



Newsletter of THE PALMERSTON NORTH MODEL ENGINEERING CLUB INC

Managers of the "MARRINER RESERVE RAILWAY"

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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 onerous.

Visiting club members too, 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,

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Coming Events

Coming Events: August Monthly Meeting: This will be held at the Hearing Association Rooms, Church Street, Palmerston North on the 26th August at 7.30 pm. **SHARP.**
See further details on page 2.

Mid Week Run at Marriner Reserve Railway:

24 th	August	between 10.00 am and 2 pm.
28 th	September	between 10.00 am and 2 pm

Please contact Doug Chambers beforehand.

Track running at Marriner Reserve Railway:

5 th	September	1 – 3 pm
19 th	September	1 – 3 pm

OPEN WEEKENDS

South Canterbury Model Engineers	18 th – 19 th	September	70 th Anniversary
Havelock Live Steamers	23 rd – 25 th	October	
New Plymouth Model Engineers	23 rd – 25 th	October	
Tauranga Model Engineers	12 th – 14 th	November	25 th Anniversary

The closing date for the next issue of The Generator is Friday 10th September

REPORT of the JUNE MEETING

On the table for us to see were the following projects.

Fred Kent had the new clock face for the clock he is repairing. Also one half of his completed railcar twin-set

Ian McLellan had the tender and bogie wheels for his "Maisie".

Richard Lockett had the safety and clack valves for his NZR 'W'.

Murray Bold demonstrated the Gauge 1 NZR 'Standard' railcar he is making.

Bruce Geange demonstrated the two powered jiggers that he has just completed in "O" Gauge.

Chris Morton showed us the pump to be used for an injector tester (for diesel engines)

The highlight of the evening was the DVD made from 8mm movie film taken by Rolly Penhall.

With the aid of various borrowed equipment members were shown about thirty minutes from the DVD.

There were scenes from 1977-8 laying track at

Monrad Park (Marriner Reserve nowadays),

Running EB 28 or Stan Compton's 'George the

Fifth' at school gala days or in the Palmerston North City Square.

Stan's Allchin traction engine driving the hay-baler at Petone was good to see.

There was a good clip of the chaff-cutting at Maewa with the Steam Traction Society's Robey portable driving the chaff-cutter.

Trying to put names to the faces of people appearing on the screen was difficult as they all were somewhat slimmer than now and had more hair, usually darker with little sign of grey or silver.



The DVD is accompanied by handwritten notes from

Rolly describing who, where, and what. These notes will be typed up and members will be able to borrow both notes and DVD from the Club Librarian, who is at present Doug Chambers.

At the conclusion of the evening the Secretary gave Rolly a copy of the 25 year publication that the club publisher in 2002.

AUGUST MONTHLY MEETING.

The August 26th Meeting will be at the Hard of Hearing Hall at 7:30 pm.

There will be a short talk on "Smoke box Draughting" followed by "Bits and Pieces" and a cuppa.

Notes FROM the COMMITTEE

The club was fortunate to get a grant from the "Square Trust" for the purchase and costs involved in building a new station at Marriner Reserve Railway. The steel has been purchased and delivered. The station is to be built off site and when completed, it will be transported to MRR and installed on the pad that was previously laid.

WANTED

8 BA screws, countersunk, cheese-head or round-head. Steel or brass.

Contact Bruce Geange 06 357 0566

LETTER FROM ENGLAND

By Stan Compton

Many of us may not realise the Science Museum have a number of hangars at Wroughton Airfield, for displaying larger items. Only two of the hangars are open to the public at no charge on certain days.

Other hangars are used for storage and no doubt these too would be worth seeing.

The location is called Red Barn Gate off the Swindon to Devizes Road, A 4361. Note do not follow signs "Science Museum Offices" as they are at the opposite end of the airfield. Keep a look-out on the left about a mile out of Wroughton Village.

