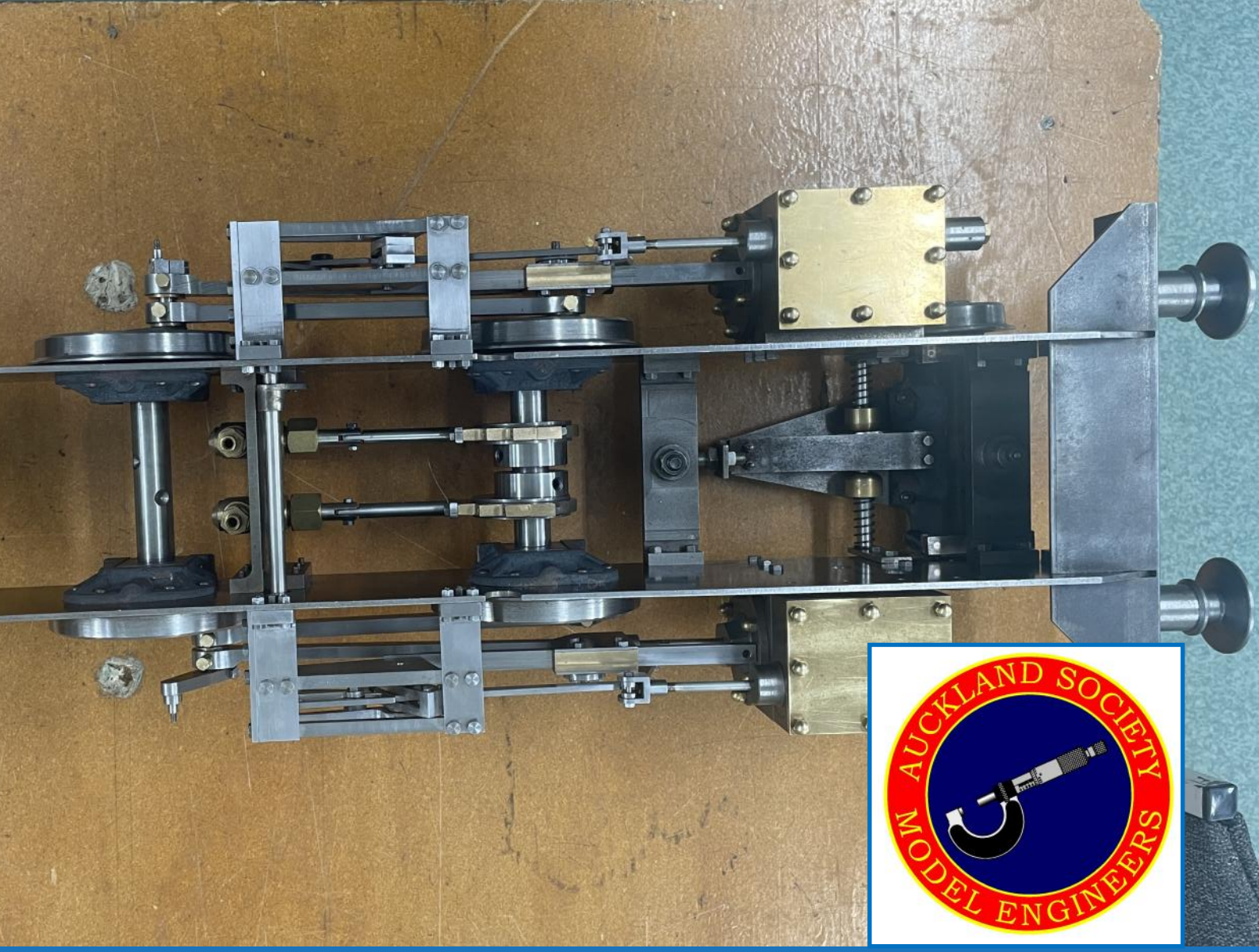

Steve Watson's continued progress on his BJax locomotive

AUCKLAND SOCIETY OF MODEL ENGINEERS INC. | Issue 713 | July 2025

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Inside this issue

Presidents Report

Hello everyone

I'm proud to announce that we will be having our next exhibition on the 18th and 19th of October this year! Mark your calendars, polish your models and get ready to show off everything you've built or are currently building!

