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# The MICROMETER

AUCKLAND SOCIETY OF MODEL ENGINEERS INCORPORATED

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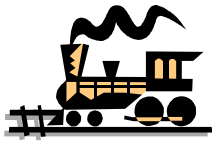
REGISTERED NEW ZEALAND PUBLICATION

## A Bit of a Problem with Leaves on the Line!

After the storm.

Story p4.





# Train Roster

	Electric	Electric	Steam	Train	Station /	Station /	
Date	Driver	Driver	Driver	Controller	Guard	Guard	
<b>6-May-18</b>	M Plant	R Reichardt	Voluntary	<b><u>G Anderson</u></b>	<b>R Crook*</b>	D Beecher	
<b>13-May-18</b>	P Woodford	I Ashley	Voluntary	<b><u>D Russell</u></b>	<b>P Jones*</b>	D Vaughan	
<b>20-May-18</b>	A Bailey	G Beazley	Voluntary	<b><u>G Wills</u></b>	<b>M Luxton*</b>	D Wilson	
<b>27-May-18</b>	M Granger	M Hollis	Voluntary	<b><u>B Aickin</u></b>	<b>B Matchett*</b>	S Wilson	
<b>3-Jun-18</b>	D Housley	J Lankow	Voluntary	<b><u>P Dowdeswell</u></b>	<b>R Souter*</b>	M Vickers	
<b>10-Jun-18</b>	D Moffat	M Moore	Voluntary	<b><u>T Lawrence</u></b>	<b>A Stratton*</b>	D Beecher	
<b>17-Jun-18</b>	P Moy	R Reichardt	Voluntary	<b><u>S Meikle</u></b>	<b>R Stratton*</b>	D Vaughan	
<b>24-Jun-18</b>	A Shirley	P Woodford	Voluntary	<b><u>T Robinson</u></b>	<b>P Tomkies*</b>	S Shirley	

## **Bold and Underlined Name:**

This is the designated **Train Controller**, i.e. the person in overall control of all operations for the day

## **Bold with Asterisked\* Name:**

This is the designated Stationmaster, i.e. the person responsible for activities in the station area. The Stationmaster is also responsible to account for the day's takings.

**Drivers:** Please keep your eyes open for unusual or suspicious behaviour around the track which may affect the safety and/or smooth operation of our trains. Report such activity to the Train Controller.

## **Please Note:**

If for some reason you are unable to attend on your rostered date, you are respectfully reminded that it is **your** responsibility to find a replacement member to fill the gap – please don't let the rest of the team for the day be left short-handed. **Note: the Train Controllers for both affected days must be informed of the swap in advance.**

Also, please ensure the member you arrange a swap with is one who is rostered to undertake the same role to ensure we always have members with the appropriate training and experience on the day.

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## **MAY CALENDAR**

**Tuesday May 1st, 7.30pm** - General Meeting, ASME clubrooms

**Tuesday May 15th, 7.30pm** - Committee Meeting, ASME clubrooms

## Committee Comments

*The Comments which follow should have been included in the April Micrometer but were unfortunately omitted due to an Editorial mix-up. My apologies particularly to Grant Anderson (who wrote the comments), and Mike Banks (who provided the pictures) - Ed.*

Mike Banks organised a mini-exhibition and ASME promotion at the Brit & Euro Classic Car show held at Pa-kuranga on Sunday 4 March. Mike loaded up his trailer with the Club display board of stationary engines (by the late Basil Wilson), ASME promotional brochures & signage as well as three locomotives – his GWR King engine with the “under construction” tender, his Beejax tank loco and Bruce Cooper’s Tich (which now has a new boiler ticket and has recently done a few circuits successfully at ASME). The display was manned all day by Mike and new junior member Samuel Wilson, assisted at times by Allan Stratton & Bruce Cooper. There was a large gathering of people milling around and admiring the exhibits and asking questions most of the day – this was a very large “free” event attracting some 800 plus cars and the public. Thanks Mike for your initiative and work in promoting the Club and hobby.



The Club's insurance policies were renewed in March. The first impact of the new Fire and Emergency Levy increased costs together with above inflation increases on company premiums was felt. The total cost of the indemnity policy required under the lease together with the general liability policy increased costs 13% overall and now exceeds the cost of annual subscriptions on a per member basis!

