BR ELECTRO-DIESEL CLASS JB E6035
73128 "KENT & EAST SUSSEX RAILWAY"
"50 Years of Heritage 1974 - 2024"

The Southern Railway's expanding third rail electric passenger network (which was started by the London & South Western Railway in 1915) was purely a passenger electric multiple unit (EMU) system until 1941. This was because it was necessary to have gaps in the third rail for level crossings, etc., which effectively prevented the use of electric locomotives on either passenger or freight.

In 1937, Oliver Bulleid, Southern Railway's Chief Mechanical Engineer of the Southern Railway, teamed up with Alfred Raworth, the company's Chief Electrical Engineer. To overcome the problem of gaps in the third rail, three experimental locomotives were built (later becoming British Rail Class 70) which had large flywheels to maintain momentum long enough to avoid stalling in gaps.

Another problem, for freight train operation by electric locomotives, were risks arising from 750 V DC third rail being laid in goods yards. This would be a danger to personnel on the ground and also present some complex issues loading and unloading wagons. The initial solution was installation of simple tramway-type overhead wires carrying 750 V supply in certain yards across Kent and adding a pantograph on locos. This occurred between 1959 and 1961.

British Railways (BR) continued electrification schemes starting with the main lines to the Kent Coast as part of the 1955 Modernisation Plan. In addition to the fleets of new EMUs required, a small fleet of twenty five electric locomotives of 2,552 hp classed type "HA" (BR later named them Class 71). They were built to haul freight, parcels, and the few remaining locomotive-hauled passenger trains in Kent, such as the "Night Ferry" and "Golden Arrow".

Although successful, this system did require considerable extra cost and maintenance. It also limited freight operations with the Class 71 locos to those facilities fitted with the catenary. Something more versatile was needed. Development and advances in both electric locomotive and diesel engine design began in earnest during the early 1960s. This resulted in Southern Region engineers beginning to consider the possibility of a combined electric and diesel locomotive.

Their requirement was an electric loco with a similar power when using the electrified third rail to the already successful Type 3 Birmingham Railway Carriage and Wagon (BRCW) built diesel locos (later Class 33) beginning to enter service on the Southern. This would be supported by adding a diesel engine powerful enough to move reasonable freight loads at slow speed within yards.

The new locomotive design needed retractable third rail pick up shoes. First related to track relaying jobs. Retraction avoided the problem of bridging a gap thus energising a dead section of third rail, and possibly electrocuting track workers who might be in contact with the dead third rail section. Secondly allowing locos under diesel power to move off or on third rail without risking damage to "fixed" third rail pick up shoes.

SR engineers built a prototype batch of six new "electro-diesel" locomotives at Eastleigh

Carriage and Wagon Works during 1961–1962. The new locos had 1,600 hp on electric power plus an English Electric 600 hp diesel engine. These latter engines were similar to those used in the SR's existing diesel electric multiple Unit (DEMU) fleet.

To improve versatility, the locos were designed to work in multiple with most of SR's electric and diesel multiple unit fleets as well as normal carriages and wagons. This meant they were also fitted with buckeye drop-head couplings, Pullman gangway rubbing bars and retractable buffers. The success of these prototype locomotives resulted in British Railways ordering a production batch of 30 locos which was later extended by a further 13.

The contract was awarded to English Electric and they were constructed at their Vulcan Foundry in Newton-le-Willows. This was part of the Bournemouth Line electrification Scheme. The locos were outshopped between 1965 and 1967 and had been designed to the Hastings Line loading gauge. This meant they could be used across the SR network.

Minor technical differences prevented the prototypes (classified type "JA" – later Class 73/0) working in multiple with the production examples (classified type "JB" – later Class 73/1). In all other respects, the new "electro-diesels" proved extremely versatile, to the point where many are still in service after a life of almost 65 years.

73 128 began life as English Electric / Vulcan Foundry with works number E3597 / E367 outshopped from Newton-Le-Willows in June 1966 as BR E6035 in BR (then) standard BR two-tone green livery. It was first allocated to Horsham depot before TOPS renumbering to 73128 in 1st January 1973.

73128 was photographed stabled in the bay at Waterloo station on Friday evening 17th November 1978. It appeared to be coupled to another Class 73 and possibly on standby for weekend engineering works in the area. 73128 was involved in weed killing train duties departing the sidings south of Basingstoke station at 11.32 on 12th May 1982. At the time it was painted in overall BR Blue livery.

73128 was photographed near the area of Merstham on the 16:45 Victoria - Gatwick service on 8th July 1984. Three years later, 73128 was on display at Gravesend station, in a cleaned InterCity livery, during an Edwardian fair on 28th June 1987. 73128 was on somewhat prestigious duties when it hauled the 17:30 Brighton - Victoria Belmond Pullman train on 21st September 1991.

73128 was coupled to 73132 whilst working a special past Tonbridge bound for the Kent Coast on 25th March 1995. They hauled the Pathfinder Tours "The Marsh 'n' Moor" rail tour on the section: London Waterloo - Lewisham - New Beckenham - Swanley - Sevenoaks - Tonbridge - Battle – Hastings.

