# 1). INTRODUCTION :

Reefsteamers is currently running in marge-and-no-jam 'economy mode', endeavoring to minimize our monthly financial overheads. Our financial director has instituted a rigid financial regime which finally brings our running costs below our revenues and allows us to consistently pay our outstanding debts. In the meantime, we need to look at expanding business opportunities and increasing revenues. Otherwise, the financial savings currently instituted will only last a year or three as the costs of operations inevitably continue to increase – in which case, we will eventually close our depot gates for good.

This, of course, means that we can't spend too much on capitalizing projects in the workshop. So we are using this time to catch up on low expense jobs, some that have been 'hanging around' for a while. Getting the GMAM Garratt No.4079 'Lyndie Lou' back into steam has been skittering around on the back burner but this is now a mainstream project.

At the same time, the second Sandstone Day-sitter coach, which has been standing for over half a year for the lack of hands and time for plumbing and painting work is now under way again. This coach is to replace the catering coach, which has been taken out of service. (More in the report.) The Sandstone Day-Sitter is a 96 seat vehicle, being a full day-sitter and not a composite brake coach – which increase our potential revenue per train for the same YQ costs. (Extra 20 seats.)

The repair work to the Class 12AR's valve spools was of an emergency nature. But the 'little lady' needs a bit of pampering anyway, being the main revenue earner from amongst three operating locomotives and one almost operating machine.

Some amongst us are having a rough time adapting to the changes and the medium-term austerity model under which we must run, which has caused some inter-personal tensions. But the majority of the active Reefsteamers members understand the problems and have knuckled down together to keep this organization alive. If anything, the various teams at Reefsteamers have become stronger, in the workshop, on the coaches, and on the board. We've seen how close we came to losing everything that we've worked so hard for and have thus come to appreciate it (and each other) even more.

We've made mistakes but from what I've seen of our strengths, particularly from amongst our people, I am quite confident Reefsteamers will survive and steam on to bring joy and awe to a future generation.

## 2). PROJECT : FINISHING UP THE GARRATT :



### D01 – Hangin' around.

The GMAM Garratt No.4079 has been driving us nertz for a few months as it has been so close to completing a steam test but seemingly just not making progress. The dry pipe's corroded hangars have been repaired so that should be one less clank from within the articulated pork barrel. The drive is on now to get the mighty GMAM back into steam. The only known work is the final machining and fitting of the new Bissel truck pivot pins and rebuilding the fire arch.

Here is the dome cover hanging while Dawie's first of two attempts at a copper sealing crush-ring was tested for fit. We tested that chain-suspended dome for soundness (pun intended) and it rings like a lifeless bell ... as flat as the damp-proof course at the footings of the bell tower. Dr. Smudge struck six on the clock and made our ears ring!

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D02 – Loopy. Absolutely loopy.

The dome's crush-ring is simple enough, being a ring fabricated from circular section solid copper rod. However, the ends are made as half-lap joints, rather than simply being cut through and made into butt joints. The problem is that the brazing is harder than the copper. So a simple-to-cut and simple-to-braze plain butt joint will probably fracture when the dome's cover is knuckled down tightly.

The need to make a lap joint means that the initial diameter of the copper ring must be made oversize to compensate for the two ends over-lapping each other. It gets awkward.

Dawie is conveniently on his knees for a close up of that joint, as well as earnest prayer that his copper ring would fit. Too large a ring can be trimmed down to fit but too small means a new ring needs to be fabricated for the job.

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D03 – Priority Track.

The Biggish Green Heffalump now sits in Road Number Two, which has been adopted as the priority workshop road by Peter Labuscagne. It is closest to his workshops and there are now a whole row of workbenches set up alongside for light duty work. Our main machine shop doesn't have much in the way of conveniently horizontal surfaces for general work.

If you see a locomotive in Road Number Two, it is a good sign that there is something actually going on there and she's the next candidate to get bunted out of the 15M shed.



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D04 – Will it fit, My Precious-s-s-s?

Dr. Smudge Ackerman takes over the filing of the extended lap joint for the second attempt at The Ring after the first one came out too large and Dawie's abraded fingers were going numb.

Notice the raised digits on the left paw to show off some semblance of culture. But the ingrained grime in the whorls, cuticles and the calluses does spoil the affect some what. Nice try though...



D05 - Cookin' copper :

Dawie gets to work with the acetylene torch on the second attempt. The lapped joint means that there is always almost a full diameter of copper to back up the brazing material when the ring is crushed to make the steam-tight seal.

