



2005c GCR "Barnum" No.664 at Ruddington (Photo: R. Tilden Smith)

This 3<sup>rd</sup> class Open Tourist Saloon was built at G.C.R.'s 'new' Carriage & Wagon Works, Dukinfield, Manchester, in 1910/11 to the design of John G. Robinson, Chief Mechanical Engineer (CME).

One of 32 built to this basic design within the one year. (3 survive in preservation)

G.C.R. Diagram No. was originally 5G1. This changed in June 1926 to 5C8  
General Drg. 4096-C, Underframe Drg. 3985-C and Bogie Drg. 4077-AC  
LNER code (from 1937c) 5067

Also known as LNER No.5664 and under British Rail - originally E5664E and later DE320540

**Note: GCR-RST will use the GCR number 664 and a build date of 1910 so that we, RST, our members and all other readers, have no confusion.**

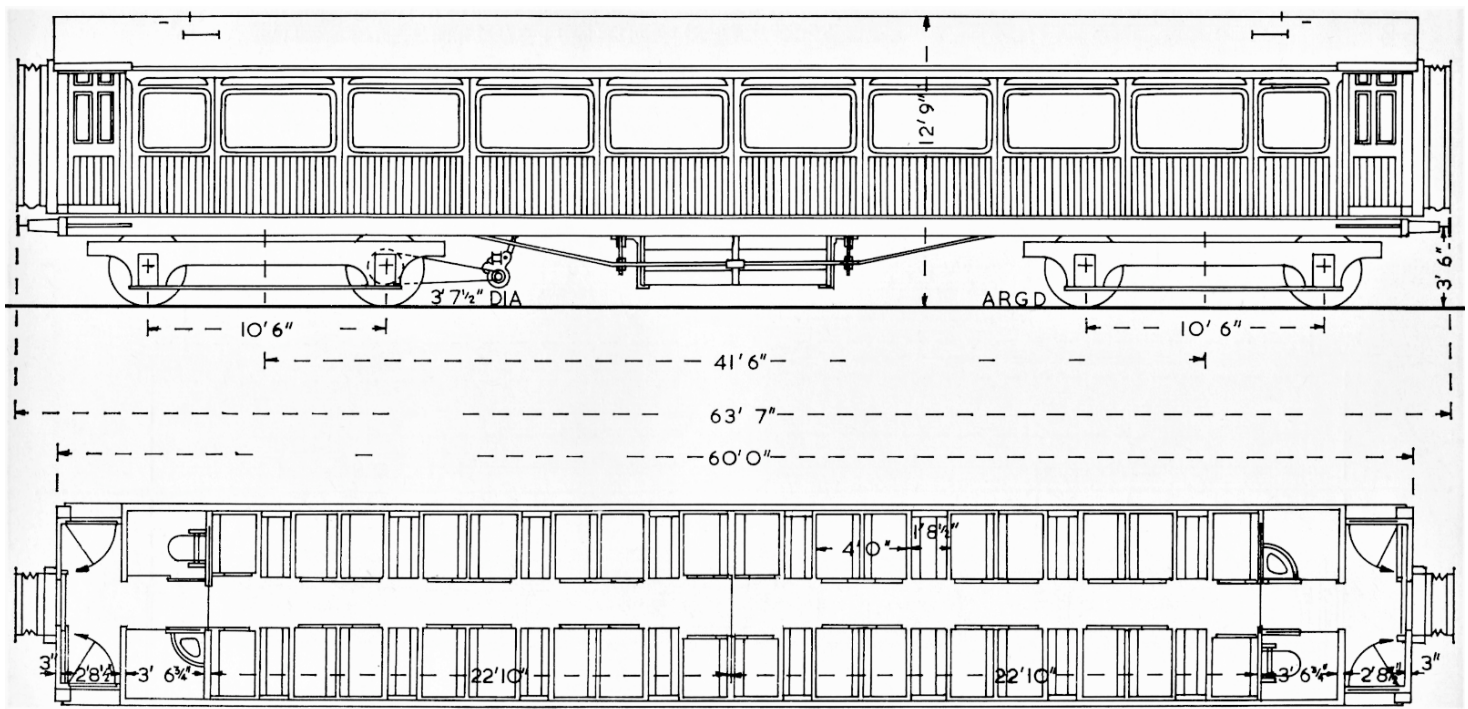
Max Height (over water filler)	12' – 11¾"	Height (rail to roof)	12' – 9"
Width over body	9' – 0"		
Length over body	60' – 0"		
“ over headstock	59' – 11"		
“ over buffers	63' – 7"		
Bogie centers	41' – 6"		
Bogie wheelbase	10' – 6"		
Tare weight	34ton 10cwt 0q		
Seating capacity	64		

The mainline pre-grouping companies mainly favoured the vacuum brake system, but some, the N.E.R. and G.E.R. for example, used the Westinghouse air brake. All the "Barnum" carriages were originally fitted with both types. This meant that other companies' passenger engines could take over a train of "Barnums" from a G.C.R. locomotive and work the train over their lines.

