

## THERE'S LIFE IN THE OLD GIRL YET



Rodney (top) and Colin (bottom) giving the new locomotive a "test run" early last month. Photo on right shows a birds-eye view of the engine room.

After some extensive work on the hydraulic system the club's newest locomotive has had her first workout on last month's running day.

And apart from a small jerk on starting off it runs like a dream.

It's very quiet and quite fast. Customers have asked several times what sort of power plant it has and when told that it is a 3-cylinder Daihatsu car engine are quite surprised that it is possible to squeeze such an engine in the space where it is.

The locomotive is no "spring chicken" as it was built some 20 years ago by member John Wright. When built it was somewhat shorter than it is at present.



## CLUB NOTICES

3rd Sunday Running — May 20th 2018.

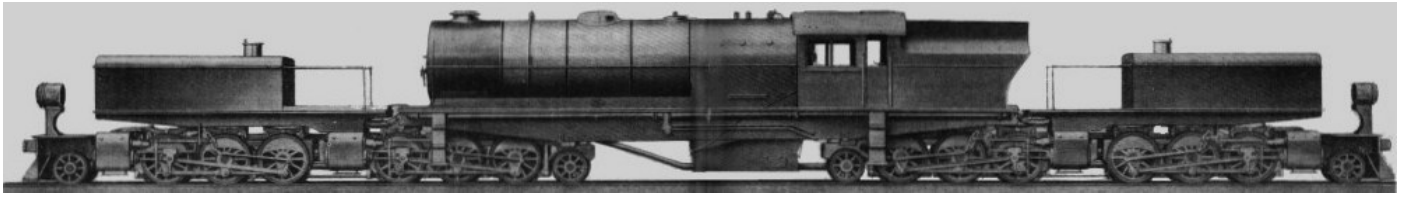
Mid-week Workdays — Mostly Every Wednesday.

**Extra Running Days This Month:**

**NONE ADVISED**

THESE WORK IN WITH  
MUSEUM "LIVE" DAYS AND OTHER  
EVENTS

## QUIZ — What is it? For answer see Page 4.

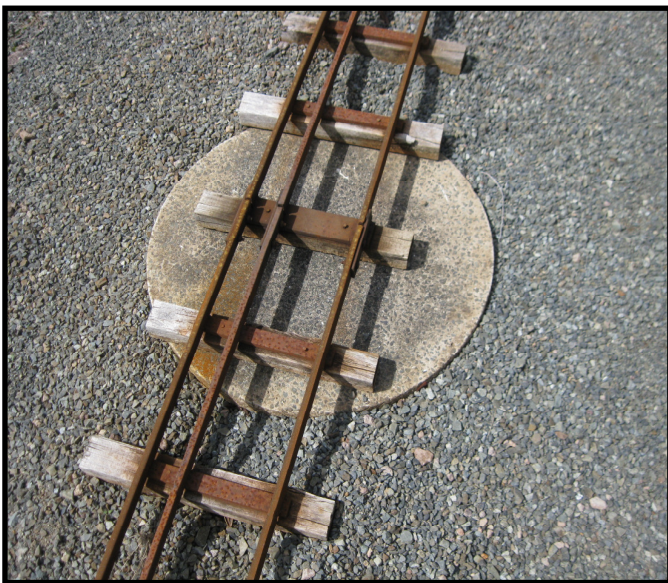


# WEDNESDAY WORKDAYS: By The Editor



The first two working days of April were mainly taken up with the construction of four tracksets to completely replace the lower part of the line down to the tunnel to take out all the kinks and bumps that have crept in over the years.

An attempt to repaint all the ground hardware (points levers, etc) were foiled by the weather in that as soon as the paint tin lid was opened it rained ... funny that!! But perseverance will get there sooner or later.



The next two Wednesdays were taken up with running trains to honour our commitment to the museum to run on the Wednesday of each week in the school holidays.

An attempt to bolster a sinking expansion joint using a concrete stepping stone appears to be working in as much as it is supported over a bigger level area. But as mentioned elsewhere a new type of expansion joint is being experimented with.

The fourth Wednesday in April was Anzac Day and still being school holidays we were operating.

Like a few others I didn't hurry up to the track on Anzac Day, thinking that there would not be too many patrons. (watta mistaka to maka). I arrived there about 10.50 am and the crowd was out to the driveway across the track.

Two trains were operating and they were packed to the gunwhales. I took over the ticket box and tried to get a coffee (silly boy). So I had to wait for my fix until about 12.30.

The per way gang has removed all the tracksets down the line to where they will be required. Some more ballast, etc, will be required very soon. Maybe next week we can get stuck into renewing that bottom trackwork and some painting.