I was waiting for someone to pick up that hot ring after brazing but was disappointed. The steel table and the items used to wedge-up and hold down the ring 'sunk' most of the heat. Regardless, the freshly brazed joint was reannealed.



D06 - Stand by for tangle.

The second copper ring fitted and it was time to get the steam dome cover knuckled down before afternoon tea...

That husky air wrench was making short work of the 38 bolts. But the procedure of doing up the nuts in the correct spread quadrant pattern was causing issues. The tool's airline was getting tangled with the various chains drooling slackly from the hanging hoist.

Dr. Smudge takes a break, still holding the air gun clear, and having neatly folded himself up, is collecting hemorrhoids from the cold, hard, flat-pack clack boxes. Meanwhile, Dawie, out of frame to the left, is combing out lots of links before detaching the hoist with the prolapsed chains and passing the mess on to me.

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#### D07 – Under Pinnings.

Other work in progress on the GMAM Garratt No.4079 'Lyndie Lou' is the fabrication of a new pair of pivot pins for the Bissell trucks as both of the existing pins were a little worn. They could perhaps have been re-used at a pinch but the corresponding holes in the bracket (foreground) had been beaten oval.

'Lappies' has been busy machining new slightly oversized pins from hardened steel and re-machining the holes in the corresponding bracket to match. Because the pins have to pass through the still circular eye at the apex of the wishbone-shaped Bissel truck frame, the new pins now have machined steps to fit the various diameters required. This means that the pins and the brackets (and their Bissel truck) are now matched sets and are not interchangeable.



**Samers** 

#### D08 – Boring stuff.

Well, boring out a Bissell pivot bracket to be precise.

The diameter of the final hole needed to match the long axis of the original worn-oval hole. But to add to the challenge was the centralization.

In spite of the camera lens's perspective, you can clearly see that this that this bracket is asymmetrical, being bent on the right side. Could this be a souvenir from her complete roll-over accident back when GMAM No.4079 was still in gold mining service at the Randfontien Estates Gold Mine?

Peter had to re-center the bracket the best he could as well as well re-boring the pivot hole.

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### 3). PROJECT : COACH STRIPPING AND PAINTING :



<u>C01 – First steps.</u>

Like many Reefsteamers jobs do, this coach stripping and painting project starts with a quick bit o' shuntin'.

Waving a mutated 'Forward' signal, Engineering Manager Andrew King brings in Coach No.25206, a 3<sup>nd</sup> class daysitter coach. (Technically speaking, he should have been waving at hip height.)

This is one of four coaches in our fleet which belong to the Sandstone Heritage Trust. This is one of a matched pair of type H-2 day-sitter coaches, the other being No.25163.

As the coach undercarriage is to be serviced and lubricated during the interior refurbishment project, the coach is being brought in to the (clean) ash pits of the Locomotive Reception Track. These ash pits are deeper than the inspection pits of the old running shed (Carriage Sheds) and are thus more comfortable for all-day work.



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C02 – Incorrect Interior.

Awaiting plumbing work, this coach stood for several months after a brand new Markey sheet floor was laid. The coach was then painted to match the then-refurbished dining and lounge coaches which were done for Cherry Festival run in November 2009. The person who started the painting project did so without the knowledge or the authority of the then Reefsteamers Board, although their intentions were good. But the good intentions gave us a coach with wasted paint, poor-ish quality work and an incorrect colour scheme.

Our colour scheme for the day-sitter coaches is to be twotone brown, a robust colour scheme that doesn't show dirt. The other Sandstone Day-Sitter coach, refurbished by Shaun Ackerman, is already in the new adopted colour scheme. All the Reefsteamers Day-Sitter coaches will be repainted with matching two-tone brown interiors when they go through the one-by-one refurbishment program.



### C03 - Understudy.

Grunting amongst the dust bunnies, Robbie 'Honeyball' gets to grips with the fasteners under the seats. The various fasteners weren't too tight as they'd been removed and replaced only the previous year. But there are a lot of sharp, shadow-shrouded edges and possibly some feisty arachnids under those seats.



#### C04 - Overstudy.

The 'Smidge,' pursing her lips in effort, braces herself against the still-bolted seats at the other end of the coach and starts removing aluminium strip. The strips had been painted over - but they will be chemically stripped back to natural aluminium finish. Because the ceiling is at least the right colour, those air circular vents need not be disturbed.