We received some great feedback from people last year about the exhibition, so the committee has elected to move the end of year luncheon to 12:00 (midday) on the 1st November. I'm looking forward to seeing everyone's progress with their models, and from what I hear we'll even have a decent number of new models on display as well!

If you'd like to submit an exhibition, please send the details of your exhibit to info@asme.org.nz.

In addition, if you would like to attend the luncheon, please let us know at info@asme.org.nz so we can ensure a spot is available for everyone. We anticipate the price for this will be the same as last year but we are waiting on the venue to confirm it so we should be able to let everyone know hopefully by next month.

Finally, the laws and regulations surrounding incorporated societies will be changing early next year. The committee is looking into getting our rules updated as per the legal requirements. When we are ready to present it to the members, we will be sending out a special meeting notice to everyone well in advance and will be including the updated rules as well as details about the explicit changes.

Thanks

Philip Dowdeswell

ASME President

This Month's Calendar

Tuesday, July 1st	07:30pm	General Meeting (Clubhouse)
Tuesday, July 8th	07:30pm	Workshop Night
Tuesday, July 15th	07:30pm	Committee Meeting (Zoom)

TRAIN ROSTER

Date	Electric Driver	Electric Driver	Steam Driver	Train Controller	Station / Guard	Station / Guard	Extra Person
6-Jul-25	R Reichardt	T Gil-Goldsbrough	Voluntary	**T Lawrence**	**R Souter***	S Heath	
13-Jul-25	M Moore	B Matchett	Voluntary	**S Meikle**	**M Luxton***	B Leung	
20-Jul-25	R Reichardt	M Vickers	Voluntary	**G Wills**	**R Crook***	B Maroc	
27-Jul-25	C Whitiskie	R Shearer	Voluntary	**B Aickin**	**K Ryan***	T Schaw	M Schaw

(Please Note; Swaps notified have been included in July)

3-Aug-25	I Ashley	T Gil-Goldsbrough	Voluntary	**P Dowdeswell**	**R Souter***	L Brown	
10-Aug-25	D Housley	R Shearer	Voluntary	**T Lawrence**	**R Crook***	S Heath	
17-Aug-25	M Moore	R Copeland	Voluntary	**S Meikle**	**M Luxton***	B Leung	T Mcdonald
24-Aug-25	R Reichardt	M Vickers	Voluntary	**G Wills**	**K Ryan***	B Maroc	
31-Aug-25	C Whitiskie	S Watson	Voluntary	**B Aickin**	**P Dowdeswell***	D Housley	

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. It is the responsibility of the person who initiated the swap to do this. Also advise Bob Aickin who is keeping track of the number of duties each of us perform during the year.

CLUB NOTICES

Model Engineering Journals

ASME has an extensive range of Model Engineering Journals (ME and MEW) in the library, managed by Mark Luxton. The collection goes back to the first editions. However as new copies arrive binding takes a while, so the latest may not available for a while.

If you would like to read the latest edition, they are free to borrow electronically from Auckland Public Libraries. The easiest way to borrow them is using the LIBBY app. If you are a member of the Auckland Library System (anywhere in the SuperCity), this gives free access to an ME and MEW e-sub. If you encounter difficulties take your device (an iPad is ideal) into any Auckland Library Branch.

Please let the editor know if you have been using this service successfully, or have encountered any difficulties.

ASME Exhibition + End of Year Luncheon

We have tentatively booked the next exhibition for the 18th and 19th October and the End-of-Year Luncheon and awards ceremony for the 1st of November. More details will follow in the coming months.

ASME will be hosting it's annual exhibition on the 18th and 19th of October at the ASME Clubroom.

Thank you to everyone who gave us great feedback about last years exhibition. We've elected to have the end of year luncheon and awards ceremony on the 1st of November.

