



## From the Chairman

Despite the optimism of your scribe as related in the previous Travellers' Tales, the worst thing that your Directors could imagine, happened. During a routine inspection Ollie noticed that oil was showing on the Fireman's-side leading bogie wheel. You may be aware that the lubrication system of the M7 is based loosely on the 'total-loss' principle which accounts for the liberal coating which seems to adhere on all parts under the running plate with the exception of the bogie wheels. The oil was coming from the axle box oil pot (i.e. inside) but was showing on the front face of the wheel (outside). Worried faces made copious examinations and decided that reference marks should be applied to wheel and tyre to determine whether movement was occurring.

These days these marks are fairly commonly seen on diesel locomotives and are necessary because of a change in practise that was prompted by the advent of the wheel profiling lathe. In steam days wheel-sets were profiled by removing them from the frames and mounting them in a conventional-type lathe for the operator to reshape to the correct parameters. Modern practice has the 'lathe' (usually of German manufacture) mounted in the floor of the rolling stock shed so that the wheel-set may be machined *in situ* by simply driving the vehicle onto it. It is obviously important to know if a tyre moves relative to its wheel and the reference marks serve this purpose. As a matter of interest, when '53's driving wheel-sets were re-profiled at Wimbledon, back in 1998, an under-floor lathe was used.

The marks were applied when '53 was over the Coal Dock pit and then the locomotive moved to the shed end of the turntable – about twenty yards. In that distance the tyre had indeed moved and by about ¼"! No further testing or thought was necessary, the bogie tyres would have to be replaced.

Tyre blanks cost about £1000.00 a piece and are on sixteen weeks delivery from South Africa. Each wheel will cost at least £1000.00 to remove the old tyre, machine the wheel true, shrink a newly machined tyre on and profile. When a quick calculation was performed in the back of the proverbial envelope it showed the likely cost of re-tyring to be in the region of £15,000. As at that time the locomotive had only run 26 steaming days in 2007 the bank account was dry but a number of fortunate events and coincidencies occurred:

- the Swanage Railway was willing to pre-pay more steaming days to cover the cost.
- James Cox calculated that Class 37 diesel tyres were possibly the correct size, and
- Southern Locomotives had some already in stock (for future Bulleid tenders), and
- Railway Brake & Wheelset Ltd. were about to place an order on South Africa

- The South Devon Railway had the equipment from Eastleigh for replacing Gibson rings

All these meant that DLL was permitted to use four of Southern Locomotives' tyre blanks which were hurriedly brought down from Wigan and able also to have Railway Brake & Wheelset Ltd increase their order by four to repay Southern Locomotives when they arrive. In addition DLL saved about £500.00 per blank being part of a much larger order.

The provisional budget is shown in the Financial Matters section.

Yet another fortuitous event enabled us to take the South Devon Railway work slot of another locomotive the tyre blanks for which had been delayed leaving South Africa which meant that our whole job was completed before Christmas. In fact '53 actually pulled the last two Christmas Dining Trains (see Operation). The entire re-tyring job took only ten weeks from start to finish whereas it would normally take in the region of 24 weeks. Grateful thanks are due to all who had any involvement in the bogie re-tyring.

## **Secretary's Snippets**

The 21<sup>st</sup> January 2008 marks the tenth anniversary of the company's incorporation. On that date there were two shareholders – Trevor Heard and Bob Payne – each holding one share of £100.00p. The company became active on the 1<sup>st</sup> April 1998 when trustees appointed for the purpose by the Drummond Locomotive Society transferred to the company the assets of the society in exchange for shares in the company and these were then allotted to all members of the society. There were at that time 208 members to whom the company had issued a total of 916 shares of £100.00p.

As at the 21<sup>st</sup> January 2008 Annual Return to the Registrar of Companies the number of members was 244 while shares in issue had increased to 1,214.

The company's membership of Mainline Steam Locomotives Operators Ltd was allowed to lapse in 2005 when it became evident that the regulatory and financial criteria for main line running had effectively priced 30053 out of the market and there was little expectation of any improvement in prospect.

## **Insurance**

Nothing to report.

## **Locomotive Report**

Most of the work associated with re-tyring of the bogie took place off site so there is not too much to report. The lifting of the locomotive to release the bogie complete provided a useful exercise in determining which jacks should go for overhaul and certification...

Once the bogie had been run out Ollie had the dubious privilege of applying heat and muscle to the bolts that held the bogie centre packing piece. This was an inch-thick disc which when in place compensated for the difference in tyre thickness between the bogie and the newly re-tyred driving wheels. Those readers having access to the internet can see the offending lump in a number of the photos on our (or the Swanage Railway's) web-site Gallery. It is light rust coloured and has eight (roughly) equally-spaced holes in it, leaning against the buffer stop wall. The ninth hole was for the lubrication pipe though this has since been increased to facilitate more even lubrication.

