



Newsletter of THE PALMERSTON NORTH MODEL ENGINEERING CLUB INC
Managers of the "MARRINER RESERVE RAILWAY"
Please address all correspondence to :- 22b Haydon St, Palmerston North.

PRESIDENT
Chris Rogers
(06) 356-1759

SECRETARY
Murray Bold
(06) 355-7000

TRACK CONVENOR
Richard Lockett
(06) 323-0948

EDITOR
Doug Chambers
(06) 354-9379

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PNMEC Home Page www.pnmeec.org.nz
Email:- pnmeec@clear.net.nz

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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,
Palmerston North

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here

This Months Featured Model



Report of the AUGUST MEETING

Laurie Gudsell gave us a most interesting talk on firstly the history of the Allison Company and then the history of his own engine. His presentation assisted greatly by the slides and video clips told of the dismantling, reassembly and the acquiring of suitable parts at reasonable prices. Bearing in mind that the engine was only being re-stored to a standard where it could run in an engine stand and that many of the components, particularly the magnesium castings had deteriorated to a stage that they could not ever be used in an aircraft again.

That the engine runs as well as it does is a credit to Laurie and his wife Joan who has had to lend a hand holding this and turning that during the overhaul process.

Any members who would like to see the Allison running should contact Laurie as where possible the engine is run every two months often for specific groups such as, Vintage Car Club, Classic Cars, Classic Motorcycles etc.

On display were various projects that are underway.

Stuart Anderson had the laser cut frames, pony truck wheels, steam and dome castings for the Mogul he is building.

Fred Kent had parts of the motor for the Fokker Triplane he is making.

Chris Rogers had the major engine components for the 4" scale Clayton and Shuttleworth steam truck that he now has well on the way.

Brian Leslie had some 3 1/2" gauge NZR Ab wheels and cylinder castings. He also had some old photos showing Basil Wilson and his 3 1/2" gauge NZR Ab and Vic Hurley with his 5" gauge NZR Wab.

SEPTEMBER MEETING.

This will be held on the 22nd September. A visit to Ohakea Air Base has been arranged and a bus will leave from the Hearing Association Rooms at 7.30pm and also picking up members at 7.50pm outside the Sanson Shell Service Station. If you are not on the bus you will not be able to get past the security at the Base entrance. There will be a \$3 charge per member for the bus. Once on the Base members will be guided through the helicopter servicing and operations.

COMING EVENTS

Mid Week Run at Marriner Reserve Railway

27th September between 10.00 am and 2.00 pm
Please contact Doug Chambers beforehand.

Track running at Marriner Reserve Railway

2nd October 1 - 4 pm
16th October 1 - 4 pm

OPEN WEEKENDS

Havelock North Labour Weekend
New Plymouth Labour Weekend

FOR SALE

12"x12" cast iron marking out table with wooden cover. \$90 ono Phone 06 368 6223
Ask for Laurie Jenson

Myford ML7 lathe. 4 and 3 jaw chucks, faceplate, travelling steady. Very good condition.
Being sold on behalf of retiring model engineer.
Price \$1700 Apply to Barry Parker 06 354 5972

WANTED TO BUY

A Rodney Mill-drill of the type that will fit on a Myford ML7 or Super Seven lathe
Contact Bernie Coyne Phone 06 753 4528.

The closing date for the next issue of The Generator is Friday 14 October

ALLISON POWERED AIRCRAFT in the PACIFIC, NEW GUINEA.

By Doug Chambers

From 1968 to May 1970 I worked for Bayford Motors in Preston, Melbourne. One of the other diesel mechanics was Alan Hazelman and he and his family became great friends of mine.

Alan was older than me and had served in the Australian Army in New Guinea until he was severely wounded and was returned to Australia. After recovering from his wounds the Army used his jungle skills to train replacements before they were sent up to the Islands. Sadly Alan's health declined after I left Melbourne to return to New Zealand. He died in 1973 aged 60, his early death due no doubt to the wounds received as a teenager in New Guinea.

He told me of the struggle in holding back the Japanese advance, how the Australians finished up with just a few coastal airstrips before the Japanese advance faltered due to their inability to maintain sufficient supplies across the mountainous inland divide.

The Australian Air Force Kittyhawks took off, dropped their bombs and strafed the jungle almost at the end of the air strip, before returning re-arming, and repeating. The engines were worn out, but there were no spares. For days on end there would be no wind and the flight paths of the Kittyhawks could be determined long after the planes had landed, by the trail of blue oily smoke left behind. The pilots, ground crew, and the soldiers desperately trying to defend the airstrips all suffered various tropical diseases and it is not really appreciated how close New Guinea was to being lost to the Japanese Army.

