



GN07-W001
Contents of this kit

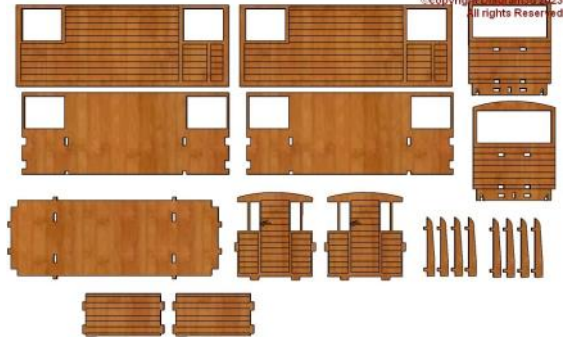
MDF Parts

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.



- 1 x single acting brakes
- 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.

Copyright Statement

The entire contents of this document including but not restricted to the text, images, drawings and components, method of construction, design and intellectual content are the copyrighted property of Diagram3D.

No part of this document or design may be used altered or copied without the express written consent of the design and copyright owners. This document was first published in 2021 CE.

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.



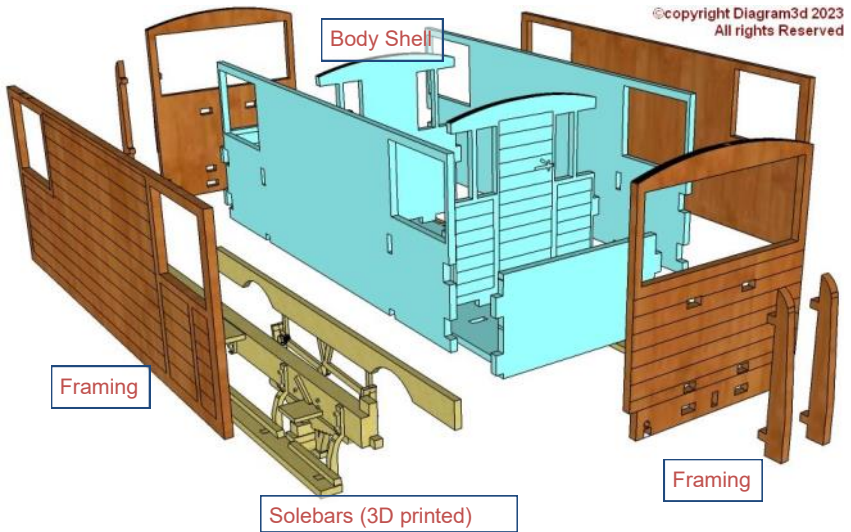
Exploded Diagram

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

Body shell.

Solebars.

Framing.



Body Shell

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.

Total preparation and assembly time about 5 minutes

Firstly attach the partitions to the floor. Then the sides and finally the inner ends. Allow the adhesive to set at each stage of assembly.

The final result should be square without any further adjustments

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





Framing

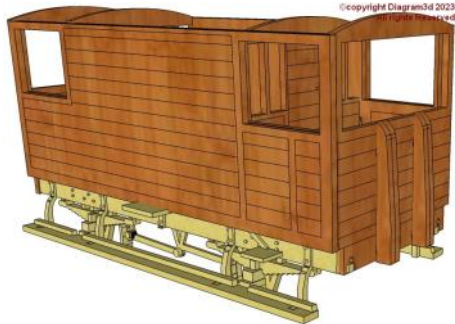
*Total preparation
and assembly time
about 10 minutes.*

*Allow sufficient time
for the adhesive to
dry thoroughly*

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

At this point the solebars can be attached to the floor (contact adhesive recommended). Note that the inner solebar slots into the ends as well as the floor. The brake unit (alternately clasp brakes) is attached behind the solebar.

Attach the stanchions. Each stanchion is assembled from two of the thin stanchions provided.



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).

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

Roof

*Total preparation
and assembly time
about 5 minutes.*

*Allow sufficient time
for the adhesive to
dry thoroughly*



Brakes and axleboxes

3D printed brakes and axleboxes are provided.

Early versions of this vehicle had brakes on one side of the van acting on the inside of the wheels (similar to goods wagons). The brakes were applied from inside the cabin, there was no external lever.

Latterly, these vehicles were equipped with clasp brakes acting on all four wheels.

Note that the earlier van depicted in the "livery" section on the next page has brakes acting on one side of the van and the other van has clasp brakes acting on all wheels with sanding gear.



Historical notes

The GNR had several types of brake van. The brake van type that this model is based on, with horizontal planking, was made in 10 ton, 15 ton and 20 ton versions.

The physical dimensions and wheelbase were similar. One version had six wheels. Some brake vans were adapted for passenger service.

Type of Brake Van	1922	1903	Sample Number
10 Ton ordinary	230	733	13190
10 Ton vacuum fitted	20	none	15452
15 Ton	47	65	21868
20 ton (four wheels)	24	none	21864
20 Ton (six wheels)	76	112	23819

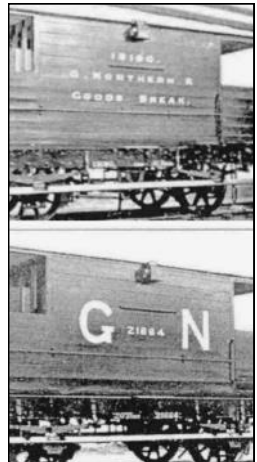
Livery

From existing photographs, one early livery appears to be brown (or teak colour), varnished, with shaded yellow or gold lettering.

The Number, and legend "G. Northern R.", "Goods Break" was arranged on three planks with a plank between the lettering.

At a later stage, the vans acquired the more familiar large lettering "G" "N". (early 10 ton van and later 20 ton van illustrated).

In 1896, Moore's Journal describes GNR livery for goods vehicles as "chocolate brown" with black iron-work. Moore's Journal also states that GN brake vans had vermilion ends.



Underframe

The principal dimensions of these vans, applicable to all variants of this vehicle type were:

Description	Dimension
Length over body	18 feet 6 inches
Width of body	7 feet 6 inches
Wheelbase (four and six wheeled vehicles)	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 August 2022