## LIST OF MAIN CLUB OFFICERS

**President:** Rodney White. Telephone (09) 436 1185. E-mail; [rtw@slingshot.co.nz](mailto:rtw@slingshot.co.nz)

**Vice President:** Rankin Kennedy. Telephone (09) 430 8328. E-mail; [jenandrankin@gmail.com](mailto:jenandrankin@gmail.com)

**Secretary:** Brian Mould. Telephone (09) 434 6188. E-mail; [thewrinkles7749@gmail.com](mailto:thewrinkles7749@gmail.com)

**Treasurer:** Bruno Petersen. Telephone (09) 438 7600. E-mail; [brunopetersen@xtra.co.nz](mailto:brunopetersen@xtra.co.nz)

**Committee Members** — Colin Smith, Ian Mison, Tony Tanner, Lloyd Cross.

**Newsletter Editor** — Ian Mison. Telephone (09) 434 3125. E-mail; [julianm@xtra.co.nz](mailto:julianm@xtra.co.nz)

**Charters and Bookings** — Rodney White. Telephone (09) 436 1185.

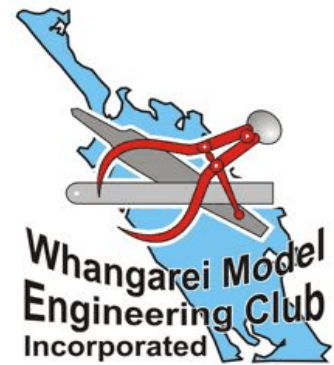
**Postal Address:** Whangarei Model Engineering Club (Inc), P.O. Box 10233, Te Mai, Whangarei 0143.

**Club Telephone:** (09) 438 9520 (Available Work and Running Days Only).

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# **ANNUAL GENERAL** **MEETING**



**OF THE CLUB**

**WILL BE HELD IN THE CLUBROOMS**

**ON**

***WEDNESDAY, JUNE 6, 2018***  
***AT 6 PM***

**(CLUBROOMS OPEN AT 5.30 FOR COFFEE, ETC)**

**Agenda:-**

Apologies.

Minutes of the 2017 AGM.

Inward and Outward Correspondence.

The President's Report.

Treasurer's Report.

Adoption of the Annual Financial Report for the previous year.

Election of Officers.

- President      • Vice President      • Secretary
- Treasurer      • 3 Committee Members

Appointment of Honorary Auditor.

Setting of membership fees.

General Business.

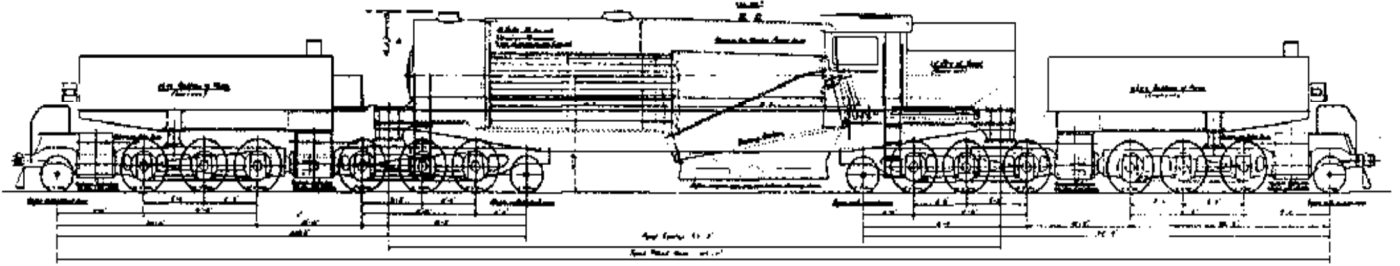
Two notices of motion have been filed. They are:-

- (1) That Rule 9.2 be amended to read one per year,
- (2) That Rule 9.4.2 be amended to read six members for a quorum.

# ANSWER TO QUIZ ON PAGE 2:

## Super Garratt

"Super-Garratt" Locomotive, 4' 8½" Gauge. Beyer, Peacock & Co. Ltd. Patent No. 230,888.



Garratts were used in Africa, Asia, Australia, Europe, and South America and were built by quite a few different builders ... not just Beyer, Peacock. No Garratts were used on North American railroads, the most likely explanation being that American rail companies considered the Garratt's coal and water capacities insufficient for their requirements.

The Garratt was most widely used in Africa, with large numbers in South Africa, Zimbabwe and Algeria and smaller numbers in Angola, Congo, Ivory Coast, Kenya, Libya, Madagascar, Mozambique, Senegal, Sierra Leone, Sudan, Uganda, and Zaïre.

Most of the remaining Garratts are heavily in-

involved in the tourist railway industry such as the Welsh Highland Railway. Closer to home there is still one original still left in Brisbane, Australia. Another massive standard gauge AD60 was recently restored in Canberra and ran a few excursions around NSW before the group that did the restoration went into receivership.

