The ups and downs of buying a model steam locomotive: Part 1. The Buying and Tinkering - Roger Stephen.

Readers of the Gazette will know that I have been looking for a 3½" gauge steam locomotive to have some fun with at the track. I found Guy Ellerby's articles and personal advice from other members very useful, so thank you chaps for all your help. For some months I monitored the locomotives offered for sale from various sources including a dealer who I visited but did not buy from. Then I got wind of a 3½" gauge Princess Marina offered at a reasonable price from another dealer who had better remain anonymous. The 'Princess' is an LBSC design from about 1935, based on the LMS 2-6-0 mixed traffic locos designed by Sir William Stanier.

When I purchased my Princess Marina she did not have the LMS and number transfers and looked rather plain. Its surprising how adding them has smartened her up. She weighs about 90lb (40kg) – hence the bend in the picnic table top!

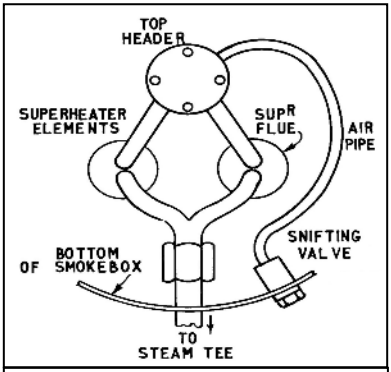
A phone call and a chat at the Alexandra Palace exhibition revealed it to be a circa 1992 example, painted a peculiar colour, with a current Southern Federation boiler certificate issued by the Bedford club. I contacted a Bedford club boiler tester who remembered the loco, confirmed the name of the last owner and said that the hydraulic test was fine. However, when the steam test was done the boiler was OK but the loco would not actually run. I called the dealer again and reiterated that I would like to see the loco running on compressed air if not in steam. There followed a few weeks delay for various reasons after which the dealer confirmed the loco would not run on air at first because a return crank had come adrift but that it now 'runs like the clappers'. So, 24th February saw me driving through sleet and snow to see it.

I examined the loco for nearly an hour and found that the workmanship of the bits that mattered (chassis, wheels, motion, and most of the plate work) was pretty good. What I could see of the boiler looked OK with no sign of soft solder, although the fire hole door was poorly made. The boiler cladding was a bit scruffy and the paintwork was pretty terrible so I concluded that the person who built most of it was quite competent but that someone else with rather less skill had finished it off. The tender was very nicely made but, again, was let down by the paintwork. I wanted a loco to have fun with so was not too concerned about the paintwork – I could always strip and repaint it if I felt like it – but how did it run?

On compressed air the loco ran OK forwards and backwards, although it was a bit lumpy. It was propped up on the buffer beams and with the axle boxes at the bottom of their travel the connecting rods were both fouling the crosshead guide bars. Back on its wheels the loco appeared to roll quite smoothly so I thought it would be OK.

I had come quite a way in snowy weather, the dealer had put it on hold for a month for me and said he had someone else interested in it if I decided not to buy. The price was right, it had a boiler certificate, it ran on air and I was confident I could easily tidy up the odd shortcomings I had found. To hell with it, I'll buy it. Its only money and the wife thinks its an investment! On the way home, in the rain and spray on the M25, it occurred to me that the loco in the back was worth more than my ageing car!

Having got the Princess home I was well pleased and set about tinkering with my new toy. This was definitely an 'up'. However, the next day I started to find niggling little problems. I knew the end of the snifting valve pipe had been plugged for some reason but discovered it was too short to poke through the hole in the side of the smoke box. At first I thought that meant the wet header and super heaters would have to come out, but after some thought I realised I could sort it out by making an extended snifting valve body. Problem solved and I'm 'up' again after a brief 'down'.

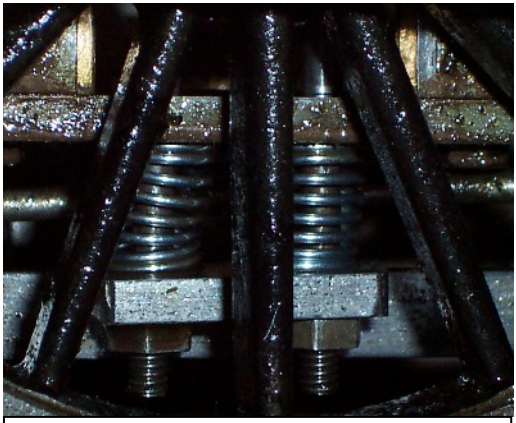


A diagram of the wet header, super heater and snifting valve pipe work. On my engine the air pipe was not long enough to poke through the hole in the side of the smoke box.

Closer inspection of the axle boxes revealed that, even standing on the wheels, they were very near the bottom of their travel in the horn blocks. There were at least four different types of suspension spring fitted and those on the leading and trailing coupled wheels were particularly stiff. To cut a long story short I eventually found just the springs I wanted in the hardware shop in Bovingdon. Whilst fitting them I thought the pony truck springing felt rather stiff, holding the front of the loco too high. I took the two pony truck buffers to pieces and found that two strong springs had been fitted in each, so I reassembled them with just one spring, as specified by LBSC. When I stood the Princess back on her wheels the axle boxes sat just about in the middle of their travel with plenty of connecting rod clearance. Why LBSC designed her with so much axle box travel that the connecting rods could foul the cross head guide bars I don't know. Anyway, problem solved, another 'down' and 'up' so I'm smiling again.

Out of curiosity I took off the dome cover to have a look at the top feed fitting on the boiler. Oh dear - although that's not what I actually said! There was a lot of red haematite gasket sealer in evidence and the 6BA screws were just bizarre. On closer inspection I found that some of the screws were only hanging on by a couple of threads, so I took the fitting off to see what was going on. Four of the eight threaded holes in the boiler bush were almost completely stripped and, worse, in two of them a drill had been put right through into the boiler. This was serious and required careful thought to come up with a solution. I even considered taking the loco back to the dealer for a while.

I decided to re-tap the holes in the boiler bush 4BA (5BA would not give a full thread engagement in a 6BA hole). The gasket would have to be a close fit because of the reduced land around the enlarged bolt holes but it looked possible. I sealed the two holes in the boiler



The axle box suspension springs. Four different types were originally fitted! These were replaced with softer springs to allow the locomotive to sit with the axle boxes in the correct position so that the connecting rods did not foul the crosshead guides.

Top feed fitting on boiler. The red gasket sealer has all been cleaned off, 4BA screws fitted in place of the stripped 6BA items and a proper gasket fitted.

with tiny 8BA plugs screwed in with plumber's sealing compound (a favourite of LBSC's) and used the top feed fitting to keep the 4BA tap straight in the boiler bush.

Having the top feed fitting off allowed me to look at the two integral check valves. This was just as well because someone had used ordinary steel springs which had completely rusted away! I fitted new light copper springs and cleaned up the valve seats. Two downs, two ups and I'm smiling again – but not for long.

Time to do a quick hydraulic test on the boiler using the tender hand pump. I filled the boiler and tender with water, fitted plugs in the safety valve bushes and started pumping. The pressure came up quickly and the boiler seemed OK, including my modified top feed, but there was water dribbling out underneath and the pressure dropped off quite quickly. There is a small bracket screwed to the top of the axle pump body and some idiot had drilled the screw holes into the water passages so water was leaking out around the screw threads. It also meant one top feed check valve was still not sealing properly. My smile quickly disappeared because the whole boiler has to come off to get at the offending screws.

I discussed it with Tony Mason and he suggested steaming the loco anyway, just to see what happens. Why not? If nothing else it would be a bit of fun. Find out what happened next time!

To be continued…..