

1). INTRODUCTION :



Following is a collection of pics that I took rambling around the deserted 15M workshops late at night while looking after a certain Susan. There is definitely a certain magnetism to a loco shed and the associated workshops, even if the majority of the machines are cold and in various stages of disassembly, and there are no people around. But it's not just the haulage machines standing under cover – there are a lot of hopes and dreams resting on those stationary steel wheels. It's a great place for a loner like myself to think and meditate on things – pacing up and down between the silent, brooding machines.

Two of the steam locomotives are waiting for funds to repair them – and they look sad sitting around with open front ends. But they'd look even sadder sitting outside, forlorn, amongst the weeds. The two cranes, particularly the 60t Crowans Sheldon unit recently rescued from scrapping by Sandstone Estates, are simply waiting for manpower to complete them. No.3016 has been moved to storage in the carriage sheds.

As always, I had some fun with looking after the 12AR locomotive overnight. We have a good batch of coal with plenty of 'snap' to it. (Quite literally, ample snap, crackle n' pop as the coal releases the volatiles in the early stages of combustion.) The fire required an absolute minimum of coal and it spread out perfectly in the morning. I opened the fire 40 minutes early because there was no crew timings posted in the club house. However, with a single thin layer of damped coal on top, two or three gentle shakes of the grate to aerate the ash and then just a teeny touch of blower – I was able to present Johann Breydenbach with a beautiful solid-orange coal bed and a boiler creaking full of steam when he arrived..

The old girl had a surprise for us in the morning though. And no, I don't mean when a distracted Johann B. trapped my fire iron under the drop-grate rodding.

The right hand drop grate wouldn't close and you could see the long streaming flames that are characteristic of a hole in your fire. You could see the whole rectangle! Uh Oh! Between Johann, Michael Thiel and myself – we figured out what the problem was. The drop grate (like a slatted trap door) is actually fine. (Phew!) But the latch that holds the operating lever's stub in the forward position, has worked itself loose. So the grate was closing properly when operated but flopping open part way again under its own weight.

Michael tried shimmying the gap between the latch and it's pawl with a wired on hex-nut but it would have lasted 5 minutes. We ended up putting the heavy grate shaker lever back onto the spigot, pushing it full forward and using some stiff wire to tie the top of the lever tightly to a corner stanchion on the flame plate. It would not really be in the driver's way as the floor-mounted sanding and cylinder cock levers are just the right of the drop grate lever's hatch anyway – so a simple bodged repair kept them going through the day.

The Gautrain looks so much more sleek and modern by comparison!



- 01). The late autumn evening light casts a pleasant glow on the front of the gently simmering locomotive. I've just arrived early at 5:30 pm, having forgotten that there's little traffic on the highway on a late Sunday afternoon, and I've snapped off a few shots before Oom Attie realized I'm here. Unfortunately the low winter angle of the sun means the shadow of the old Forge House falls across the front of the engine at this time of year.



- 02). A solar powered headlamp? The headlamp's simple parabolic reflector catches the low-angled sunlight at just the right angle. The finish on Michael Thiel's silver painted hinge fixtures and the smokebox ring is holding up very well in operation, much better than the usual traditional white enamel paint. However, it is quite hard to catch a picture of an unblemished graphite finish as the front end of that smokebox gets quite hot in operation.



