

**1). INTRODUCTION:**

Some reminders here before we get into the good stuff:

1. Club memberships are due to be renewed for 2013.
Contact Lauren Ackerman at membership@reefsteamers.com.
2. Membership cards are available for pick-up at the canteen. This year's cards are pink. ☺
3. David Wardale's book 'The Red Devil and other tales from the age of steam' is available as a special import. Contact Luca Lategan at reddevil@luca.la for details
4. We are still asking for a R500 donation towards face bricks to go into Coen's Pretorius's ongoing Garden Improvement Project.
5. If people have landscaping type items such as used bricks, paving slabs, slasto, irrigation equipment or garden furniture that they can't use, we might be able to make use of it. Contact Gordon Bennett at gjbennett52@gmail.com and he will see what we can use.
6. Coach Staff and Loco Crew are asked to please have the courtesy to reply when they are sent a roster with their name on it, and to confirm whether they can or cannot arrive.
7. Don't forget to sign up as crew or staff for the November Steam Tour if you wish to get involved. Speak to Shaun Ackerman or email him at engineering@reefsteamers.com.
8. We need volunteers to assist with the grounds and on the trains for the Open Day at the end of July. Please contact Lauren Ackerman at marketing@Reefsteamers.com if you have not yet done so.
9. We need volunteers to assist us with finishing off the Energy Saving Lighting Project in the workshops.
10. We are still asking for people to come and lend a hand with the sleeper coach upgrades, of which many more pictures have been included in this Waybill. We had a better 'turnout' last week and really managed to get some work done. Thank you to those that came!

2). SOME NEWS BEFORE WE START:

Johann Breydenbach has qualified to join the select group of Reefsteamers Wheel Grinders – passing his practical Driver's Evaluation on the homeward run on the recent Beer Tasting Train on 25 May.

In classic Breydenbach fashion, he didn't make a big fuss of it. He just quietly greased up his loco while the bearings were still warm, assisted with decommissioning and then toddled off home without fanfare. He hadn't slept the night before with an understandable combination of nervousness and excitement. He just needed to put his head down and be decommissioned himself! But I am sure his poor dear wife got to hear about EVERY mile and exactly where the cut off was and what the fireman (Michael Thiel) was doing. Zzzzz!

Well done Johann and be nice to the poor firemen and loco minders, okay.



A chuffed and relieved Johann (R) gets a hug from our senior Driver, Attie de Necker. In spite of the date on the recycled envelope, this happy occasion was on 25 May 2013.

**3). SPONSORSHIPS:**

We have two firms that are currently helping us with materials and raising funds. Shield Chemicals, where our Simon Bennett works, has set up an SMS competition line to assist us with raising funds to repair the Class 15CA No.2056. There will soon be a Reefsteamer/Shield brochure coming out to promote this initiative. Shield Chemicals are having promotional stickers made too, and the competition will also be printed onto the packaging of their products, such as the tubs of car polish.

Shield specialize in automotive cleaning products, cleaning materials and kits. The stubborn shine that is currently on the Class 12AR is from their range of polishes and using a kit with an orbital buffer. Thanks guys.



Shield Chemicals - <http://www.shieldchem.co.za/>

Polyflor South Africa have also expressed an interest in assisting us with original type vinyl sheet flooring for our coaches. (They supply material for railway applications in the normal course of their business.) Currently under investigation is the sourcing of 2.5mm thick ultra-heavy duty material from their UK factory. They have also suggested that we also use a special 'walk off' product in the end vestibules. The product acts like a big door mat to help keep the coach interiors clean. There are also contacts being sought out for heavy duty carpet cleaning, of which those sleeper coaches are in dire need.

You will soon be seeing their logos on our promotional materials and likely on the trains as well – to let the world know who is assisting us with steam preservation.



