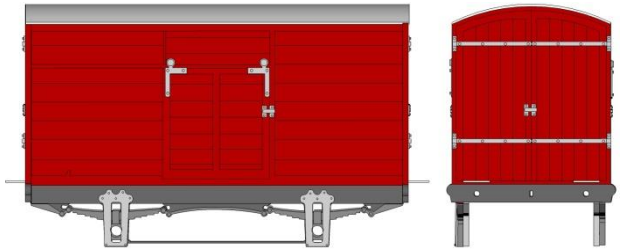
London & North Western Railway (LNWR) Covered Carriage Truck (19ft length)

7mm scale ("O" Gauge)



Laser cut
MDF and card kit

Adhesive, paint not included. Wheels, buffers etc. not included.
7mm scale kit suitable for "O" Gauge.

LNW706

London & North Western Railway (LNWR) Covered Carriage Truck
(19ft length, 10ft wheelbase)

Website:
www.Diagram3D.com

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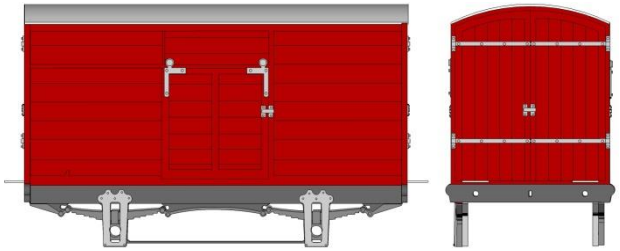

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Assembly Instructions

London & North Western Railway (LNWR) Covered Carriage Truck (19ft)

7mm scale ("O" Gauge)

Introduction

Contents of this kit

MDF parts

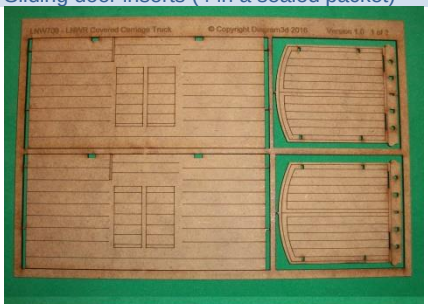
This kit contains:

1. MDF parts

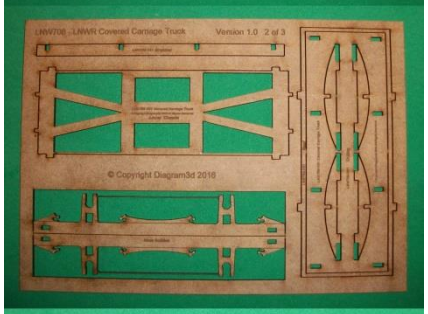
	Description
Panel 1	Sides and Ends
Panel 2	Chassis, floor, roof
Panel 3	Outer framing, axleguards
Loose parts	Sliding door inserts (4 in a sealed packet)

Image

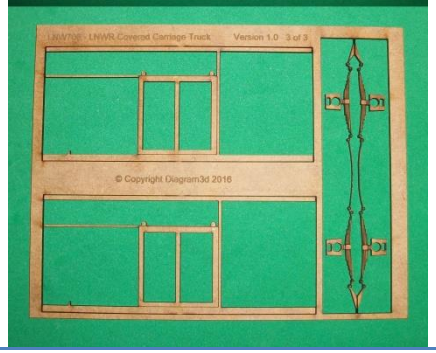
Panel 1



Panel 2



Panel 3



Note: The supplied parts may differ slightly from the illustrations

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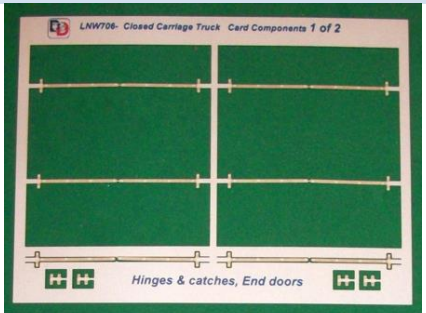
Cardboard Parts

	Description
Panel 1	Hinges and Catches, End doors
Panel 2	Wheel plates, axleguards, sliding door strapping

Image

Panel 1



Panel 2

Note: The supplied parts may differ slightly from the illustrations

Sundry Parts

1. Sundry parts include 3d printed inserts for the axleguards (the colour will vary).

Not included

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

Intended Audience

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.

MDF is based on natural material and therefore it is impossible to guarantee that the colour or finish of the parts will be consistent with the illustrations.

Assembly Instructions

London & North Western Railway (LNWR) Covered Carriage Truck (19ft)

7mm scale ("O" Gauge)

Hints on assembly

Separate parts by cutting the reverse side of the fret.

Pre-assemble and check parts at each stage.

