

THE CENTURION SMOKEBOX



"Providing smoking news and steaming interests to members and friends"

Centurion Society of Model Engineers

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 **Centurion Society of Model Engineers**
& Centurion Society of Model Engineers' Supporters Group

CSME NEWSLETTER MAY 2025

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2025 SUBS: R500 FOR ORDINARY MEMBERS R250 FOR SENIOR MEMBERS AND STUDENTS

Official Correspondence & Newsletter

If you read this and are not receiving mail from the CSME you should contact the secretary or editor to update your details. Please ensure we are notified of any change of email address and cell phone number. Those members without email can collect a copy of the newsletter on request from the clubhouse on track day. The news letters are also distributed via the official CSME Whatsapp group.

Next Club Meetings

The committee meeting is on Saturday, 17 May 2025, the club running day is 18 May 2025.

Members are welcome any other time by arrangement with Swannie 064 520 8572. The gates are operational by cell phone for members. Members, please contact Norman Reyneke to be added to the gate motor list.

Chairman's Chatter

The last month there were so many public holidays, one lost count in the end. We were open all public holidays except Easter Friday, and both the weather and support from the public was excellent.

A special thanks to all the drivers that kept the wheels rolling and the public smiling. It took a lot of effort, especially on the busy days, it is appreciated.

We are busy with quite a few projects, extra fences in the station, finishing the storage tunnels, raised track and the low-bed carriage for wheelchairs to mention a few. We will work on the raised track again next opportunity. We also plan to start with a disabled toilet and 4 extra passenger carriages. Lucas is also overhauling Lizzy to get it back in operation, as it gathered dust when we borrowed its tender for Theresa.

Please join us on Tuesdays or the club Saturday, there is always something to do and enjoy.

Leon

Secretary's Bit

My thanks go out to members who continue to respond to the emailed details update request form. This is definitely a very worthwhile exercise. Printed copies of the relevant form are available at the Club office as previously indicated. Please pop in and complete a form when next you visit the club.

Birthday wishes go out this month to: Rene Bosch, James Leenders, Zuhan Henning and Derick Louw.

Norman

From the Editor

Thank you very much for all the contributions to this edition on **THE CENTURION SMOKE BOX**.

We have some interesting content in this edition of the newsletter. An active club makes it easy to gather information for the newsletter, as well as members sending material.

We do not have any items for the SELL/SWOP/WANTED section, so please look around the workshop, there must be items storing dust that other members will find useful.

A great build by James with his 15F project, and interesting methods he applies to his build. We will share what he has done before, as well as how he progresses.

Jandre is showing how the "new" technology is assisting in designing and building a 5 inch shunter, and I am sure this is a great project to get new younger members involved in ME. Jandre is willing to make his project open source, with drawings, material list and suppliers as well as fabricating processes to be published on the club's website once complete.

Carel

Of Signals and Signalling



One would assume that a lone STOP sign, out on the outer loop would suffice! But not when our resident military pilot takes on a project! And it has more to do with Jon Shaw's untimely encounter with a mother duck and her ducklings in the tunnel, than one would ever imagine.



The approach to the first tunnel navigating the blind curve around the "mountain" could be considered a potential safety concern if a train needs to stop for an emergency. This happened some years ago as Jon Shaw encountered the young mother duck with her ducklings strolling through the tunnel. Humanity makes you stop, in order for the ducks to go around their business of the day. Another train approaching, would not have sufficient time to stop in time, in order to comply with the humanitarian situation of the



moment. At first, we installed a sign, not allowing any ducks in the tunnel. This proved to be extremely effective, as we never had any encounters with any ducks in the tunnel since the erection of the sign!

So, as an extra precaution, Francois jumped in and designed a signalling system, that I would attempt to explain in the following pages:

Of Signals and Signalling



The first signal in the system ensures a train does not enter the section approaching the first tunnel if the section is occupied with another train. Once a train enters this section, the signal turns red. A sensor at the exit of the tunnel, returns the signal to green and the next train may enter.



Once the train exited the tunnel, it approaches the crossing, where a compulsory stop sign is installed. This allows the train approaching from the left to have right of way and proceeds through the crossing.



A situation may arise that the train on the right hand side, may be stationary for an extended period of time, when it waits for two or even three trains approaching from the left and then through the crossing, as they have right of way.