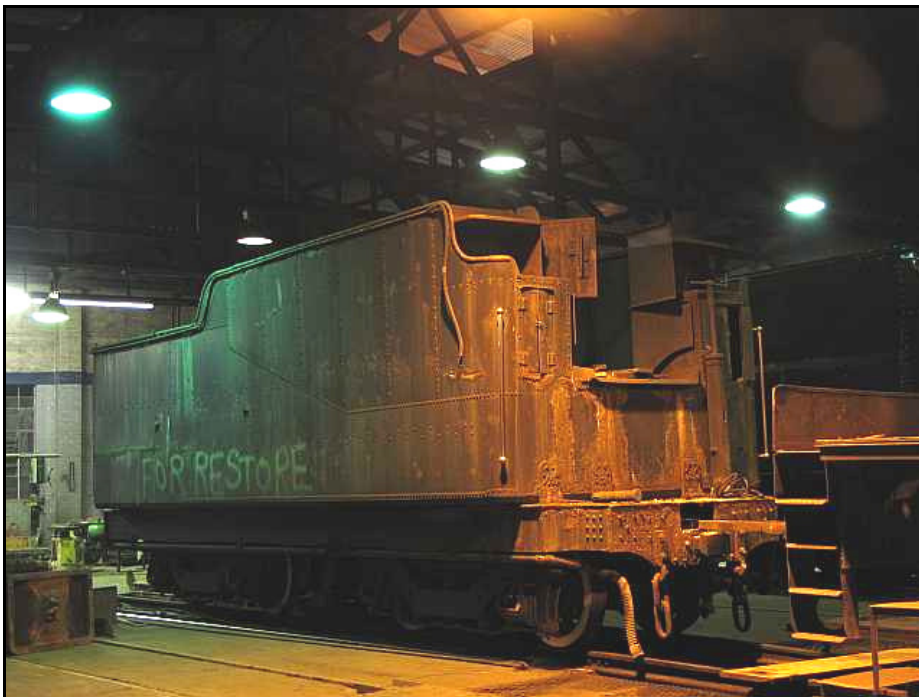
- 03). Here is a quick snap of the turret valves before I quite literally whistle up 'Oom' Attie out of where he's hiding and use the locomotive's whistle to tell him that I am now on duty. Our guest stars on the copper valve plate, from left to right, are Left Injector Steam, Blower, Dynamo, Turret Main (spoked wheel - top center), Grate Shaker main, Lubricator, Power Reverser, Brake Vacuum Ejector and the RHS Injector Steam. The climbing boiler pressure on the over-exposed pressure gauge is about 950kPa. Glasses are over full.



- 04). The gaunt, rudely cab-less firebox end of the shorn and naked Class 12R No.1947 – aptly nick-named 'Rusty Rosie' these days. She was the Germiston station pilot from about 1974 until displaced from her duties by our own Class 12AR 'Susan' in about 1982. This locomotive has been systematically stripped down for a visual boiler inspection to assess whether she is worthwhile restoring to operation, given our current funding. She is to the topic of the next formal Reefsteamers Depot Report.



- 05). Under the amber tinted light of the workshop aisle lamps, the rusty steel looks almost like dull brass. This is a detail shot of the right side of the firebox. The heavy duty 'nuts' that you see are the flexible stay caps and they are arranged radially from away from the center of heat and also to hold the top side and front corners of the very simple square firebox within. They tie the inner and outer firebox walls together but allow some flexibility for the different rates of thermal expansion. The corroded crinoline bars that hold the sheet metal cladding are still in place. They are going to be completely re-fabricated.



- 06). Here's the 12R's tender – Albeit weathered, it looks pretty OK from this angle but the steel plate work is shot and it has more holes than Joost v d Westhuizen's underpants.



- 07). The stripped down front end of the 12R No.1947 'Rosie'. This locomotive has been subjected to two weeks' worth of stripping to get her ready for a visual boiler inspection. Much of the hardware in the smoke box is rusted out and the blast pipe is missing.



- 08). A study in different boiler pitches with the 12R No.1947 'Rosie' on the left and the much more modern 15F No.3046 on the right. Number 3046 has just been completed but waits patiently with the smoke box front cover and the underlying spark arrestors missing to facilitate access for boiler inspection and certification before she can run for the first time in nearly 20 years. That odd looking assembly on the chimney is the upside down regulator valve box upon which is nestled the old fashioned barrel headlight.



