

History of G.C.R. "Barnum" No. 695 Open Tourist 3rd class Saloon/Brake (Rev11 Apr2020)

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

This 3rd class Open Tourist Saloon/Brake 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 only 6 built to this basic design, all within the one year and the only one to survive into preservation.

G.C.R. Diagram No. 5E1

General drawing 4665-C, Underframe drawing 3985-C, Bogie drawing 4077-AC

LNER code (from 1937c) 5112

Also known as LNER No.5695, British Rail No. E5695E (Early 1950s), DE 320528 (Mess & Tool Van).

Note: GCR-RST will use GCR "Barnum" number 695 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"

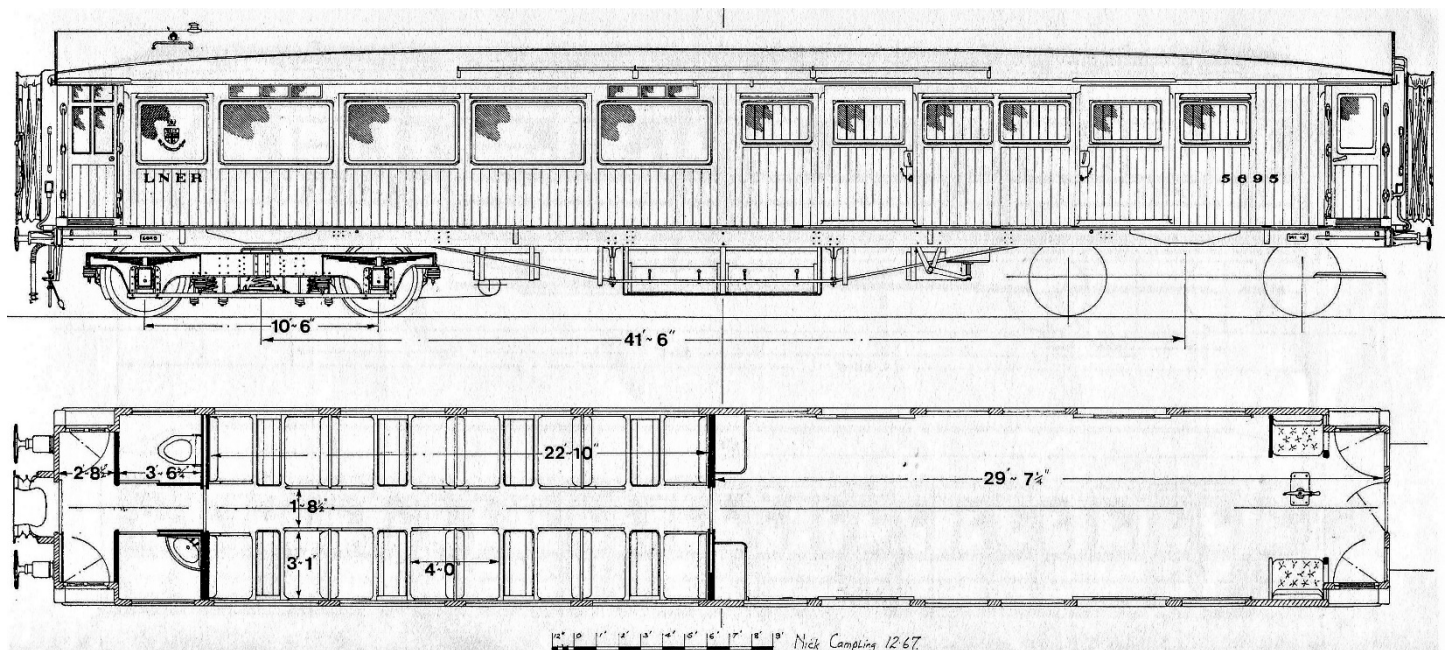
Bogie centers 41' – 6"

Bogie wheelbase 10' – 6"

Tare weight 32ton 18cwt 0q

Seating capacity 32 in a single 22' – 10" long open compartment or saloon.

