

LOCOMOTIVE REPORT by Richard Pearson & Martin Lloyd

P3 NO. 2392

The P3 is still on display at the NRM's *Locomotion* at Shildon. As reported in the last NEWS the 10 year boiler ticket was due to expire on 30th November, and we have been in touch with the boiler insurance company with a view to obtaining an extension. Following a further insurance steam test on 28th November we can now report that the boiler ticket has been extended until 10th June 2006.

This will now allow the P3 to take its turn on the museum's Santa specials during December. The P3 will also steam on the 21st and 22nd January when the museum plans to hold another 'cab it' weekend when members of the public will be allowed access to the footplates of various locomotives, a place that is normally out of bounds while the locomotives are on display in the museum.

Q6 NO.63395

The Q6 frames are still in store in Deviation shed while we wait for the NYMR to finish the boiler, and the only outstanding mechanical job on the frames is to fit the piston valves. The valves have been in store at Hopetown and it was intended that we would fit the valves over the winter and then do some initial measurements with a view to setting the valves, but as we are now busy with K1 at Carnforth, this job has been contracted to Maurice Johnson.

News on the boiler is better this month as the NYMR has been able to spend more time on the job. The tubeplate that has been waiting for several months to be riveted into the barrel has at last been started and as of December 9th about a 3rd of rivets had been fitted. The news on the firebox side stays is also positive as now all the new stays have been fitted; the stays now just need to be caulked and have the heads riveted over. Progress is also been made with the fitting of the new roof stays, with about ¾ of the new stays having been screwed into position. When fitted they have to be caulked and then have a nut fitted on the inside of the firebox, and on the outside they will be riveted over to form a dome head. A number of rivets on the inner firebox back seam still require replacing with copper lacings and firehole door rivets still need to be fitted.

In previous loco reports we have reported that we have been in regular contact with the NYMR as regards the delays in completing the work on the boiler, and in early December we received the latest letter from the NYMR General Manager saying that the boiler should be finished by 28th February.

Work continues with painting the tender although the weather conditions aren't favourable to painting at this time of year, so the top coat and the transfers will probably now not be fitted until the spring.

K1 No. 62005

How do you sound cheerful when faced with such a huge expenditure just to keep the K1 running for another ten years? The EGM on Friday 9th December voted unanimously to authorise the spending of up to £200,000, and it looks as though we will not get a lot of change out of that vast sum. (I find it difficult to get my head round the correct number of noughts).

Those at the meeting were left in no doubt about the scale of the task but only four days later the repair became even more expensive. Thankfully, if that's the right word, the expenditure sanctioned by the members, has an element of contingency.

What are we talking about? The firebox backhead (the back of the boiler with the door hole therein) was removed on Monday 12th and was found to be in a worse condition than hoped for but we were not totally surprised. The doubling plates, which reinforce the outer radius of the firebox back, were extensively cracked and really we needed to look beneath them rather than just carrying out a weld repair.

By the time this is read, we will know the worst and will have made plans but at present we are still fact finding. Johnny Haddow, the Carnforth boilersmith is removing the doubling plates to examine the plate underneath. I suppose it is just possible that the NDT detected the cracks in the doubling plate and the parent platework is undamaged – but I doubt it.

The next stage is to examine the options of complete replacement, replacement of just the doubling plates with repair welding of the main plate or partial replacement and repair. In other words we are keeping

options open but, as the bottom line, enquiries are in hand to find cost and delivery figures for a new backhead.

The cost will have to be carefully examined. A new plate will save on repair time and cost but will involve not just the delivery of a new plate but will involve a lot of time (and therefore money) in drilling and tapping hundreds of stay and rivet holes. We plan to be ready for the start of the 2006 Jacobite season but we won't use that as an excuse to cut corners. In the end it will depend upon many factors, not least of which is the approval of our insurance company boiler inspector and our vehicle acceptance body. These organisations won't let us do anything approaching a quick botch. But we still have to keep the pressure on and not slacken off the pace.

The mechanical side of the overhaul is progressing well. The attention to axles and axle boxes is almost complete. One of the trailing boxes was examined last year and most of the other five required minimal attention. The wheel boss faces were given a light skim in the Carnforth wheel lathe (100 years old this year!) and the excessive side-to-side movement was eliminated by building up the white metal on the outer faces of each affected box.

