1). INTRODUCTION :

Steam locomotives really are diurnal creatures – they look and run great at day time as well as in the hours of darkness, and especially at the magic hours of dawn and dusk. With dramatic changes in my job situation and also the duties of Club Secretary, I don't have much time to do Depot Reports and such articles these days, but I've been putting this little 12AR themed photo essay together in the occasional spare hours that I catch fluttering around. This Photo Essay covers two weekends of working with our Class 12AR and has been selected to show somewhat harshly lit day time work as well as work during the more unconventional hours.

Our featured Class 12AR No.1535 'Susie' is running great and she is currently the only bread winner for the depot fleet, which are hungry for new boiler tubes and firebox repairs and what not. Quite a voracious, heavy weight family for 'Gran'ma Suzie' to support. She's developed a few minor steam leaks in the auxiliaries, as can be expected for any elderly locomotive, and it is suspected that there is a restriction in the steam feed for the fireman's injector as it isn't picking up properly with the turret-based steam valve at part throttle. You have to move quickly to wind the turret valve out – no convenient quick-opening Seller's valve here! But ever since being returned to steam after her dry crown sheet incident, she is confirming her reputation as a tough, sure-footed and reliable old girl. The Vesconite ™ bearing conversion to the valve motion is working a treat.

Class 25NC No.3472 'Elize' has passed both her hydraulic and visual boiler inspection and is now being buttoned up for a steam test, with the worn, holed chimney currently under repair and a spare petticoat waiting for installation. Next on the boiler inspection list is Sandstone Estates's GMAM Garratt No.4079 'Lyndie Lou' but no issues are expected apart from a few leaky flexible-stay caps.

The other favourite for the day-trips, the Class 15CA No.2056 'Dorothy' is going to be standing for a while with failed SAR-era welds in the flues. These are currently being inspected but getting the 15CA back into steam looks like a long and expensive job. When the 12AR is taken off her four months cycle for the day trips, the mighty Class 25NC will take over for a few shake down runs after recommissioning and both the locomotives will be used to haul the Cherry Festival 2009 train to the Free State. We hope to have the GMAM recertified by the end of the year so the 'little' Class 12AR will have two of her really big sisters around to help take the load.

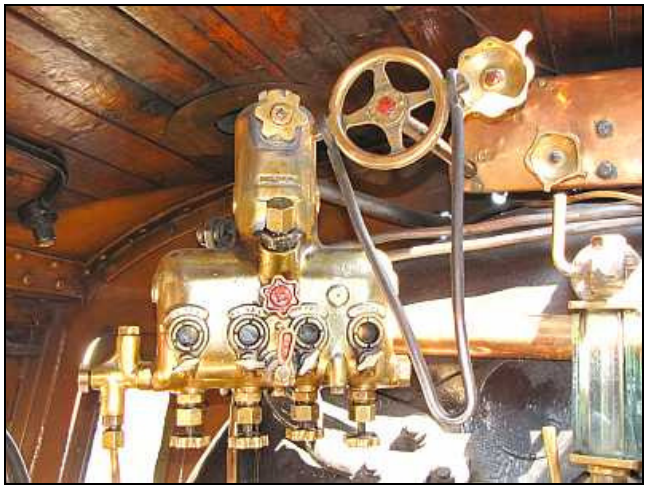
But for now, she's doing all the work and earning some of her rail-cred back after standing idle for 2 years with motion parts scattered all around the workshop and the smokebox door leaning defeatedly against the air compressor room wall. Out of the shed and in the sharp-edged light of the African day, or the magic touch of the darker hours, this last survivor of her class, the only one of her kind, always draws the eye.

FA01 – A few flicks of coal are casually going into the 41 sq. foot grate during a relatively rare open-air Reefsteamers Fire-Lighting session. We normally do fire lighting work under cover in the old boiler house (visible in the background) Our Class 12AR No.1535 'Susan' was rostered to take a 17 vehicle train to Boksburg East on behalf of our tenants, the Shongololo Express. The red lamps on the buffer beam are not SAR standard. (Neither is the 'Oom' Attie trademark – an oil can left on the buffer beam.)