If you would like to submit an exhibit, please send the details to info@asme.org.nz. Please also include a photo of the exhibit, as well as dimension details and any other support required (Such as needing power or an air compressor) so we can ensure there is space for everyone.

If you would like to attend the luncheon, please let us know at info@asme.org.nz. We anticipate that the price for this should be the same as last year, but we are waiting for some final confirmation from the venue so we will post that in the next Micrometer if we have it.

The Milling Machine Repairs

The good news is that the mill in the basement workshop is now running and just needs a drop of oil in the main spindle gear box and will ready for action.

The mill was put in place and rebuilt as it had to be placed in the basement in semi kit set form. Thanks to the members who carried that out.

Once it was positioned in its final place the rebuild began Steve Watson wired up the circuit panel for the control functions and our electrician Tony connected up the main circuits.

That we thought was the get go for the mill. But Tony tested the motor for the spindle and found a winding burnt out. Steve and I decided that we should explore two options on the motor. The first was to pull the motor out of the machine to have it assessed at the motor rewinders and secondly to get a quote for a new motor. Whilst we had taken the motor of we decided to check the X and Z motors and their respective operation. The Z axis was found to be satisfactory so attention was turned to the X axis which when switched on resembled a coffee grinder so again bite the bullet and dismantle the gearbox off the table mounts then test again the operation. Same result. The levers did not want engage properly and the motor gave out the same grinding noise. OK, we are now going to get intimate with this and strip her down.

The cover plate to the gear box was removed and the first thing we experienced was a broken roll pin in the sump. That gives you that “hmm I think we delve deeper”. After removing a slide and selector we still had no further insight where the broken roll pin came from further down the track when we removed the ration selector arm we found the errant hole where the roll pin came from which tied the selector arm to the shaft (by this time Steve had learned how to take out taper pins).

Simple! We drove out the remnants of the pin and as usual our fortune waned and the selector arm broke. I cannot put down our words one was I am not going to braze that up. We decided that I would model up the arm and create a drawing and email it over to Steve and he would manufacture it. All went well, we assembled the shaft with a roll pin. This still did not take up the fact that the unit sounded like the original coffee grinder.

We sourced the bearing for the main input shaft and the motor bearings and replaced them. When we stripped off the bearings we carefully examined them and if you checked them static you would swear “she’ll be right” but nevertheless they were changed.

The Milling Machine Repairs

You wouldn't want to go through the whole procedure again once assembled and put back in the machine.

We assembled the gearbox and motor back together and installed it on the machine it now works as it is supposed to do.

So to make a long story longer. The next step was the motor. We had approached the motor rewinders and had been given a verbal quote of $1700 for rewinding and refurbishing as opposed to a favourable quote of $850 for a new motor thanks again to John Brookes Ltd. This was presented to the committee who approved the purchase of the new motor.

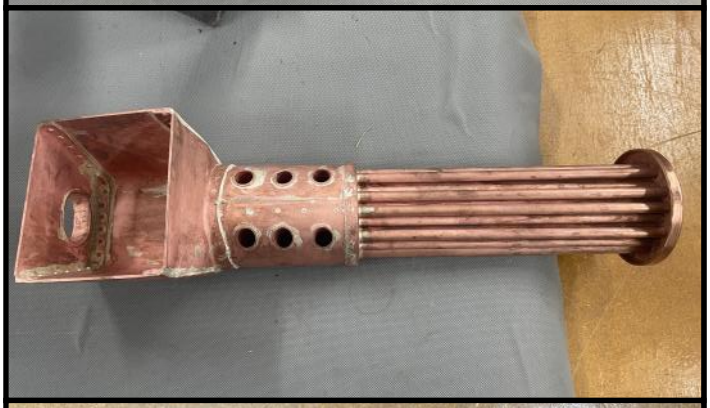
The next day we purchased said motor, took it to the workshop and installed it on the mill. The rebuild of the mill went quicker than that of the strip down. Now the club has for the use of members:

1. A single phase lathe.
2. A larger lathe for heavier work.
3. A mill that will take whatever you throw at it.

These machines are here for the benefit of our members and are available for all to use.