Failure to cover the outstanding debt resulted in all the infrastructure going under the hammer but still not meeting the debt. When last heard of, the "scrappies" had offered a price that could not possibly be met by the average enthusiasts group.

I guess time will tell!!

The longer you have to carry a heavy package the more your nose itches.

Last year the club offered to part pay for a defibrillator to be installed on the premises of the museum. Below is a recent reply to that offer.

### A THANK YOU LETTER ...

Dear Rodney and Members.

We would like to thank you for the generous donation toward installing a defibrillator here at Kiwi North. As you know we have discussed this several times over recent years but have never been quite able to make it happen. Your considerable donation is sure to change that.

The need for a defibrillator at this facility with the number of users, both staff, clubs and visitors, especially on event days, is obvious and obtaining it is long overdue.

I thank you for taking a big step toward making it happen.

Best regards,

*Allie Fry,*

Director Operations, Kiwi North.

(Letter abridged — Ed).



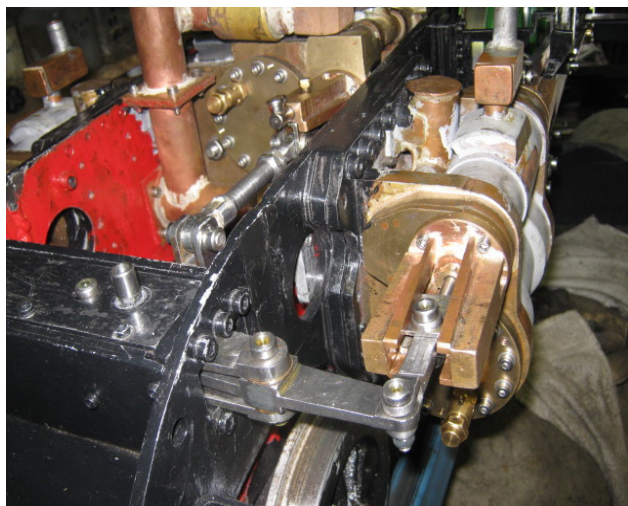
## MORE ON THE PROGRESS OF TONY'S A3.

### Setting the timing on A3 triple cylinder steam engine.

Revised August 7th 2017 and March 6th 2018.

Each of the three cylinders have 2" diameter cast iron pistons each with three cast iron rings running in cast iron bores. Similarly, the three valves are cast iron running in sleeves that are fitted to a cast iron chest. There are no rings on the valves.

The cylinder end plates are fabricated from 1/2" bronze plate



and are silver soldered to form the complete endplate, including the exhaust and steam ways. The steam ways are formed in these plates, milled out 7mm deep and fitted with a 3mm copper plate silver soldered in place. The exhaust ways are fabricated in a similar manner. These assemblies and parts are shown on fabrication and assembly photos attached. The endplates are easily sighted to see the steam ports.

The pistons are attached to 1/2" stainless rods and double bolted to the X-slides. The centre cylinder is angled at 8°. The centre cylinder valve is also

angled at 8°. And this involves a valve cross slide arrangement not shown on the original drawings.

Each valve assembly consists of a 250mm long 6mm dia stainless steel rod on to which parts are fitted. The rear valve x-head guides are attached by 4 off 4mm socket stainless screws that have the heads thinned down to fit the valve guide assembly. There is no need to undo these fittings to adjust the timing. The right and left hand cylinder rear valve rod is secured into the X-head via a 1/8" reamed hole into which a bolt is fitted.

These can be tapped out by careful positioning of the combination lever. Releasing these two fitted bolts frees the valve gear for removal from the front of the engine.

On to each of the 6mm valve rods is fitted a 1/4" bore 3/8" OD stainless pipe a little longer than the valve spools. These are threaded at each end for about 20mm at 3/8" x 40 tpi. 10mm nuts are bored and threaded accordingly to fit this pipe. The pipe is positioned on the valve rod. Two knurled sections on the valve rod ensure concentricity of rod and valve spool carrier. This

pipe is then drilled through in three places and a 2.5mm stainless pin is lightly riveted and smoothed. The valve spool is then fitted and there are two special made up sockets to tighten the end nuts to hold the spool in its required position. The front end of the three valve assemblies are pass through the valve X-head guide glands and are pinned to the valve rod.

Thus the valve spool can be moved along the valve rod by appropriate movement of the two end nuts to position it as required for timing. The valve rod is thus fixed and the valve spool position only is adjustable. Having adjusted the three valve spools, the three assemblies are offered into the valve sleeves and the front end guides bolted up.