Doesn't she look a picture?

FA02 – Senior fireman Johann Breydenbach relaxes and chats to Attie and Sakkie out of frame. The locomotive was raising steam at 500kPA, but with the firebox doors open and the fire hardly blown, to slow the pressure increase down ; as the staff of the Shongololo Express were still busy preparing their coaches.

This would be an easy prep and run. The coaches were actually only meant to move the following day but this would have meant overnight loco minding work. So we arranged to move them on Saturday afternoon– which caught their staff out a bit.



FA03 - The Hydrostatic Lubricator is charged and ready to go – but is bubbling and hissing from the filler plug. The valve with the extension handle is the steam valve for the fireman's injector – this elderly locomotive does not have a Seller's valve set-up, so the steam supply for the injectors is operated directly from the outermost valves on the turrets and not from pull levers from halfway up the left side of the boiler backhead, as with our 15F's, the 25NC and Sandstone's GMAM.

The medium size valve wheel is the blower and the small valve wheel is for the steam turbine driven dynamo. The square copper cover from which the valves protrude is not a standard item – but was custom made and fitted for the locomotive. (Our Class 15CA No.2056 'Dorothy' has a similar turret arch cover fitted by the Booysens duo (Timothy and Chris) – but in stainless steel.)

The spindles on which the valve wheels are mounted fit loosely in a cast iron plate – to allow for relative movement between the boiler backhead and the locomotive's cab. This plate has an added luxury – the valve functions are actually stamped in.

FA04 – A driver's eye view of power reverser testing. Fireman Johann Breydenbach is operating the reverser lever while Driver Attie de Necker has already checked the right side and is now out of sight on the left side of the engine.

The power reverser should be checked before every run, for full extent of operation, leaks and for the operation of the locking cylinder. The displacement lubricator must be confirmed to have has been drained of condensate and refilled with oil. The Class 12AR is a bit unusual in that the reverser's exhaust steam discharges to ground level via a vertical pipe mounted behind the RHS cylinder chest (center of picture), instead of between the frames or the ash pan like the reverser discharge pipes of most more modern SAR locomotives do.

The white building is the recently donated modular office which has been installed and wired up. Apart from the kitchen, it will function as the engineering office as well as the Reefsteamers media library. The yard lighting is being repaired and upgraded too – you can see the scaffolding around the light standard in front of the building.

SP01 – Some extra preparation work went into this locomotive! Against the unadorned, solidly black painted goods-train sized wheels (4 feet 3 inches), the newly polished coupling rods and valve gear really stand out. These rods were done with a pneumatic powered flapper wheel but the job is still a long and tedious one with the crannies, recessed webs and gaps needing hand work where the bulky flapper wheel can't go.

It's a thankless job too, as those rods get dirty again quite quickly, especially up front at the valve gear end. However, if they are rubbed down with paraffin before a trip, the dropped grease and oil doesn't stick. It's easier to put a little extra effort into keep the rods clean than letting them get crusty.

SP02 – Class 12AR No.1535 'Susan' is standing hot, but silent and dignified at the head of her train. She is facing east, as she will be hauling the train eastbound to Boksburg East station. So she will be PUSHING the classically profiled clearstory train out of our west-facing yard-lead today. The two flat vehicles behind the tender are special roll-on road vehicle transporters used by Shongololo Express for their mini and midi busses.

It would require extra care on the shunt as you're pushing a set of heavy coaches on a curve with two light vehicles in between the locomotive and the coaches. When a train is made up, ideally the light vehicles should go towards the back.

S03 – Like a fly to a honey pot (A really BIG honey pot!), Ackerman Slightly Junior (aka 'Patrick') is irresistibly called from his graphite painted perch from astride the 25NC smokebox to come and watch the live steam action. He is just about to walk a-pace with the engine right through the carriage shed with eyes for nothing other than the mesmerizing movements of those coupling rods and valve gear, courtesy of Uncle Walschaert.

He successfully navigated the carriage shed and didn't dent any of the I beam columns with his cranium. A loco beat under a closed roof is always interesting to hear and it roused the roosting doves.