- 09). Here's another view of the Class 15F No.3046. That isn't steam in the rafters – I had oil on the top rim of my camera lens – always an optical hazard around a real steam depot. Note that this 15F is going to run like the very first batch did – without smoke deflectors. Those are modified Class 19D hand rails on the footboard risers. This loco is going to be a bugger to climb up to put the blower in the chimney stack when lighting up!



- 10). This thoroughly red-oxide primed smoke box front plate, complete with door, the nose wheel latch and the headlight bracket, looks as if it belongs to the Red Devil! It is the front end for Class 15F No.3046. The locomotive is likely to be called 'Elizabeth' after the then young Princess Elizabeth, now HRH Queen Elizabeth of England, whom she hauled within the Royal Train back in 1947.



- 11). The Germiston 15M shop is still full 18 years after it was officially closed. In the far background, David Shepherd's Class 15F No.3052 'Avril' awaits new boiler tubes and is the current subject of a sponsorship drive. The locomotive with the 'silvery' cylinders is the Class 15CA which needs new flues. Sandstone Estates' GMAM No.4079 shyly shows a wheel, visible within the angle brace of the yellow painted platform.



- 12). Another view of the stripped down 12R Class. Reefsteamers have recently been posted on a preservation website within the Hall of Shame pages, although the caption for the photo gives mild credit to Reefsteamers for moving the locomotive to a place of safety. This locomotive was actually stripped down by railway personnel as she was plinched on the depot property when the depot was still open. Some parts probably went for souvenirs but many of the parts probably ended up on other 12R's and particularly the 12AR's which were working at the time. I'm going to ask the webmaster to update his site.



- 13). This Class 12AR looks like she's been shunting a fuel depot with those tank cars in the background. I had to hold my breath to stand still to take that photo for there was such a stench of decaying dog doot around that I was starting to gag. It was coming from that porta-bin in the foreground. I wheeled it away next to the plinthed type C22 articulated coach sets to olfactorially ambush the unsuspecting Coachies and Crews when they come on duty the following morning! One of her red 'running lamps' has gone missing....



- 14). She's a-gonna blow ! Actually, even with a minimum of coal, the boiler pressure never fell below 1300kPA the whole night and the front, lower rated safety valve was 'feathering' all through the night. The locomotive didn't blow off once. I lost some skin with this shot – accidentally letting the underside of my right arm rest on the blistering hot dynamo feed pipe. I had both my hearing aids on but switched off for this pic – they then act as form-fitted ear plugs. Having safety valves let go at this range can cause permanent hearing damage – ask Les Smith and if he hears your question, he will tell you it's true.



15). A clinker's eye view from within the ash pit. A nice dry pit for a change.



16). Now this is a rare sight! The driver's cab light is in working order. Usually, it is switched off as not to spoil the driver's night vision, and being the most unpopular bulb, it is often the first candidate to be used as a spare should one of the other 32V light bulbs blow. Some of the more experienced crews create uni-directional bulbs by wetting wads of tissue paper, or sometimes cotton waste, and sticking them to the globe glasses to block undesired light from the driver's side. In fact, when the locomotive is running, the only bulb really needed is the one right behind the lubricator – the bulb so placed to back-light the oil feed sight glasses. The open firing hole lights the way for the shoveling fireman.



- 17). A view of the relatively simple boiler back head from just above the toe board. The firebox door isn't posed. It is open to reduce the draft through the glowing fire bed and to help hold the boiler pressure in equilibrium – notice the pressure gauge straining at the red line. The curved wing plates help deflect heat but also help to deflect steam downwards should a tube end fail within the firebox.



- 18). Wheels of steel - 12AR Motion at rest. They would do just under 200km the following day.



- 19). A rear view of the stripped down 12R 'Rosie' and her disconnected tender. In the foreground is a huge pile of loose boiler and back head cladding, beneath which lie the fire box doors. Beyond the pile of plates lies the RHS steam chest cover and then one of the old fashioned rectangular footboard-mounted sand boxes.