Polyflor - <http://www.polyflor.com/jh/web.nsf/home>

4). UPDATED TRAIN SCHEDULES:

The Train Schedules have been updated for the remainder of the year, thus:

DATE	TRIP	TRIP ITINERARY
25th May	Magaliesburg	Beer Tasting – De Garve
17 th June	Short trip around JHB	Lunch
29 th June	Magaliesburg	Magaliesburg Express
13 th July	Depot	Winter Photo shoot
27 th July	Depot/Park Station	Open Day
9 th August	Magaliesburg	Women's day special
7 th September	Magaliesburg	Magaliesburg Express
22 nd September	Short trip around JHB	Lunch
5 th October	Magaliesburg	Magaliesburg Express
26 th October	Magaliesburg	Magaliesburg Express
30 th November	Pretoria / FOTR	Lunch
7 December	Magaliesburg	Magaliesburg Express
16 December	Magaliesburg	Magaliesburg Express

5). GOLD CLASS COACH WORK FROM SAT, 1 JUNE 2013:



C01 – Inspection of the vestibule floor under-plating through the cut-outs in the timbers made by Simon revealed that the plating had corroded under the ply-wood sheets. Today, all of the timber and plating was removed.



C02 – As Gordon worries away at a nearly-cut plate, you can clearly see the corroded edges. The water was getting into the floor timbers from underneath, as well as through the bathroom, open doors and the gangway drips.



C03 – Seen through the new hole, you can see how the wheel would spray water into this area. As the vestibules are designed to be crumple zones, there is no corrugated under-frame plating here, as per the habitable spaces.



C04 – Here is the vestibule floor with the under-plating removed. The steel visible here is a part of the coach frame. It needs to be de-rusted, cleaned and primed for a new floor. The big nuts are for the buffer-plate rams.



C05 – Gordon and Robbie start working on cutting out steel plates to repair the floors. They were concerned about the length of time it would take to cut the plates and weld them in – especially as there are 4 more coaches still to do! But this job was cancelled after a single cut.



C06 – Sitting on the draft cushion stack, Gordon is thinking things through. If we plate this floor with our stock of thicker plate, and then put new plywood on top, the higher floor will foul the inward opening doors. It is also one of the reason why cheap vinyl was originally laid – it is THIN!



C07 – The consensus is that we will lay the new plywood sheeting directly over the access holes, but with a coating of bitumen on the undersides and along the edges. To minimize unsettling floor flexion under heavy people, we'll span the holes with a piece of scrap angle iron welded in.



C08 – With that decision made, work continued on chiselling away the leftovers from the hole covers and grinding down the welds. In spite of the planned bitumen, the floor boards will also be mechanically held down with cadmium-plated countersunk screws.



C09 – Lauren 'Smidge' Ackerman is placing the splash-back tiles in the center bathroom. They are being fastened with generous blobs of clear silicone and will be grouted with white silicone. The silicone will impart some flexibility to the hard ceramic tiles on a moving, vibrating coach.



C10 – This awkward shot, taken from ground level through the window, serves to show a better rendering of the neutral tile colours chosen. At work is Cheylin Blore, Lauren's eldest of three. The bare space in the corner is reserved for the pipe risers and mixer valve panel.



C11 – The decision was made to go for oversized floor tiles rather than normal bathroom tiles. It would reduce the number of grouting joints to be made, and the silicone would help prevent cracking. We would have still had the same number of tiles to trim, regardless of their size.



C12 – A view looking down into the shower-to-be. The tile cutter purchased for the job wasn't able to handle the floor tiles. That dead space in the left corner will allow continued stand-up and 'bunk steps' access to the standard overhead storage which extends over the corridor ceiling.



C13 – The shower drains are to be rigid PVC pipes rather than flexible stuff – this trench will also house the water pipes. Each coach's shower drains will need to be reconnoitred in advance, due to framing and bogies getting in the way. They also need to fit beneath the shower pan.



C14 – While the silicone cures behind the tiles, the foam under-floor sheet (with integral water proofing membrane) has been laid and Alan Lawton had started putting the new laminated T&G flooring in. The toilet's waste pipe will be re-routed through the wall to eliminate an extra S-bend.



C15 – Leaning loose in the corridor, this is one of the modern shower mixer units that had been purchased and installed by Setimela. They aren't bad quality and have seen little use, so we are going to reuse them. We already know they fit in the corner panels.



C16 – Classic plumbing by the now-failed Setimela Tours Company. Neither the pipes or the mixer valve were physically attached to the timber. They had relied on two screws through the plastic escutcheon plate for the mixer, and on the shower rose's pipe to hold everything together.



C17 – A little extra work involving saddle clamps and some scrap flooring as spacers makes for a more rigid mounting. At least one of these showers had already started to leak due to fractured pipes. Note the stray tee-piece .. not ours!