This 'small-ish' locomotive weighs just over 99 tons, and is coupled to a 66 ton tender. It is always remarkable and a little uncanny how smoothly and delicately a heavy steel-wheeled machine like this can actually move.

SP04 – Spot the running repairs required to this loco?

By the time 'Susie' has chuffed in a stately manner right though the Carriage Shed, the cylinders and the pistons are warm enough to close the cylinder cocks. But the left hand piston gland is blowing a bit and the backward slipstream forms a steamy wreath around the cylinder chest.

That is one of Sandstone Heritage Trust's wooden-bodied ore hoppers visible to the left - rescued from the defunct Simmer and Jack gold mine.

MV01 – One of the reasons why we no longer use the Boksburg East station for our own trips is the extra shunting required to cross the goods lines and line up for the eastbound junctions.

Class 12AR No.1535 Susan has backed out of our west-facing yard lead, and has run forward onto the Reefsteamers siding and joined the mains. Now she's backing up again with driver Attie looking backwards next to the control cabin before finally running forward on the selected set of irons towards Boksburg.

For a change, there were no diesels grumbling in the diesel depot or on the depot's lead, so we just had the hoarse, but somewhat soft-edged chuff of the 12AR to listen too.

MV02 – 1950's vintage Metro-Cammel built clearstory coaches out promenading on the main line and finally on their way. This is the Shongololo Express 'Southern Cross' train set on the way to Boksburg East. This is one of the last wooden-panelled interior sleeper coach sets still running in the country.

The boiler, which is oversized for the 24in diameter cylinders, blew off twice during the tedious shunting movements with this long train.

The diagonal streak is an out of focus electric fence wire. When that electric fence is energized, it makes taking wire-free line side shots extra challenging.

LM01 – A driver's view of a throttled blow-down. The blow down deflector has long since been removed in our recent yard neatening exercises. One needs a bit of restraint if blowing down to manually to reduce the steam pressure from the right hand blow downs when on the reception track. Even so, the adjoining coaches and the water tankers got drenched in condensation.

When one blows down to clear the foundation ring, being one of the 'official use' of the blow downs - let her rip! Just be careful of doggies, Reefsteamers, open windows and loose panes of glass. Out on the rails, the blow downs are used to reduce the concentration of suspended impurities in the boiler water to reduce foaming and the resulting priming.

When blowing a stationary loco down to relieve boiler pressure – the boiler pressure initially barely drops but the water level falls dramatically – because you are releasing surface pressure in the boiler and the water boils off rapidly, increasing the rate of evaporation. When the resulting lower water level is topped up via the injectors, the boiler pressure then drops as desired. One can run the injector(s) at the same time the blow down is open and achieve both effects at the same time.

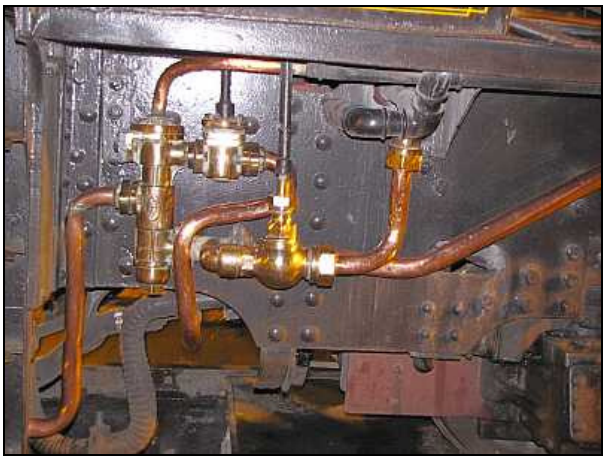
LM02 – Washing up – Reefsteamers style with a coal shovel in the kitchen sink.

Good job I'm a bachelor, huh?

Tonight's menu was chilli steak al'a firebox, with wors to follow and some somewhat dry Portuguese rolls. A drooling Luca Lategan traded some of my meat for a helping of tomato and olive enhanced pasta salad which accompanied the rough meal quite nicely.