Seal components.

This is a fairly easy kit to assemble as long as one does not rush the assembly and is aware that card or MDF sections can warp if over exposed to water.

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

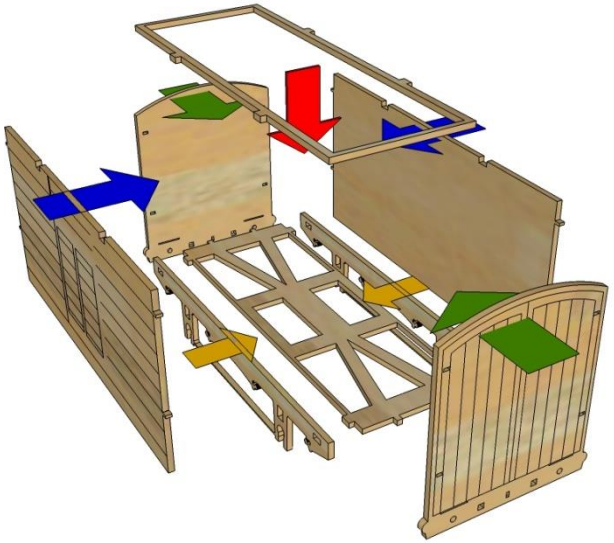
Allow as much time as needed for the adhesive to set. Fill any gaps and smooth surfaces for optimal results. It is strongly advised that cardboard parts are sealed before assembly. Refer to our gallery at www.diagram3d.com/gallery/ for images of this and similar kits.

These assembly steps are recommendations and should not be taken as definitive.

Body Shell

Total preparation and assembly about 10 minutes.

Allow sufficient time for the adhesive to dry thoroughly



Use the diagram above for reference.

Separate the parts described below from the first MDF panels. Assemble on a flat surface.

- The lower chassis from panel 2
- The two inner axleguards from panel 2 (yellow arrows in diagram)
- The ceiling from panel 2 (red arrow in diagram)
- The two CCT ends from panel 1 (green arrow in diagram)
- The two CCT sides from panel 1 (blue arrows in diagram)

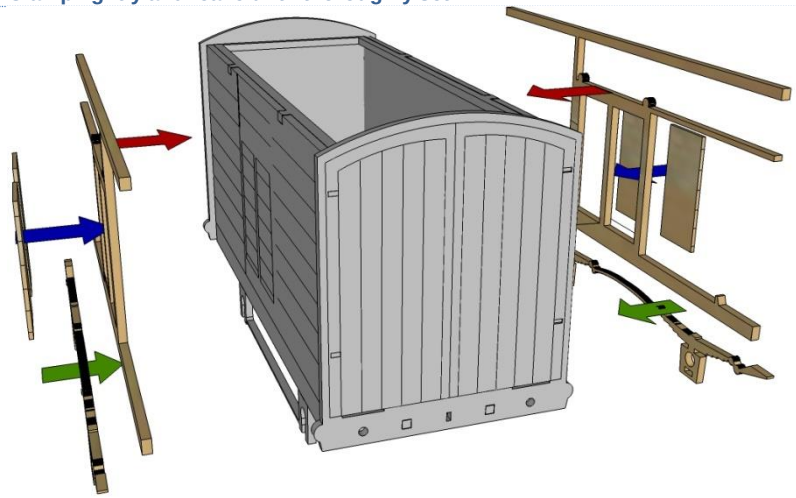
Begin by attaching the two inner axleguard sections to the lower chassis (yellow arrows in diagram). Now slot the lower chassis into one of the two ends (green arrows in diagram), ensuring that the plank detail faces outwards. Next attach the CCT sides, ensuring that the lugs on the sides mate with the corresponding sockets on the end. The two slots on each side will be facing upwards. Ensure that the plank detail on each side is facing outwards (blue arrows in diagram). Now attach the second end. This end slots into the top of the assembly to complete the box structure. Ensure that the plank detail faces outwards. Finally insert the ceiling piece using the indentations in the top of the sides for alignment (red arrow in diagram).

Clamp lightly and leave until thoroughly set.

Outer Panelling and axleguards

Total preparation and assembly time about 10 minutes.

Allow sufficient time for the adhesive to dry thoroughly



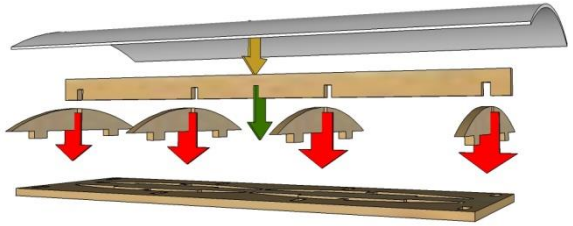
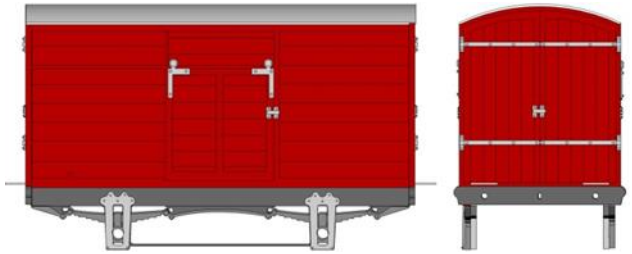
Use the diagram above for reference.

