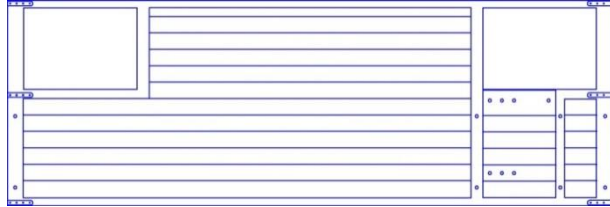




Great Northern Railway (GNR) Brake Van (10, 15 and 20 ton) 7mm scale ("O" Gauge)



Laser cut
MDF and card kit

7mm scale kit suitable for "O" Gauge.

Adhesive, paint not included. Wheels, axleguards, buffers etc. not included.

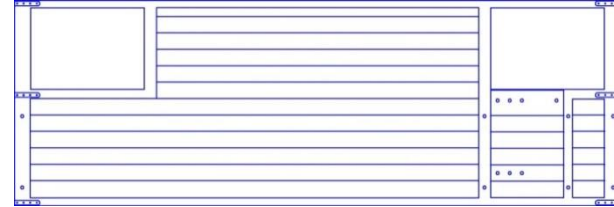
GN07-W001

**GNR Brake Van
(10, 15 and 20 ton)**

Website:
www.Diagram3D.com



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Introduction

Contents of this kit

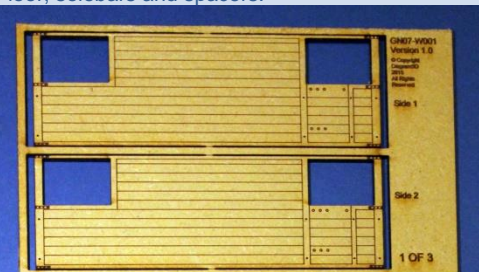
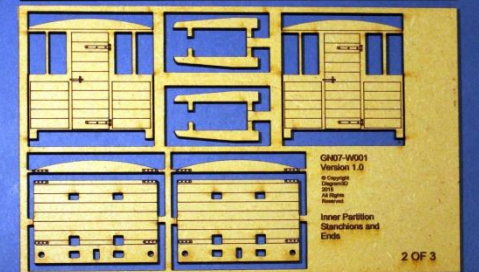
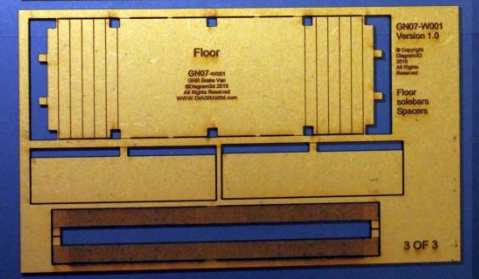
MDF parts

This kit contains:

1. MDF Parts

Note: The supplied parts may differ slightly from the illustrations.

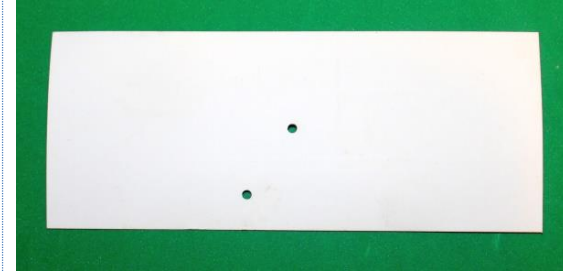
| | Description |
|---------|---------------------------------------|
| Panel 1 | Sides |
| Panel 2 | Ends, Stanchions and inner Partitions |
| Panel 3 | Floor, solebars and spacers. |

| Image | Description |
|---|-------------|
|  | Panel 1 |
|  | Panel 2 |
|  | Panel 3 |

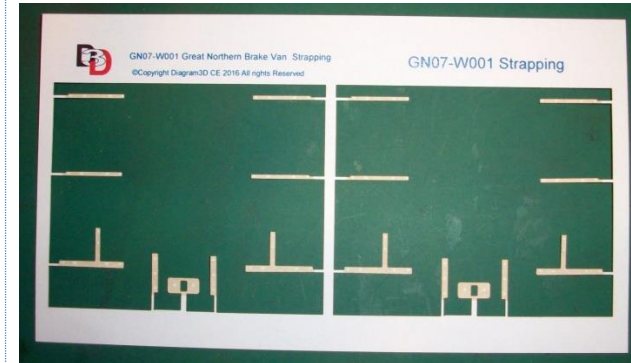
Cardboard Parts

2. Cardboard Parts – Roof

A cardboard roof for this vehicle is supplied as part of the kit.

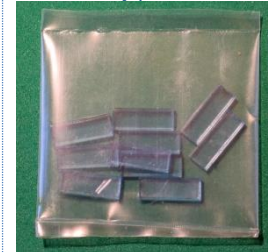


Strapping is included as part of this kit.



Sundry Parts

3. Sundry parts include acrylic glazing for the windows.



Not included

- Adhesive to attach the parts. A contact adhesive or strong PVA glue is recommended for the MDF parts
- Craft knife, Clamps, weights or other tools
- Paint and filler
- Wheels, axleguards bearings, Buffers, couplings etc.






