

BR BULLEID BATTLE OF BRITAIN CLASS

34072 257 SQUADRON

Even before the Second World War, the Southern Railway desired a larger range of locomotives to accelerate services which were getting heavier to cope with increasing passenger numbers. Brighton Works drawing office first proposed a 2-6-0 design, as a replacement mixed traffic locomotive, but the Kent Coast lines demanded a 4-6-0 or 2-6-2 at the least.

Scaling down Bulleid's existing Merchant Navy Pacifics with shorter wheelbases, narrower boilers and smaller cylinders allowed both the 44 strong Battle of Britain Class and their 66 West Country siblings to feature the same welded construction, steel fireboxes, oil bath chain driven valve gear, Lemaitre multiple jet blastpipes, thermic syphons, Bulleid-Firth-Brown wheels, electric lighting powered from a steam generator and power operated reverser, firebox doors and clasp brakes.

Of the 27 squadron names submitted, three were discarded because they were not flown by British pilots while one other flew Blenheim night-fighters. The squadron list was presented to the Southern Railway as '*the order of battle for Number 11 Group (which was responsible for London, the Thames Estuary and South East England.) at the end of the campaign on October 31 1940*', namely: 25; 73; 17; 229; 615; 257; 249; 46; 264; 41; 603; 222; 141; 74; 92; 66; 605; 253; 501; 219; 145; 213 and 602. 257 Squadron flew Hurricanes out of Northolt during the Battle of Britain.

The air-smoothed boiler casing, with an integral smokebox, allowed the light Pacifics to use mechanised carriage washing plants although driver visibility remained an issue. This latter point was one cause of the Lewisham disaster on 4th December 1957 in which the driver of 34066 "Spitfire" was unable to see caution signals in foggy conditions and ran into the back of a stationary local train. The overall shape of the original locos allowed enthusiasts to bestow the nickname "Spam Can" on the class.

The construction of 280 psi welded boilers for West Country and Battle of Britain 4-6-0s was subcontracted to North British in Glasgow due to continuing Austerity shortages. This even continued as late as March 1949 when Brighton Work's constructed the final batch of 20 light Pacifics ordered by the newly formed British Railways.

Southern Railway built Bulleid light Pacifics could be distinguished from the British Railways built examples by the width of the cabs. The earlier machines had been designed with a view to them operating through narrow tunnels between Tonbridge and Hastings, and so received 8 ft 6 ins wide cabs, while the post 1948 examples had footplates measuring 9 ft across.

34072 257 Squadron was built at Brighton Locomotive Works and outshopped on 30th April 1948 in Malachite livery. It was the second Bulleid light Pacific built under British Railways' auspices. It does not appear to have received a formal naming ceremony and was allocated directly to Dover Priory shed working mainly Continental Boat Trains to/from London Victoria including the famous "Night Ferry" service. It also hauled local services between the Kent Coast and Charing Cross and, on one occasion, it was noted working over the Tonbridge to Redhill line which is believed to have been a first for a Bulleid light Pacific.

It has also been pictured hauling "The Man of Kent" which were timed originally as the 09:42 Up and 16:10 Down trains. These timings were accelerated, however, to 1 hr 20 mins for the run between Charing Cross and Folkestone but the others took between 1 hr 28 mins and 1 hr 32 mins. As always, loads increased and by the end of the 1950s the minimum loading was ten coaches with eleven being frequently required, sometimes twelve. The 80 minute schedule meant hard work for the engine but as the trains were now mainly worked by Bulleid light Pacifics this was well within their capabilities.

During April 1952 it was repainted into Brunswick Green livery and, in March 1955, its boiler pressure was reduced from 280 psi down to 250 psi. BR's Kent Coast electrification programme meant that 34072 was re-allocated as Dover shed lost its entire allocation of main line express duties during Stage I of the modernisation. 257 Squadron moved to Exmouth Junction shed in January 1958 and received a BR totem on the tender later that year.

There 257 Squadron worked trains around North Devon and North Cornwall as well as to Salisbury and London. Certainly it would have hauled the well-known "Atlantic Coast Express" to Ilfracombe. In September 1959, 34072 had the BR Automatic Warning System fitted and a speedometer was installed in January 1961.

By 30th December 1962, BR's boundary changes meant that 34072's residency at Exmouth Junction was changed from Southern to Western Region. In 1963 it received a Heavy Intermediate Repair, and repaint, at Eastleigh Works as General Repairs to un-rebuilt Pacifics had ceased at the end of 1962.