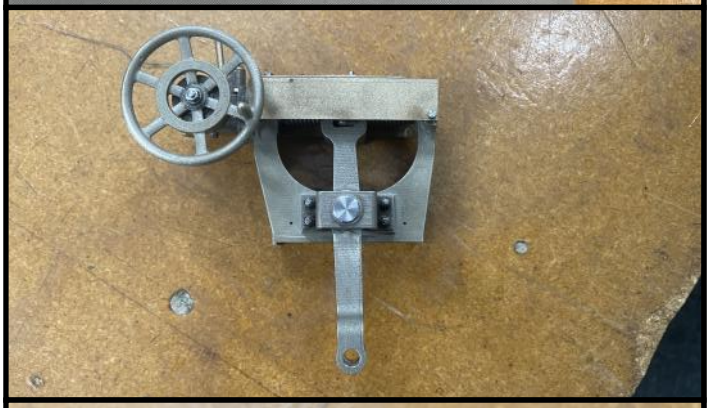
On workshop night we will be available to give all members who are interested, an orientation to the operation of the mill and any other machines in the basement bring your items of interest and for the latter part of the night an insight to the mill, Did you know it has five planar actions?

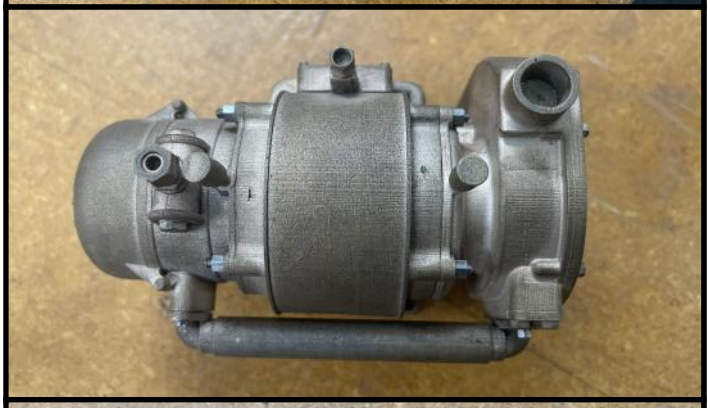
Bits & Pieces



Arnold has started welding up the copper boiler that he has been building and be brought it in for everyone to see. Some of the pipes are a little close together so he looking into making some adjustments. It doesn't have any leakage problems so it's going great so far!

He's put circulation tubes inside the combustion chamber to improve steam efficiency. The original design had tubes that were too long and it degraded the steam efficiency so his fix is apparently working quite well!

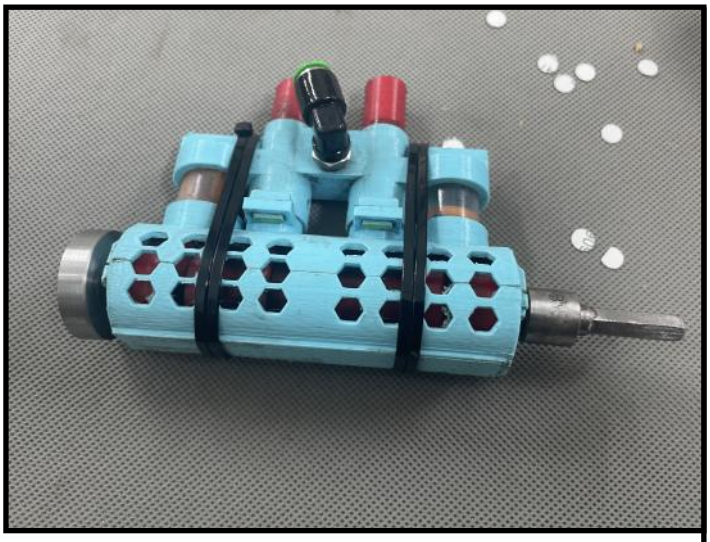




Mike has continued more work on his reverser. Three have now been assembled from his production run and are ready to be shipped overseas to the buyers. A bit more fitting, some assembly and the rest of them will be complete as he has already finished the machining. He's had to make enough for seventeen models!

