

History of GCR "Barnum" No.666 Open Tourist 3rd class Saloon. (Rev8 Apr2020)

Acknowledgements: Author Clyde E. Pennington, Verifier and contributor John Quick.

This 3rd class Open Tourist Saloon was built at G.C.R.'s 'new' Carriage & Wagon Works at 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 Bogie Drg. 4077-AC

LNER code (from 1937c) 5067

Also known as: L.N.E.R. No.5666 and under British Railways - E5666E

Note: GCR-RST will use the GCR number 666 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'-11³/₄", Height (rail to roof) 12'-9"

Width over body 9'-0"

Length over body 60'-0"

Length over headstock 59'-11"

Length over buffers 63'-7"

Bogie centers 41'-6"

Bogie wheelbase 10'-6"

Tare weight 34ton 10cwt 0q

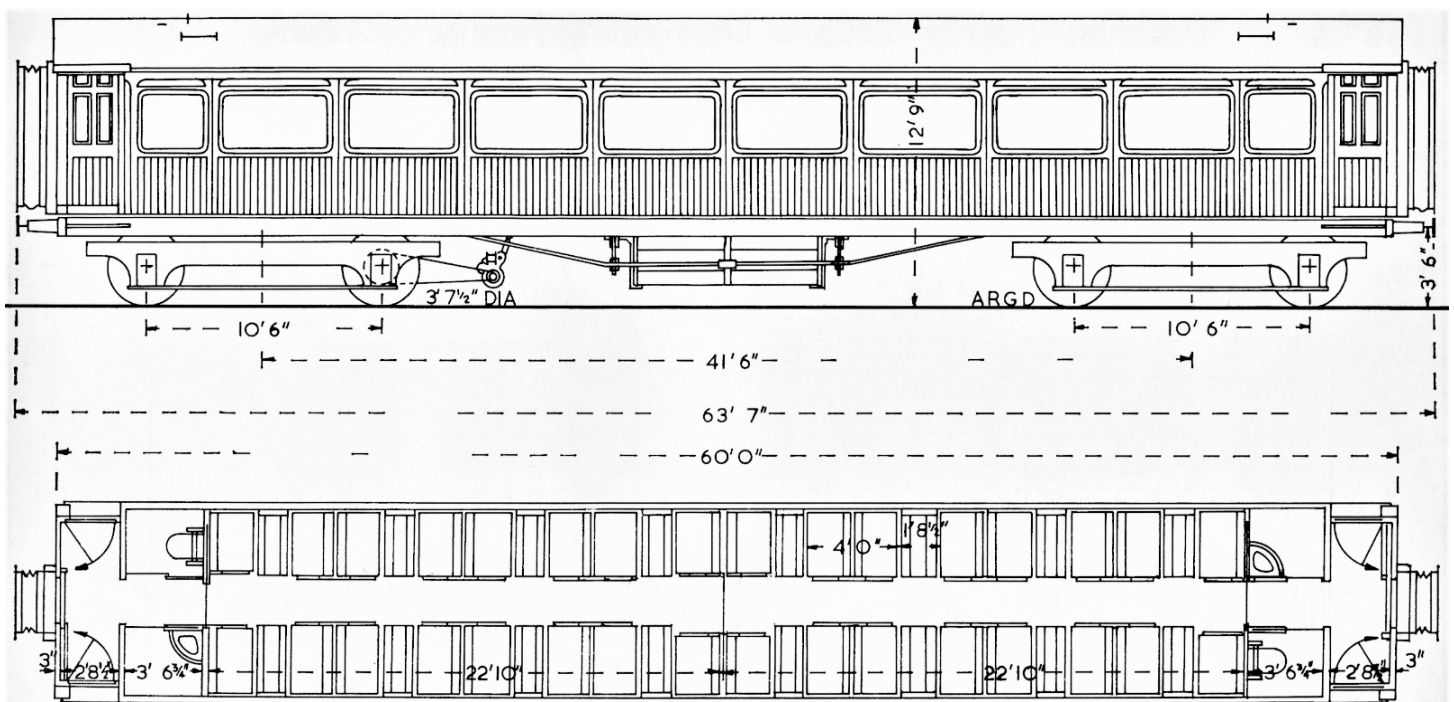
Seating capacity 64

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 Volume 3.

