

# **BR CLASS 121**

## **DRIVING MOTOR BRAKE SECOND 55028**

Driving Motor Brake Second (DMBS) 55028 was outshopped in 1960 by Pressed Steel Co Ltd at Linwood in Scotland. British Railways (BR) Western Region ordered a batch of sixteen single cars (numbered 55020–55035 ) under Lot number 30518 to design diagram 512. At some stage, Class 121 DMU vehicles gained the nickname "Bubble Cars" by some enthusiasts.

The units took over services originally monopolised by GWR built railcars but as more and more cross country and branch lines closed that work became less and less. Consequently, the class was concentrated around the Reading, Bristol, Cardiff and Plymouth areas. They were used on the West London branch lines, the Severn Beach branch, lines in the Welsh valleys and the Cornish branch lines.

DMBS were a double-ended single-car diesel multiple unit fitted for 65 passengers in two saloons with 2+3 high density seating. They had a top speed of 70 mph, slam-doors at every seating bay and vacuum brakes. The body was 64 ft long They had a four-character head code box in the roof dome, with the destination blind inside the top of the centre cab window.

The destination indicator was at the inside top of the centre cab window, and was enclosed in a wooden box. The standard DMU British United Traction power train was fitted involving two (AEC type) 150hp engines each coupled to an R14 epicyclic gearbox with an F239 final drive. They used the 'Blue Square' control system so that other DMU's could be coupled and driven in synchronisation.

On the Number Two (van) end were both exhaust pipes which bent outwards, around the route-indicator, becoming known by some as 'antler' style exhausts. Two marker lights were fitted to the lower cab fronts, two horizontal handrails were fitted below the two outer cab windscreens with two vertical ones (one either side of the centre cab windscreen). Oval buffers were fitted from new.

All 16 Class 121 vehicles were introduced in 1960 equipped with Western Region (WR) Automatic Train Control (ATC). They were designed primarily for use on WR's lightly used branch lines in Cornwall, various Thames Valley branch lines, the Bridport branch line (which closed on Monday 5<sup>th</sup> May 1975), and Bristol's Severn Beach line.

During December 1960, 55028 came down from Scotland to be based at Southall depot. In April 1968 it was transferred to Reading with a further re-shuffling in May 1969 going to Plymouth Laira and the following month going to Bristol Bath Road depot. In August 1970 it came back to Reading for some years.

In the period ended 12<sup>th</sup> August 1972, the BR standard Automatic Warning System (AWS) was added alongside the WR ATC system. During September 1974, both AEC engines were replaced by Leyland 680 type which were also 150 hp rated. By July 1975, the WR ATC equipment was removed leaving the BR AWS.

By 1978, despite closures and a downturn in passenger traffic, all Class 121 units were still

allocated to Western Region depots. In addition to their designed solo service they could be seen frequently substituting for failed power cars in other sets, mainly suburban Class 117's. 55028 entered Swindon Works some time during 1980 to be thoroughly refurbished being outshopped in BR Blue/Pearl Grey livery.

On 22<sup>nd</sup> June 1985, 55028 was coupled to Unit L420 (Class 117 vehicles 51358, 59510 & 51400) on the Branch Line Society's "Cotswold Lion" rail tour. This was an over 12 hour trip from Paddington visiting such exotic locations including Appleford GLC Waste Terminal, Long Marston Central Park MOD Exchange Sidings, MEB Oil Sidings and Wiggin Alloys Siding (both near Hereford), Glascoed ROF and Llanwern Exchange Sidings then back to Paddington.

Apparently, all passengers riding in 55028 were due to disembark at Colwall to ride through Ledbury tunnel in the Class 117 - due to Class 121's being banned from carrying passengers through it. The schedule had the train stopping at Ledbury station, at the other end of the tunnel, so 121 passengers could regain their seats. It seems the train passed through Colwall station, however, but stopped at Ledbury!

June 1987 saw 55028 was transferred to Old Oak Common for it's remaining revenue earning service. It was listed as set number L128 in Sector NWRX (Great Western suburban services) and, at some stage, it was repainted into Network South East livery.

