

BR MkI SECOND OPEN No. 4004 converted to 4TC DRIVING TRAILER SECOND OPEN No. S76298

Most details from: <https://www.bloodandcustard.com/bournemouth1966.html#PushPull>

SO Coach No. 4004

This was constructed by British Railways, as part of Lot No. 30149, which was ordered on 17th March 1954. A total of 100 SOs (numbered 3998 – 4097) were constructed at BR Carriage & Wagon Works at Swindon on underframes supplied by Ashford Carriage & Wagon Works. The 64 seater Second Open was built to Diagram No. 93, which other Regions classified as TSOs, and would have been delivered during May 1956.

It was delivered originally to Southern Region to be added to the 'loose' pool and not placed in a specific Set. The two vacuum braked BR 1 bogies allowed the vehicle to travel at up to 90 mph. The coach was fitted with steam heating equipment and outshopped in BR (S) Passenger Green livery.

DTSO S76298

In June 1965 it was scheduled for conversion as part of the Bournemouth Electrification project and arrived at York Carriage & Wagon Works in April 1966 still in Green. Refurbishment, as part of Lot No. 30754 to Design Diagram 900, took only a few months with 76298 being outshopped from York on 22nd September 1966 allocated to Unit 415.

It came out painted in the (then) current all over blue livery, with a matt paint finish. Cab ends were also blue with small yellow warning panels on the gangway doors and white unit numbers. This paint scheme did not wear well, however, and within three years all units had been repainted into BR's Blue /Pearl Grey scheme with full yellow ends and Unit 415 itself was outshopped on 25th June 1970.

Apart from internal layout alterations, all vehicles had their internal finishes updated with grey and blue coloured laminate panelling replacing wood, improved levels of lighting (though still provided by incandescent bulbs). The revised seating moquette was in a new blue /green check pattern which became known as 'Bournemouth Blue' and was subsequently used in other types of SR units.

Mechanically, all TC trailer vehicles had their vacuum braking and steam heating removed and were remounted on new B5(S) bogies and fitted with air and Electro-Pneumatic braking. These B5(S) bogies were a heavy duty version of the B4 bogie used extensively under loco-hauled stock elsewhere on BR.

Each pair of 36" wheels was braked by clasp-type brake rigging operated by a single 8 inch brake cylinder with integral slack adjuster. All bogies were fitted with trunnions for attachment of pull rods for handbrake operation, though these were only used on bogies beneath driving cabs, the handbrake applying on the innermost pair of wheels.

Heating was converted to the SR 750-volt multiple unit arrangement. The saloons had one 500w (at 675v) heater below each seat, which equated to 16kw for the whole saloon, controlled by thermostats to keep the temperature between 65°C and 70°C. Control circuits worked at voltages between 45 - 110v to allow operation at 70v with other multiple-unit stock or 110v with locomotives.

Gangway connections were rebuilt and improved with new fibreglass doors (manufactured at Eastleigh) fitted during conversion. Vehicles were already fitted with the drop head type of buckeye couplers at each end with retractable side buffers. Where this coach would couple to another within the Unit the side buffers were removed and the buckeye replaced by a fixed head version. The previous arrangement was retained on the cab ends of TC driving trailers.

Single glazed windows were retained throughout all vehicles but the later style of glazing unit, with gasket rather than mastic mounted glass, had an external aluminium frame with sliding vents.

Unit 415 was renumbered to 8015 during October 1986 and on 2nd September 1988 it was repainted into the latter version of Network South East livery which used a darker Blue with curved upsweeps.

DTS vehicles were extensively rebuilt at the former toilet end with both the former toilet compartments stripped out and a completely new cab end fitted. A standard cab interior was fitted with driver's controls being similar to the '1963 stock' design although they were equipped with an 'engine start' button instead of an 'auxiliary button'.

The entrance vestibule immediately inboard of the former toilet area became the cab entrance vestibule, and inwards opening doors replaced the original outward opening ones. Standard cab-side sliding ventilators replaced the toilet windows. A doorway was cut each side of the first seating bay, with $\frac{1}{4}$ light windows installed each side of the new doorway. A sliding door divided the cab vestibule from the passenger area.

Unit 8015 was stopped for door lock change during June 1988 and the opportunity was taken to change some of the coaches. It re-entered service until withdrawal on 13th May 1991. On 11th January 1992, 76298 was one of the 4TC coaches purchased by London Transport for use on special trains including 'Steam on the Met'.

76298 was purchased by the Swanage Railway 4TC Group in November 2005 initially being stored at Westfield Storage in Dinton near Salisbury with other 3 cars of 4-TC Unit 413. All four were moved to the Midland Railway Centre at Butterley in February 2008.

In September 2016, the Swanage TC Group decided to gift 76298, and the other ex-London Underground vehicles, to the Swanage Railway Trust charity. It was moved from Midland Railway Centre around May 2019 for storage on Swanage Railway and probable use as a spares donor for other vehicles in the planned TC unit.