During March, Allan Stratton and Bob Aickin have improved the running clearances on the middle mainline between the main pedestrian bridge and the dog box by removing the concrete panels of the low retaining wall, cutting back the tuff behind (using the jackhammer as necessary) then replacing the panels. This was necessary due to the slight realignment of the curve when the 7.25g rail was added; the curve being moved inwards to provide more clearance from the curved end of the trestle bridge and southwest end of the stone wall. The job has been on the “to do” list for a while, so thanks to Allan & Bob for jumping in and getting it done. (Photos of the pair hard at work were shown in the April Micrometer).

A special working bee on Tuesday 20<sup>th</sup> March laid the replacement concrete slab at the west end of Waipuna Junction station shelter – this completes the work which started over the Xmas/New Year period with the repairs & upgrading of the subway storm water drain. Now storm water readily drains away from the area (yes, even though it has been summer, we have had enough rain to be confident of its performance!) and provides a much tidier, smoother and safer surface for our volunteers working around the station on Sundays as well as the public accessing the station via the pedestrian bridges. The working bee consisted of Tony Lawrence, Timothy Robinson, Mike Banks and Grant Anderson with outside helpers Aaron & Les.

Dave Housley has recently completed a warrant of fitness check of all operational club trolleys and locos. The committee decided at its February meeting that this should be undertaken on an annual basis for all rolling

stock used by the public. WOF checks done by other MEANZ affiliated clubs are acceptable.

Mark Luxton has agreed to step in and act as Assistant Librarian on General Meeting nights when Graeme Murray is not present – so please see Mark to borrow (or check back in) any books or videos you want to take home.

Congratulations to Allan Bailey who passed his steam drivers license test and is now cleared for public hauling with his new Polly locomotive.

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And more recently:

An updated list of ASME members and Friends of the Waipuna Miniature Railway (FWMR) has been added to the member section of the ASME website. After you have logged in, the new list can be opened (double click on relevant blue words) and then printed.

Many thanks to those members who turned out to clear up the mess after the storm on April 10th. These were, on Friday 13th: Grant Anderson, Mike Banks and John Lankow, and on the following day: Grant, assisted by Tony Lawrence and Timothy Robinson made sure the track was ready for Sunday running by clearing up the remaining leaves, twigs etc.

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## **After the Storm**

On the evening of Tuesday April 10th 2018 Auckland experienced a violent storm, with wind gusts well over 100 km/h causing widespread damage across the city. ASME's track did not escape the mayhem so, with more bad weather forecast for the following weekend, a small team consisting of Grant Anderson, Mike Banks and John Lankow set out on the morning of Friday 13th to clear up the mess so that normal Sunday running would be able to take place on the 15th (weather permitting!). With such widespread damage around the city, it was thought that trying to hire a chainsaw would be futile, but fortunately Mike owns a chainsaw and he sharpened it up and brought it along: it played a vital part in getting the job done.

There were two main areas that needed attention - a large tree adjacent to the east end of the ex-water ski club building split into three, one branch of which fell across the embankment between the trestle bridges and blocked the lower track as well. This was removed by Mike and Grant. (The rest of the tree has since been removed). The fence along the top of the embankment suffered a minor "ding" where the tree fell, but otherwise there was no lasting damage caused.

The other area was at the top end where a considerable number of tree branches and associated debris was blocking the track along the curve above the entrance to the long tunnel. Fortunately, this did not need the chainsaw for most of it and John was able to clear the track using a pruning saw and a pair of loppers.

Smaller stuff consisted mainly of broken twigs and leaves in various places around the track (and in the boat pond) - and would be easily removed by hand later. The track itself and buildings appeared to be unscathed.

The following pictures show some of the mess:

















There was some minor debris at the entrance to the long tunnel - and some in the boat pond.





## **Bits and Pieces 6th March 2018**

Presented by Pete Woodford, report by Grant Anderson and photos by Greville Wills

*(Unfortunately, Greville had to use his 'phone to take the pictures and some of them didn't come out very well. Apologies to those members whose Bits and/or Pieces are not shown - Ed)*