C18 – Smudge Ackerman fastens the corner panel with the same self-drilling screws used for the skirting boards. The RHS bolts had to be angled perpendicular as that firewall has two sets of laminated ply astride a sheet steel plate.



C19 – The outlet pipe for the shower rose is threaded, not soldered, so the shower heads can be removed later on. We are going to try out a low pressure high flow 'sunflower' type shower rose on the pumps before purchasing more.



C20 – Fitting the shower pans proved to be tricky with SIX adjustable feet to set up level, and with the pan tilted by the planking too. Note that shower water pipes had already been brazed in – joints above rather than below floor level.



C21 – Because this bathroom floor was now physically higher because of the extra layer of 7-ply plywood sheeting that had been fitted, and then the laminated planks, that corner panel had to be trimmed to fit the pan. It was still a bit long, so it was trimmed twice more.



C22 - The grotty and badly siliconed Setimela-era drain fitting was replaced after the levelling operation. The fellows had to turn the body against the drain's grid to get it loose, but they managed without fracturing the shower's fibreglass pan. (Sighs of relief all round.)



C23 – A part of the customization that will need to be done for each shower. Dr. Smudge uses a crow bar to peel off the floor vinyl remaining in the drain trench to provide clearance for the PVC drain pipe. Note the lack of a drum trap or U-bend – not necessary for external discharge.



C24 – The drain pipes were put together with proper liquid adhesive for PVC for a true chemical bond, rather than just any old glue ... or even silicone! It made for some mad dashing though, to try and fit the vertical pipe up from underneath before the fusing PVC had time to set.



C25 – We will be re-using the close coupled toilet pans that were originally installed by Setimela, but with better quality seats. The fellows were debating putting the toilet in the center line for more leg room on the user's left side, but the route for the waste pipe dictated the offset position.



C26 – Alan has a go through that wall with his 110mm diameter hole saw. Unfortunately the teeth no longer have any set and all the saw was achieving was scorching a groove into the plywood. And that stuff REEKS when it gets all hot and smoky!



C27 – The chaps eventually cut the hole with a tungsten jigsaw blade and some swearing. In the resulting 'biscuit,' you can see the double five-ply of an UCW Coach firewall – with the fire-retarding steel plate right in the middle.



C28 – Generously-built Robbie Davis-Hannibal had to fold himself into this small space and strip the original bathroom. Once cleaned up, this room will become the lockable linen store for when the sleeper train is out of use.



C29 – Another fine Setimela stuff up. To ease the fitting of their PBC waste pipes, they had used the rubber-ringed pan couplers as standard bends between pipes underneath the coaches – so some of the pipes were not rigidly joined.



C30 – I've always said that this cheerful, mischievous old Spoorie is just plain full of it! Senior Driver Att de Necker finds a comfy perch on the removed drop-hatch toilet while the coach jack boys fetch their cast iron kit.

6). **SOME 12AR 1535 RUNNING REPAIRS!**



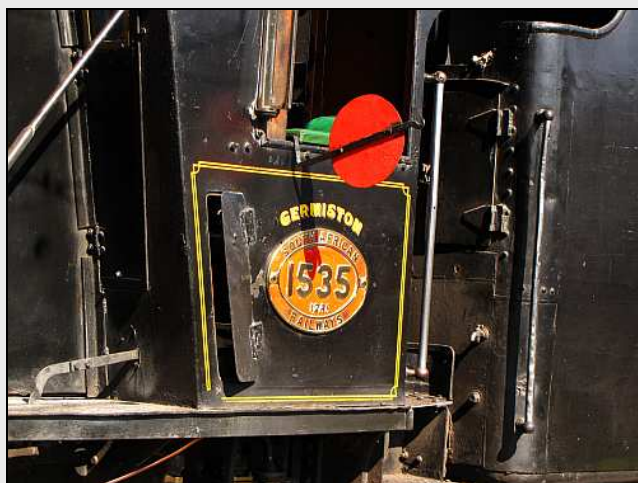
W01 – Our Susie Girl had been pulled out over the ash tracks for some undercarriage work. The smokebox had been cleaned out and washed the previous week. Jeandre had left the door open on purpose to help it all to dry out.