34072's final allocation was Eastleigh shed from 14th June 1964. According to an article in Heritage Railway magazine, in September 2017, that was not the end of its BR career as it was re-steamed again two months later, apparently, to haul an enthusiasts special from Fareham to Southampton docks. So far, details of the tour have not been traced.

On 25th October 1964 it was withdrawn whilst at Basingstoke shed having run 698,843 miles in a working life of almost 16½ years. 34072 is the only surviving Bulleid which retained a high-sided tender throughout its working career. It was moved for storage at Eastleigh until being towed 'dead in train' to Woodham Brothers scrap merchants. It arrived at their yard in Barry on 18th February 1965 and stayed there, steadily rusting away, for 19 years.

34072 257 Squadron was purchased by the Port Line Locomotive Project in January 1984 for £5,750. Transported to Swindon & Cricklade Railway, Blunsdon in October 1984 it then moved to Swindon Works (Weighbridge) in November 1987. Tarmac Directors provided an interest-free loan to hasten restoration by the 50th anniversary of the Battle of Britain as Network South East had invited the loco to take part in a Battle of Britain commemoration at Folkestone Station.

Arrangements were made to move the locomotive to Derby for weighing followed by a loaded test run to Sheffield. After this had succeeded, 34072 was then going to steam to Folkestone. However late on the Friday afternoon, one week before the move to Derby, and its planned re-commissioning at Folkestone Central Western Region's Civil Engineer would not allow the locomotive out of Swindon on the grounds that it was out of gauge, despite 34092 *City of Wells* travelling through Swindon a couple of weeks previously. After a number of frantic telephone calls arrangements were made for a road transporter to take the locomotive to Ashford the following Wednesday.

However, even road transport was not without difficulties. The locomotive was required to wait on the hard shoulder of the M25 as there had been an accident ahead. Unfortunately passing motorists, who slowed down to look at the engine, managed to pile into one another and it took the best part of two hours to sort out the 20 vehicles involved.

257 Squadron was denied access to Ashford Works owing to a weak bridge so was diverted to Cheriton, the site of the channel tunnel terminal, at about midnight on the Thursday and was left on the transporter until the following morning. In order to speed things up, the boiler was lit up while still on the transporter before being winched off onto the rails and towed to Ashford. The test run took place on the main line to Folkestone and Dover albeit with an electro-diesel pilot. There were no problems despite the fact that the locomotive had only previously been tested on 75 yards of track at Swindon.

Saturday 8th September 1990, produced another first as 257 Squadron steamed into Folkestone without a diesel pilot looking immaculate. The re-naming ceremony was carried out by Air Commodore Peter Brothers, a former 257 Squadron Flight Commander. The event was also attended by a number of other former Battle of Britain pilots for whom, no doubt, the highlight was the flying display as a lone Spitfire made a number of passes over the station. Later that afternoon, 257 Squadron hauled a short train to Dover and then back to Ashford, completing a memorable and triumphant day. *(Photo copyright - A Wilson):* <https://picasaweb.google.com/116839141471298057728/31Restoration199502#5809954654560059954>

It then moved to work on the Bluebell Railway before arriving on the Swanage Railway where it was used for footplate experience courses as well as regular service trains. In the Summer of 1991 it was loaned to the North Yorkshire Moors Railway followed by the East Lancashire Railway where the then Prime Minister, John Major, travelled on the footplate in February 1992. The rest of 1992 was quite hectic as it attended the Severn Valley's Spring Gala; then back to the ELR and on to NYMR before coming back to Swanage in October.

34105 Swanage had been hired for a short term, from the Mid-Hants Railway, and hauled some normal service trains over a weekend. On the day before (Friday 19th March 1993) 257 Squadron was involved with Swanage which had been hired for a day's photographic charter. A series of double headed special trains, organised with Sentimental Journeys, had been titled 'The Double-Whammy-Spammy'. The last train of the day involved 34105 and Class M7 30053.

During January 2003 257 Squadron was withdrawn from passenger service, after 12 years and 4 months in traffic, with serious firebox problems. No other preserved loco has operated for so long in one continuous spell. A suitable tribute to the team, paid and volunteers, who restored it from scrapyard condition.

After several years in open storage 257 Squadron was moved into Herston works, awaiting its turn for overhaul. With the completion of Sir Keith Park in 2012 work on 257 Squadron began in earnest. By mid 2016, work was well advanced but there had been very long delays on the boiler work undertaken by Adam Dalglish Engineering Ltd at Stockton.

