

Pannier Tanks to the rescue Copyright J Crosse 2005

It is one of life's mysteries as to how one organisation arrives at a different solution to a problem to the majority of its competitors. This might be anticipated where the need is for a single item but less so when many hundreds of a particular machine type are produced. Such a case is the Great Western Panniers where the railway had in service over 1000 of a type which was hardly to be seen anywhere elsewhere on the national system.

The Pannier tank was engrained in Great Western culture from early in the 20th century when Dean and Armstrong designs dating from 1874 and 1890 were updated by the fitting of pannier tanks in place of side or saddle tanks on the original designs.

These were classes 1501, 1813, 1854, 1901 and 2021 in GWR terminology although the numbering sequences were spread through a range starting in the nine hundreds and going through to 2160. The 2021 class later spawned the 2181 class- this variant simply being a modification with increased braking power for working the heavier trains.

Not content with rebuilding its own locomotives it also turned its attention to a small number of ex Cardiff Railway locomotives that had been absorbed into Great Western stock in 1923, these being numbers 681-684 and two from the Cloebury, Mortimer and Ditton Priors railway, numbers 28 and 29.

Representatives of all the above classes came into British Railways ownership along with the various classes which were designed and introduced after the grouping and with which we are familiar today on our heritage lines.

First off the drawing board were the 57XX tanks, the doyen of the class appearing in 1929. All had 4' 7 1/2" driving wheels, 17 1/2" x 24" cylinders and a boiler pressure of 200 lb/sq in giving a tractive effort of 22,515 lb. These were built in the sequence 5700-99, 7700-7799, 8700-8799, 9700-9799 then 3700-3799, 3600-3699, 4600-4699 and finally 9600-9682, of which the last 21 were built by British Railways. A variant that did not make it into preservation was the condensing apparatus fitted batch of 9700-10 which carried this equipment for working certain services on the London Underground network.

A further variant, which later seemed to be accorded a separate class designation, was the 6700-6779 batch which was fitted only with a steam brake and no ATC as they were intended to be used entirely for shunting duties. This class became synonymous with Newport Pill shed where a large number of the class were allocated. All of this class also went to the breaker's yard.

1931 saw the introduction of the 54XX series. These had large driving wheels (for a tank of this size) being 5' 2" diameter. With 16 1/2" x 24 1/2" cylinders and only 165 lb boiler pressure they had a tractive effort of only 14,780 lb. They were push pull fitted as were the 64XX class which followed in 1932. By reducing the driving wheel diameter to the same size as the 57XX series and raising boiler pressure to 180 lb a

tractive effort of 18,000 lb was achieved. 1936 saw the 74XX series started, this being simply a 64XX without push pull apparatus. The last 20 74XX (7430-49) did not enter service until the BR era. Despite their modernity no 54XX (or for that matter 74XX) managed to end up at Barry or find another route into preservation.

Meanwhile, in 1934 the 1366 class had appeared, these being a development of the 1910 saddle tank design (1361 class) which were intended for dock side duties. Unlike all their forerunners 1366-71 had outside cylinders measuring 16" x 20" but with just 3' 8" diameter wheels and 165lb/sq in boiler pressure the tractive effort came out at 16,320 lb.

Just making it into the Great Western era was the 94XX class of which the first ten only were built before 1 January 1948. The nominal technical specification was the same as the 57XX. However the engines were much heavier and came out classified as red route engines which seriously restricted their areas of operation. The class eventually totalled 210 (9400-99, 8400-99 and 3400-9 built in that sequence) but many had a woefully short working life.

The final development of the line was the 15XX class- outside cylindered- but again with the same tractive effort as the 57XX, the design change appeared to be aimed at ease of accessibility for maintenance and servicing. Just ten members of the class were produced appearing in 1949 and so were products of British Railways rather than the Great Western.

In the same year the 16XX class started to enter service. These were light weight Panniers nominally replacing the 2021 class, and indeed had identical boiler pressure, cylinder and wheel sizes thus producing 18,515 lbs of tractive effort.

Many of the present day survivors owe their existence to being sold for further service with London Transport being the principal user of the 57XX type whilst the National Coal Board also had 57XX as well as 1501 in its service and several heritage railways owe a lot to their pannier tanks which have been the mainstay of services for a number of years.

So what do we have and where are they.

First off is 1369 which was bought straight from BR service and is currently operating on the South Devon Railway.

1501 came to the Severn Valley Railway from NCB service at Coventry Colliery and is also active at present.

The sole survivor of the 16XX class is 1638 which is normally to be found well away from its original owners patch on the Kent & East Sussex Railway, although of course a number of 57XX panniers were allocated to the Southern Region, some of them working not too far away at Folkestone Harbour.

The 57XX fleet comprises no less than 16 survivors. Of these 5764/75/86 and 7715/52/60 all came via London Transport.

3650 (under restoration) and 3738 (working) are to be found at Didcot.

4612, subject of many column inches in this magazine due to its almost complete renewal, is operational at Bodmin.

The Severn Valley operates 5764 and 7714 and these are also both in working order. However to achieve this it has over the years dismantled 3612.

Well away from home territory is the Keighley & Worth Valley's 5775 which is currently out of service awaiting overhaul. 5786 was for many years resident at the now closed Bulmer's Railway Centre at Hereford. The owning group then moved it to the South Devon Railway where it has been restored for further service. 7715 has appeared in its LT of L99 guise at the Buckinghamshire Railway Centre but is now in British Railways black carrying its BR number. The Birmingham Railway Centre hire fleet has three of the class on its books, these being 7752/60 and 9600. These have worked on many lines but all are currently to be found at 'home base'.

7754 is nearing the end of its operational ticket at Llangollen where it has appeared in its former NCB green guise recently. 9629 at the Pontypool and Blaenavon Railway is the only survivor, other than 3650, that has not steamed in preservation although work is underway.

9642 from the Swansea Vale Railway and 9681 have found employment mainly at the Dean Forest railway whilst 9682, which belongs to the Great Western Society Southall group, has also wandered, most notably to the North Norfolk Railway.

The sole survivor of the 94XX class, the pioneer locomotive, owes its survival to being designated as part of the National Collection as the 'final development' of the Pannier tank family. If this had not happened, one wonders if today we would have a group proposing to build one to fill an important gap in the Great Western heritage fleet. However it is effectively 'stuffed and mounted' at the Steam museum at Swindon and is unlikely ever to steam.

It is clear that the Great Western would not have operated effectively without its panniers and possibly the same could be said for our heritage railways as well, their usefulness being evident by the fact that nearly all have worked in the preservation era and when they do come out of ticket they are usually overhauled with some speed.