Guards/luggage compartment 29' – 7¼" long.



Carriage details.

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.

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

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.

They gained the nickname "Barnum" 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 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 handrails 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.695 was divided into two sections, one being the combined luggage and guard's compartment. This area had inward opening 'falling light' foot-access doors, with full length brass grab rails, at the end of the carriage for the guard - to give visual symmetry.

As the carriage was built to the extreme limits of the loading gauge, there were no standard lookouts, but there were two large windows at the rear of the carriage, either side of the corridor connections.

The guard did not have a separate compartment but had a seat either side of the manual brake at the rear of the luggage compartment, which was completely open.

There was a sliding door at the luggage end giving access to the passenger saloon.

For loading luggage four wide sliding doors were fitted, two either side.

The saloon half of the carriage was accessed, 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 the entrance vestibule, there was a toilet to 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 open passenger saloon containing the 32 seats, 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 the access to and from the seats, the top of each table was made in three pieces to fold over to half its full width.

It 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' 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, they were replaced with others covered with upholstery. (NB: For our GCR-RST restoration project these later removed 'falling lights' will not be re-installed or the rattan summer seating provided).

The interior of the saloon was finished in polished mahogany with a white ceiling.

The carriages were steam heated, through storage heaters placed under every pair of seats and also in the luggage - brake section.

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

The luggage/guards compartment had ceiling mounted bulkhead lighting.

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.

No.695, was initially allocated to Sheffield, where it was used all over the Great Central network 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 to a far more robust elliptical shape.

Note also the brass grab handle shape on the photo on page 3, some "Barnums" had ornate grab handles.

It is not known which type were originally fitted to No.695 and if replaced by the straight rail, when.

Under L.N.E.R.

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

A rain-strip was fitted, also destination board holders.

The coach was renumbered 5695 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.



1950c "Barnum" No. E5696E Open Tourist Saloon - Brake (Photo: H.C. Casserley)

Under British Rail (BR).

The carriage entered British Rail service as E5695E.

Another aspect of our railway story is that of re-using life expired coaching stock for conveying men and materials to engineering works on the system. On withdrawal from revenue passenger service on 3rd November 1956, the carriage was selected for further service in departmental work, renumbered DE320528, and converted to a 'Mess and Tool' van for the 'Signalling and Telegraph Engineers' Department, located in Newcastle. For the later years of its life it stood at East Boldon, on the Newcastle to Middlesbrough line, where it was first noticed by a group of members of the Middlesbrough Model Tramway Club.

The carriage was withdrawn by BR in July 1970 and sent to the scrap yard of Arnott Young, in Fighting Cocks, Dinsdale, near Darlington. Chris Davies was instrumental in preventing this unique vehicle from being scrapped, pointing out that negotiations were going on with BR for its purchase.

Because it had been sold to Arnott's, a special dispensation had to be sought from BR for Arnott's to resell it to the prospective owner group "Barnum Coach Trust", formed with an initial membership of seven.

Preservation years on the North Yorkshire Moors Railway (N.Y.M.R.)

No.695 was removed from Arnott Young with the aim of restoring it to its original G.C.R. condition over 2 to 3 years, at a projected budget cost of about £1000, and operating it on the North Yorkshire Moors railway's preserved line.

It arrived at Grosmont station on Wednesday 29th October 1970 and was stabled at Goathland.

When bought from BR, it was found to have most of its running gear but, the newly formed 'Barnum Coach Trust' set about major works of providing the drawings and patterns for the metalwork so crudely torched off.

The interior of the coach had been completely gutted by British Rail. Two stoves had been fitted for heating and a third for cooking. In the luggage compartment, a large bench had been built on one side and on the other side cupboards and tool duckets were fitted. New outward opening double doors were cut into the side.

In the passenger saloon more cupboards were fitted. A new partition was fitted to make a cloakroom.

Two Formica topped tables and fixed benches were added to make a mess room for between 8 and 10 men.

Work was first begun on the brake gear to enable the coach to be easily and safely moved.