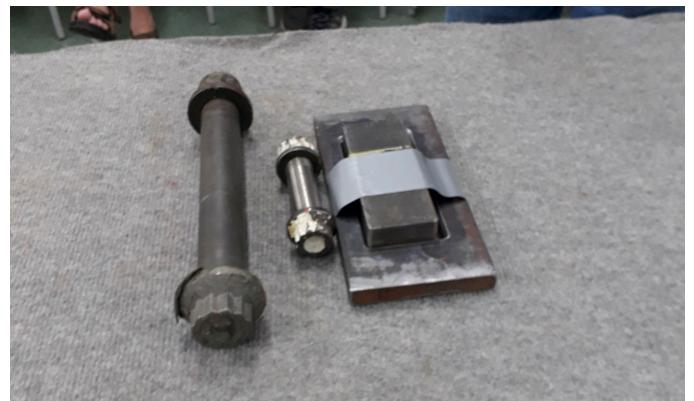


**Mike Jack** displayed handrail stanchion castings made in silicon bronze, which he recently completed for a customer. Mike had one basic stanchion cast in the normal (one-off) way, then fitted a 2BA threaded rod for mounting. Silicone moulds were produced from that master and these were used to have lost wax models made which were then used to cast the final product. This was a much more economical way to produce multiples with the added advantage that if anymore are required, the moulds (if handled with care) are able to be reused to make literally hundreds more.

**Michael Cryns** brought in some 5mm round flexible orange belting he had acquired from Hancock Industrial in Ponsonby which he proposes to use on his small lathe. It can be cut to length, then joined via a small aluminium clip which pushes into the internal hole to provide a smooth joint. Michael thought it probably could also be joined by heat welding.

**Pete Woodford** had another example of a Sturmey-Archer 3 speed bike hub (Ron Cope-land had one along last meeting) this time with coaster brake included and also his Marin Bike which has a Shimano Nexus 8 speed hub. One advantage of this later type hub is that there are no false neutrals (i.e. one can have some power on through gear changes without loss of drive). Pete rides the bike (cost only \$600) to work whenever weather permits.

**Mike Banks** had a press fitting he had made for forming the ends of the water tanks (in copper) on his Beejax tank engine. The blanks find their own position happily enough without the need for any guide pins – and he is happy to loan the formers to anyone who needs to make a similar tank. He also had a sample engine mounting bolt and inconel alloy under-carriage bolt from a Boeing aircraft. These are regularly checked at maintenance intervals and replaced if any corrosion or other defect shows up.







**Greville Wills** had the bogie (earlier converted to 7.25" g from an old 5" g trolley bogie) which supports the sucker head he made for the Club's leaf sucker machine to automate the operation. After several derailments, he has deepened the flanges to 6mm which should help track the bogie more reliably. The extended rig is quite a lengthy set up as a photo taken at a recent Saturday working bee shows – but effectively helps to remove the backbreaking effort of manually holding the sucker head.

(Bottom photo supplied by Grant Anderson)







The aircraft model has a plaque on its wooden base which reads:

Mike Banks  
51 Years Service  
Air New Zealand

The top photo shows Air New Zealand DC8 ZK-NZC as it was when Mike was working on it: the bottom photo is of the same aircraft many years later in a much sorrier state on a Brazilian airfield (missing the odd engine and complete with a couple of bullet holes apparently!).

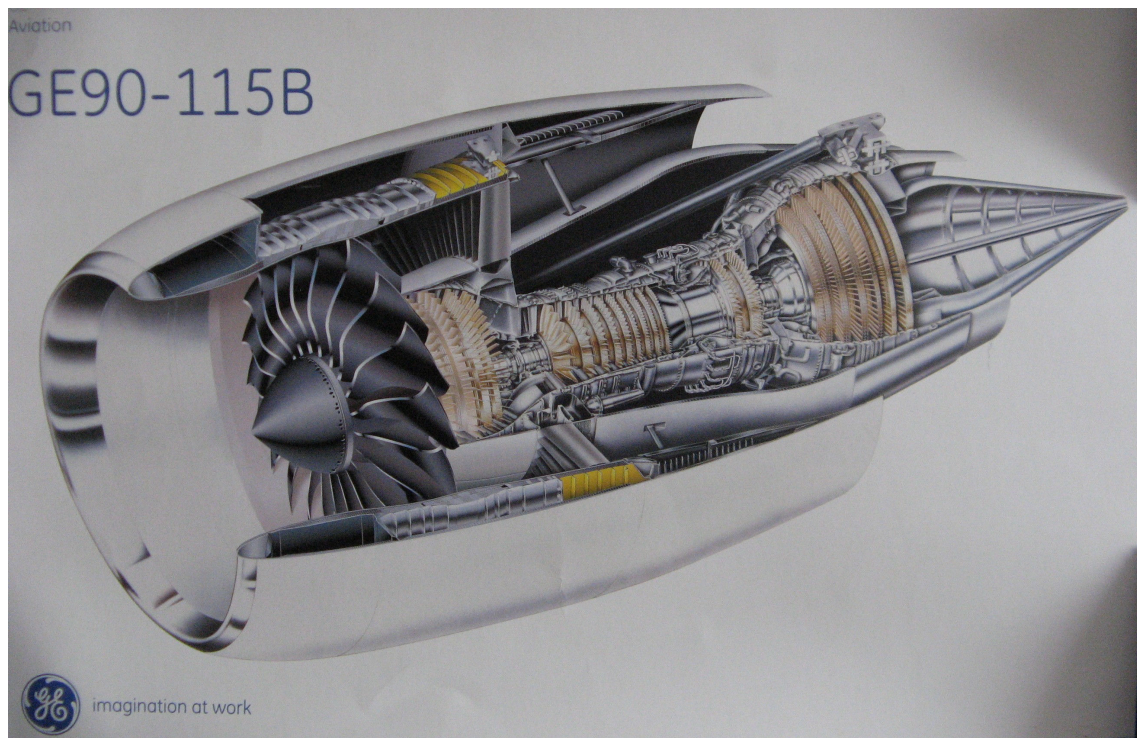
After the Bits and Pieces had been discussed, Mike continued with an interesting talk on the present engine problems that Air New Zealand have been dealing with on their Boeing 787 Dreamliner aircraft, using an old compressor blade from an earlier engine to help explain the problem. He explained that the Rolls-Royce engines on the Dreamliner aircraft are leased from Rolls-Royce and their performance is monitored round the clock by R-R in the UK. Mike illustrated his talk with several posters of cutaway views of jet engines (NOT the ones involved in the present situation) and including a magnificent poster of a Boeing 787 cockpit.