When the inner chassis is ready, the outer components can be attached.

- The outer solebars from panel 3 green arrows in diagram)
- The outer framing from panel 3 (red arrows in diagram)
- The siding door inserts found in a sealed packet (blue arrows in diagram)

Note that:

1) The outer solebar is aligned over the inner solebar.
2) The outer framing aligns between the ends and aligns with the top of the

	sides (trim to length) Firstly attach the outer solebars taking care to ensure that the axleguard holes are correctly aligned and the solebars mate with the slots in the buffer beams. **Give the assembly time to set.** Secondly attach the outer framing.. **Give the assembly time to set.** Finally attach the door inserts into the sliding door frames.
Roof Assembly ***Total preparation and assembly time about 10 minutes.*** ***Allow sufficient time for the adhesive to dry thoroughly***	 The detachable roof assembly consists of: The roof base Four arced formers A longitudinal stretcher. The roof (card) The arced formers slot into holes in the roof base (red arrows). The longitudinal stretcher then is pushed into position (green arrows) and assembly allowed to set. The cardboard roof is rolled into shape and then attached to the formers and stretcher, aligning with the sides and ends of the roof (yellow arrow). ***Hint****: Once set, the roof can be placed into position on the body to assist with alignment. The card can then be fixed in the correct position.*
Card Parts, strapping etc. ***Total preparation and assembly time about 10 minutes.*** ***Allow sufficient time for the adhesive to dry thoroughly***	***Hint: Seal or Paint the card components before assembly.***  The card overlays represent: Axleguards Loading plates Hinges and strapping and latches. Apply the cosmetic axleguards to the MDF axleguards on each side as shown. The loading plates are inserted into the slots provided in the ends. The two hinges and strapping for the end doors is pre-aligned on the fret. Place each set of hinges so that the hinges hide the lugs used to join the sides with the ends of the vehicle. The overlay for the sliding doors and the cosmetic axleguards are aligned with the corresponding parts on the sides of the vehicle. Finally, the latches are placed approximately centrally on the end doors and also on the sliding doors. Newer vehicles had three sets of hinges, an extra set of hinges is provided if one of these is to be modelled.
Axlebox inserts	The 3D printed axlebox inserts have an internal diameter suitable for pin-point bearings but can also be used independently. The inserts fit into the holes in the axleguards, allowing wheel sets to be positioned before the inserts are pressed home. Do not force the inserts into the MDF holes. Gently ream the holes if they are too tight and remove any extraneous plastic from the inserts.
Historical Notes	The LNWR had several versions of Covered Carriage Trucks (CCT). This model was created using information from diagram books, works drawings and photographs of similar vehicles. According to an early LNWR diagram book there were about 140 CCT's, of various lengths, in service around the end of the 19th century. These vehicles had many modifications over their lifetime. This particular type of CCT had a wheelbase of ten feet and was 19 feet in length. The livery illustrated is an approximation of LNWR maroon which was used for non-passenger coaching stock. The LNWR Historical Society http://www.lnwrs.org.uk/) is a good source for further study of liveries which changed considerably over time. Some applicable vehicle numbers from the 1890's diagram book were: 610 – 621 inclusive. (No. 609 was altered to incorporate perforated zinc sides and ends). These vehicles do not appear in later diagram books.
Brakes and wheels	Early vehicles probably did not have brakes. A photograph of a similar vehicle shows a single acting lever on one side only. The vehicles were intended for use in passenger traffic and were given coaching stock wheels, Mansell pattern. The vehicles would have been fitted with chain brakes then vacuum brakes or through piping at a later date to conform to newer regulations. Finally, these vehicles would have originally been provided with side chains as well as the inner couplings.
Dimensions	The principal dimensions of these vehicles were: • Length over body: 19 feet • Body width: 7 feet 10 inches • Wheel base: 10 feet
Finally…	Congratulations on completing this kit. We hope you enjoyed making it as much as we did. There are more kits to make, take time to visit our website (www.Diagram3D.com) to find similar items. Our website has • Free downloads of historical information • Current downloadable assembly instructions for all of our products • A gallery with completed models as well as assembly hints Email: info@Diagram3D.com E&OE.