# BR MK 1 BRAKE SECOND OPEN (MICRO-BUFFET) 9015

A batch of 77 Brake Second Open coaches were ordered by British Railways in May 1954, in Lot no. 30170. Doncaster Carriage Works built them to design diagram 183 and they were numbered in the range 9200 to 9276. E 9229 was outshopped for traffic use in March 1956.

These vehicles seated 39 passengers in an open saloon configuration, with steam heating, and it's BR1 design bogies were vacuum braked. One toilet was installed adjacent to the end corridor connection. At the opposite end of the coach were sited a Guard's compartment as well as a small caged luggage/parcels area.

During January 1969 E 9229 was re-allocated from Eastern Region to London Midland Region where it was re-numbered M 9229. After a few more years of normal service, a decision was taken in 1981 by BR, to modify some of Lot no. 30170 coaches. M 9229 was re-allocated to Scottish Region to be part of this modification programme.

Two passenger seating bays were removed, reducing capacity to 31 seats, with a counter installed for serving food, and space for a trolley for light refreshments. The toilet and internal wall were removed with the space converted to a steward's prep-room and store complete with a sink.

It is believed that some of these micro buffet conversions were done at Darnall (Sheffield). BSO(T)s were intended originally to provide buffet car facilities on Scottish Far North line trains as well as some services on the West Highland and, until 1987, Inverness - Aberdeen workings without having to provide a full buffet car. The Passenger Train Marshalling Book for 1982/3 states the use of one BSOT, three TSOs and one BFK to Oban and Fort William but it cannot be confirmed how rigid these formations were.

As part of the conversion to BSO(T), air brakes and electric heating were added to make them dual braked/dual heated coaches. When outshopped in February 1981, after conversion, E 9229 became Sc9015 and it continued in service for a further 8 years until final withdrawal in 1988.

It was purchased in 1989 and moved eventually to Swanage where it has been in passenger service almost ever since apart from times of repainting, etc. At some stage the original bar area, which was quite open as BR never stored anything there when not staffed, was adapted at Swanage. One floor-to-ceiling wooden wall was erected and lockable doors were added to allow long lasting items to be stored on board safely when the bar was not in use.

A problem for most heritage railways relates to carriage lighting. Classic Mark 1 coaches have a dynamo, driven by a belt powered off the nearest axle pulley, which charges batteries once movement exceeds around 17 to 18 mph. At main line speeds, carriage dynamos revolve fast enough to work as designed but lower speeds and frequent stops on heritage railways adversely affect carriage batteries as they tend to become discharged and the lamps very dim.

In some respects the equipment could be considered as rather complex. It needs to produce DC of the same polarity despite changes of direction, the battery charging voltage needs to be regulated, and the voltage on the lamps also needs regulating. In an attempt to limit battery discharge, some heritage railways remove half the lamps and/or use lamps of lower power than was originally intended. The lamps are usually 24/25 volt, often 15 or 25 watt, which give a poor light since they are designed for least cost and long life, not efficiency.

A trial was carried out on 9015 to convert it's lighting equipment to a modern 240v low energy arrangement. This required the removal of the entire BR system - dynamo, regulator, original underframe lighting equipment, internal lamps and sockets plus all the old 24v cabling. New wiring (to current 240v standards), an inverter/charger, control relays and contactors, control fuses, input and output MCBs plus an RCB needed to be installed along with carriage-end 240v connectors.

The intention was to ensure stock stabled overnight would be attached to a 240v supply thus charging the batteries at their 24v level. In service, when lighting was required, the Guard would switch on the new system which used the inverter to take 24v from the batteries and supply 240v to the new low energy lighting installed. This was found to be advantageous in that batteries could now supply sufficient power for lighting for many more hours than was possible with the old system.

The new system was devised and developed by the Swanage Railway's former Electrical Engineer Mark Campbell. The system on 9015 was inspected by an HMRI Inspector gaining their official approval in 1996. Since then almost all of the Mark 1 carriage fleet have had their lighting systems changed and updated in a similar manner.

More recently, the luggage/parcels area had it's cage removed and converted for disabled use with seating installed for carers plus extra windows installed.

On Wednesday 25th January 2023 9015 was taken to Arne Road RRI to be taken away by the lorry than had brought BSK 35464 from work at Rampart Engineering based at Barrow Hill Roundhouse Railway Centre near Chesterfield. It arrived back six months later, by road, on Monday 17th July and was put into revenue-earning service a little while later.

Information collated by Peter Sykes 5th September 2021

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