The design of the bogie centre meant that a new piece, though very much thinner, would be required in place of the packing piece when the re-tyred bogie was replaced.

When the wheel-sets were returned from South Devon, the axle-boxes were blued and scraped to remove any high spots to ensure that the eight tons each one carries is spread over the whole extent of the journal. To confirm the benefit of this job one has only to notice how freely and easily the locomotive will run – especially when approaching the carriages prior to tying-on.

Finally, a possible answer to the question of why the bogie tyres had to be replaced. During the overhaul it was decided not to replace the bogie tyres because there was sufficient tread depth for future running. Remember that these wheels are neither driven nor braked so wear only occurs due to trundling in front (or behind) the drivers. There will be some wear due to mis-alignment of the track and such like but at a very small fraction of the rate of the drivers. There was, however, what looked like a crack at the end of a couple of the spokes near the rim and it was decided to have these investigated and, if nothing untoward was found, weld them up. That was a mistake. We now believe that during the welding of the spokes the wheel tried to expand within the tyre and afterwards the wheel shrunk as it cooled and allowed a miniscule gap to open between wheel rim and tyre. Subsequent investigation leads us to believe that the cracks that were found were as a result of the casting process. The whole wheel was cast but because of its structure and design certain parts (like the spokes) will cool more quickly than large masses of metal like the rim and the hub, thus there was not a controlled even cooling so it is inevitable that as the spoke cools it will contract in length and a stress crack will occur at the weakest point, where it joins the rim.

## **Operation**

I was fortunate in being rostered on 22<sup>nd</sup> December to take out the Dining train. It would be '53's first passenger train after bogie re-tyring and was loaded to six coaches. The M7 had been out late on the previous evening but that was light engine so this would be its first loaded run. As it was still somewhat of an unknown, the 'Crompton' would double-head but would allow '53 to do the work if all was well.

Once on the level towards Victoria Avenue bridge '53 progressively took over more of the work until going through Herston station it was hauling the train and propelling the Crompton. This continued until Harman's Cross which posed a certain difficulty – the Up platform track circuit is not long enough to hold a six-coach train plus an M7 and a

Crompton. A slight deviation from normal practice allowed the Down train into their platform and we were away again; through Corfe to Norden where a surprise awaited us. Checking round the locomotive (a standard procedure) showed that the bogie frame had been touching the main frames at some point and that the track on which it currently sat caused the clearance between the pairs of frames to be almost nil and had squished the corks into the bogie trailing axle-box oil pots. A quick discussion resulted in the M7 staying on the back of the train so that on arrival at Swanage it could be uncoupled and run directly into the Coal Dock for further examination.

The Crompton took out the second run of the dining train while the M7 stood over the pit and had its bogie spring hanger nuts taken up to give more clearance between bogie frame and main frames. This may sound like a job that anyone with experience of a Meccano spanner could undertake but let me assure that it bears no resemblance. First you need a hydraulic jack (we used a 50 ton Tangye) and gas (just to warm the nuts up, you understand) and two large spanners (of course, they are lock-nutted) and something heavy to beat them with. Heat the lower nut until rosy, lock the upper nut with one spanner against some major part of the locomotive and beat away at the lower nut until it moves. Jack that end of the spring up to relieve the weight so that the upper nut can be screwed up by about 30 flats (you only need the spanner for that as the spring hanger thread is fairly well lubricated by the aforementioned 'total-loss' from the associated axle-box oil pot!) The lower nut is then screwed up to the upper one and 'wellied' up tight (that's a technical term..) That's one done, only three more to do. You won't be surprised to learn that that job took four people the rest of the day.

'53 did take out the six-coach Dining train on its own on the following day and completed both trips without incident providing both power and heat.

My next trip on '53 was on New Year's Day 2008 and our three round trips were completed with ease though now with only four coaches.

The next day saw '53 out again all day shunting at Herston, Harman's Cross and Eldon's but mainly at Corfe Castle plus loading signals onto wagons for S&T and bringing them plus their three vans down to Swanage ready for the winter engineering work which would soon start.

When the locomotive has steam on there is a blow from the fireman's side piston packing. The piston packings have been investigated and both sides were found to have problems which result in them not sealing well; new ones have been ordered.

#### **Latest Situation** (as of 14<sup>th</sup> January)

The locomotive is in the Shed at Swanage; mainly because it is out of the way there whilst the engineering work to the main line and the access to the Bay Road is underway but also because it probably needs the least amount of work over the winter. The new piston packings have arrived and will be installed soon.

'53 is due to enter the Goods Shed for painting some time during April 2008. We do not know exactly when because that depends on when the current occupants are out-shopped. However, it is likely that preparatory work will start in March, cleaning and rubbing down, etc. Details of this will be posted on our web site (see below) as soon as they are known.

## **AOB**

The Company's web-site is now active and open and can be accessed at <http://drummondlocomotives.co.uk>

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