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 20th 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.666 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.



1910 Identical GCR Open Tourist No.153 at Dukinfield, newly built. (Photo: J. Quick).

Under G.C.R.

When new No.666 was allocated to Sheffield on 'General Express and Excursion Duties'.

At some stage, either under G.C.R. or L.N.E.R., the buffers were modified from round, as shown on page 2, to the far more robust elliptical shape shown below.

Note the brass grab-rail shape on the photographs. Some carriages had ornate grab-rails but we have no evidence that these were initially fitted to No.666.

Under L.N.E.R.

Very little is known of No.666's working life. However, these details may be available through N.R.M. records.

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

A rain-strip was fitted and destination board holders. The coach was renumbered 5666 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.



1973c "Barnum" DE320709 (ex GC666) at Doncaster Marshgate acting as a mobile T.O.P.S. (Photo: J. Quick)

On withdrawal from revenue service No.5666 was altered for departmental service, renumbered DE320709 and became a mobile workshop for the Peterborough area.

It was also in use for some time as a Mess Van, before moving to Wrawby Junction, Lincolnshire, a busy railway junction located a short distance west of Barnetby, North Lincolnshire. It controls the confluence of the Network Rail routes from Lincoln, Retford and Scunthorpe towards Immingham and Cleethorpes).

During DE320709's last period of BR work, it was used as a mobile T.O.P.S. office.

The 'Total Operations Processing System' was a computerised system in use until the early 1980's by British Rail. Originally designed to maintain records on freight wagons in real time, this was expanded in the late 1970's to include locomotives.

We believe the carriage was located circa 1973 at Doncaster Marshgate, as shown by the above photograph, and later, re-sited on to an isolated piece of track opposite the signal box at Barnetby Le Wold until withdrawal from BR service.

Dates are unknown, but after being decommissioned by BR in the late 1970s or early 1980s, it was taken under National Railway Museum (NRM) ownership and entered the National Collection.

Preservation years at GCR Loughborough, Leicestershire.



1985c - GCR "Barnum" No.666 at Loughborough (Photo: J Quick).

1983 - No.666 was transferred from the national collection, on an initial 10-year loan agreement, to Great Central Railway (1976) Plc. (changed to Great Central Railway Plc. in 1996), to be based on the southern preserved G.C.R. rail section at Loughborough – its previous location is unknown, possibly it remained at Barnetby Le Wold,

30th March 1983 - Delivered by road to Quorn sidings, near Loughborough, Leicestershire.

1983 to 1999 - No work was done on the carriage due to GCR Plc.'s financial and manpower constraints.

Preservation years at the Nottingham Transport Heritage Centre, Meres Way, Ruddington. Nott'm.



June 2000 - GCR "Barnum" No.666 at the Nottingham Transport Heritage Centre, Ruddington (Photo: R. Tilden Smith).

9th September 1999 - No.666 was moved by road from Quorn sidings on the southern section to the Nottingham Transport Heritage Centre, Ruddington to become a part of the future GCR-RST fleet (on loan from NRM).

A restoration project team had been formed, for the growing vintage GCR carriage fleet on site, under Director Peter Wilson and Manager Arthur Barber, courtesy of the site management.

22nd September 1999 - Custodianship of No.666 was transferred to this newly and purposefully formed team, based on the Ruddington site, under a new loan agreement from 1st Oct 1999 to 30th Sept 2009.

18th January 2000, a separate stand-alone section was created to take over this role, officially formed as a 'Private Company Limited by guarantee', transformed on 28th August 2000 into a stand-alone Charitable Trust, named 'GCR Rolling Stock Trust' (GCR-RST), whose aims were to specifically rescue, research, manage and eventually restore to operational condition, the rare or unique vintage GCR stock on the Ruddington site, under Chairman Richard Tilden Smith.

Note: This agreement was not renewed by NRM in 2009 on expiration and the situation remained so until 2019.