The Westinghouse brake system was removed from very many former G.C.R. carriages c.1930.

At certain times, "Barnums" were also used as dining cars. However, as they did not have matched cooking facilities, they would have to be coupled to a spare kitchen car, all of which would normally have been in regular use in the main line trains.

British standard corridor connections were fitted at both ends of the carriage.



Barnum" Open Tourist Saloon Drawing: George Dow - Great Central V3

The carriage was designed especially for 'General Express and Excursion' traffic and built to take full advantage of the generous gauge of the G.C.R. London Extension, which itself was designed to take continental traffic, via a Channel Tunnel, to the north of England.

Note: The G.C.R. had already built some 60'- 0" saloons but they were not "Barnums".

They gained the nickname "Barnums" because they had similar features to some of the vehicles that conveyed the Barnum and Bailey circus on a tour of this country at the turn of the 20<sup>th</sup> century. This circus train was built by W.R. Renshaw & Co. of Stoke-on-Trent. Apart from loading gauge modifications, they were of the type then used in the United States of America – This accounts for the American features of the G.C.R. design, such as match board sides (which G.C.R. later used on all its coaches), inward opening passenger doors, with full depth grab-rails on the doorways, and open saloons.

A progressive design when built, the structure was very simple, having a steel under-frame on which the teak clad body was mounted.

It rode so smoothly thanks to the extra-long Spencer patent floating bogie principle, for increased passenger comfort. Gresley had an almost similar system for his teak coaches.

No.664 was divided internally into two identical compartments or saloons.

The carriage was accessed at both ends, assisted by a step and two full length brass grab-rails, through a recessed inward opening door into an entrance vestibule, similar to 'Pullman Cars'.

Adjacent each entrance vestibule, there was a toilet one side of the gangway and on the other side a separate wash-room facility, with both hot and cold water available, both having sliding doors. These cubicles had obscured glass windows with the G.C.R. coat of arms engraved into them, visible from the outside of the coach. Facing you, another sliding door gave access to the two open passenger saloons, each containing 32 seats and interconnected by another sliding door in the central partition, a feature that is now common on our modern railway coaching stock – previously, open coaches had only been used as 'Dining Saloons'.

The passengers were seated in groups of four around a large table, and in order not to obstruct their access to and from the seats, the top of each table was made in three pieces and folded over to half the full width.

The carriage had a central corridor, and massive picture windows, four feet nine and a half inches long, (BR standard are four feet). Originally, the two diagonally opposite end windows or 'falling lights' in each saloon could be lowered down half the window depth, a feature which was new to this country but had been in general use on the continent.

The seats and backs were removable - in the summer ones of woven rattan cane were fitted, whilst in winter these were replaced with others covered with upholstery. (Note: For our GCR-RST restoration project these later removed 'falling lights' will not be re-installed, or the rattan summer seating provided).

The saloon interiors were finished in polished mahogany with white ceilings.

The carriages were steam heated, through storage heater units placed under every pair of seats.



Electric lighting was fitted throughout - There was an elaborate set of light fittings comprising, a two-shade suspended fitting at either end and 2 x three-shade suspended fittings in the middle of each saloon, as well as single units in the toilets, washrooms and entrance vestibules.

Each carriage had a dynamo, belt driven via a pulley on one bogie, which charged the batteries when moving above a certain speed, so that lights continued to operate when the train was stationary.

An electric bell push was installed in each saloon to summon an attendant.

### **Under G.C.R. and L.N.E.R.**

At some stage, either under G.C.R. or L.N.E.R., the buffers were modified from round to a far more robust elliptical shape.

Some carriages had ornate grab-rails. It is not known which type were originally fitted to No.664 and if replaced by the straight rail shown, when.

The carriage was modified under L.N.E.R. by fitting sliding 'top lights' above the four corner windows of each saloon to increase ventilation and assumedly the 'falling lights' were removed at this time.

Rain-strips were fitted and destination board holders.

It was renumbered 5664 and the brass lettering and numbering were removed.