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#### C05 – Ergonomix.

Harry 'Hound' Cubitt gets stuck into his first bench seat and discovers that the stainless steel covers for the densely finned steam heating pipes makes a fairly handy head rest.

The use of Harry and Robbie as coach strippers had an unexpected benefit. The half-year's worth of dust and airbourne coal that collected on the idle coach's floor was automatically swept up and taken out via the medium of their clothing - you can see Harry is picking up a healthy collection already and this is only his first bench seat.



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C06 - Grunt.

Grrrr! Ain't no way that 'Dysie' is gonna climb up on the benches, even with parcel shelves to hang onto. So, unlike 'The Smidge' she stayed on terra firma. (Well, technically, terra-marine-ply.) Diana is stronger than she looks and those stubborn screws didn't have much of a chance. But you can see that the cubicle quadrant screws are putting up a noble fight here!

The original screws were countersunk semi-dome headed Philips screws. But over the years screws get changed out and missing screws replaced with different types, so these people needed a wide variety of screwdrivers. The previous, somewhat rough paint job also filled in the slots on the screw heads as well, making extraction even harder.



C07 - Tilted on the job.

The job is progressing well as the smell of warming van Dyk-made stew starts to waft tentatively from the club house. The femmes removed about two tons of aluminium and several thousand screws, while the hommes have made good headway with unbolting the benches.

They discovered that you need to be careful with those rugged looking seats as the sharp inner edges of the ledge brackets are capable of putting a dent in the brand new So the climbing and scrambling action was flooring. stopped forthwith.



C08 - The basement ceiling.

Here are the complicated mechanical underpinnings of a third class SAR bench seat. The sharp edged brackets of which I spoke previously are visible at the top rail and under the legs. You can also see that there isn't much holding that bench against the wall - two screws only.

I found it interesting that although corners were cut with that tapered fiberglass backing, the original designers went to the effort of building in a slight back angle for the horizontal seat cushions, which is ergonomically correct.

If we pull out of our current financial doldrums, we intend to start making matching washable, slip-on covers with foam padding for the hard-shelled seat backs.

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### C09 - Punctuation.

Here is the coach end view with an interesting contrast of heights of a person walking at ground level and a person inside. As the floors are usually at platform height, one often doesn't realize how tall the coaches actually are. You can also clearly see the generous overhang on the 3ft 6in gauge ; said overhang often freaking out our steel-wheeled brothers of the standard gauge.

This Coach, owned by Sandstone Heritage Trust, still bears signs of service on the Lorraine mine. Those red marker lamps and the center lamp shield are not standard SAR&H fittings. The drip strip, visible on the transverse bellows seal above the gangway, is still present. (It is badly worn or missing on many of our own coaches.) The clawed coupler for the steam heating system is still present too, visible hanging bellow the coupler.



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<u>C10 – Wash Up.</u>

Washing mucky mitts before lunch, both girls revealed very pink and tender palms and embryonic blisters. Colin Hall, who arrived later, was lucky enough to borrow a set of Gedore screwdrivers from yours truly and because they have holes cast in their handles, a second screwdriver can be passed through the first to form a tee-handle for leverage.

The young lady in front looks amazingly like Lauren 'Smidge' Edgar but is actually a talented imposter, only revealed because it wasn't wearing any purple. (Not even purple socks ©)

As usual, the industrial hand cleaner was in short supply – but coach dust washes off easily enough anyway.



#### P01 – Sanding Around.

Two jobs that I absolutely detest are sanding and painting so I stayed well clear of this team. Because the coach's pale green paint job had been applied a bit roughly, the swirls and ridges needed to be sanded down. The other coaches, with stained but smooth laminates, won't need that step.

Colin Hall looks a bit trapped here, doesn't he? Did he have the word 'Help!' scrawled on the back of that sheet of emery paper?



P02 - Artistic Threesome.

Dysie (Foreground) and Colin in the corner did the roller work while The Smidge loads up the paintbrush for another splat. Unfortunately they misunderstood the instructions and should have been applying the dark brown paint up to the wainscoting rather than up to the sill rail. They were stopped after four panels and apart from the extra sanding required, no harm was done.

This is good paint and isn't runny. There was little in the way of runs and the paint rollers weren't splattering.

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### P03 – Smidgey Smile.