1999/2000 - Lt to Rt: Arthur Barber, Clyde Pennington kneeling & Jim Kent, removing office walls. (Photo: R. Tilden Smith)

Oct 1999 to June 2000 - Work was carried out by GCR(N) and GCR-RST volunteers to strip out the later BR office and storage area structures to expose the original interior and thus, enable a full survey of its internals. BR had used steel nails, causing extensive wood splitting and highly expensive teak board replacement, due primarily to the rust expansion. (GCR & LNER used brass as standard, which does not corrode in this manner).

No original GC internal furniture or equipment remained, except the two in-situ water tank cupboards.

Due to its location on what is now platform one, temporary wire mesh screens were fabricated and fitted over the windows to deter vandals, but these proved ineffectual, as several were broken by ballast missiles launched from the adjacent country park.

The maroon painting on just one side of the Barnum was undertaken as part of a general cosmetic tidy up of the site ordered by the GCR(N) board, prior to the second track being connected up.

December 2012 - The carriage was covered with heavy duty canvass (donated by 'Big Tops' of Nottingham) and remained externally stored in the yard sidings, pending the completion of the proposed secure storage facilities, (No.4 shed).

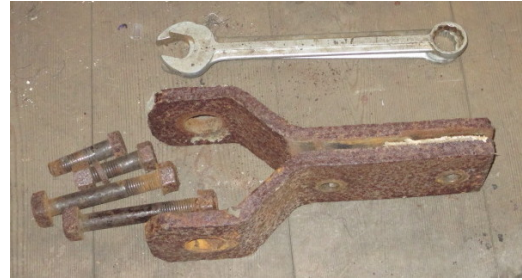
2014? Proposed NRM loan renewal with GCR-RST for a further 10 years. (This was never actioned by NRM)

July 2017 - Full photographic survey both internally and externally of No.666 by NRM staff, assisted by GCR-RST volunteers. The results were shared and have been of great assistance in our research and documentation.

Autumn 2017 - No.666, together with the now fully restored MS&LR 6-wheeler No.946, were strong contenders to form major components within the proposed, lottery aided, first NRM 'new-build – rail dedicated' museum, to be sited at Leicester North station on the southern GC section, near Birstall. (This station had replaced the original London Extension 'Belgrave and Birstall' station.) GCR-RST volunteers and the museum's Head Curator - Roger Shelley were in close contact, passing over our research and ideas, to facilitate its future restoration as part of the museum's education and learning program, with the vision that it would ultimately form part of a 4 carriage 'Excursion Express' train running over 18 miles of GC metals in the 2020s.

Alas, this all was not to be when the National Lottery funding for the museum was suddenly withdrawn in December 2017 and subsequently the proposals had to be abandoned.

(6)



(Photos: A. Coalwood)

March 2019 - No.666's vacuum equipment was carefully removed by the RST team, measured, photographed, partly refurbished, and detail drawings produced, to provide the replication basis for the GCR-RST owned three "Barnums", who's vacuum equipment had been stripped out prior to entering their ownership.

17th May 2019 - Inspection visit by NRM staff - Asbestos was suspected in the concealed remnants of the original internal wiring coverings. Consequently, a 'No Entry' notice was served pending further investigation. This later proved to be un-substantiated and the notice was lifted.

July 2019 - NRM loan renewal agreement and associated conditions were tabled for a new No.666 lease. GCR-RST Trustees advised the NRM that due to the existing serious site constraints, current lack of funding and the continuing unavailability of secure storage facilities, they were unable to meet these proposals.

In partnership with the Ruddington site management team, GCR(N), proceedings were instigated for the removal of "Barnum" No.666 from site by NRM nominated contractors.

November 2019 - All borrowed and externally stored parts were returned to the carriage and it was moved to the site's transfer rail pending return instructions from NRM.



2019-11-21 Barnum No.666 awaiting despatch to pastures anew. (Photo: C. Pennington)

18th December 2019 - Railway Support Services collected "Barnum" No.666, from Ruddington, and transported it, on behalf of the NRM, to Quorn sidings, on the southern section of the preserved GCR. To date, its future home remains unknown.