The first hangar contains a large variety of exhibits and incidentally, nice toilets. There are early bicycles, one built by Rover must have been a special for a giant with a 36 inch inside leg !!!!! Nearby is a F. N. motorcycle built in 1905 with a four-cylinder in-line engine and shaft drive which apparently cost no more than other more basic machines of that era.

There were many aircraft engines spanning a period from 1912 to the latest jets including a Bentley Rotary and a Wright Cyclone radial. There was a WW2 Junkers Jumo opposed piston diesel that had been sectioned to give a good chance to study it's construction. Being diesel it was quite heavy for its power output. The information cards on these engines were very descriptive unlike other exhibits.

Too many aircraft to describe, but to stand under a Lockheed Constellation or a Comet in the next hangar was most impressive. Anne and I flew to Montreal in 1952 in a Constellation and I found the radial engines very noisy. I remember an ex-RAF man telling me that the bombers were a lot worse.

The DC 3 brought back war-time memories but the De Haviland Rapide looked so British compared to the metal fuselage of the 1933 Boeing.

A 1924 Handley Page bi-plane "Gugmung" named after cartoon character in "Pip, Squeak and Wilfred" could fly at 35 mph due to slots in the leading edges of the main spar. There was an example of a "Flying Flea" that most unstable of aircraft, built to provide cheap flying in the 1930s.

One most unusual item on display was a Chinese wheelbarrow, very crude with a centrally mounted steel tyred wheel of about five foot diameter with two boxes for supplies hung pannier style on each side, plus a square sail on a mast above. The caption stated that this vehicle crossed the Sahara Desert. I would like to know more, to push that thing more than a mile would test most men.

Picard's balloon capsule, spherical in shape, that ascended to 33,000 feet in 1932 was close by an "Edsel" car, what a monstrosity, no wonder it nearly broke Henry Ford.

There were a number of Hovercraft including SRN 1, early space rockets, a Glasgow Tram (I had forgotten how high they were) A McLaren traction engine, a snowcat with a photograph showing one of the leading track units hanging down a crevasse. I would love to know how they extracted it on that journey to the South Pole.

Ed Hillary only had Fergusson tractors on tracks with his New Zealand team.

Up against the far wall was a beautiful 58 foot steam launch, "Donola", built for a wealthy manufacturer of biscuits. Signs informed us "No Photography" yet someone under supervision, was crawling all over it with his camera. I have since been told that it lay at its berth unused for years which seems such a pity. It is now owned by the National Maritime Museum.

Next to it was an Admiralty Barge, to be powered by oarsmen many years ago, really beautiful workmanship with gold trim around the counter.

We learn something everyday and nearby was a display of Fire Engines from early manual ones to a more recent Leyland Pump with escape ladder. A couple of early Merryweather Steamers drew my attention, and posed the question "How are the chimneys made?" No obvious seam was visible, but my brother-in-law, a plumber drew my attention to the vague signs of a coppersmiths joint, visible because these exhibits never get polished. That made my day as I am just starting on a chimney for my village fire engine.

There were a number of motorcycles, probably on loan, but the 1911 490cc single-cylinder 'Indian' from the Museum collection had primary and secondary chain – drive. It competed successfully in the T.T. races on the Isle of Man and looked very advanced for that era.

We have a new member of the Hereford Model Engineers who has returned to this country after a period in Malawi in Africa. His elderly father had built a number of locomotives, one was a nice LSWR 4-4-0. I tested the boiler but the locomotive ended up in a Transport Museum in Canada. An ideal location, as the boiler mountings were scale size, not really suitable for steaming. With the proceeds of the sale of the "Halton Tank" which you may recall has a riveted and soft soldered copper boiler, our new member purchased a 3 1/2" scale Lynton and Barnstaple Railway tank engine named "Lew". It was bought off the Internet so was untested. It had a commercially built boiler, so no problems under test. The safety valves have a "pop" action and I noticed one of them had a loose thread, luckily 26 tpi, not 40 tpi. The buzzing under air test vibrated the 26 tpi retainer loose. A locking screw was really needed, but instead I used Loctite, we shall see what happens under steam.