Note: As L.N.E.R. used the same livery as the G.C.R., the carriage remained in varnished teak.

### **Under British Rail.**

Some of the "Barnums" received crimson and cream livery under British Rail. This may have included No.664 but cannot be confirmed, as no evidence has been found.

1957 - E5664E was withdrawn from revenue service, selected and altered for departmental work and renumbered to become the Darlington tool van DE320540 (below).

Condemned by BR for disposal at Divisional Maintenance Engineering Depot, York., it was offered for sale at £330 on 29<sup>th</sup> March 1971. Sale reference 52/230/552/165. Described as 2nd class?

Purchased from BR Lot No. FE44V/5067, by F.G.A. Noon, a member of Severn Valley Railway (S.V.R.).

9<sup>th</sup> July 1971 - Offer accepted with completion on 14<sup>th</sup> July 1971.

10<sup>th</sup> August 1971 - Application lodged to house DE320540 (GCR No.664) on the preserved S.V.R. following a meeting on 6<sup>th</sup> August.

10<sup>th</sup> September 1971 - Despatched from York depot to S.V.R., Bewdley, Worcestershire.



1971c - GCR "Barnum" No.664 as DE320540 (Photo: GCR-RST archives)

### **Time at Severn Valley Railway.**

Proposed initial use for No.664 was as a mobile base when work commenced on their southern section.

S.V.R. fitted replacement standard connections, (It is assumed BR removed the originals).

Windows were replaced & L.N.E.R. axle box covers swapped for G.C.R. covers, prior to its sale on 14<sup>th</sup> July 1979 to the Main Line Steam Trust (MLST), based on the southern section of the preserved G.C. line at Loughborough, Leicestershire.



1985c "Barnum" No. 5664 on SVR (Photo: J Quick)

### **The Journey from Bewdley to Quorn**

Following the purchase from Severn Valley Railway, No.664 travelled from Bewdley to its new home on the Great Central Railway between Wednesday 10<sup>th</sup> and Saturday 13<sup>th</sup> October 1979.

Road transport throughout proved to be cheaper than rail haulage to Loughborough Midland, followed by a road haul to Quorn.

Use of a trailer dispensed with the need to hire lifting cranes at both ends.

As neither Bridgnorth nor Bewdley had the space necessary for the loading operation, British Rail's goods depot at Kidderminster was chosen as the nearest suitable site.

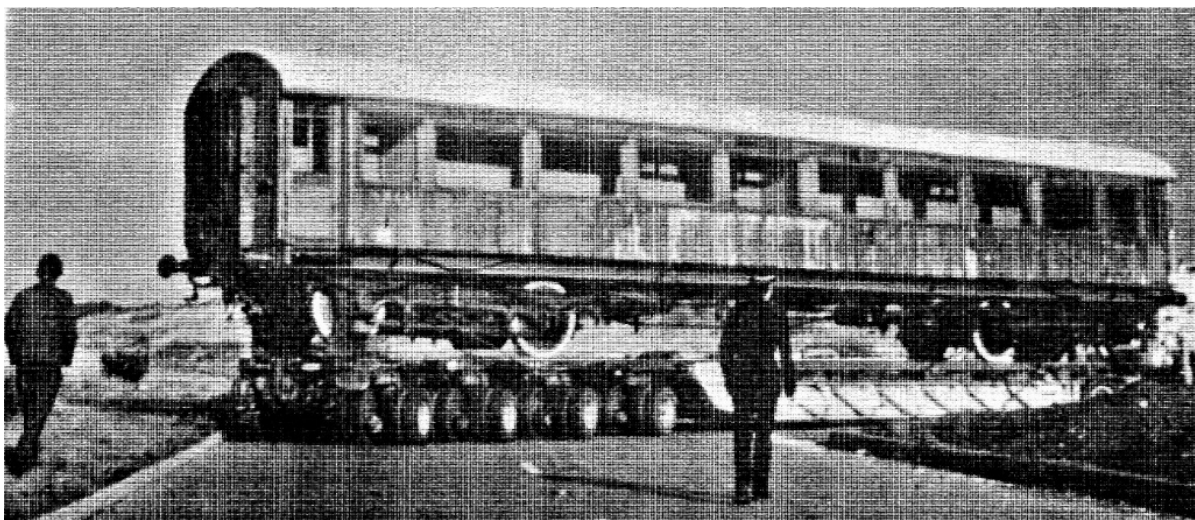
No.664 started its journey on Wednesday, suitably steam propelled by ex GWR 2-6-2 No.4566 as far as the Foley Park 'frontier', where a BR 08 class diesel shunter took over for the short run to Kidderminster.