Because her noggin was dunked in the previous picture, I have to include at least one clear shot of Lauren 'Smidge' Edgar with a loaded paint brush. (or else ...)

This was her idea – but she was originally aiming to have an all-girl team painting the coaches and doing light duty work. The girls have apparently said there isn't much for them to do so our Lauren is trying to encourage them to get involved in things other than coach control and catering.

It turns out that she didn't really realize how much trim and fixture stripping would be required for this project, so the extra hands and muscles, even of the masculine persuasion, came in useful! But it is good experience for the next coaches.



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P04 – Stacks of Strips.

There is a truly scary amount of aluminium strip in a steel coach's interior. Some of it is simply trim strip but some of it actually holds the coach's interior panels in place. And it's hard to tell when removing the screws. Some of the strips had to remain because of seized screws but some could not be removed for risk of loosening certain panels.

A few sections did get bent but they'll be replaced from stock left over from the first Sandstone coach refit. This is only half the removed trim, the other half is in the other toilet cubicle at the opposite end of course!

All the screws, assorted, or bent, or rusted, or stripped heads or otherwise intact, are going to be universally replaced with coarse threaded self-tappers with counter sunk heads.



P05 – Choco Caramel. (With a sprinkle of mint.)

Here's a picture of a 6-bum seat bay of the sister Sandstone coach, No.25163, which is also a H-2 type 3<sup>rd</sup> Class Day-sitter. This piccie shows what the final two tone colour scheme will look like. It is the dark brown dirt-hiding paint that will take the marks, as well as the scuffs and foot prints from clumsily crossed legs.

The stainless steel steam heating pipe skirting will remain in the coach, like this one, and they are currently being polished up, like these, at the time of issue. (They've been stripped for now to eliminate the requirement for masking of the paint.)



P06 – The Look.

Here's a general view (Of coach No.25163) to show what the interior will look like. The ceiling paint goes right down to the parcel racks. It seems counter intuitive and dirtshowing, but the plain semi-gloss white is easy to source for patching-up should the paintwork be damaged from roughly stowed luggage. As we do not permit smoking on the train, nicotine staining of the white ceiling and quadrant panels should be a non-issue.

The cabin end walls are also to be two tone but the vestibules will be done completely in the darker 'Utanium' brown. For maximum use of light, the toilet cubicles will painted in clean semi-gloss white as per the ceilings.

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# 4). PROJECT – PREFABRICATION OF 12AR VALVE SPOOL :



V01 – Chunked and Clunked.

The class 12AR No.1535 'Susan' suffered a valve failure above her right cylinders during her last trip. The fastening for a spool valve failed and caused it to fracture an outer land when it tilted. This, in turn, allowed the valve rings to twist and break, which compounded the mechanical failure. The two broken rings snagged in the valve chest porting, twisting between their lands and thus forcing the brittle lands to break off. Poor Susie was still running with this although making guite a noise and was a 3 beat machine.

One of the ring end stops is totally broken off although you can see that the lower one, at six o' clock, is still intact. The split was made to expand the spool casing and to loosen the two concavely conical end disks.

The fact that the circumference of the broken spool casing is not very shiny is normal – the ring-lands of a steam locomotive's valves and pistons do not actually contact the bore if the mechanicals are lined up and are properly tightened. The steam oil used colourizes the surfaces too.



### V03 – Drill Press.

Pieter Labuscagne spent this Saturday finishing off and test fitting the spool casing that he had machined to fit during the week. The old SAR&H-era Asqwith-manufactured radial arm drill still functions perfectly, although Peter was not using the auto-feed at the moment.



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V02 – Ring o' Ring o' Ports.

Unlike the piston rings in a 4-stroke engine, the piston rings don't get to work against contigious cylinder walls. A steam loco's valve rings (spool-valve set-up) pass back and forth over these complicated annular ports. Any misalignment of break in the rings can cause the ring to snag in one of the ports and breakage is bound to follow. You can see previous scoring and damage closest to the camera.

On a spool-valve type steam chest, the outer annular ring of ports are the exhaust ports that lead up to the draft induction system in the smokebox. The inner annular ring of ports are the bi-directional steam ports to either end of the double-acting power cylinders just below. The canted hole visible at one o' clock is where the steam comes into the valve chest from the superheater header.

The square hole at 12 o'clock leads to the rear of the two bypass valves mounted on top of the steam chest. The canted hole at 8 o' clock is the vacuum relief port which leads to the snifter valves in the side of the steam chest.