The locomotive appears to be well made, but has had a lot of use. The displacement lubricator has been over oiled. The drain-cocks do not clear very well and I got soaked with hot water and oil while testing the engine. The locomotive ran better in reverse so will need further attention. A problem with buying an engine without opportunity to try it first.

DIESEL ENGINE STARTING

By Doug Chambers

At our last meeting Chris Morton showed us a pump that he intended to use to produce an injector tester. By using the pump he would be able to check for nozzle leakage, internal leakage, spray angle, pressure setting and condition of spray.

Unfortunately the following weekend found me suffering more than usual from back problems and while unable to do anything physically I began to think of how the diesel engine has improved over the last twenty years.

Today you can start a diesel simply by turning the key. To stop it, turn the key off and then if fitted with a turbo it will run for a short time to allow the turbo to 'wind-down' and then turn itself off. But it wasn't always like this!!!!

Because of the high compression needed to operate diesel engines and their reluctance to start under cold conditions the various engine manufacturers came up with a variety of ingenious ideas to promote easy starting.

International Harvester's approach to the problem was interesting to say the least. The engine was started on petrol, After the engine was deemed to have 'warmed up', the throttle and change levers were pushed over to full-throttle, and diesel running positions. Once the engine caught on diesel the throttle was allowed to return to fast idle and the petrol tap turned off.

The change lever simply increased the compression so that the engine would run on diesel.

Although starting was made easy there was the added complication of a carburettor, magneto, spark plugs, and a separate small fuel tank for petrol.

Diesel engines can be classified in two basic types. Direct and indirect injection. Direct injection engines have the injector spray on top of the piston. Indirect engines have an offset cell that the injector fires into. Indirect injected engines are usually quieter running and also have a slight advantage in fuel economy.

Most of the Ford or Fordson diesel engines were direct injection. Most had a Simms in-line injector pump. These have a small button that allowed further travel of the rack which increased the amount of diesel supplied to the injectors, in effect a rich mixture for starting. The throttle control had to be in the fully open position before the cold start button could be engaged.

The early Power Majors had a decompression lever on the end of the tappet cover. This meant that the starter motor was able to turn the motor relatively fast ensuring a start when the lever was pulled to give full compression. The only catch being that the starter lever was just above the clutch pedal on the left hand side and the decompression lever was on the front right hand side of the engine. One needed long arms to operate both at once.

Perkins, Leyland, BMC and others of the 1950 - 60s developed a small heating element that fitted in the inlet manifold. It was known that if the inlet air was warmed easier starting was achieved. Some took this a little further and added a small valve that allowed diesel fuel to run over the heater. This vaporised the die-

sel and further assisted starting. However these devices were not reliable and some operators resorted to removing the hose connecting the air cleaner to the inlet manifold . A rag soaked in petrol was held near the inlet manifold by an assistant while another operated the starter. This method was never recommended but it did work.

I saw a big Leyland engine that was driving a sawmill started in this fashion. The usual driver was replaced with another chap who didn't realize that he was not to use the inlet manifold heater. He pressed the starter and held down the manifold heater. The heater ignited the petrol fumes drawn in from the rag, the engine fired up, backfired setting fire to the rag which the lad promptly let drop into the inlet manifold. The engine bellowed, coughed black smoke, and spat burning pieces of rag out the exhaust. After about five minutes it settled down and ran OK but the lad who had been holding the petrol-soaked rag had mild burns on his hand and he refused to assist starting the engine in the future.

Manufacturers of indirect injection diesel engines turned to pencil type glow plugs to assist starting. These pencil-like devices fitted into the cylinder head and protruded into the combustion chamber. An electric current would cause them to glow red-hot in the combustion chamber and this warmed fuel and air greatly assisting starting.