Loading on to the road vehicle took most of the remaining day.

So, the long haul was postponed until the following day, Thursday.

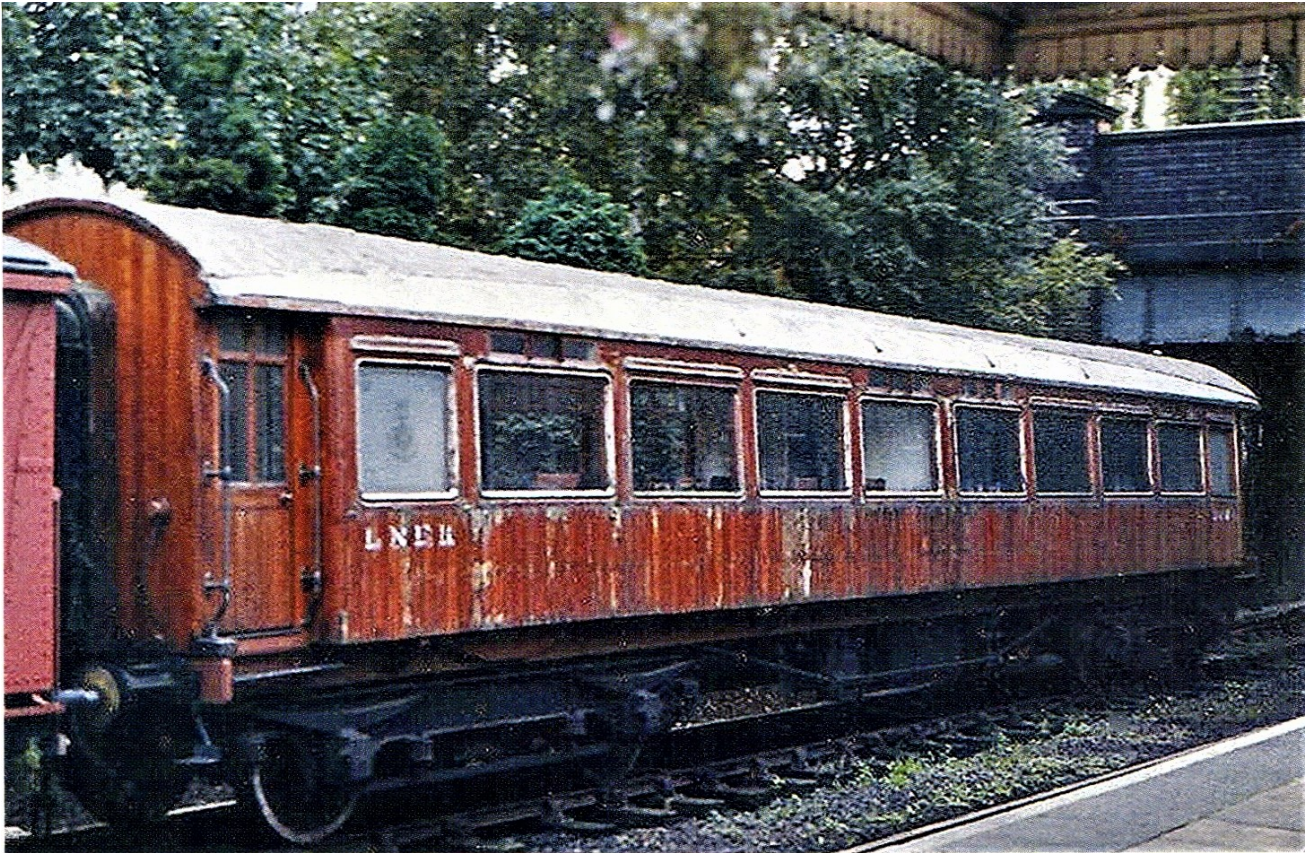
Once on the move, the low loader travelled at a remarkable 40 mph on the level stretches and the journey would have been quick, had it not been for the lengthy sojourns awaiting its police escorts.

The transporter crew unloaded the coach at Quorn on Friday morning, and it was towed down to Loughborough, it's new home, by Class B1 No.61306, (LNER No.1306), steam locomotive "Mayflower" on the Saturday.



The transporter carrying "Barnum" No.664 enroute from Kidderminster to Quorn negotiates a roundabout to join the A5 at Gailey, Staffordshire (Photo: JGT)



**GCR Southern Section at Loughborough, Leicestershire.**

1999c "Barnum" No.664 as LNER No.5664 at Loughborough (Photo: H Llewellyn).