V04 – A 'round' of rings.

A full set of valve rings, one used (Polished with work) and one new set with very light surface rust, wait on the leading portion of the valve spindle. Loco valve rings are originally made slightly oversized and their slots are filed down to fit the actual spool \ bore combination in which they will work.

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#### V05 – Spool Case.

Like the pistons, locomotive valve spools are supplied as basic blanks cast slightly oversized and with unfinished surfaces. They need to be machined DOWN to fit the specific locomotive upon which they will work – thus one set of castings will work in oversized bores as well.

Peter has been drilling the holes for the valve ring stops. Peter copied the original, which seems a bit unusual as all four valve ring gaps line up. The stops are special bolts whose diameters protrude into the ring slot. Thus they prevent the rings from turning in relation to the valve spool – and thus the vulnerable ends can be restrained to running on a contiguous surface between the ports within the steam chest. On the 12AR, this is the 12 o' clock position.



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V06 – Delicate Touch.

Peter turned and fabricated the ring stops from scratch. Here he's tapping the threads on a stop that is mounted upside-down in the vice. The threaded portion goes into the (tapped) holes visible in the left picture.

The slightly brassy coloured part of the rod stock is actually unmachined. This is a sacrificial section used to hold the part for tapping, and later, to have flats ground in to provide purchase to screw the ring stop in. That entire section currently clamped in the vice is sacrificial and would be cut off upon completion.



### V07 – Carbon Cone.

This scabrous, flying saucer-shaped object is one of the two conical end disks that fit into the end of the spool case to form the faces of the valve piston. The damaged bore had to be built up and then re-machined. It isn't quite finished, hence the rough looking surfaces. The multi-part valve piston concept reduces the engineering and fabricational complexity of trying to make a one-piece casing. This also means that in cases of serious damage, just like this, only the spool casing needs to be replaced.

The conical shape is actually stronger under the reciprocating forces, allows for a protected pocket of space on the spindle for the spool fasteners at top dead center as well as incidentally providing a void for condensate and oil.



V08 – Spooling down the job.

Here's a test fit of the completed valve spool on the valve spindle – the spool assembly is a firm hand-press fit. The conical ends actually seal to the spool casing on their circumferential faces (Seen facing upwards in the left picture) rather than the edge as expected.

The valve spindle is keyed – you can see the square section key at twelve o' clock between the butt ring and the spool cap. It is vital that the valve spools are not able to turn in operation as otherwise the vulnerable ends of the valve rings may poke up and snag in a steam port with calamitously crunchy consequences.

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### V09 – First Stroke.

The repaired spool cap ended up with a plain bore and now has to have a new key way slot cut in. Our vintage genuine Germiston fitter, 'Lappies' is still setting up the Thule-made reciprocating shaping machine. He is having to adjust the height as well as the depth of the stroke and the angle to tool – this is a true thee-dimensional job.

Notice the locating peg at the top of the conical end cap.



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V10 – Sans Shaving.

#### Peek a boo!

Here's the end view of the cutting tool. Peter actually abandoned the job for the day as he had to mosey off to home base (He's married and she MUST be obeyed.) – cutting a slot isn't really a job that can be safely interrupted.



### V11 - Kindly posed by my driver.

At the time of issue of this particular report, the valve spool repair job has been completed. Class 12AR No.1535 'Susan' was tested on Friday, 20<sup>th</sup> August and did a very short revenue earning run on Saturday, 21st August, to pick up our coaches for their last leg of their journey home from the Rotary Great Train Race in Middleburg. The valves operated well and we had four beats again.

The acid test will, of course, be a typical day trip run at a good clip. The drivers are to be instructed to permanently limit their speeds with this engine as those smaller wheels mean a high rate of valve (and piston) events in proportion to the track speeds. Even though she's quite capable of picking up a good rate of knots, she's an old girl now, originally designed for heavy coal haulage, and she cannot take such spirited running any more even within the posted speed limits.

She suffered a reverser failure just as we finished up the pick-up job – the reverser going over to hard-reverse, lifting up the radius rods and staying put-O no matter were the reverser lever was put. It is suspected that the D-valve slide has come off the spindle in the actuating cylinder. We managed to get the old lady to bed under her own steam though, by putting the reverser lever linkages forward to open the cataract valve (unlock) and then manually lowering the radius rod downwards (Forward Gear) with engineer-weighted crow bars. The grand old lady at least had the decency to fail in the yards.