W02 – As the front tube plate is known to be wasted, the 12AR Loco is on a strict cleaning schedule to forestall any further sulphur-leached corrosion from wet char and ash. The smokebox gets cleaned after Every ... Single ... Trip.



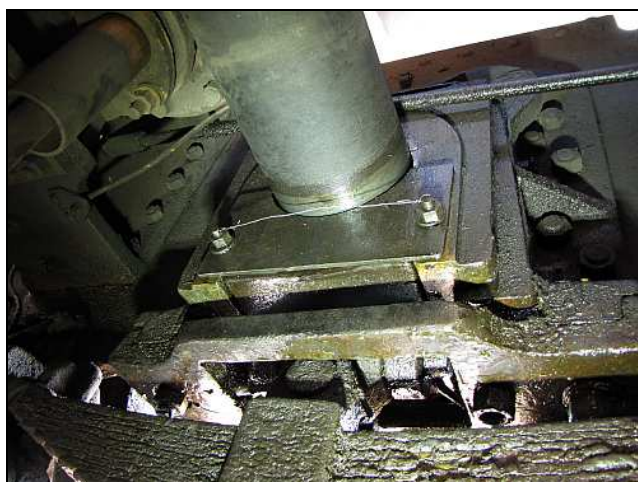
W03 – The 12AR 1535 was pulled out for improved lighting as there are no lights in the pits in the Top Shed. The diesel shunter's driver was enjoying the sunshine, taking a break between the rigorous work of jockeying the levers.



W04 – Class 12AR No.1535 had been correctly flagged as 'under work.' It is now Reefsteamers policy that all the operating steam locomotives carry their red works disk in the cab at all times.



W05 – While working under all the iron, the fellows checked other bolts and safety wires as well. A good habit to have! Seen is the detail of one of the bronze front bogie bearings, with an oil box packed with oil impregnated 'socks.'

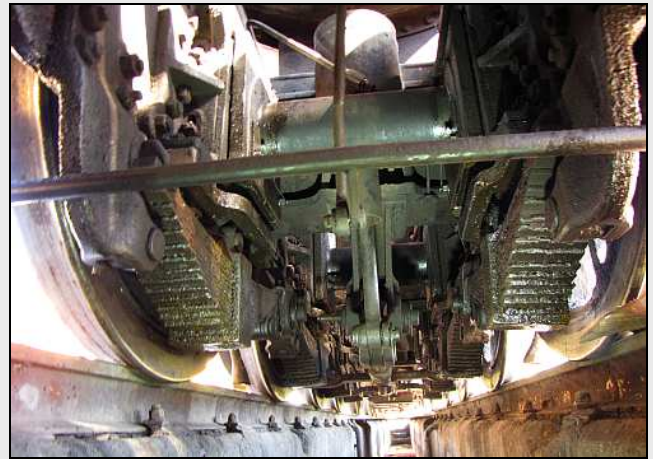


W06 – Here is the main project underneath – some of the driver axle boxes had loose wedges. You can see the tapered wedge to the right of the picture (Front). It adjusts the side clearances between the box and the axle horns.



W07 – The correct axle box clearance on this loco is about 1mm. The thickness of a worn hacksaw blade makes for a rough feeler gauge. If the clearances are too wide, the axle boxes bang backwards and forwards with the motion of the rods. (It knocks the rod bushes oval.)

Too tight, and the axles cannot move up and down within the horns of the frame and the locomotive's suspension goes stiff. Sustained running with the axles tilted could cause an axle bearing to run-out.



W08 – Here you see why the loco was pulled into daylight! It's bright-ish under there – albeit with a flood lamp as well. Some of the axle keeps had worked a bit loose too, so the undercarriage was checked and tightened from end to end.