We haven't examined side rod bushes in detail but we don't envisage any major defects here. Piston valves will need decarbonising but we don't expect any problems here either. If you remember we fitted new cylinder liners two years ago and honed the valve liners last year. Crank pins, gudgeon pins and the like will all be ND tested for cracks as a routine part of our maintenance policy. Boiler fittings and the various control valves from the cab are all being overhauled by volunteers at Hopetown. Richard Campbell is overhauling the brake ejector.

This latter device is one of the largest pieces of equipment in the cab. In fact it has two ejectors, a large one for creating vacuum in all the brake cylinders throughout the train when the loco is first coupled on and a small ejector for maintaining the vacuum in normal operation. The level of vacuum is controlled by a small relief valve. Each ejector works by forcing a jet of steam into an orifice such that it draws air out of the surrounding chamber and thence the train pipe. The driver's handle opens and closes a valve which allows air into the system, partially destroying the vacuum and causing the brakes to be applied throughout the train. There are three non-return or clack valves, a series of cams and springs and several ball drip valves. All these control the passage of air through the unit and prevent it being drawn back in the wrong direction. The

ejector exhausts the steam and air into the smokebox and it is particularly important not to draw smokebox gasses back into the ejector.

I have attempted to describe this formidable device, not to deliberately baffle you but to try and convey how complicated a piece of kit it really is. At first sight the big lump of brass with a handle sticking out, just in front of the driver, looks a bit numb. But this plain exterior hides a labyrinth of passage ways and valves. It is extremely reliable but occasionally requires a little TLC. Richard is just the man for that.

Despite the amount of work we volunteers have to tackle, we are confident that we will be ready on time. It's all down to the skills of Johnny Haddow and his men. There is no doubt that they have the skills; the same repair has just been done on *Galatea's* firebox, only twenty feet away from our own boiler.

Q7 No. 901

On public display inside *Locomotion* at Shildon.

J72 No. 69023

With the locomotive now stripped down into its major component parts an examination of the fracture in the cylinder casting has taken place.

Following the examination we have decided that the only way of doing an effectively repair is to remove the casting from the frames. There are a number of jobs to do to the casting other than just repairing the fracture and the decision was made taking all these jobs into account. The fracture has also been examined by an engineer from specialist casting repair company Metalock, and a method of repair has been agreed; the casting once removed will be repaired at Metalock's main workshop in Coventry. The casting is made up of two halves; the joint between the two sections is vertical and passes through the centre of the steam chest. Once we have removed the casting from the frames we will separate the two sections and then we will machine the cylinder bores to a size that will allow us to fit two new cylinder liners after the casting has been repaired without any further machining. A start has already been made with removing the fitted bolts that hold the casting in the frames; the bolts are being removed by drilling them out using the magnetic based drill. We are making quite good progress with this job and hope that the casting will be ready for removing early in January. When we remove the casting it will be lifted and then lowered onto a permanent way trolley that we have on loan from

Fastline. *Fastline* are a Network Rail permanent way contractor, based next to Darlington Bank Top station.

The axleboxes have now also been examined. The leading and trailing axleboxes are in quite good condition and only require a small amount of machining to adjust the clearance of the brasses on the main bearing surface. When the brasses have been machined they will be white metalled before being machined again to the final finished size. However, the axleboxes on the centre driving wheel are in very poor condition with an amazing 1/8" clearance between the axlebox thrusts and the journal. It is incredible how this excessive amount of clearance didn't cause problems in other places on the locomotive, especially when the leading and trailing axleboxes were in such good condition. The centre driving axleboxes brass crowns will be completely renewed.

All the axleboxes will have the horn faceplates renewed; they are all generally in poor condition with a number of the plate retaining copper rivets either loose or missing. The frames are in the process of being measured so that we can assess the work required on the horns; we plan to have the measuring finished before we remove the cylinder casting.

The new side rod brasses have been cast, and we have made a considerable saving with these as we have cashed in the old brasses, along with some old Q6 side rod brasses, with the casting foundry. Therefore after restoration the J72 will still be running with original BR side rod brasses!

A start was made with cleaning the wheels in preparation for painting but the dirt was so far engrained into the paint that it proved impossible to clean; the only way of removing all the dirt has been to remove all the old paint as well. All the driving wheels have been needle gunned back to remove the old paint and they have now received the first coat of primer.