Assembly Instructions

Great Northern Railway Goods Brake Van

7mm scale ("O" Gauge)

| | |
|--|--|
| <p>Intended Audience</p> | <p>This kit is intended to reduce the time, complication and labour associated with the construction of a model of a railway vehicle. It uses MDF parts which have been cut and scribed by laser. This is not a complete kit of parts. The choice of axleguards, wheels, and other fittings is left to the modeller.</p> <p>MDF is a natural material and therefore it is impossible to guarantee that the colour or finish of the parts will be consistent with the illustrations.</p> |
| <p>Hints on assembly</p> <p>Separate parts by cutting the reverse side of the fret.</p> <p>Pre-assemble and check parts at each stage.</p> <p>Seal components.</p> | <p>This is a relatively easy kit to assemble as long as one does not rush the assembly and is aware that MDF sections can warp if over exposed to water.</p> <p>Separating components cleanly is more easily accomplished by completing the half etched portions on the reverse of the fret rather than cutting from the front.</p> <p>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.</p> <p>Allow as much time as needed for the adhesive to set. Fill any gaps and smooth surfaces for optimal results. Paint inner surfaces before assembly. It is strongly advised that cardboard parts are sealed before assembly.</p> <p>These assembly steps are recommendations and should not be taken as definitive.</p> |
| <p>Copyright Statement</p> | <p>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 published in 2016 CE.</p> |
| <p>Gallery</p> | <p>It will be helpful to refer to the Diagram3D gallery at www.diagram3d.com/gallery/ where a series of images of this model being assembled can be found.</p> |
| <p>Floor</p> <p>Total preparation and assembly time about 5 minutes.</p> <p>Allow sufficient time for the adhesive to dry thoroughly</p> | <p>It is convenient to paint the visible section of the floor and partitions before assembly, but this can be done later.</p> <p>Separate the parts described below from the wooden panels.</p> <ul style="list-style-type: none"> • floor from panel 3 • The two spacers from panel 3 • Partition from Panel 2 • Partition from Panel 2 <p>Assemble on a flat surface.</p> <p>The partitions fit facing outwards at each end of the cabin using the location holes provided. The spacers fit between the partitions using the locating holes at the centre edges of the floor.</p> <p>Clamp lightly and ensure that the inner box formed of the spacers, partitions and</p> |

| | |
|---|--|
| <p>Glazing</p> | <p>floor is square. Leave until thoroughly set.,</p> <p>At this stage it is recommended that the partitions and floor are painted and that the window glazing is installed for convenience as it will be more difficult once the sides are attached. Any additional internal detail can be added easily now.</p>  |
| <p>Brake Van Sides</p> <p>Total preparation and assembly time about 5 minutes.</p> <p>Allow sufficient time for the adhesive to dry thoroughly</p> | <p>It is convenient to paint the inner parts of the Van sides before assembly.</p> <p>Separate the parts described below from the wooden panels.</p> <ul style="list-style-type: none"> • Brake Van side (1) from panel 1 • Brake Van side (2) from panel 1  <p>Attach the sides to the inner box created beforehand. The Panels are symmetrical. They are the same length as the floor.</p> <p>Lightly clamp and leave until thoroughly set.</p> <p>At this stage, any inner detail should be finalised, especially the painting of inner surfaces.</p> |
| <p>Van Ends</p> <p>Total preparation and assembly time about 5 minutes.</p> <p>Allow sufficient time for the adhesive to dry thoroughly</p> | <p>It is convenient to paint the inner surfaces of the brake van ends before assembly as it is quite difficult to paint them later.</p> <p>Detach the Van ends, stanchions and solebars from the wooden panels:</p>  <ul style="list-style-type: none"> • The Van ends from Panel 2 • The stanchions from Panel 2 • The solebars from Panel 3 |



Assembly Instructions

Great Northern Railway Goods Brake Van

7mm scale ("O" Gauge)

The van ends are designed to fit on the ends of the floor locating on the projections. The solebars are designed to fit on the floor *with the etched surfaces outwards* using the locating holes in the floor. Once the ends and solebars have been attached and are have had time to set, then the stanchions can be attached into their respective holes at each end of the brake van.

Roof

Total preparation and assembly time about 5 minutes.

Allow sufficient time for the adhesive to dry thoroughly

The roof section has holes which locate the positions of a central lamp and offset chimney. Bend the cardboard into an arc to match the shape of the van.



To bend the material, use a section of tubing and roll the cardboard on a rubber mat or similar surface. It is strongly recommended that this process is practiced on some of the scrap material beforehand.

Separate the Van end roof supports from Layer 2.

Attach the van end roof supports to the ends and allow to dry.

The roof can now be attached to the body and painted. The location holes provided are for a central lamp and offset chimney.

Strapping

Total preparation and assembly time about 10 minutes.

Allow sufficient time for the adhesive to dry thoroughly

To enhance the model, a card overlay is provided with two sets of strapping and drawbar detail, one for each end of the vehicle. The components have been arranged and positioned so that they can be easily applied, It is recommended that the strapping is painted and then applied to the vehicle after it has been painted.

Hint: Paint the strapping before attaching it to the model.

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. A few vans were vacuum fitted.. From existing photographs, the early livery appears to be brown (or teak colour) varnished, with yellow or gold lettering shaded blue. In 1896, Moore's Journal describes GNR livery for goods vehicles as "chocolate brown" with black ironwork. The journal states that brake vans had vermilion ends. At a later stage, these vans acquired the more familiar large lettering "G" "N".

The GNR stock was declared as:

| Type | 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 |

There were other variants on the same underframe. It can be seen that the light 10 ton version was steadily removed from service, being replaced with new, heavier vehicles of a different design that had vertical planking.

Early versions of the four wheeled brake van had brake blocks on one side only as depicted in HMRS drawing 3148. All these brake vans had clasp braked on all four wheels by the end of the 19th Century.

Dimensions

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

- Length over body: 18 feet 6 inches
- Width of Body, 7 feet 6 inches
- Overall Wheel base (four and six wheeled) 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
- Current downloadable assembly instructions for all of our products

Email: info@Diagram3D.com

E&OE, updated September 2016.