- 20). Uncle Wilfred's GMAM Garratt No.4079 'Lyndie Lou' looks impressive even when cold and standing. After a resolution of the problem of a stubbornly leaking clack valve on the previous day, she is now ready for an official hydraulic boiler test and to be steamed up for a steam test and then to be put back into service with a 3-year boiler certificate. The boiler and the sealed off fittings holds the required test pressure under hydraulic testing. The fault on the clack valve was a tiny blemish on a seat – not enough to be noticeable really, but enough to cause a leak at the hydraulic test pressures. This cute little locomotive has been placed into our care by the Sandstone Heritage Trust.



- 21). Looking down the aisles. Sandstone's GMAM No.4079 fills up a whole service bay on the right while Dave Shepherd's Class 15F, also in our care by courtesy of the Sandstone Heritage Trust, waits for her new tubes on the left. The light-weight tracks in the middle were used for service trolleys and also for movement of removed axles and bogies in the old days. They also form useful ladder stops, as you can see here. Someone had been using the WAP machine and has naughtily left it out overnight.



- 22). Tenders, tenders, as far as the eye can see. (And the cardinal mistake of the railway photographer, leaving my tripod in the shot ... oh ... the shame! ☹) I'm standing on the 'gasser' Hyster forklift for this shot.



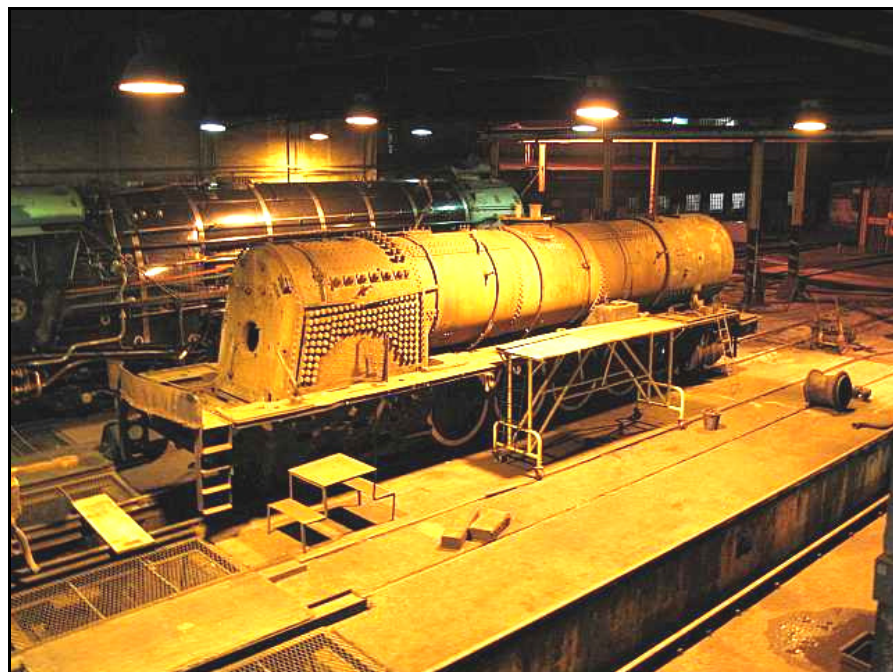
- 23). The rear end (coal bunker) of Sandstone Estates' magnificently intimidating GMAM Garratt – taken with a double-curtain flash. In the background, the cab-less and boiler-less Booth Crane waits for the spare boiler to be fitted. The GMAM's dark brunswick green paint finish looks black in the coldly alien cast of the aisle lighting



- 24). David Shepherd's Class 15F No.3052 'Avril' (left) and Reefsteamers' Class 15CA No.2056 'Dorothy' both look forlorn without their smokebox front plates. Both locomotives are in excellent shape mechanically, particularly the 15CA which was treated to a full motion rebuild to Reefsteamers' Vesconite™-based standard in 2007. But both locomotives are down because of waiting for funds for boiler repairs. It illustrates a problem that all steam, preservations groups eventually face – when the boiler flues and tubes reach the end of their lifespan at the same time on several locomotives. But if the affected club can get those boilers sorted out, those steam locomotives will last just about forever under the usually light loading of preservation operations. Where is Daddy Money Bags when you need him?