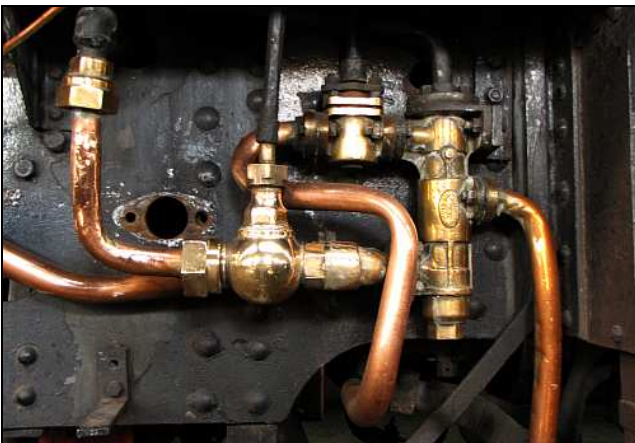
In the foreground is the pull rod for the locomotive's independent brake. It is steam operated and works with the same set of linkages as per the vacuum brake, with the vertical steam cylinder visible.



W09 – Back in the top shed and looking at the 12AR's ash pan hopper. Jeandre Gordon had been tasked with repairing the stopper on the linkages. They were going over-center and jamming, making the ash pan difficult to open without repeatedly bouncing the stirrup handle.



W10 – The relay rod for the steam-powered rocking grates had been removed. It is to have its journals machined and then fitted with Vesconite bearings. I wasn't able to get a pic, so as a consolation prize, here is a view of the rocking grates themselves as seen from underneath.



W11 – The Injectors were test-polished with a new brand of 'Brasso' this week. (We use 'Brasso' as a generic term.)



W12 – Looking smart with his new engine covers, Andrew the Hunslet pushes Suzie back to bed to sleep a bit more.

7). **MIENIE-POWERED COACH LIFTING:**



L01 – The Sleeper Coaches all have to be lifted off from their bogies at alternate ends to inspect the pivots, bolsters and their bearing rings. We'll lube-up the brake rods with the coaches up topside, as the light will then be better.



L02 – One of the pneumatically powered 'Duffy' jacks waiting for service. (The manufacturer's name is Duff-Norton – still trading today.) The hand ratcheted jacks are known as 'Bhudda' as they are of the BUDA brand



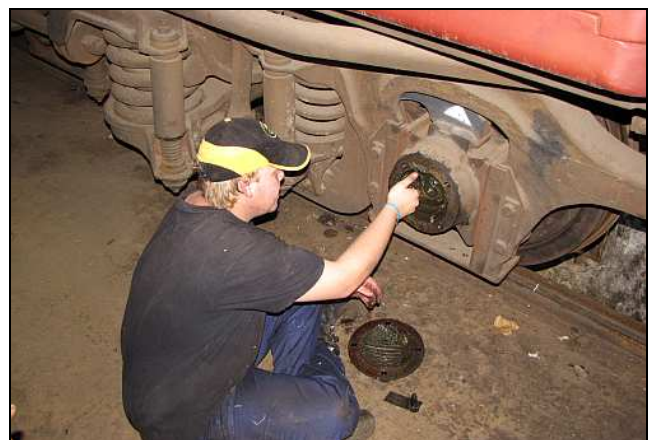
L03 – That unused split-pulley for the axle-dynamo drive will be the next scrap item to go. Hennie would need to get up into the gaps and uncouple the bolster ring and then disconnect the brake rodding. Short guys can stand under the flooring, but then their arms are too short. Sheesh!



L04 – Victor operates the 'Duffy' Jack on this side while Alan operates on the other side. Attie is aiming his torch at the pivots and brake rods to check for any entanglement or trouble. Gordon was assisting at the end to check that the coach didn't tilt with the two independent jacks at work.



L05 – Mienie Major and The Mini-Mienie chat with the Shower Shifters as they take a breather (and a smoke) before disconnecting the brake pull-rod clevis on their second bogie for the day.



L06 – Victor checks and spreads the tired grease on this axle. When the coaches don't move, the grease settles down to the bottom of the journal box, especially in the heat of the sun. All of the boxes will need to be inspected.

8). **SEALING UP 15F 3046 FOR BOILER TESTING:**



F01 – With the copper sealing ring freshly annealed and replaced under the cover, Swakhart and The Smudge are happily chatting while spinning cleaned hex nuts onto the freshly greased studs.



F02 – The 'dome cover' on the 15F's is actually a manhole manhole cover. Noticed the concave dishing to withstand the pressure. Those nuts all need to be tightened with an air gun before the boiler can be fully pressure tested.



