



GN07-W002
Contents of this kit

MDF Parts

MDF parts are supplied pre-cut, partially attached to the panel which preserves their integrity and ensures that the right parts are present. Do not separate the parts until it is time to use them.

MDF Components

- 2 x outer sides
- 2 x inner sides
- 2 x outer ends

- 1 x floor
- 2 x inner ends
- 2 x partitions
- 8 x stanchions



Cardboard panel

The card panels supplied contain strapping detail for the MDF components.



3D printed components

- 1 x Roof



- 2 x solebars.



- 4 x clasp brakes



Glazing

- 8 x windows.





Not included

Adhesive to attach the parts. PVA is recommended for the MDF parts.

Craft knife, Clamps, weights or other tools.
Paint and filler.
Wheels, Buffers, couplings etc.

Intended Audience

This kit is intended to reduce the time, complication and labour associated with the construction of a detailed model of a carriage body using accurate pre-cut layers which can be conveniently assembled without specialist knowledge to give the same quality, or better, as traditional methods.

***This is not a complete kit of parts.** The choice of other details is left to the modeller.*

Hints on assembly

Separate parts by cutting the reverse side of the fret.

Pre-assemble and check parts at each stage.

Seal Cardboard components.

Video and Gallery

Separating MDF components cleanly is more easily accomplished by completing the half etched portions on the reverse of the fret rather than cutting from the front.

Please do not separate components from layers until assembly is complete or instructed to do so.

At each stage, once the required components have been separated from the frets, test the assembly without glue to ensure that the parts are trimmed correctly and fit properly before final assembly with adhesive.

Allow as much time as needed for the adhesive to set.

Fill any gaps and smooth surfaces for optimal results

It is advised that cardboard parts are sealed before assembly. For example, artists fixative, spray paint, varnish or even shellac can be used. Good results have been obtained using automobile primer spray. Visit our website for further constructional information including a video and gallery of similar models.

The assembly steps below are strong recommendations but should not be taken as definitive or prescriptive.

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Current Documents

E&OE.

The current version of documentation for this and any other of our products can be downloaded from www.Diagram3D.com in PDF format.

Feedback

We welcome your comments and suggestions, especially images of models "in progress" or completed.



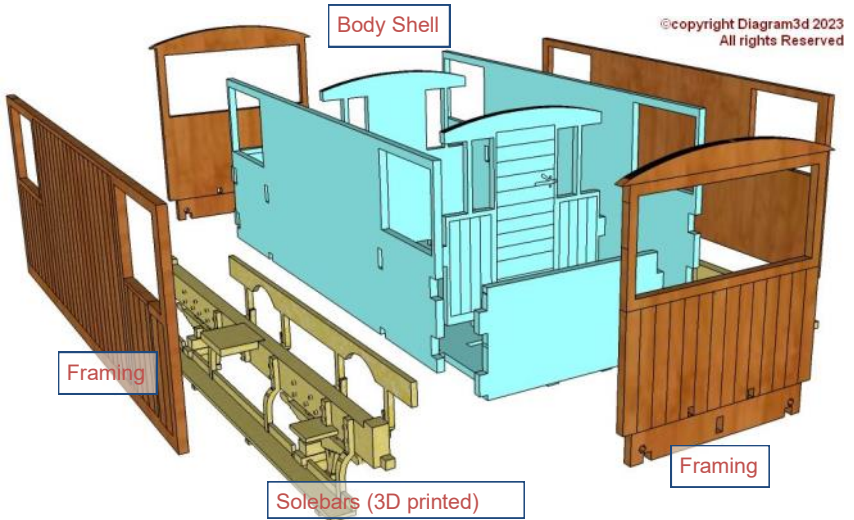
Exploded Diagram

This image shows the relative positioning of the major MDF components.

Body shell.

Solebars.

Framing.



Body Shell

Total preparation and assembly time about 5 minutes

Allow sufficient time for the adhesive to dry thoroughly at each stage of assembly

The body shell consists of the floor, inner sides, partitions and inner ends.

When assembling these parts, ensure that the planking detail is orientated correctly. It faces outwards on the partitions and inwards on the ends and sides.

Firstly attach the partitions to the floor. Then the sides and finally the inner ends. Allow the adhesive to set/

The final result should be square without any further adjustments





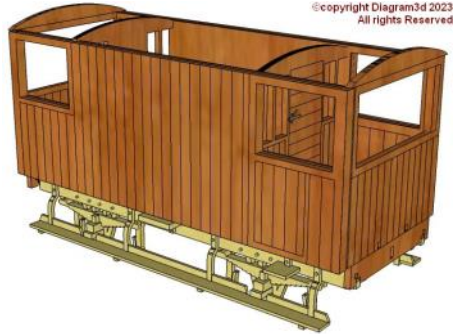
Framing

Total preparation and assembly time about 10 minutes.

Allow sufficient time for the adhesive to dry thoroughly

The outer panels can now be attached, beginning with the ends and then the side panels. The end panels fit into the recess in the body shell.

Note that the solebar slots into the ends as well as the floor. The clasp brake unit is attached behind the solebar beforehand. At this point the solebars can be attached to the floor.



The strapping detail provided is arranged so that it can be easily applied. Note that strapping detail is also etched into the components. (It is recommended that the strapping is painted before it is attached to the vehicle).

Roof

Total preparation and assembly time about 5 minutes.

Allow sufficient time for the adhesive to dry thoroughly

The roof is placed centrally over the assembled body and secured with contact adhesive.



Brakes

3D printed brakes are provided.

These vehicles were equipped with clasp brakes acting on all four wheels. The brakes are attached to the solebars and then the complete assembly slots into the floor. Small lugs engage in the buffer beam.



Historical notes

The GNR had several types of brake van. The brake van type that this model is based on, with vertical planking and plain ends (Diagram 1602N), was a 20 ton van which replaced earlier vans with horizontal side planking (Diagram 4490N). There were several variations of this van. One version had ends with horizontal planking and incorporated end stanchions similar to the vans it replaced. Another van incorporated a guard's lookout or "ducket". This was a slightly different design (Diagram 2690N) which was 19 feet long and had a wheelbase of 10 feet 6 inches. In summary, this brake vans can be modelled in various guises, a photograph of the intended vehicle is recommended.

Type	Diagram	1922	1911	1903	Sample Number
20 ton vertical plank 4 wheels	1602N	346	151	none	
Stanchions at ends	1602N	156	151	none	10830
Plain Ends, (wood frames)	1602N	89	none	none	39887

All these brake vans had clasp brakes on all four wheels as standard when constructed, unlike earlier vans.

Livery

These vans were painted in GN brown with large lettering "G" "N", with variations in style as shown in the images below. LNER livery was similar, the "GN" being replaced by "NE".



Underframe

The principal dimensions of these vans were:

Description	Dimension
Length over body	18 feet 6 inches
Width of body	7 feet 6 inches
Wheelbase	10 feet

Finally...

Congratulations on completing this kit. We hope you enjoyed making it as much as we did. If you enjoyed making this kit then take time to visit www.Diagram3D.com to find similar items.

Our website has

Free downloads of historical information

Downloadable assembly instructions for all of our products

Email: info@Diagram3D.com E&OE document produced April 2023