We were battling to get the train in from the head shunt as a brake pipe's cap kept coming off the end coach every few minutes and putting the brakes on rather firmly! With the constant stops and starts to, we had lots of extra unnecessary reverser action and by rights, we should have failed in the grass-furred, very dark wilderness between the scrap lines and the commuter storage sidings. So, Susie got a pat from me and a quite word of thanks at least. From a workshop point of view, it's not a major job to repair and she'll be back running order before her next trip..

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## 5). PROJECT – ROAD WORKS :



#### R01 – Ridge Runner.

Our long, winding entrance road is an unsecured, usuallyrutted embarrassment. It is also used as a local refuse dumping point, which is unpleasant to see and hazardous to drive through, especially at night. The road was graded beautifully flat a month ago, thanks to some arrangements made by Alan Lawton, but the clandestine dumping continues. Alan also arranged this 2<sup>nd</sup> phase of the project.

With consultations with Transnet, this road is going to be reconfigured and the job starts with removing this ridge between the approach road (where that bakkie is parked) and the moon crater-like depression off to the right. Where those fellows are standing to survey the gritty battle field, a ramp will be built. The ramp will lead to a new road behind the Transnet Diesel Depot's parking garages and will link up to their road system. Thus, we can use the signposted gate and also benefit from their security.



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R02 – The Crater.

This depression is to be graded and rough ditches just off to the right to be filled with the spoil from the broken down ridge. Because the ramp will come down from mid right to left, this depressed area needs to be cleaned and smoothed to be made available to reverse trucks to allow them to be able to turn sharp right and head up towards the various depots and yards.

The ramp will need to be made in two stages for a shallow grade, otherwise there will be traction problems when vehicles negotiate the slope in wet weather.

More spoil will be dumped at the entrance of the existing road to deliberately block of the pesky refuse dumpers and their vehicles. The road itself will remain intact for the use of Transnet for signal service. The uphill section towards the depot is to be re-graded and widened to allow passing.



### R03- The Loader.

Here's the machine of the hour, a 'medium' sized front end loader. It is a 'Jacob', a JCB model 156 and is the company's No.11. Even though, sadly, it is not steam powered, it was interesting watching this machine as work as it steers by articulating its two pivoted halves rather than through a steered set of axles.



#### R04 – Company Logo.

This company has good taste and great strategic acumen using Ford Ranger 2.5 TD's as site vehicles.

This job, being done for free on behalf of Railway Heritage, was agreed to by the management of the company and was being conducted in between other work in the area.

No shady deals and theft of resources here! Thanks, guys!

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#### R05 – Rover.

A Mars Rover, oddly closely resembling a Nissan bakkie, surveys the rugged landscape of the far away planet.

We could perhaps earn some extra money renting the rugged grounds, complete with acid mud, sink holes, cyanide tainted dust-devils, erosion ravines and sulphuric acid pools out to NASA for Rover testing. (References to acid and cyanide are not totally facetious! <sup>(C)</sup>)



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#### R06 – Charge.

The ridge was going down quite quickly, the sun-baked cyanide-yellow outer crust revealing a soft, crumbly interior.

Just visible above the bucket's hydraulic ram is the open clearstory roof of the Depot's old boiler house, which is now our running shed.



### R07 – Taking a Dump.

The knoll right behind this hard working machine will become the new ramp.

It is also hoped that the building of a ramp, removing ridges and filling up the dongas with loose rubble will improve the drainage of the area. In the rainy season, the existing topography forms shallow pools which capture the acid run off from the mine dump terrain as well as the oil, solvent and diesel polluted run-off from the diesel depot.

After percolation, the smell on the approach road next the reed-lined catchment basin is sometimes wind-window-upand-turn-fans-off indescribable! What is amazing is that we still have wild life living in the area with the noticeable absence of moist skinned amphibians.



#### R08 – Break Through!

The parapets of the ridge are coming down just before we decide to grate off some Nissan undercarriage and scoot on out of there before the road accidentally gets blocked.

Looking at the bricks and broken concrete 'raisins' in the spoil, I think we now know where some of the demolished building of the old Germiston Depot ended up – and not just within the current carriage shed's inspection trenches either! (That seemed to be fate reserved for the 'Bantu' ablution blocks from the apartheid era.)

These chaps worked for about 2  $1\!\!/_2$  hours and returned on the following day (Sunday) to clean up and get a start on the new access ramp.