The Kittyhawks often made whistling noises as they came back to land. There was no longer any metal left to cover up the bullet holes in the wings and fuselage and the interrupted airflow set up this whistling. Finally the Japanese Army had to fall back to shorten their supply lines. The pressure eased

a little for the Australian Army and Air Force. Best of all reinforcements in the way of two squadrons of American Aircobras arrived, 24 aircraft in all and all the necessary support staff.

One of the American pilots got his landing a bit 'crossed up', he wiped of the undercarriage and slid off the strip ending up almost in the jungle near the weapon pit that Alan and some others were manning. The Aussie soldiers helped the uninjured pilot out of the wreckage and pointed out that it was a pity to treat a new aircraft like that. The American pilot replied, "Don't worry about that. 'Uncle Sam' has plenty more of these -- ----- damn things."

It was about 3pm in the afternoon and the Americans decided to leave the damaged Aircobra where it was until the next day when they would recover it. They were greatly astonished to find that the entire Aircobra had vanished during the night when they came to retrieve it. The Aussies had looked upon it as legitimate wartime booty and during the night it had been dismantled and taken away. The Allison engine was the same as the Kittyhawks and was promptly fitted to one.

Instruments were interchangeable. There was now plenty of material to patch Kittyhawks and the 50 calibre machine guns were the same as those fitted to the Kittyhawk. The Aircobra had a 37mm cannon firing through the hollow propeller hub and this could not be mounted in a Kittyhawk. The resourceful Australians mounted it on the ball pivot for a four-wheel drive truck front axle. At this time Japanese aircraft were strafing the airstrip at least once a day. This meant that at least once a day everyone had to dive in a trench, which because of rainfall and lack of drainage was always half- full of water. Americans and Australians both became aware of the sound of the 37mm cannon's thump, thump, thump, operated by some infuriated Aussies trying to dispatch their tormentors. It is not known if the 37mm

cannon's operators ever hit anything, but Americans and Aussies alike were glad to feel that someone was hitting back.

After some weeks the Americans did begin to wonder where the ammunition was coming from as the Aircobra only carried 30 rounds and much more than that had been fired at Japanese aircraft. They knew that the Aussies didn't use 37mm rounds and they searched around their ammunition dump. As they suspected, a hole in the wire was found and evidence of Australian bootprints told the story. The American Officer in charge was a realist. He left orders that the Aussie gunners were to be supplied with all the 37mm rounds that they required and that the Aussies should collect it with a wheelbarrow in daylight!!!! The Aircobras did not prove suited to the Pacific Island conditions and were replaced with, Republic Thunderbolts, Lockheed Lightnings, Grumman Hellcats and later Corsairs.

A large number of the Aircobras were parked up on various airfields in Australia to all intents abandoned.

The Australian Air Force still desperately short of spares for their Kittyhawks made use of many of the interchangeable parts and after the War ended the remains of the Aircobras were in many cases just buried as landfill.

Laurie Gudsell told us in his talk that he had not been able to find out what sort of aircraft his Allison engine had been originally fitted to. The records show that some near his engine's number had been delivered to Bell for fitting in Aircobras. Some near that number had been fitted to Kittyhawks and a few had been supplied to North American to be fitted to the prototype Mustangs.

When he purchased the motor the propeller reduction hub was bolted to the motor, so it was intended for a Kittyhawk. It had been overhauled and there is evidence of a new sump and crankcase having been fitted.

However it could easily have started off in an Aircobra and been 'acquired' and overhauled by the RAAF for use in one of their

Kittyhawks. We may never know for sure.

FIRST RUN for NEW MOTOR

Graeme Hall told me that he has had his Bentley Rotary engine running. The usual bit of messing about trying to find the best way of starting from cold and then success. The engine performed very well and had to date run for about 30 minutes. Like the full-size engine it ejects a fine spray of castor oil into the propeller wash which then is distributed over everything in the workshop. Graeme's wife Janice complained of the 'whiff' of castor oil that she could smell through the house. Even so I expect that she shares with some pride in Graeme's achievement.

Now I had better find something else to write about before members start thinking this is an aviation magazine!!!!

MONARCH BUTTERFLIES at MARRINER RESERVE.

Palmerston North Model Engineers at the August 21 Running Day were astonished to see at least two hundred Monarch butterflies on the large willow tree. There are often two or three flying about on a fine day but never before have we seen so many together at one time. Evidently a specialist in the butterfly field noticed them, as the following week there was an article about them in one of the local papers.

Aviation, butterflies and now caterpillars. No, it's all right, we are definitely coming down to earth with the next feature.