F03 – <Product Placement.>
'Hi! I'm Dawie! I work on steam locomotives! I ALWAYS use 'Cu-Slip' organic copper grease in dry-heat applications for smoother, younger-looking, long-lasting screw threads! You should too! <Cue jungle.> <Fade to Cu-Slip Logo.>



F04 – Dawie is applying grinding paste to the vane element of the clack valve in the foreground. We normally grind 'em in lightly and then apply silicone to the valve seats to prevent false boiler leak readings. But Dawie had spotted a flaw in the valve seat and trying to cut it down.



F05 – Looking down into the clack housing, you can see the flaw at 10 o' Clock on the valve seat. (The dark spot.) The clacks are self-cleaning, as they spin when they lift. But that's to deal with water-bourne scale and impurities and isn't capable of resolving damage to the valve's seat.



F06 – The problem is that the spinner vanes are a bit worn, which allow the valve to tilt in the housing. A small steam leak can quickly cut a groove into the valve components. It also accounts for the inconsistency that we were experiencing with the steam leak.



F07 – Not a good place to be – under the big boots of a grumpy-looking Viljoen who'd just been battle-cracking with a blunted-out valve seat cutter.



F08 – Dawie was later lucky enough to find a brand new valve cutter head, still in its original protective wax coating. So he was able to cut that seat down smooth and re-lap the valve. But the job will need doing again soon, unless new valve elements can be sourced or fabricated.



F09 – All alone and neglected in his dimly-lit, oil-scented cave, Aidan McCarthy made up five new Klingerite™ gasket rings for the regulator spool covers – 4 mains and a smaller one for the pilot.



F10 – Aidan clears the cuttings away. This stuff is sheet Klingerite. It's good stuff for hot applications but this universal grade sheeting doesn't handle joints with different materials too well and can be troublesome on brass/bronze joints due to the high thermal expansion. It's fine for this application but laboursome to use, as you can see..



F11 – One of the double-beat valve spools of the regulator waits between its studs. As per Dawie with the clack valves, Aidan was lightly grinding the valves in and then sealing them with silicone for the hydro-tests. The silicone will blow out when the regulator is first used on a live boiler.



F12 – 15F No.3046 is happily being worked on with two gangers sharing the same pot of grinding paste! Two of the washout plugs incorrectly installed and the blow downs need to be blanked, but otherwise she's ready. Gordon would test-fill the boiler to mains water pressure this week.

9). **FROM AROUND THE DEPOT:**



M01 – Shield Chemicals also donated an LPG-burning forklift to the depot. This Hyster is intact and just needs a bit of wiring work and the HT ignition system put together before going back into service, and likely a new battery. We even got four gas cylinders in the deal. Thanks!



M02 – How to make a Mienie run – hunt him down with a piece of used toilet drain pipe. He took off down the coach corridor but I didn't worry. Being the evil sod that I am, I knew the doors at that end were blocked from opening, so I took my time. (That pipe wasn't really that dirty, BTW.)



M03 – A pair of tender-backs seen through an open door. Seeing this place was built as a locomotive workshop, you wouldn't have easily gotten a picture like this in the old days!



M04 – A view down the Gold Class corridor at Gordon grinding off endless welds. The entire floor has been stripped and now it acts like a big fly-trap. If you don't keep moving, your boots literally stick to the glue left on the floor!



M05 – Mr. Gibson™ (Center) had come to measure up the flooring and seating of the Bar Coach. He's going to call in a long list of favours owing and see if he can't get some new flooring sponsored for us (Unique to that coach) as well as materials to repair the fraying bench seat cushions.



M06 – Class 15F 3046 driver wheel over an illuminated inspection pit. The worn valve gear bushes have been remade in Vesconite and reinstalled, so she's basically ready to run again once the boiler tests are done and the fire arch rebuilt.



M07 – Yeah! We rock and don't you forget it!

Now that the T&P tree has already dropped its leaves for a winter that doesn't seem to be coming this year, you can get a different angle on the Reefsteamers sign board.



M08 – The last light at the end of a long work day, although the chaps were still working on until about 7pm. One advantage of working on a coach is that you don't have to put your tools away – just lock the coach and leave. The train in the background is the Shongololo Express.



This Reefsteamers Waybill Newsletter was compiled by Mr. Lee D. Gates on behalf of Reefsteamers Association NPC. For observations, corrections and suggestions – email me at documenter@reefsteamers.com

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