The 4mm wagon and van kit

NERDC001

North Eastern Railway
London & North Eastern Railway

Diagram C1 5T open fish truck



from 1896 to 1940s

For 00, EM, P4 and S4

Features: Whitemetal body and detailing parts, steel headed buffers, plastic floor
Required to complete: ten spoke 14mm carriage wheels, bearings, screw couplings, transfers

The Prototype

Built from 1896 to 1902, a total of 602 of these 5T wagons were constructed. The slatted sides improved ventilation and with sliding doors for loading, the C1 was a considerable improvement over the previous 8T open fish wagon based on the C2 high-sided goods wagon. Side chains were fitted in the early days and some wagons were allocated to specific stations.

The C1 was gradually replaced by the F6 van but withdrawals did not start in earnest until after the Great War. By the Grouping 419 were left, and just one survived to 1940 (and all the way to nationalisation).

This wagon is known to have existed with a wide variety of braking systems including: piped Westinghouse and/or vacuum; vacuum brake; and Westinghouse and vacuum brakes. Starting in 1909, the wagons were fitted with through steam pipes for working in passenger trains. This kit can be made into any of the brake variants and is supplied with vacuum and Westinghouse brake gear.

References

British Goods Wagons from 1887 to the present day
R Essery, D Rowland & W Steel
LNER Wagons, Peter Tatlow, Vol 2 pp85, 88
North Eastern Record, Vol 2 p85
British Railway Journal, Special NER edition, pp24-32

Interested in the North Eastern Railway?

North Eastern Railway Association
www.ner.org.uk

Assembly

Please read these instructions before starting to build your model. Examine all the parts and familiarise yourself with their assembly, undertaking a dummy run before commencing construction. Remove any moulding flash; we suggest wet fine emery paper (1200 grit) to clean up flash marks.

Assembly is best carried out using low melt solder or an epoxy resin such as Araldite. Glues like UHU, Multibond or Thixofix can also be used. For small parts use superglue. To obtain the best results a combination of several techniques will be needed.

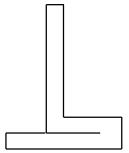
There are three types of slat casting, the longest being for the ends and the two shorter ones for the sides (some kits will be supplied with the centre door slats moulded in situ).
Attach the long slat castings to the end interiors. Fix the two short slat castings to the centre of the sides. The medium length slat casting has **I** engraving indicating the surface to be attached to the side frames. The **I** should be in contact with the door end post. In all cases ensure the top of the slat casting is in line with the wagon top.

Check the fit of your chosen wheel bearings in the axleguards, drilling out if necessary. Just tack them in place for now, in case they need to be adjusted later. Fix two axleguards to one side, using the coach bolts on the solebar for alignment which should ensure the axle spacing is the correct 40mm (10'). You may need to file down the spring ends for a good fit.

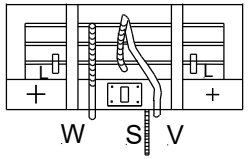
Now assemble the body: properly join one end to the side with the axleguards, and tack the other end to the other side. Bring the two halves together and tack them to each other. Ensure all is level and square, and properly make the three remaining joints. Take one of the remaining axleguards and tack it to the body, trapping a wheelset in place. Ensure the wheels are firmly supported and run freely (adjust the bearings if needed – use 8BA washers as packing if they are too far apart), and that the axle is horizontal and perpendicular to the side. Do the same for the last axleguard and wheelset, ensuring that the axles are parallel to each other. When satisfied, properly fix the bearings and axleguards in place. Again, check that the wagon is level and square. If not a gentle tweak will ensure that all four wheels are in contact with a flat surface such as a glass sheet.

Fit the clasp brake shoes in place behind each axleguard ensuring the wheels continue to turn freely.

The buffers should now be attached in place. The bolts should be at the 12, 3, 6 and 9 o'clock positions. Form lamp irons from pieces of scrap brass as shown below and attach two to each end in line with the first gap between the slats.


Side view

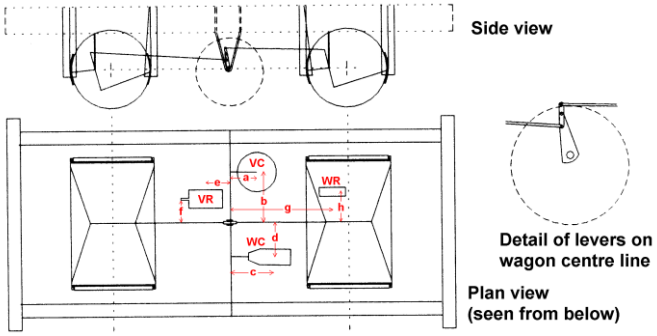

End view



Attach the vacuum, Westinghouse and steam pipes as required following the sketch above for position.