A brake column was purchased from a scrapyards to replace the two wagon type brake levers that the vehicle now carried.

At the same time, two vacuum brake cylinders were obtained, so that the vehicle could be fitted with an automatic brake system. It was decided that as no locomotive on the N.Y.M.R. was fitted with an operational Westinghouse brake system, only a dummy air brake cylinder would be fitted.

The exterior of the carriage was then stripped of its service stock black paint, and the three stoves were removed, allowing work to proceed on patching up the holes where the stove pipes penetrated the roof.

The old canvas, destination board holders and rain strips were then removed.

The canvas was replaced with a new piece, but the rain strips and destination board holders were not, as these were fitted by L.N.E.R. The roof was then painted in white lead and made waterproof, all at a cost of £115.

While on N.Y.M.R., major restoration work completed the bottom end and running gear.

After a considerable amount of time and money partly restoring the vehicle, it was resold for a peppercorn sum to a group based on the northern section of the GCR preserved railway, near Nottingham.



1st birthday celebrations on N.Y.M.R. - Members of Barnum Coach Trust 29th Oct. 1971 (Photo: Barnum Coach Trust)

Lt to Rt: Ray Nolan, Mark Lloyd, Malcolm Bateman, Chris Little (kneeling), Gordon Best & son,
Charles Wright, Chris Davies (with glasses) & Charles Berry.

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

No.695 was purchased from N.Y.M.R. 'Barnum Coach Trust' for a nominal £1, plus £350 for stored teak and its accumulated spares, drawings, photographs, etc. It was removed from Pickering and arrived at Ruddington on 18th December 1998 by Allelys Heavy Haulage, specialists in the movement of all types of oversize loads.

The 2 Corridor connections arrived separately on 27th March 1999



A restoration project team was formed under Director Peter Wilson and Manager Arthur Barber, courtesy of the then site management 'Great Central Railway (Nottingham) Limited', now 'East Midlands Railway Trust'. Later, on 16th February 2000, a separate group was formed as a Private Limited Company, transformed on 28th 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.



GCR-RST Trustees c2005 Lt to Rt Rear: Arthur Barber (Manager), Richard Potter, Richard Tilden Smith (Chairman)
Front: Peter Wilson, Gerald Thorpe (Treasurer), John Quick. (Photo: RST Archives)

1st January 2000 - No.695 was donated by Deed to the GCR-RST by its Chairman, Richard Tilden Smith.

The LNER top lights crudely fitted by L.N.E.R. have since been removed, so that the exterior will be to the original GCR style and match the only known 3 surviving "Barnum" Open Saloons, with varnished teak sides, raised brass numerals etc. Two of these, No's 228 and 664, are also owned outright by GCR-RST, and currently based at the Nottingham Heritage Centre. (N.B. The third No.666, formally based at Ruddington on loan from the National Railway Museum, was returned to NRM custodianship on 18th December 2019, due to unacceptable loan renewal terms and conditions, and existing site constraints.)

Initially in the stock yard, No.695 was stored internally in No.5 shed from 2010 to 2015 to keep it, plus a valuable collection of teak and parts, in weather and vandal resistant conditions but has since been moved outside due again to site space constraints, circumstances outside our Trust's control.

Work on this unique vehicle will commence as soon as secure covered space and finances are available.

In the meantime, restoration work has recommenced on the 3rd Class "Barnum" O. T. Saloon No.228 which is housed on site at Ruddington in No.1 shed (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.

Due to the jig-built nature of these carriages, the passenger entrance vestibules, toilets, washrooms and two saloons, will be identical internally and externally to the saloon half of No.695. The bogies are also identical and much of the chassis detail likewise.

Where practical, addition parts are being prepared, or obtained, for use in this follow-on restoration.

Gradually during 2019/2020 the contents of No.695 are being catalogued and unwanted items removed and offered to 3rd parties, or scrapped, to allow a thorough detailed internal survey and a plan of works, costings etc.



Views of interior prior to cataloging stored items and clearance. (Photo: C. Pennington)