The winter weather of 1979/80 did little to assist efforts to paint the southern end saloon interior russet and cream in readiness for its display to the public, alongside GCR 11F No.506 "Butler Henderson", at the Easter event at Quorn. The northern end was thus available for ongoing restoration work i.e. the stripping down of the woodwork to its original mahogany, plus replacement of damaged panels and reinstatement of the washroom and toilet partitions. This allowed the other half to continue in revenue earning service. The installation of permanent seating and tables being left until both saloons were presentable in mahogany.

The restoration of vintage GCR coaching stock was a new venture for the existing preservation group, Rothley Vehicle Preservation, (RVP), requiring new volunteers and skills. In fact, these did not materialise.

1983 Connections replaced (again?) by ones from an ex LMS sleeper – reason unknown.

1983 'Wolverhampton' lighting system fitted.

False saloon floor fitted to open interior.

Permanent fixed seating was never installed and due, amongst other reasons to financial constraints and the lack of suitable labour, no further restoration work was undertaken thereafter.

It was thus only used on special occasions and as a moving board room.

After its annual inspection by John Robinson GCR Plc Carriage & Wagon Manager on 29<sup>th</sup> Aug 1997, it was restricted to non-passenger use/static display due to safety considerations.

Reasons given - Condition of bogies, underframe and body securing bolts, generally due to its 87 years of age. Thus it remained, until agreement was reached in 1999 to sell No.664 to Richard Tilden Smith for relocation at Ruddington, on the Northern preserved section of the GCR.

**A new home at the Nottingham Transport Heritage Centre, Ruddington. Nottinghamshire.**

9<sup>th</sup> October 1999 - No.664 is purchased from the Main Line Steam Trust (MLST) by Richard Tilden Smith for £2500, with the bulk of the transportation cost met by the Ruddington management team and transported to the Heritage Centre.

A restoration project team was formed under Director Peter Wilson and Manager Arthur Barber, courtesy of the site management.

1<sup>st</sup> January 2000 - No.664 was donated to GCR-RST by owner R. Tilden Smith

18<sup>th</sup> January 2000 - A separate group was officially formed, as a 'Private Company Limited by guarantee', transformed on 28<sup>th</sup> August 2000 into a stand-alone Charitable Trust, and named 'GCR Rolling Stock Trust' (GCR-RST) to specifically rescue, research, manage and eventually restore to operational condition, the rare or unique vintage GCR stock on site, under Chairman Richard Tilden Smith.



9<sup>th</sup> September 2000 - Outstanding issues of former ownership and transport costs were clarified and resolved by David Pladgeman, Chairman of MLST.



2011 - "Barnum" No.664 in No.5 Shed at Ruddington (Photo: C. Pennington)

No.664 was stored on site on arrival in the proposed Engine Shed No.5 until late 2012, when it was moved into the yard, then later covered with canvas sheeting for protection against the weather and, to some degree, vandalism.



May 2018 - "Barnum" No.664 under wraps at Ruddington (Photo: C. Pennington).



In the meantime, restoration work has recommenced on sister 3<sup>rd</sup> Class “Barnum” Open Tourist Saloon No.228 which is also housed on site at Ruddington, currently in Engineering Shop No.1 (See separate history). This carriage was initially the GCR-RST workshop, impress stores and records office but was fully cleared during 2018/9 to allow for its restoration to proceed.

As all the “Barnums” were jig built, much of the research and restoration considerations are identical. This fact is being built into all GCR-RST current plans, and where material procurement is enhanced by bulk buying, “Barnums” O.T. Saloon/Brake No.695 and O.T. Saloon No.664 are being included to reduce overall project costs.



The 2001c dream: Lt – Rt GCR “Barnum” No’s 695, 664 and NRM owned 666 form a rake at Ruddington (Photo: R. Tilden Smith)

### **The Future.**

The current “Barnum” plan (Feb 2020), after the No.228 restoration is complete, is to restore the unique “Barnum Brake” No.695.

At the same time secure dedicated GCR-RST covered storage space and workshop facilities must be in place before the restoration work on No.664 can commence, ultimately to form a three carriage “Barnum” rake, hopefully pulled by the new build MS&LR 4-4-0 Class 2 No.567 currently being fabricated and built by the ‘567 Group’ also based at Ruddington.



1891-01 The original MS&LR No.567 at Gorton Works, Manchester. (Photo: courtesy of 567 Group)