Form the floor by cutting the planked plasticard to size. A gully or 'runnel' should be made by removing a longitudinal 1mm wide strip from the centre of the floor. Either cut the floor in half and glue the two halves to the plain plasticard, or scribe a longitudinal line along the length of the floor in the midway position.

Add the vees to the solebars, using the locating pins for positioning. Depending on which type of brake gear you wish to fit, attach either or both of the vacuum and Westinghouse cylinders along with the brake cross rod (0.9mm wire) using the cylinder levers and the diagram overleaf for positioning. (The longer lever is the Westinghouse lever.) Also add the vacuum and Westinghouse reservoirs to match. Use 0.7mm wire to form brake shoe cross rods and push/pull rods. The central push/pull rods may also be prepared from the additional 0.5mm wire supplied. (Note: the central lever equalising links are not supplied.)



a = 3.7mm b = 7.5mm c = 8.3mm d = 5.5mm
e = 5.8mm f = 5.3mm g = 16.4mm h = 6.0mm

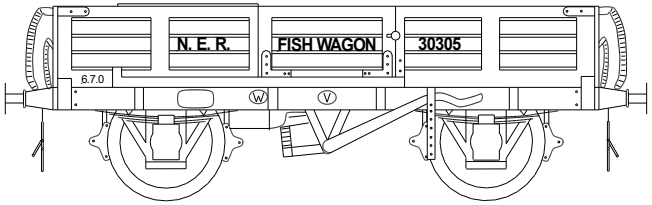
Fit the brake levers in place. Earlier wagons would have had Morton duplex levers, i.e. right and left handed levers, and later vehicles fitted stock Morton cam brake levers. (The duplex levers have a curve at the handle end whereas the fitted levers have more of a right angle.) The left hand or Morton cam lever was situated on the Westinghouse side of the wagon. Lastly add brake yoke safety loops by folding up from the supplied frets (ignore the other parts on the frets. The loops were U shaped with the width at the base of the U being greater than at the legs and were positioned adjacent to the shoes.

Finishing

Clean and degrease the model, using white spirit prior to painting. For whitemetal parts use an etching primer, such as Precision Paints PS1. The model should be painted using the livery of your choice. After painting clean the model using a tissue soaked in white spirit. This is especially important if you are using “Powsides” dry lettering rather than waterslide or ‘Methfix’ transfers.

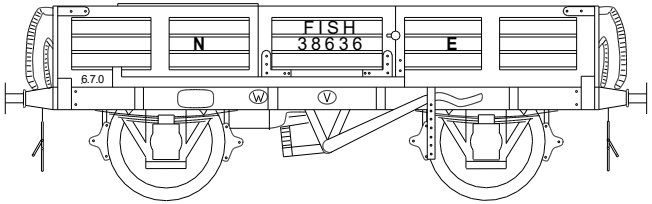
Livery

North Eastern Railway 1896-1911



Bodywork, solebars and buffer housings: crimson lake, Precision P529
Interior: dark brown/black (creosote on prototype)
Underframe/brake levers: black
Letters and numbers: probably gold, or possibly white

North Eastern Railway 1911 to withdrawal



Bodywork and solebars: Indian red, Precision P6
Underframe/brake levers/buffers: black
Interior: dark brown/black (creosote on prototype)
Letters and numbers: white, Powsides sheet E263 or HMRS PO sheet

Few wagons would have been repainted by the LNER prior to withdrawal.

Sample Numbers

Date in brackets indicates build date if known.
5049, 30305(7/97), 30312 (12/98), 30321 (10/00), 30353 (7/99), 30363 (3/99), 30386 (10/00), 35137 (7/98), 38323 (1/97), 38395 (10/98), 38636 (3/99), 39172 (5/99).

3049, 3068, 31179, 32497, 33498, 34006, 36238, 37960, 38255 (all 1899).

30366, 31718, 32548, 33456, 34132, 35234, 36097, 38428, 35138.

Acknowledgements

51L thanks Michael Grocock and Claire and David Williamson for their assistance in preparing this model.

51L

51L has a wide range of locomotive, carriage and wagon kits for the following railway companies

GWR and constituents: Cambrian Railways
LMS and constituents: Caledonian Railway, Glasgow & South Western Railway, Highland Railway, Lancashire & Yorkshire Railway, Midland Railway, North Staffordshire Railway
LNER and constituents: Great Central Railway, Hull & Barnsley Railway, North British Railway, North Eastern Railway

A more recent version of these assembly instructions may be available on the Wizard Models website.

Wizard Models

Wizard Models stocks a wide range of components and other necessities for the modeller in 00, EM and P4.

Wizard Models Limited
PO Box 70
Barton upon Humber
DN18 5XY
Tel: 01652 635885

Email: info@wizardmodels.ltd
www.wizardmodels.ltd

Version: 7.01 Issued: October 2025

© Wizard Models Limited 2025