- 25). A new safety requirement is to prove that each boiler was originally built to certified standards. Unfortunately, the paper certificates were lost long ago and the manufacturers no longer exist. But every boiler operated by the old SAR+H should have the certificate number stamped on or beneath the flange for the steam dome or the manhole cover. Here, the numbers are clearly marked on the 12R. We are going to remove the dome covers on each one of our locomotives and photograph those numbers, and then highlight them with a card – and then step back to photograph the entire locomotive with the cab plate (number) and the highlight card in view. There's going to be a lot of shunting!



- 26). Two opposing stages of restoration. Class 12R No.1947 'Rosie' in the initial stages of strip down and Class 15F No.3046 'Possibly Elizabeth', mechanically complete and waiting for her official boiler certification routine, in the background. I'm standing over the 15CA's firebox for this shot and watching my head on those pigeon-splatted rafters.



- 27). A distinctive shot of the brick fire arch within the firebox of the Class 12AR No.1535 'Susan.' The coal bank is glowing nicely with just few clinkery, burnt-out deposits beginning to form on the top layer, hence the blue flames. The relatively new fire arch, constructed from separate fireclay bricks mortared together, has fused together nicely in service. Only the rear coal bank is burning – the glowing flat front end of the fire is an optical illusion caused by the rough 'horizon' of the bank and the ruddy red reflection.



- 28). Experiments in making the 12AR into an oil burning locomotive. I'm just about to chuck in a 4-month old bottle of presumably oxidized sunflower-based cooking oil. You'd be surprised what gets thrown into locomotive fireboxes! It isn't every mode of transport that comes with a built in incinerator.



- 29). Whoomph! Actually the crusty top layer insulated the plastic bottle and it took about 15 seconds to melt through. The oil initially spurted out the melting bottle and was then wicked up by the porous deposits. There was no change in the scent of the coal smoke from the front end.



- 30). Chez de Loco. All a steam-freak bachelor needs for a hot meal. The raised shovel plate on the 12AR makes a handy little kitchenette area, particularly as the nuts on the collar ring on the handbrake stand (out of frame) hooks and balances the spade handle nicely. As with all steam locomotives, there is ample hot and cold running water laid on. An inverted bucket makes a useful side stand and the lid of the Tupperware container is the chopping board. Lumps of coal serve to ward off the scroungers, two legged or otherwise.



- 31). Cooking up some marinated pork and peppered pineapple rings in a dedicated cooking shovel. The all round heat coos the food remarkably quickly and one has to be aware that it continues cooking even when the shovel is removed. It's very easy to overcook 'fireboxed' meat and you need to withdraw the shovel in literally a minute or two. Pork is a little tricky as if you want crispy, crunchy crackling, you need to cook it separately from the meat – otherwise the meat dries out before the cracking is done. I ate lean tonight and tossed the fat. I didn't bother warming up the fresh bread rolls tonight either.



- 32). Here's the very useful 12AR handbrake stand in action. As this was about 1am in the morning, there were no scrounging, pathetic hungry Reefsteamers to fend off. Not even the dogs were sniffing around, so I ate in peace within the clubhouse.



- 33). At about 3am, a light mist stealthily came down, gently shrouding the depot and here is the result, a beautifully defined headlight beam. The mist was thin and the stars were still visible in the clear sky above it. Yeah, the locomotive is STILL feathering at the safties.



- 34). Here's a front view of the same scene. Being warm-hearted, this was the driest piece of equipment in the yard – every other coach, tanker and locomotive was liberally running with streams of condensation.

*- by Lee D. Gates -
On behalf of Reefsteamers Association – March 2010.*