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## 6). THE LUCKY PACKET SECTION :



M01 – Dark Lights.

Train schedules were ballsed-up this morning and the signals were all dark. Amongst others, signal post GMRG-No.58 is glassily blank. This unfortunate container train, with three dual-power Class 38's on point, waited on this spot for over 4 hours. Other trains had to move through on orders for the day. The diesel shed was thus, unusually silent, as our Depot Working day is normally punctuated with the sounds of idling diesels and blowing horns.

Those locomotives were running from the overhead, their air brake compressors running at intervals. So the problem was signaling. I was wondering if yet another incident of cable theft had taken place.



M03 - Faded forehead.

Mr. Hunslet has settled down into reliable service after engine and transmission rebuild. However he shows the bug bear that South African preservationists face – the UV rays of the fierce African sun. On items parked outdoors and not painted in duco, a typical paint job lasts two years before fading. But given the endemic rust that that British boys face versus faded paint, I'd plump for the lower latitudes. Actually, the paintwork isn't so bad – just dusty.

That bell is currently disconnected. Visible top center of the windscreen are the two automotive horns that try their best to sound authoritative in spite of rather meek beeps.



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M02 – Chunks of Desperation

Theft of railway sleepers is fairly common on South Africa. The pressed steel sleepers go for scrap metal while the wooden ones go for fire wood or often for the making of socalled 'Railway Sleeper Furniture.' The results can be devastating on an active line. And this is why many mothballed lines quickly become hopelessly uneconomical to restore to operation.

But here is a sign of real desperation. These are the smashed remains of CONCRETE railway sleepers that have been bashed apart to try and extract the rebar steel within. This is scary stuff to see, as concrete sleepers are generally regarded as being safe from scrap metal bandits.



M04 - Riffle and Rustle.

Every Reefsteamers train departs in a virtual snow storm of papers. There is a reason why the Train Manager's briefcases usually have strained stitching and bulging seams. Clifford Mathee (Pictured) and Andrew King have the unfortunate and rather tedious job of keeping the paper work up to date and filing the ever-growing records.

This was Clifford's job for the morning. He's a real heritage operator and still uses carbon paper (!) He was a little miffed when I jocularly brought it up some time ago, but I had honestly thought that carbon paper only existed in fossil form these days.

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#### M05 – Kango gets the Kut.

As a part of our cost-cutting measures, the vintage Kitchen Coach No.127 'Kango' has been taken out of service on the day trip trains and is pictured here after being unloaded of privately owned catering equipment. The kitchen and bar cars were contracted to private individuals for their own profit, but the monthly rent we received from such didn't even cover one trip's YQ costs for one, let alone both coaches. Thus, the two hospitality vehicles were constant financial loss makers for Reefsteamers. Given our current dire financial situation, this is totally unsustainable.

Furthermore, the Kitchen Coach No.127, which was not originally designed to be a tuck-shop type affair, is a safety hazard on a day-trip train. The narrow side-corridor gets blocked up with customers waiting to be served and train staff cannot move from one end of the train to the other.

Reefsteamers is soon to receive a donation of surplus airline-type food trolleys for volunteers to sell snacks, drinks and souvenirs along the train – their supply base being the bar car. We are pricing modifications to the bar car to allow for a small kitchen so we can start selling the popular hot food again in time. 'Kango' the kitchen coach will still be used for our long distance trips and tours, as well as a stationary kitchen for events at our own depot.



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#### M06 – Contemporaries.

Sandstone's English Electric Class DE2 and this Class 25NC No.3472 are actually contemporaries of each other.

No. 3472, previously named 'Elize', has had her headboard removed. Reefsteamers is investigating offering naming rights for the steam locomotives at a price. Basically, we will let individuals name a locomotive for five years after anyone they choose, but within bounds of decency of course. Although this is a strange, new idea in South Africa, It is frequently done in England to raise funds.

The new name of the Class 15F No.3046 has already been 'brought' and a new name-board is currently under off-site fabrication. The offer will be officially announced via the SIA newsletter. Hopefully we can raise some much needed funds to help pay off our patient creditors.

Renaming an engine every five years might seem 'obscuring' of their history. But even in the SAR&H days locos were frequently arbitrarily named and re-named again with the girlfriend, daughter or wife's name of the currently assigned driver. The potential series of names will, of course, be recorded and traced for future history. The various privately owned Sandstone locomotives in our care will retain the names that the owner(s) chose.