The boiler will be shot blasted inside and out but first we need to remove all the heavy scale from inside the boiler. We have started this job and hope to have it finished before the end of the year to allow the shot blasting to take place in early January. We have recently had a heavy duty metal saw donated but it proved to be of no real use to us so we have given it to a local firm, *Northern Steam*, and in return they are going to shot blast the boiler for free. *Northern Steam* specialises in building and repairing traction engines, but it is also the same company which recently announced that it was going to build a brand new G5.

When the boiler has been shot blasted it will be washed out internally and then painted externally; we will then be able to thoroughly examine the boiler to assess exactly what repairs are required.

A2 No. 60532 Blue Peter

On display at North Road Museum, Darlington. NELPG members are entitled to free admission on production of their valid membership card.

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WORKING PARTIES

The regular Monday and Thursday evenings continue at Hopetown on the J72.

If you want to join them and help on the J72 at Darlington, day or night, please contact **Fred Ramshaw on 01325 377306** or **Terry Newman on 01642 654675**. Please try to turn up if you can. The phone number for **Hopetown Carriage Works is 01325 382155**.

However, work will also be required on the Q6 – and the new Deviation shed store - at Grosmont, and on the K1 at Carnforth. If you want to help please contact **Richard Pearson on 01642 659461 (or 07779 366796)** or **Fred Ramshaw on 01325 377306**.

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MEMBERSHIP MATTERS by Colin Smith & John Drew

Membership subscriptions are due for renewal for 2006 and a renewal form is enclosed with this issue. Please enclose a stamped, addressed envelope with your renewal if you wish to receive your card quickly. If not, it will be included with your copy of the next NEWS. Membership

will lapse if you do not renew by 28th February 2006. Junior members should also renew to show continued interest, though no fee is payable.

Membership of the NELPG at 1st December 2005 stood at:

Ordinary	243
Husband & wife	82
OAP	140
Junior	10
Life	86
TOTAL	561

This time the annual appeal is for the J72, the overhaul of which has started in earnest this year. Though no completion date has been set, a good response to the appeal will boost the restoration.

A warm welcome is extended to the following new members who have recently joined the Group:

Mr & Mrs A. Chaplin from Yarm
Mr. D.A. Elliott from Bishop Auckland

We sincerely wish that these new members maximise the enjoyment of all aspects of their membership and support NELPG actively in whatever way they are able.

My usual note to all members is slightly different this year; I have to report that despite some extra members signing up to the Gift Aid scheme, it is probable that we will not receive over the £2000 return from the Income Tax that we achieved last year. My forecast this time is approximately £1950. This is still a magnificent achievement for a small group of people and makes a difference to the work that can be carried out on your behalf by the Committee to keep the locomotives going.

I always welcome more members to join up, if you haven't already done so, or if you can't remember if you have before, please complete the form on the back of the membership renewal form. Every 78p you donate to the group gains 22p return from the Income Tax that you have already paid.

Thank you to all of you on the list; please keep supporting us in this way.

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GENERAL MEETINGS

The December meeting proved to be the final meeting at the Sunnyside Hotel at Eaglescliffe. The remaining winter meetings from January to May will be held in the Friends' meeting room at North Road Museum, Darlington.

This has once again prompted a debate in the Committee and it was decided to seek the views of the membership. The simple questions are: is Friday night the most suitable and popular night? Should the venue have a licensed bar? Should it be on Teesside or at Darlington or in some other location? What type of entertainment do you want?

If you have any views or can suggest a suitable meeting place – it ideally needs to have a room that can accommodate up to 50 people in comfort, be easily accessible and have secure and safe car parking – then please let our secretary, Jackie Maples know.

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APOLOGIES

Sincere apologies for the delay in publishing this issue of the NEWS. This was primarily due to the Editor's computer becoming 'corrupted' and losing most of the information thereon. After 10 days away for repair, hopefully, all is now well! Besides losing vital files it was not possible to download the pictures for this issue, all of which had been supplied in electronic format! Furthermore if anyone had emailed the Editor during this time this explains why they did not get a reply or acknowledgement.

Once bitten, twice shy, so in future all files will be saved on disc or CD as a back-up in the event of computer failure, so ensuring they don't get 'lost' again. No doubt for most computer users, they do this as a matter of course, but for this Editor it has been a salutary tale!

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FORTHCOMING EVENTS

Friday 13th January 2006

MORE TALES FROM THE FOOTPLATE by John Fletcher, who is promising some vintage video this time.

Friday 10th February 2006

TO BE ARRANGED

Meetings are held in the Friends' meeting room, North Road Museum, Darlington commencing at 7.30 pm. All are welcome.

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