordson County crawler was based on a Fordson E 27N wheel tractor. Some of you may remember them; they were dark blue in colour and produced 1944-1950. Most had a four cylinder petrol engine but a few were fitted with the Perkins diesel. They had a 3 speed gearbox plus reverse and the first gear was too high for pushing the blade and the result was frequent stalling of the engine. Quite often the stall was followed by the load on the blade pushing the tractor back a few inches and the engine restarting,

but in reverse direction.

The governor could not control the revs if the engine was running backwards and unless the fuel cut-off device was used to stop the fuel supply, the engine revs would build until the engine suffered a major failure. This was impressed upon me and then I was off. I was only thirteen, wouldn't Worksafe, Health and Safety and ACC have had a field day.

Well I got on to the job and was making fair progress until stalling the engine with the result of the engine running backwards. I pulled the emergency stop button which was located right beside the oil bath air cleaner; now with the engine running backwards the air was being sucked in the exhaust and then blown out the air cleaner together with the filthy oil and blowflies. I naturally copped a face full while I grimly hung onto the stop button. Eventually the motor stopped and the next task was to use the old rag that I found in the tool box to clean my face and upper body. The day being hot I had discarded my shirt and it too became clean up material!!! Of course the two Allis Chalmers drivers had seen what had happened and added to my discomfort with their broad grins, they said a lot more at lunch time, none of which was very sympathetic!! This event was to happen several more times before I found that the answer was to stamp on the two steering brake pedals as soon as it stalled which prevented the crawler rolling back and starting the engine running backwards. The owners of the Fordson County hadn't found this out for themselves.

The other occasion I worked a Perkins P6 diesel was in Australia. This one was driving an irrigation pump taking water from the Murray River and it had dropped the head off a valve, damaging a piston and the cylinder head. I patched the engine up and it continued to run happily burning less than a gallon an hour and running for three months each year virtually non-stop.

LETTER FROM ENGLAND

By Stan Compton

I was able to visit the track site of the 'Llanelli Model Engineers' on the occasion of

their Annual Gala recently. Their track site is located in Pembury Country Park, a coastal area in Wales. A charge is made to obtain entry but to visit the railway just tell the lady attendant, who has a lovely Welsh accent, that you are helping at the railway and no charge will be made. Ask for a map of the Park and study it as soon as possible to find the location among the many sealed roadways that lead you to other attractions. Fred and I were met on the site by two members who made us welcome and told us where we could get tea and coffee. One of the men, George Golightly gave us a tour of the site. On a previous visit many years ago I noted that the elevated track was built for 5" gauge and it is still in use but now there is a lengthy 7¼" gauge ground level track giving two circuits round a raised area covered in trees. These are a feature of the Park which was used as a munitions dump during the two World Wars, all the munitions have been defused and removed long ago. The club has the use of the two foot gauge engine shed to store 7¼" gauge locomotives and rolling stock of which some are privately owned. They are safely stored out of sight and secure. Another store for 5" gauge stock is close to a traverse which gives access to the elevated track and steaming bays. Of interest is the short section of main line track from GWR days laid in the concrete near the site entrance.

A pity the weather forecast was so poor, there were few visitors for the Gala Weekend and someone had made a big effort to provide pot plants to give some colour at the entrance. Full Marks!!! We were taken round the 7¼" track behind a new petrol engine locomotive, commercially built, a justified expense to handle the large numbers of paying passengers. I noted that the charges for rides are the same as ours at Hereford.

Someone gave me copies of instructions and drawings to build a fourteenth century clock from Wartzburg in Germany. All of the original movement was made of wrought iron and is weight driven. A lot of trouble was taken by the author who learnt German so

that he could correspond with the staff of the town museum that were happy to measure basic items on the original timepiece. It is not a strike movement but it runs for twelve hours and it has an alarm set with a series of pegs. The iron bell will be a challenge to make as are the verge and escape wheel.

I could do with the use of my AC welder to fabricate some items but since I had all my domestic wiring upgraded with new distribution board fitted with circuit relays which 'trip' when I plug in and switch on the welder. Obviously a problem somewhere, but where? I have checked for faulty internal wiring, yet I had no problem with the old switchboard.

This reminds me of my first single phase welder, I built it from an 'American Practical Mechanics' magazine. On its first test I could run a nice bead so I carried on forgetting there was no overload cut out fitted and the welder was burnt out. I was living in Canada at the time and I wrote to Lincoln Electric Co. Ordering a 180 amp welder which duly arrived followed by an invoice!! It ran on 220 volts.

One of our club members asked me for advice on riveting the rear wheel spokes on his three inch scale traction engine. He wanted to form a full snap head so I told him he needed an acetylene/ oxygen set to heat the rivets white-hot and a commercial air driven riveter with a large air compressor to supply the air. When I built my four inch scale Allchin I tried to hand rivet but with no success and I borrowed an air riveting gun and that made all the difference. Soft iron rivets are hard to obtain now and the steel rivets cool so quickly.

My 'Allchin' took 2500 hours to complete and I made everything including the steel boiler. When living in Vancouver in 1960. I paid to be trained on arc welding pressure vessels. Traction engines are hard work to build and when it was completed I lost interest and built a three inch scale wire-tying hay baler. The public loved to

see the small wire tied bales being made. Many children took a bale home; one mother told me that her son put the bale on top of the TV set!!!

In the Newsletters from other Clubs

Hawkes Bay Model Engineers.

A very good account of the derailment disaster on the Te Aute Hill of the Wellington-Napier Mail Train on 22nd September 1925.

Work continues on laying 7¼" gauge rail.

Whangarei Model Engineers.

Two interesting articles. The first being on the Maunsell Sea Forts that are located off shore on the Thames Estuary.

The second article is on the Baldwin Triplex locomotive built for the Virginian Railway in 1916. The wheel arrangement was 2-8-8-8-4

Santa's Cave Display Te Manawa

**326 Main Street, Palmerston
North**

10am-5pm

Most of you will be aware that Te Manawa is now the custodian of the old Santa's Cave that has been a part of Palmerston North since the 1930's.

The Cave opens on Saturday 28 November and runs until early January. This year the club have put on a display of models in the first display case leading into the Cave. Please take the opportunity to go and look. Also encourage your friends and neighbours to drop by.

Many thanks to Bruce Geange for organising a great assortment of models that show off the diversity and talents in our members and for raising the profile of our club.

If you would like an email when this newsletter is published, send us an email with "Generator Please" in the subject line with your Name, Club and Email address to pnmec@trains.org.nz