On 21st September 1991 it was named "*O.V.S. Bulleid C.B.E.*" at Brighton Station by his two sons Messrs Anthony and Michael Bulleid - both retired engineers and architects. This ceremony was part of the 150th birthday celebrations of the Brighton Line. The steam loco style nameplate was complete with a Bulleid light pacific style scroll "*C.M.E. Southern Railway 1937–1949*". It was outshopped in BR Civil Engineering Department's 'Dutch' livery of Grey and Yellow.

This lasted until 1997 when, following the take over of the UK freight and parcel businesses by EWS, the US Wisconsin Central-owned company livery of maroon and gold was soon applied to a number of locomotives of most classes. However, the early repaint

of 73 128 included the branding of EW&S rather than the later standard EWS.

73128 was withdrawn in February 2002 with fire damage at the Willesden Princess Royal Distribution Centre. It was then withdrawn and sold following which it moved to the Staffordshire's Chasewater Light Railway. It had ten years in preservation including a spell on the Pontypool and Blaenavon Railway before the loco returned to main line use in October 2014 with GBRf being based at their Tonbridge West Yard.

After several years there it moved to the Pontypool and Blaenavon Railway in March 2008. 73128 was then named "Silver Jubilee" in honour of the Welsh railway's 25th Anniversary.

It was bought out of heritage railway preservation by GB Railfreight (GBRf) and, in April 2014, the loco moved by road to the St Leonards Depot where work was undertaken to restore it back to main line condition. It was then repainted into GBRf's standard livery. A test run took place on 26th October to ensure everything was working properly.

73128 has headed the Network Rail test train on several occasions with another Class 73 at the rear of the consist. 73128 "OVS Bulleid CBE Southern Railway" & 73107 "Tracy" coupled together hauled the London Victoria - Paignton charter service on 16th July 2016. It was a UK Railtours trip "*The Herd of Wildebeeste*" which had 73962 "*Dick Mabbutt*" & 73963 "*Janice*" at the rear.

On 22nd February 2019, five GBRF Class 73's travelled on route from St Leonards Engineering after undergoing maintenance. They were going to their base at Tonbridge West Yard being led by 73128 under diesel power. The other four were 73962 "*Dick Mabbut*", 73964 "*Jeanette*", 73965 and 73201 "*Broadlands*". On 30th March 2019, UK Railtours "*Ye Olde Black Friar*" had 73128 hauling LU's 4TC unit with 73109 at the other end. This train visited various branches such as Hayes, Angerstein Wharf and Tattenham Corner.

73128 and 73119 "*Borough of Eastleigh*" worked the 11:15 Tonbridge West Yard - Tonbridge West Yard circular trip on 7th May 2019. The load was 18 empty aggregate wagons which took in the Lee Spur, Dartford, Medway Towns, Faversham, Canterbury, Dover and Ashford on a driver training trip.

73128 ran from Southampton Central to Eastleigh East Yard, via Weymouth, and was photographed as it approached Hamworthy station on 1st September 2021. It was working light engine for MPV crew training on the route out of their base at Eastleigh.

More recently, on the eve of the Kent & East Sussex Railway (K&ESR) 50th Anniversary Gala weekend, GBRf renamed class 73 locomotive 73128 "*Kent & East Sussex Railway: 50 Years of Heritage 1974 –2024*". This was in honour of the railway's 50th Anniversary and the start of work to extend the line to Robertsbridge.

The Class 73/1 Electro-Diesel locomotive was revealed in a revised NSE livery having been repainted at Eastleigh during April and May 2024. It was developed in collaboration with GBRf and railway heritage experts. This was designed to replicate a sister locomotive 73 126 which had been named '*Kent & East Sussex Railway*' back in 1991. This was to celebrate the extension of the heritage railway to Northiam as well as the intention to one day reconnect to Robertsbridge and the national rail network.

The naming ceremony was performed by John Smith, Chief Executive Officer of GBRf. Alongside him were the former Minister of State for Rail Huw Merriman, members of the

K&ESR Board, three former directors of Network South East – Chris Green, Geoff Mee and Alan C Baker – who were involved in the original naming in 1991, and Steve White, the current Director of Southeastern which have been collaborating with RVR and K&ESR for the Gala.

LEADING DIMENSIONS			
Wheel arrangement	Bo-Bo	Weight in working order	75 tons
Maximum service speed	90 mph	Length over buffers	53 ft 8 ins
Power Rating: Electric	1,600 hp	Width over footsteps	8 ft 8 ins
Power Rating: Diesel	600 hp	Overall Height	12 ft 5 7/16 ins
Tractive effort (nominal max.)	42,000 lb	Bogie pivot centres	32 ft 0 ins
Tractive effort (1 hr Full Field)	18,600 lb	Bogie wheelbase	8 ft 9 ins

ACKNOWLEDGEMENTS

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