At this time products like "Engine Start", a spray can filled with ether became popular but some engines were damaged by the glow plugs igniting the ether fumes before the correct stroke.

From 1975 Cummins diesels were fitted from new with a canister of ether which was used as a starting aid but the engines had no glow plugs or manifold heaters to cause problems.

Caterpillar tractors had small petrol engines instead of an electric starter motor. The petrol engine was rope started and then engaged the ring gear on the diesel engine's flywheel. The prolonged cranking of the diesel engine and cranking speed was enough to ensure that the diesel started.

My father told me that during WW2 in Italy the Caterpillars became unpopular. As the German Army was being driven back they blew the bridges crossing the many rivers. The Engineers had to push Bailey Bridges across at night so the Allies could move on. The petrol starter motors were not silenced and the sharp crackle of their exhaust note was picked up by German sound detectors in the front line. The German artillery could triangulate on the sound and their shooting was always very accurate. Once the diesel engine was running the shell-fire was no where near as accurate. When possible the Caterpillars were started up well to the rear and brought forward, with their diesel engines running on tank transporters. Later the problem was overcome by using Allis Chalmers crawlers fitted with electric start GM two stroke diesels.

Today's diesel engine operators are somewhat spoiled by the easy starting engines of today.

N.B. The author does not recommend the use of petrol-soaked rags or ether to start diesels. Having had to repair the damage done by those who have !!!!!

Hawkes Bay Model Engineers Open Weekend

Richard Lockett

K 915 had trouble getting through the points leading into the station, the leading tender bogie taking a different route to that of the engine. On examination of the point the checkrail had a gap of 8 mm which is ok for 7.25 gauge loco's but for 3.5 gauge 5 to 6 mm is required.

I thought that with a tap with a hammer we might be able to close the gap up a bit so after getting a permit and a hammer from HBMES I proceeded to effect a repair.

One well-aimed tap with the hammer saw the welds crack and the checkrail come free from the point,

"Bugger"

"Have you got a welder handy?"

"Ah no"

"Well you'd better get one, you need it, your track is falling apart"

A case of third time lucky saw the checkrail welded in place with the correct gap and with a weld of sufficient strength to stay in place, all a bit embarrassing really. With that I crept away and indulged myself with the traction engines for the rest of the weekend.

Thanks to HBMES for an enjoyable weekend.

Hawke's Bay Model Engineers Open Weekend

Bruce Geange

Leaving here in fine weather we ran into rain before Dannevirke and the nearer we were to Napier the wetter things became. Pulling into Anderson Park, Barry Parker was seen driving the K on the ground level track that takes 3.5 and 5 inch gauge engines. After a look around before having a delicious lunch with a variety of soups and breads was enjoyed. (Very nice on a cold day.)

The traction engine was unloaded and steamed during the afternoon. The ground was soft in places and some of the paths at the park were investigated. A total of six traction engines were in steam after lunch and also a DCC Burrell full size engine towing a trailer was also giving rides. Most of the traction engines were left at the premises for Saturday night. A very enjoyable hot evening meal was served and a natter followed that at the clubrooms.

Sunday morning was fine and cool. Arriving at the track there was already some activity. The traction engine was cleaned, oiled and steamed ready for more work. After topping up with water and coal, Alison and I went for a tour of the park around some of the many paths and crossing a few bridges with the odd photo stop on the way.

In one area there were several vintage tractors and stationary engines along with a Lister Generator powering an electric boiler that ran a steam pump. During the afternoon all the model traction engines were lined up for a photo shoot, then the Burrell was parked beside for more photos. The locomotives seemed to be busy all day and were still running after the traction engines had stopped.

Members from Palmerston North were, Necia and Barry Parker, Alison and Bruce Geange, Richard Lockett with Doug Chambers and Jim Curtis there on Sunday afternoon, having ridden on their motorcycles.



A line-up of the eight traction engines present

The Generator