Mike had hoped to screen some pictures he had on a flash drive, but these turned out to have a format incompatible with the club projector when plugged directly in to the machine - and for once no-one had a laptop at the meeting that could have been used instead! We hope to see these pictures at a later date.



The image is a composite of three parts related to the GE90-115B engine:

- Top Diagram:** A detailed cross-sectional diagram of the engine's oil system. It shows the flow of oil from the sump (labeled 'B SUMP VENT') through various stages (4TH, 7TH) and components like 'UNDERCOWL COOLING PREFERENTIAL COOLING' and 'EDUCTOR SUPPLY'. It also indicates 'CUSTOMER BLEED' points and 'LIFT ACTIVE CLEARANCE CONTROL' and 'HPT ACTIVE CLEARANCE CONTROL' mechanisms. A small inset shows a 'Smart' Fan Pump configuration.
- Middle Photograph:** A close-up view of the engine's internal components, showing the complex arrangement of oil system struts and frames.
- Bottom Diagrams:** Three gear diagrams illustrating the 'FRAME STRUT USAGE' for different parts of the engine:
  - Oil Tank Vent:** A yellow gear with 10 teeth, labeled 'B TO A SUMP VENT OIL TANK VENT', 'N<sup>2</sup> SENSOR', 'OIL SCAVENGE', 'FAN HUB FRAME', 'LUBE & DAMPER SUPPLY', and 'SUMP VENT'.
  - Turbine Center Frame:** A blue gear with 10 teeth, labeled 'SUMP VENT', 'OIL SUPPLY', 'SCAVENGE', 'DRAIN', 'TURBINE CENTER FRAME', and 'LUBE & DAMPER SUPPLY'.
  - Turbine Rear Frame:** A red gear with 10 teeth, labeled 'EDUCTOR SUPPLY', 'DRAIN', 'LUBE & DAMPER SUPPLY', 'SCAVENGE', and 'TURBINE REAR FRAME'.







## Wanted to Buy

Hello,

My name is Paddy Darkin and I am writing to you hoping that you may be able to help.

After many years of thinking about it I am going to take the plunge in to live steam, and that being a traction engine, now I have started looking I realise there are very few around and none for sale.

I have done a lot of looking in UK and almost bought one and had it shipped over, but I feel the shipping costs and the gst on the engine once it arrives makes an expensive engine very expensive, so have decided to try and source in nz.

What I am looking for is anything 3 or 4 inch and must be running condition, I am an agricultural engineer by trade and not a model engineer but do have use of workshop tools and have my own lathe for running repairs.

I am not a member of any club yet but will obviously have to join for boiler inspections. Based in Whakatane but am prepared to travel anywhere in the country to view.

If you know of anyone who might be selling a traction engine please could you let me know. Thank you for your time.

regards Paddy

*(Anyone wanting to reply to this ad should contact Mike Moore - Ed.)*