We were generous enough to invite Andrew King to eat with us too. The steaks came out OK, and the wors too (if just a little bit too crusty on the outside) – but the fire was a bit too hot to cook on. The cooking oil set alight several times and led to some fast movement on the footplate to blow the flambé out!

The cooking fire messed up the coal bank though as I made a small isolated heap first to be able to cook before midnight. I put a full bank of coal in afterwards and there wasn't enough mass to light up the coal bank properly, especially with a thick bed of ash under the firing hole. But that is advanced loco minding class 102 – how to make a cooking fire and still keep the engine warm afterwards.



LM03 – Susie's beautifully polished right-hand-side injector set. Steam is fed from the copper pipe at the top, and the water is fed in through the question mark shaped pipe and through the foot-operated valve. The overflow discharge is through the dogleg pipe off to the left (under the steps) and the pressurized feed water to the boiler is via the diagonal pipe to the right.

The brass valve in the middle of the picture is a tap-off from the boiler delivery pipe and it supplies water to the ash pan coolers – via the copper pipe in the foreground.

The black painted pipe at the top of the picture is the train brake vacuum pipe running to the front buffer beam.

LM04 – Not many leaks on this baby – at least, not on the outside or through the regulator. Actually, the dynamo piping needs work but it is switched off and steam-free in this picture. Fred Sewell's new yard lights work a treat and light up the front area of the locomotive well.

The single, recently pruned tree in the 'tea garden' is already 'budding-up' for the new season and it has literally only been a few weeks since the leaves fell. Spring has already bounced and pretty soon, the pigeons, crows, owls, rats, snakes, mongooses, guinea fowl, dogs and newly married Reefsteamers will start having little ones.

LM05 – Patrys, the plinthed Class A tank engine, now has a working headlight which was wired in to mains power during Fred Sewell's yard lighting project. (The original Pyle Industries turbine-dynamo is still present above the LHS water tank though.)

This little engine is on our wish list for restoration – being a good little steamer with a responsive, densely packed boiler and would be ideal for shunting and crew training. Of course, the supply of the wildlife marked paper is a perennial problem. Apart from the cab fittings and the injectors + pipe work, this cool little engine is quite intact.

Although the engine is stored outdoors, it is still in good shape as it has been repainted with a deliberately thick coat of paint for water proofing purposes. Note that the engine still has link and pin couplers.

LM06 – The steam test cock on the LHS water column needs repacking. Shutting the test cock off only made the leak worse. The funny thing was that it only showed the 'steam' and dribbling water when the water level was higher than the glass – which is what we often do when loco minding. When the water level dropped, the leak was still there – but the escaping steam was invisible and didn't fog up the inside of the glass. Rather dangerously, it was still capable of scalding the unwary fireman.

It illustrates a danger of steam - it is a colourless invisible gas. What we think of as being 'steam' is actually condensation.

The water level is visible at just under 1/3 height and the steam pressure on the over exposed pressure gauge is just under 1000kPA. I had let the water level drop with steam pressure rising when preparing a tall center fire to cook supper – it ignited quickly burning on three sides. After supper, I'm about to drop the pressure down to about 800kPA by filling the boiler up but not over the glasses as we usually do. The water level will need some watching tonight….

LM07 – A rare shot of Luca Lategan NOT smiling. He's been staying with us now for about six weeks, living in the Management Coach No.42. He has been working as a volunteer at the Reefsteamers Depot and getting involved in every aspect of the Reefsteamers world and learning lots about steam locomotives and the crazy people who love them! He's having a blast – and has another six weeks to go before going back to Stellenbosch.

Although he's a steam freak – he wants to study as an electrical engineer, specializing in Signalling and Indication Work.

He is now working five days a week partnered with Piet Labuscagne, who is now retired and has volunteered his services to get our unfinished Class 15F No.3046 back into steam. So Luca is not only learning about repair and servicing, but also about restoration and the fitting work that is required for the various pipes and components.