THE CATERPILLAR D8 H

By Doug Chambers

About 1960 Caterpillar announced their new model D8 H series. There were several notable changes to the previous D8 G model. The diesel engine was now turbo-charged. Although the bore and stroke remained the same at 5 ¾" and 8" and the governed rpm stayed at 1200 the horsepower improved from 191 on the G model to 235 on the new D8 H. At the same time an improvement of 20% in torque was attained and this would benefit when the machine was being operated at maximum lugging power. Starting the diesel engine was still by a two cylinder petrol engine. On the G model the petrol engine was started by a six volt starter, but on the H series a twelve volt starter was fitted.

leaving the right hand free to operate the blade or equipment controls. All the drive line components were sub-units. Only the faulty unit needed to be removed for overhaul without disturbing adjacent components.

A unique feature of the D8 H was that the entire drive train, transmission, bevel gear, steering clutches and brakes, hydraulic brake booster, and hydraulic controlled steering clutches, was pressure lubricated with 100% filtered oil.

Width of the D8 H was seven inches greater than the D8 G, but overall length remained about 17 feet.

The shipping weight of the D8 H was 47,500 lbs.



Two types of transmission were available. A master clutch running with pressure fed oil coupled to a six speed constant mesh transmission for the direct drive D8 H included a time saving forward – reverse lever.

The second type of transmission was a torque converter drive with a simple easy shifting three speed, constant mesh gearbox. This gave three speeds forward and the same three ratios in reverse. Direction and speed was now under the control of the drivers left hand

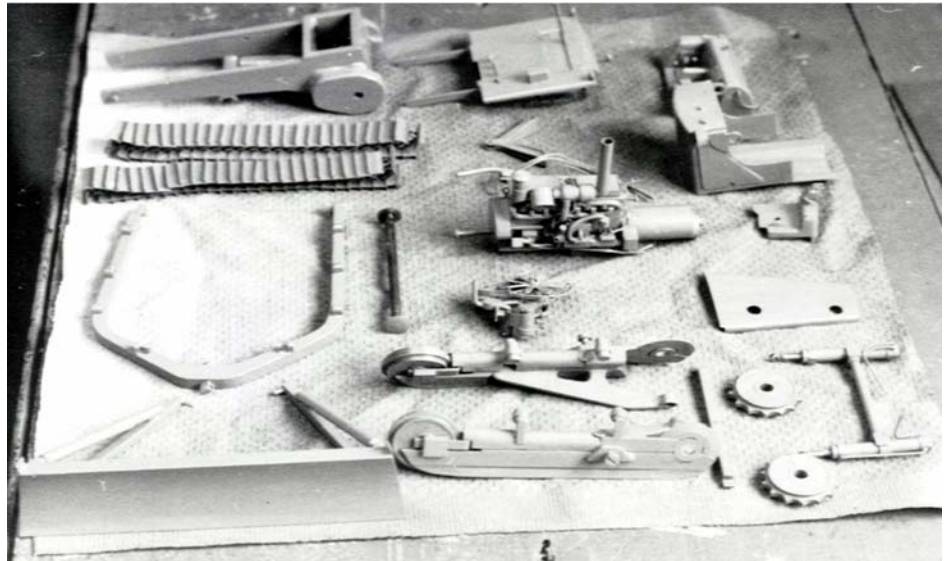
Caterpillar D8 H tractors were imported into New Zealand and through the 1960s-1970s they could be seen working on all sorts of major projects, bulldozing, ripping, towing scrapers and push loading motor-scrapers.

CATERPILLAR D8H CRAWLER TRACTOR

Bruce Geange

This model was completed early in 1978. The approximate scale is $1/50$ and is built mainly from brass. Most of the information was taken from two brochures and a couple of side views of the tractor were photographed and printed to the scaled size of the model.

The main chassis components were cut out from brass and silver soldered together. The body parts of the engine were made and silver soldered with the smaller parts soft soldered onto the engine block. The fan, fan grill and generator were made as a separate unit and fitted to the engine later. The track shoes were cut out and jig bent to form the shoe and then each shoe was soldered to a Meccano sprocket chain. The track frames were cut out and set up in the chassis to line the parts up and soldered together with the remaining frame parts added after that.



The footplate, seat, radiator and bonnet were all fabricated from brass sheet and wire, soldered as required. The seat upholstery was made from balsa wood. The C frame for the blade was cut out from a brass bar and other parts added. The blade and hydraulic rams were also fabricated. After a trial assembly the tractor was dismantled and painted. A few days later the painted parts were assembled and the tractor had the sign writing added with Letra Set lettering. The model won a Master Modeller Award of Excellence in May 1978.

Components of the tractor after painting

Another view of the tractor



The Generator