The boiler was returned to the frames in November 2016 and the last of the air-smoothed casing was fitted back on the engine in April 2017. This allowed painting to commence and left only final detail jobs such as the cab windows and lighting conduit to be completed.

It was planned to have the locomotive back in service in order to participate in a re-dedication ceremony, at the end of September 2017, but this had to be delayed as further hydraulic tests were required. A fire was lit in 34072, during November 2017, and pressure

brought up to about 120psi as part of the first steam testing of the locomotive. After final commissioning work was undertaken the locomotive underwent load tests in August 2018 before returning to traffic in the following month.

The locomotive was taken out of service in April 2021 for repairs to its bogie in which some rivets had become loose. Unfortunately at the same time a serious steam leak had been discovered and, after much investigation, it was found that the internal steam pipe running the length of the boiler, between the regulator and the superheater header, had fractured. To remove the original and replace with the new pipe required the removal of the superheater header and therefore all of the elements. Because of the weight and difficulty of removing the superheater header in Herston, owing to the limited facilities, it was planned to send the locomotive to Tyseley for the repair.

Fortunately as the pipe is only welded externally to the tubeplate it was not necessary to remove all the flues and tubes which would have cost nearly £40,000. Unfortunately, though, the pipe took six months to be delivered. In the ensuing time the team in Herston decided to tackle the job themselves saving many more thousands in transport costs and Tyseley labour. The job involved removing the top of the smokebox, then the elements and finally the header. Following delivery in late October the pipe was fitted and the hydraulic test, which followed shortly after, was successful.

During the months of waiting the team removed and refurbished the valve gear, fitted new piston rings, overhauled the injectors and delivery pipes, completed the overhaul of the bogie, and various smaller jobs.

34072 257 *Squadron* was transferred to the Railway on the 30th November and re-entered traffic on the 4th December 2021. 34072 then visited the Great Central Railway for their Winter Steam Gala in January 2022.

During late 2022, after lengthy discussions, it was announced that 34072 257 *Squadron* was going to be based permanently on the Spa Valley Railway, Tunbridge Wells West, Kent. The loco arrived late on 3rd November with staff training/acclimatisation runs occurring soon after. It was scheduled to haul all 119 'Polar Express' special trains during November and December. All 24 days were fully booked which amounted to over 43,000 tickets.

In March 2023, the loco was transferred for a short visit to the Kent & East Sussex Railway and became the heaviest engine to work on this line. It went back to the Spa Valley Railway ready to participate on the Spa Valley's 'Summer Steam Up' on 17/18 June and operated there for two weekends.

However, the locomotive transferred to the East Lancashire Railway soon afterwards. Part of the reason for the move related to covering for the lack of 34092 *City Of Wells* which was undergoing an overhaul. The expected period was from 26th June to 27th September, with a possible extension.

On 26th July 2023, 34072's tender derailed whilst at Rawtenstall on the East Lancs Railway and, from 3rd August, it ran with the high-sided tender from 34092 *City of Wells* whilst the cause of the problem was investigated. 34072's tender was found to be blameless.

Prior to leaving the ELR, 34072 had a boiler washout and running maintenance, so that on it's transfer back to the Spa Valley, in the first week of November, it was ready for another season of 'Polar Express' duties.

It is likely that, apart from one or two visits to galas (hopefully including the Swanage Railway), 34072 257 Squadron will remain at Tunbridge Wells in 2024.

LOCOMOTIVE SPECIFICATIONS			
Configuration	4 – 4 - 0	Height	13 ft 2¾ ins
Leading Bogie Wheel dia.	3 ft 1 ins	Axle Load	15 ¾ tons
Driving Wheel dia.	6 ft 2 ins	Locomotive Weight	86 tons
Trailing Pony Truck Wheel dia.	3 ft 1 ins	Tender Weight	48 tons
Overall Length	54 ft 2 3/8 ins	Coal Capacity	5 tons
Working Boiler pressure	250 psi	Water Capacity	4,500 gallons
Cylinders	Three	Tractive Effort	27,720 lbs ft
Cylinder size (dia. & stroke)	16⅞ ins x 24 ins	BR Power Classification	7P6F
Valve Gear	Walschaerts		

Southern Locomotives Limited site: <https://www.southern-locomotives.co.uk/>

Photo archive site for 34072: <https://picasaweb.google.com/116839141471298057728/1434072257Squadron>

Information compiled by Peter Sykes 21st November 2023