MP01 – A freight train and a passenger train sit side by side just as the sparrows are finishing up their birdie REM sleep cycles. We have three tank cars on the premises, one painted in dark brunswick green to match Lyndie Lou the Sandstone GMAM Garratt, but the water pump equipped tanker gets to do most of the runs as it is required to provide fire protection.

So these two tankers hardly ever run. It's so unfair!

There is a thin skin of rust forming on the naked steel wheels – but we'll polish that off on the Cherry Festival 2009 run when we'll be taking two water tankers of 33 000 liters each with the 12AR and our 25NC No.3472.

We will probably be using all three tankers for the Geoff Cooke Tour currently being planned for next year, although we'll 'only' be using two (big) locomotives for our section of the tour.

MP02 – Trainee fireman Riaan Coetzee takes a breather as the fire is still too hot to shake out. (There is a risk of buckling the ash pan if too many hot coals are dropped at once and they aren't raked or rinsed out fast enough.)

I had to shake the fire out myself at 3:15am as the dense ash had just gotten too thick. My midnight coal bank laid under the firing hole after the late supper fire hadn't even started burning in the middle as evidenced by an early morning test-raking. Using the blower (which is quite fierce on the 12AR) was just cooling the boiler down without achieving much with the fire. The shake-up worked and I had a decent fire going by 4am.

I gave these fellows a hot fire and an incandescent bank that I didn't bother to open up. So while they did have to wait for the fire to cool down somewhat, they already had a bank of glowing coals to cover up the bare grate areas after cleaning. At the time of the photo, driver Piet Molentz was already oiling around and fireman Sakkie Kekana was undergoing medical checks.

MP02B – Looking good, babe! A low angle shot taken from the steel plate walkway that bridges the west end of the ash pit. I could have gotten right into the service pit to get the cow-puncher in the picture as well, but declined for safety reasons, as I would have been invisible to both driver and fireman.

There are many rail enthusiasts and photographers who do not like smoke deflectors and hence they appreciate the clean, classic profile of a locomotive so unadorned. Our Class 15CA No.2056 is a popular photographic choice for the same reason. Our 'Royal Locomotive', the Class 15F No.3046, which has just begin a final restoration, will probably also have the smoke deflectors left off to provide a photographic contrast with the normally so equipped 15F's such as Dave Shepherd's 3052 'Avril' and our Class 15F No.3016 'Gerda' as well as the hand-bomber Class 15F No.2914 'Spikkels.'

Notice the polished brass brake vacuum pipe connector at 10 o'clock to the coupler – these are normally painted black.

MP03 – Oiling around the engine is usually done after the fire cleaning is done but here it is being done before. Here, in the light of his flare lamp, driver Piet Molentz is topping up the oil cup that lubricates the right-hand-side piston rod. The brass oil cup that feeds oil to the corresponding valve rod can be in line with and to the left of Piet's cap.

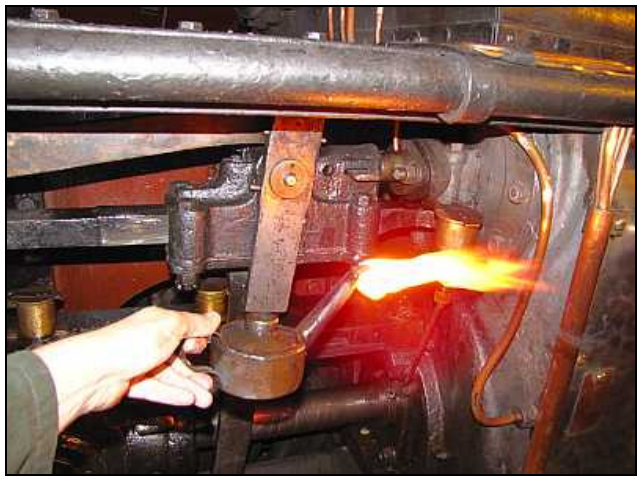
Including the cross head slide bars, there are five oil cups per cylinder chest on this locomotive. The other oil cups or oil boxes, such as for the bogie pivots, need to be topped up and the grate shaker and the power reverser displacement lubricators need to be done. Ideally, the dynamo is checked as well but this is usually a workshop item as that runs with a captive oil type system.