M07 - The buffer-plate gallery.

Dawie risks a swift kick in the mush and a generous smear of lithium grease on his chest to pass cheeky comments up to the coach painting team through the coach's gangway.



### M08 – Dozing the day away.

Our plinthed A-Class, Patrys, is now fully visible since the encroaching trees have dropped their leaves for winter. This neat little engine is quite a viable restoration project.

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#### M09 – Smooth(er) Operator.

Here is a set of freshly oiled points. Someone obviously got tired of thumping the tumbler to 'bend' the irons. These are the leading points through to the old boiler washout area.

Since the Shongololo Express coach sets were moved to two undercover roads in the old Running Sheds, these points don't see much action and are prone to rusting up and jamming a bit.



### M11 - Hot times on the high iron.

There was a bit of a panic two weeks ago when the cracking roar of a veldt fire could be heard throughout the 15M shop. We could see the flames leaping in the southern windows and could smell the classic acrid winter scent of burning grass and Rooibos stems. But upon closer inspection, the terrain on the access track and the embankment towards the workshop building is saharic in composition with a mere dusting of winter-dry foliage.

So we just watched the flames a bit. Steam boys like fire! The fire petered out within about 10 minutes anyway. The Murphy-man is on the left of Andrew King, who is assessing the fiery situation. We're all standing in the alleyway between the 15M shop and the electric substation.

Incidentally, 'Hot Times on the High Iron' is an excellent detailed documentary blog concerning contemporary USA diesel freight train operations. Check out :

http://www.railroad.net/articles/columns/hottimes/index.php



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#### M10 – And they all rolled over...

Here are six of eight shunter's radios that were meant to be left switched on to fully discharge their batteries. (But they have all been 'helpfully' switched off ... sigh.) Our radios are battling with 'memory effect' in their NiCad cells and don't appear to be holding a full charge.

They need to be put through a few full charge and discharge cycles to clear the terminal plates within the cells and to restore their original operating time.



### M12 – Bogie Base.

Shunting closure distances are confusingly referred to as 'Bogies', especially by the old generation Spoories – usually Afrikaners. (Even though it is an English word.) The term 'bogies' referred to any bogied freight vehicle as opposed to a 'short', a typically shorter four-wheel freight truck. Nowadays, they refer to bogies as 'Coach Lengths' – so 'Twee Bogies' now refers to two full coach lengths, not two actual bogie lengths as literally seen here.

Both of these coach bogies of approximately 30 years apart have compound suspension. The equalizer beam upon which the axle boxes bear against is coil spring suspended on both units. (Primary suspension) The left bogie has a twin quarter elliptic suspension for the bolster beam while the right bogie has large coil springs. (Secondary suspension) Both the bogies have primary dampers. The right bogie has inboard equalizers and has a drag control strut for the bolster – because a coil spring lacks lateral resistance, which a semi-elliptic spring naturally has.

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#### M13 – Crunchy Chrome.

It isn't just the locomotives that need to be saved, but also the vehicles which they pull. Because of the nature of heritage steam operation, there will always be more vintage coaches saved rather than freight vehicles. However, coaches, because of their complexity, have more detail parts to lose which are very hard to replicate in an authentic manner.

Here is a beautiful art deco lamp plate from a classic SAR&H sleeper bunk lamp, found dumped in our western yard. The 1950's era wooden paneled coaches often had individual lamps per bunk mounted in the corners.

Although dusty and gritted, this lamp estuation plate was intact and still well chromed, complete with latch, hinge and the floating push button assembly.



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#### M14 – Inside Job.

Sometimes the enemies of steam preservation are insidiously embedded within the ranks...

Here is the polished fireman's side injector set of the Class 12AR No.1535 'Susan.' However the brass gland nut on the large valve in the center was recently 'liberated,' hence the oxidized replacement seen here That valve is the 'Drench Valve' which controls water flow from the injector to the ash pan coolers via the drench pipe that curves up to the top left. Unfortunately, the valve handle spindles for classic Gifford injectors like these can be lifted off their square shanks by hand which makes nut access easy.

But why would someone steel (pun) a brass nut? Perhaps for a steam locomotive type paper weight? Sometimes the souvenir hunters are worse than the scrap merchants...



This Depot Report was compiled by Lee D. Gates on behalf of Reefsteamers For observations, corrections and suggestions – email me at leeg@leaf.co.za

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