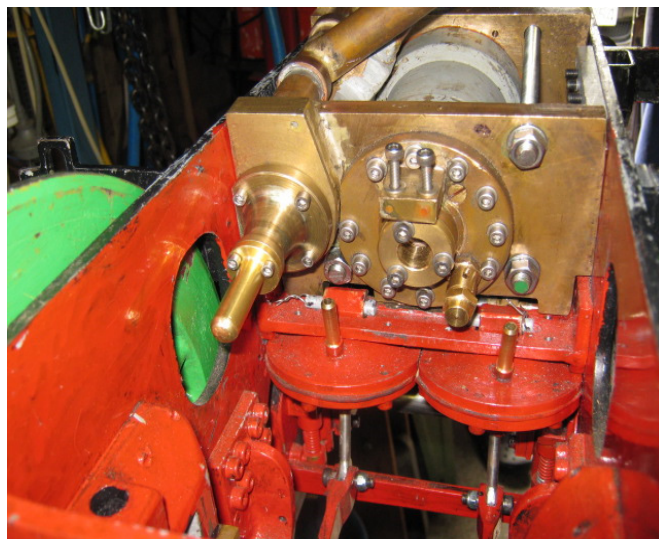
The 2:1 gear can now be re-assembled. The left and right hand cylinders should move the valve rods by approximately 23mm maximum (=VT). Clearly this depends on the valve gear being set. It has been measured that the practical valve movement will be around 24mm. At the time of writing and initial assembly, all three valves can move just over 25mm in the valve guides without hitting the ends.

The setting of the centre valve spool is different.

In order to get to the three front ends of the valves, it will be necessary to dismantle a number of items, including the two side deck front ends. It is not necessary to remove the full side decks. The plate below the smoke box front needs to be removed as well as the cover plate for the 2:1 carrier box.

The two side cylinder valves can be removed forward by disassembling the 2:1 gear completely. Remove the fitted bolt at the combination lever X-head end. The front X-head guides can now be released (four cap

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head stainless 4mm screws). The whole assembly consisting of the valve spindle, valve spool, front X-head guide and the front union to the 2:1 gear, can now be removed forward. The valve spools can then be adjusted on the valve spindle toward the front or rear.

In full forward gear, the admission point of steam at BDC is then set and the valve rod, etc, re-assembled. Having done this on both sides, check the admission points by introducing very low air pressure into the appropriate valve steam chest with the cylinder relief valve spring and ball removed and moving the frames forward to BDC and beyond. Ensure that the two outside cylinders have the same VT then box them up. The centre cylinder is of the

same build except that there is no rear X-head. The valve spindle is guided in a bronze tubular assembly. The internal



**This photo shows how the outer valves are adjusted for timing.**

valve spool is adjusted in the same manner. The whole assembly can be withdrawn to the front in the same manner as the outside cylinder valve assemblies. However, an added aid to valve setting is built in for this valve, not shown on the original drawings.

This is a double ended link with eyes at around 100mm that fit the 2:1 gear and the valve X-head. This link is made from hex steel and threaded internally 5/16" x 40tpi. The rear end is a male threaded extension and thus adjustment by this alone can move the valve spindle 0.0125" by a half turn and re tightening the lock nut. This facility to assist with this valve adjustment at a later stage.

Presently the adjustment is set for correct admission at BDC of the centre con rod. The action of the two outside valves through the 2:1 moves the centre valve to open the steam ports at each end of the stroke, but is slightly late in the admission point from FDC. Thinking about this.

Some photos in explanation are attached. No reason has been found to upgrade the above as at March 2018

Very considerable progress has been made on the overall assembly. But there are always problems to overcome. More later!



## Kiwi North Day



Kiwi North this year ran what was called a "Storybook Day" and was held on Easter Sunday which also happened to be April Fools Day.

In an event like this we run in conjunction with the museum.

The day was quite popular with the public and we had two steamers in action and a petrol locomotive on standby to cope with anticipated crowds.

But things were not all that busy mainly because of the other attraction in town for the Easter period was JA1275 and her consist from Auckland. This was all booked out solid for the four day event.

Subsequently noises have been made to get this sort of thing to be held in Whangarei on a more frequent basis.

**On left: Love that carbon emission. A great shot of JA1275 in full cry.**



## GENERAL TRACKWORK PICTURES AROUND THE SITE



Lloyd and 313 doing a bit of shunting

The above pictures show the construction of the 6-metre track-sets in the basement. Being able to work under cover and at a decent height made the job just all that much more pleasant. Road three was cleared of all vehicles and turned into a long workbench and the availability of easy-access power was a boon. The use of screws instead of nails to fasten the rails to the sleepers also made things a lot easier. The finished tracksets were then removed and stored outside until required.

IF UNDELIVERED PLEASE RETURN TO:—

Whangarei Model Engineering Club Inc,  
P.O. Box 10233, Te Mai, Whangarei 0143.