These oil pots are a 'total loss' lubrication system as all the oil used is eventually lost – but the thinner MH oil used also flushes grit and dirt from the exposed working surfaces.

MP03B – The pre-sunrise breeze has picked up and Piet has tucked his guttering flare pot right under the smoke box as a wind shield. The oil pot in the foreground is for the front LHS valve spindle. Luckily the grey graphite paint is heat resistant!

The aerial-bomb shaped contraption to the right is a bypass valve of which one is fitted to either end of the valve chest. When the locomotive is drifting at speed with the regulator shut, the still-moving pistons and valves act like an air pump. A vacuum forms in the cylinders because of the moving pistons. The vacuum acts as a brake on the free running train, tending to hold the pistons back. But it also tends to suck in abrasive grit and ash from the smokebox back through the exhaust ports when the valve gear opens – scratching the cylinder bores and damaging the piston rings.

These valves automatically open to admit air to break the vacuum. A competent driver would also open the drifter valve to admit a small, measured quantity of steam to the cylinders – not enough to propel the train, but enough to occupy the spaces behind the moving pistons and to prevent a vacuum from being formed in the first place.



MP04 – While Piet Molentz grumbled away for a top-up of his oil can, I got a close up of the unattended flare lamp with the flame flagging in the freshening morning breeze. It is basically a paraffin lamp with a woven wick in the long spout. Such a lamp looks primitive but usually provides better light than most modern torches and doesn't need to be set and have the beam aimed while the driver's two hands are otherwise engaged.

MP05 – It isn't just the locomotive that gets a roadworthy check before a run – the footplate crew are given a basic medical check-up. Sonnette Britz is a qualified nurse and reports early to the depot to check the crews and staffs the train as a first aider. Driver Piet Molentz, along with driver Chris Saayman, are both still active drivers on the railways and Piet, ironically enough, had just undergone an official railways medical the day before. Maybe that's why he doesn't look too impressed?

MP06 – Finally it is fire cleaning time and a gently steamed Riaan Coetzee comes to grips with the two pathetically small oval shaped holes which are all that is provided on either side to rake down the ash pan on the Class 12AR. The steam exhaust is from the grate shaker cylinders and the copious discharge has encouraged Riaan to take off his glasses. The fierce, staccato grate shaker exhaust noise is quite hard on the ears too.

As evidenced by the lack of tail drips from the injector overflow pipe (peeking out from just behind the steps) the fireman's injector is running to feed water to the ash pan coolers but often the ash needs a helping nudge to fall down the ash chute, past the open trap door and into the pit between the tracks.

MS01 – Here is a view of the new sink cabinet that has been installed into the old guard's area of the Power Van (ex Staff and Baggage Van) – a matching storage cabinet is out of frame to the left. The Power Van originally had a coupe compartment converted into a kitchen. The old kitchen had been removed and converted into a full shower and washroom facility for the crew. The guard's handbrake still functions – just out of frame to the right.

This revamp not only included cabinets and the res-pray, as well as window and door repairs, but also complete re-laying of the floor substrate and new vinyl sheet floor. The new crew kitchen has hot and cold running water, and is equipped with a gas geyser.

MS02 – Seen through the overhead cantenerary that spans the eastbound high-irons to Springs, the morning sun rises brassy and swollen, tinted by the pollution from the industrial heartland and squatter camps.

Contrary to popular belief, it was not the diesels that displaced steam locomotives in South Africa, but the electrics. Diesels were only meant to be a stop gap in the transition from steam to electric before electrification of all the major routes. The diesels would then continue to serve on the secondary routes.

As electrification spread, the displaced diesels 'competed' with ever more displaced steamers for the secondary duties. Because of abundant coal and cheap local labour under the Apartheid government, well maintained steam locomotives were actually cheaper to run than diesels in the early 1980's – approximately R4 cheaper per train kilometre than for diesel combinations of the same tractive power. But the decision had been made to phase out steam due to its many logistical and operational disadvantages – such as fire hazard, pollution, downtime (especially with boiler maintenance) and water supply issues in arid areas.