Subsequently, it was withdrawn and transferred to Departmental Service on Thursday 2<sup>nd</sup> September 1993. It became a combined Sandite dispenser and Route Learner with 55028 ending its career on the national network as route learning vehicle for South West Trains after further modification in 2005. On Wednesday 11<sup>th</sup> May 2005 it was named "John Cameron" at a ceremony on Salisbury station. It was allocated the Departmental number ADB 977860 and carried Set number 960012 until early 2009.

In March 2009 the vehicle was purchased in a fully operational condition, by a member of the railway, for use on the Swanage Railway. 55028 arrived under its own power via the railway's mainline connection on Saturday 21st March 2009. Subsequently the member donated it to the railway.

55028 briefly entered service during the line's "Railway at Work" weekend. Soon afterwards the vehicle was moved to Rampart Engineering in Derby for extensive conversion work, back to a passenger vehicle, as many internal modifications had been made whilst a departmental vehicle. 55028 was also fully overhauled and repainted from South West Trains livery, into original BR Green, returning to the Swanage Railway in July 2009.

Some modifications during the vehicle's departmental years have not been removed including the electric windscreen wipers. Several passenger doors have also not been reinstated for cost/operational reasons. The original 4-character head code located in the roof dome remains plated over and, internally, luggage racks have not been replaced. 55028 joined the operational DMU fleet proving a useful vehicle, was used regularly both on its own and substituting for failed power cars in the line's Class 108 and 117 sets.

In September 2014, 55028 was withdrawn from service and sent to Eastleigh Works for overhaul and mainline registration. It was towed with various Class 117 vehicles, by D6515 *Lt Jenny Lewis RN*, to Arlington Fleet Services at Eastleigh. The overhaul work, particularly those to mainline specifications, took far longer than originally hoped for or planned. 55028's underframes were suffering from corrosion which needed corrective work. All the

vehicles involved in Project Wareham were the subject of several setbacks concerning mechanical components such as freewheel units and wheel sets. Combined, these issues led to 55028 being inside Eastleigh works for several years. Another major project was the installation of full Central Door Locking to comply with modern railway requirements.

By November 2016 the vehicle had progressed to the stage where bodywork and painting was required. Moved into the excellent paint shop facility at Eastleigh, 55028 was transformed rapidly, emerging in January 2017 in primer when it was returned to the main works for further fitting out. The following month overhauled engines were fitted to 55028 and, in April, it was returned to the paint shop to receive its final topcoats in BR Green and half Yellow ends.

By late 2017, 55028 was back inside the main workshops at Eastleigh with mechanical overhaul work to the bogies progressing. Overhauled bogies, with new wheel sets, were fitted in November 2017. Problems with registration for mainline running, particularly concerning wheel sets, led to huge delays with the project to return 55028 (and the 3 car Class 117) to service.

It was on Wednesday 24<sup>th</sup> July 2019, almost five years since being sent to Eastleigh for overhaul, that 55028 finally returned to its home metals at Swanage hauled by D6515. 55028 first operated driver training services as it was not needed to return to passenger service for the 2021 operating season, due to the COVID-19 situation.

In due course, it formed part of the DMU fleet used to run stage 2 trial services to and from Wareham mainline station in 2023. These were, once again, operated under the West Coast Railway Company's Safety Case and Train Operating Company licence using their Drivers and Guards. The Swanage Railway used specially trained staff to 'conduct' WCRC crews as well as drive/guard the trains between Swanage and Norden.

At other times 55028 has been used for Directors' specials, to inspect the line from time-to-time, as well as provide low season services should steam be unavailable for some reason.

Once BR Mk I TSO 4416 has left Swanage Goods Shed at the end of 2025, after it's refurbishment, 55028 is scheduled to take it's place for bodywork refurbishment and repainting. It should then be followed, in turn, by the three vehicles comprising the Class 117 DMU.

Information compiled by Peter Sykes 19<sup>th</sup> February 2024  
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