In order to prevent another train exiting the tunnel, not knowing that a train is stationary just outside of the tunnel, another set of signals has been installed to warn the approaching train. On the curve approaching the tunnel, a signal shows green when the compulsory stop area is clear, and yellow if still occupied, signalling to the approaching train to proceed with caution. The final signal at the entrance to the tunnel, will confirm with green if the Crossing area is clear, or red if still occupied. A red light will thus signal that the approaching train should stop, until the crossing section is clear, that will be signalled with a green light.

The yellow signal also indicates to a train approaching the crossing from the station, that the crossing is occupied with a train on the other approaching line, and it should proceed with caution, although it has right of way.

Great work Francois!



Workshop Gadgets - Leon Kamffer



Lathe Spindle Stop

Making a bunch of parts to the same length like axles accurately take a bit of effort. Having a robust stop in the spindle allows you to measure and get one to length, then make all the rest to the same length easily.

There are a lot of designs and ideas on the internet, but one needs one that fits the dimensions of your lathe.

One can use different methods to lock the stop, but mine is a collet to clamp the rod inside an expanding collet that fits the back of the lathe spindle. It is made from a few pieces of Aluminium, and a selection of 10mm rods of different lengths and ends. A thinned end for small parts, and a plastic disc on the longer ones to prevent vibration at high spindle speeds. Sometimes an extra one is made like a cup end of the required dimension, so a part can be bored through like a thick washer and all faced to the same length.

The first time one makes 6 axles, or 14 like in the case of a Garratt, the time making it is recovered from the speed at which one can make multiple parts. It will definitely be used making the next set of axles for the 4 passenger truck we plan on building.

Seen around the Club



Some serious work going into storage tunnel 1 & 2. The Tuesday gang modifying the track support for storage area.



Palisades for platform 3 done, with 4 in progress. This assist greatly to improve passenger flow during boarding and disembarking.



Sam getting BARRY ready for passenger duty.



The young replaces the old. Two new trees to replace the uprooted trees during a recent storm at the ATKV Meerpark Campsites.

Who's doing what?

The new low bed / disable person truck were tested and found to be very stable (not sure about the tester though).



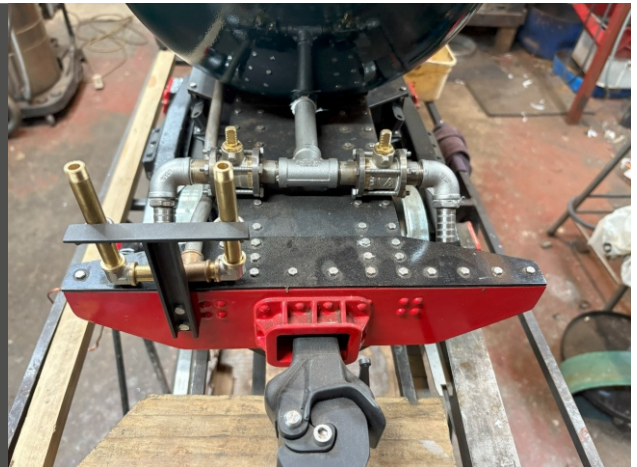
Who's doing what?

From Leon's Workshop:



Pipework for the water tanker

Small expansion links for Neil's Stuart engine



Lizzies's piston and slide bar.



Tyres for a 3 1/2 SAR loco.



The author's attempt at a machinist tool chest to help organising the workshop (One won't do it!)



Who's doing what?

James Wolmarans is busy with his 5 inch 15F, a stunning project that we will be featuring here on a regular basis:

Here is a few photos on the current manufacturing status of my SAR CLASS 15F 5" gauge boiler. Material used is certified seamless boiler tube with a 219mm diameter with a schedule 40 thickness. The boiler plate is BS 430A Spec and all is welded with AFROX 7018 Low Hydrogen 4mm diameter welding rods. As per manufactures recommendation, the welder is set to just under 160 amps. As this is my first boiler, I got valuable advise and guidance from Leon on the fabrication of the Boiler.



Who's doing what?

When you build a complete SAR train in 5 inch, you need to transport it in style. A Ventertjie will just not make the cut, so a custom made trailer is the answer! Simon did just that. Looking forward to see the trailer filled with SAR!



Who's doing what?

Jandre did his final axle boxes and the base keeper plates and suspension plates will be printed out of solid PETG. The axle boxes were tested to carry 120kg of weight before distorting or breaking, and that will be more than sufficient for this little shunter. The wheels arrived from Orion Engineering who machined them out of EN8 steel.

He also printed the axle boxes for his 5 inch LMS 10ton flat wagons.