MS03 – The two service vehicles at the end of the train reflect the morning sun. It is strangely quiet at the moment as the fire cleaning is done and Piet Molentz is in the oil store topping up his grease gun to do the coupling rods. The coach controllers are still thin on the ground and the generator set within the power van hasn't yet been started.

That tanker car is our home-bound water canteen. It really is a nuisance having to haul 33 tons of water around in a big tin can tied to your tail but there are no watering facilities at the destination, although an intact, but disconnected water tower does still exist at Magaliesburg Station.

The sun is shining against a custom air vent that was fitted to the power car by Patrick Ackerman, to help reduce overheating of the diesel engine within. With the large generator set now installed in addition to the existing Perkin's-powered generator – even the improved air flow will be insufficient and we'll be fitting grids behind a set of the closed doors that you see (on the opposite side of the coach though), and running the train with the doors open for ventilation.

MS04 – A sun-bronzed Susan is just about to be nudged forward to align one of the four holes in the bogie wheels to the 12 o'clock position. This needs to be done to allow access for lubrication of the bogie bearings and the axle horns behind those wheels.

The cylinder cocks are open to expel the incompressible water from the cylinders, which would otherwise hydro-lock the engine if the space between the piston and the cylinder head at top-dead-center (TDC) is completely full of water.

Driver Piet Molentz was being even more cautious than usual with this locomotive movement as an extra wheel-alignment move is usually not anticipated by other people, both onlookers and service staff.

MS05 – How's that for driving? The clock quartered positioning of the holes in the front bogie wheel are accurately placed. Remember that the driver cannot see the position of his bogie wheels from within the cab. Furthermore, in this case, Piet did not use a shunter or an assistant to tell him how far to move.

Not bad Molentz, not bad at all !

While Piet tends to the bogie's trailing axle bearing, the front cylinder cock can still be seen to be freely discharging a dribble of condensate water. It takes a while to warm up the massive steel cylinders and steam chests of these locomotives to a point where steam is no longer condensed back into water.

In the meantime, the hydrostatic lubricator is still working and a dripping cylinder cock like this soon provides a nice greasy green-onion-soup-coloured oil slick around the front end of the locomotive – one of those hazards one has to watch out for.

LD01 – As No.1535 'Susan' first moves off to pick up her train, fireman Sakkie 'Sakana' Kekana takes the opportunity to quickly wipe down the cab sides as the engine moves off.

A conscientious loco minder would normally give the steam locomotive a quick wipe down during the night, but she normally gets splattered and dusty again in the morning if the safety valves pop off and there's fly ash from the fire cleaning. Luckily, Susie was still looking clean in the morning with Luca's fresh paintwork on the front fixtures n' details and 'Oom' Attie's polishing on the black paintwork. But it took Sakkie some time to wipe the engine down with the slightly late fire cleaning.

As proud as these boyo's were with their engine, they left one hell of a mess with spilt coal alongside the service pit.

LD02 – The leaking gland pointed out in photo SP04 has since been serviced and we now have a clear view of the rear cylinder head end of the steam chest, helpfully spot-lighted by the early morning sun. The rods still look clean from their polish of two weeks previously.

The derelict building in the background is the Forge House. It survived intact until the Class A Tank Engine 'Patrys' was railed in and mounted on her plinth. The crane operator misjudged his clearance and damaged the building's frame with his counterweight while swinging the locomotive into position. We've been taking off the corrugated iron panels for safety's sake as they work loose over time. Visible inside is one of the original forges complete with chimney. The building is used as a storage shed and wood yard.

LD03 – After the previous photo I sprinted through the steam with one hand cupped protectively over the camera lens to avoid condensation fog and oil droplets. The reception track is actually on a downgrade from the cross-over, (The points to the left) so locomotives under repair or servicing can never roll out onto the track work even if they do accidentally roll free for some reason.

It takes a patient hand to get an engine out with the drifter open, cocks open and resisting the temptation to open the regulator. Slowwwl-l-l-l-y does it! You can get an idea of the uphill slope by comparing the sun-lit running board line with that of the roof of the converted container next door.