Many of the locomotives that he is building parts for originally had electric generators fitted for cab lighting, so he has made prototype replicas for the engineers to fit to their engines. The detail on these assets are absolutely fantastic and you'd swear they were just as real as the original full scale models.

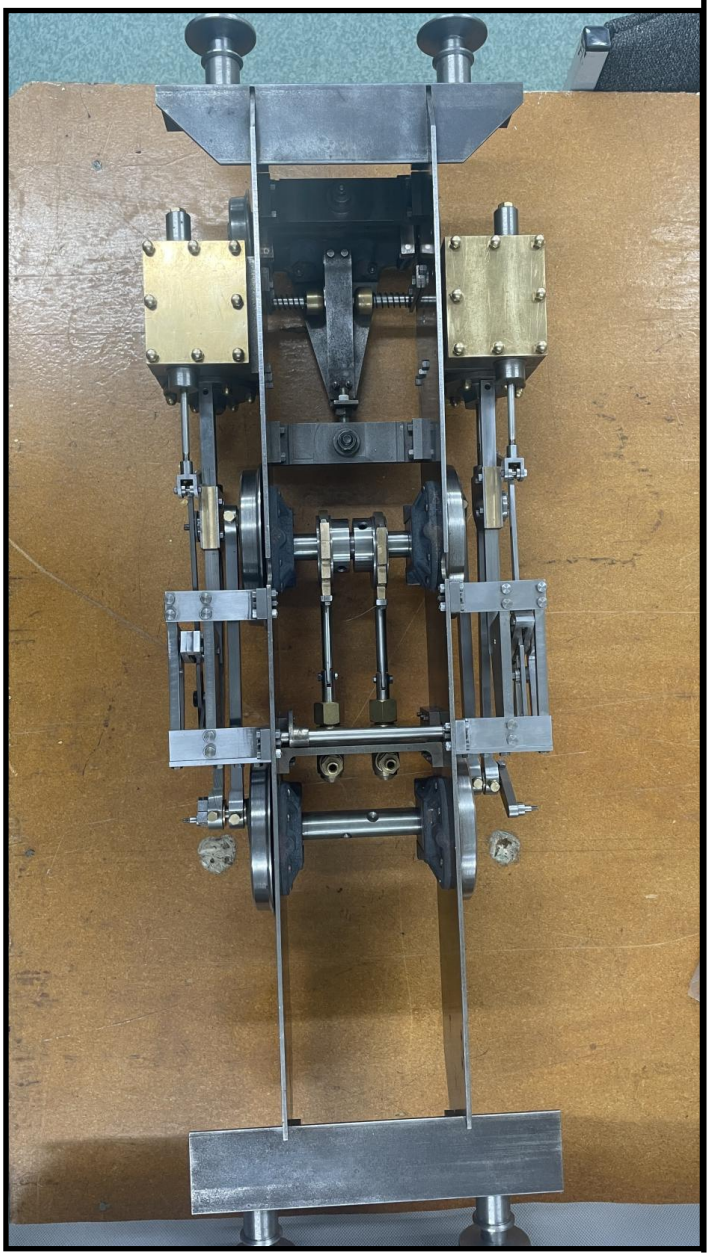
Bits & Pieces



Matthew designed, 3d printed and assembled a two cylinder engine with a slide valve.

Honestly, I'm amazed. When I was his age, he was mostly definitely not doing stuff as amazing as this.

Matthew was supplied the plans by Arnold and he 3d printed the entire unit after some minor adjustments. Originally he started with a syringe to work as the piston, but the friction on it was problematic so he redesigned the unit and is now using silicon spray as a lubricant. The engine needs to warm up before it's properly operational, but it can comfortably run at about 3 bar but anything higher and starts to get a bit unstable.



The whole assembly was about thirty hours of design and tuning after the printing was complete.

Steve has brought in his updated frame for his BJax locomotive. The inside and outside cylinders are done, aside from the Piston Rings. The next part is to get it running on air to ensure it has a smooth operation. Then he'll be taking it apart to get it painted which he expects will take another month or two.