LD04 – Green buds against a green loco. Spring is definitely here, but will there ever be a new season of work for this neat vintage engine? Notice one of the oddities here – this 'little' tank locomotive has the same wheel arrangement as most of our big locomotives, the 4-8-2 arrangement, commonly known as 'Mountain.'

I was on a roll this morning as my usual top speed is an awkward stiff-kneed hobble, but today I was able to keep ahead of the self-propelled steam cloud and still had a dry and functioning camera by the time I was stirring up the cinders in the car park.

LD05 – Can a steam locomotive snigger? I'm sure our little Suzie sniggered while starting to run on the regulator, trundling around to the eastern yard on the forge house track.

She cheekily surprised me with a short shower of sh … water from the chimney as she passed me. It's almost like a prime. What happens when a locomotive has been running on the drifter and the regulator is finally opened for the first time – the condensate that collected within the regulator casting and within the super heater header is suddenly ejected.

That pile of railways sleepers is the outside store for fire-lighting wood – these sleepers are the delicate flammable kindling stock with which we are provided to start locomotive fires.

The tender still needs to be fitted with an external filler pipe with an agricultural bell coupling for fast filling via pump or hydrant – the standard adopted by all our other locomotives.

LD06 – The other side of the preservation equation. Not only the magnificent steam machines and the interesting people that service, repair and operate them – but also the people who staff the coaches. Ultimately, it could simply be the lack of willing people that brings the last steam train to a reluctant halt.

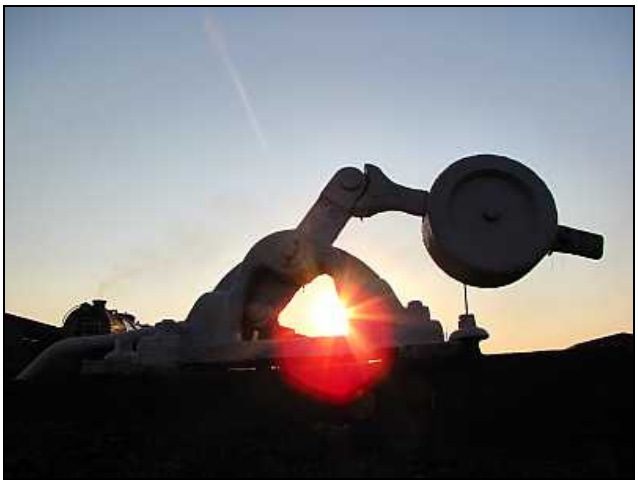
This motley bunch are some of our coach controllers. The numbers of the coaching staff has been growing lately and we've started formalizing the process, the rostering and procedures. A typical day trip is a long day for these people as, although they don't do as much physical work as the crew, they don't work a half day shift either. And passengers can be stupid, awkward, surly or just plain nasty at times.

And the footplate crew don't have to check toilets on a regular basis either….

We've just done another Coach Controller class and will be offering refresher courses every 3-4 months for new candidates. These people need to be recertified every two years.

LD07 – She's been coupled onto her train and is waiting with the rods down. Walking around the front are Train Manager Attie de Necker and Safety Officer Clifford Matthee. They've done the brake test and checked the inter-coach connections and couplings. Now we're waiting for the departure time.

We always try to do the standard vacuum brake test a little earlier than we really need to so that we have time to trace and rectify any faults before the trip starts. It is standard procedure to test the train's brakes with the locomotive(s) that will haul the train, regardless of how recently they were checked and operated with another locomotive or perhaps a stationary vacuum pump.



LD08 – The last picture I took before shuffling off to bed in a sleeper coach. It's been a long day at the office with the yuppies followed by a long night with the loco – but worth it to have been a part of the hidden process of getting a heritage locomotive out on the tracks.

This is a classic points tumbler – so called because the idea is to lift the weighted rod and let it fall the other way by gravity. The knuckled joint seen in the middle of the lever then closes and the inertia from the weight's arrested fall acts as a good firm donkey-kick to get the point blades switched over.

- by Lee Gates –
On behalf of reef steamers Association – Sep 2009