



The 4mm wagon and van kit

NERDP005

North Eastern Railway
London & North Eastern Railway

Diagram P5 11 ton Hopper wagon
from 1889 to c1940



For 00, EM, P4 or S4

Required to complete: split spoke 12mm wagon wheels, bearings, paint, couplings and transfers.

Features: white metal body, white metal buffers, etched brake gear.

The Prototype

Mineral wagon development on the North Eastern Railway was based on the principle of bottom doors to facilitate self-emptying, the inside of the wagon being hopped. A standard pattern evolved on the Central Division (the geographic area covered by the former Stockton and Darlington Railway) featuring end brake levers, which were made necessary by restricted clearances at pits etc. Whilst primarily used for coal they were also seen carrying sandstone, other minerals and slag.

Classified as Diagram P5 these wagons were built over many years, with changes only to the running gear. By 1907 some 14,262 had been built. For the most part they were rated at 11 tons. A version with modified frames and brake gear designated P17 was produced between 1907 and 1922. The LNER inherited 7,920 P5s, but

apart from some in local use, all had been withdrawn by around 1940. Some passed in to private ownership and lasted even longer, and may even have seen service with the NCB.

This kit represents the prototype as built from 1889, with 5 planks and No. 2A grease axleboxes. This is an essential vehicle for the modeller of the Central Division of the North Eastern Railway.

References

North Eastern Record Vol. 2 p86
LNER Wagons Vol. 2, P Tatlow, pp49-53

Interested in the North Eastern Railway?

North Eastern Railway Association
www.ner.org.uk

Assembly

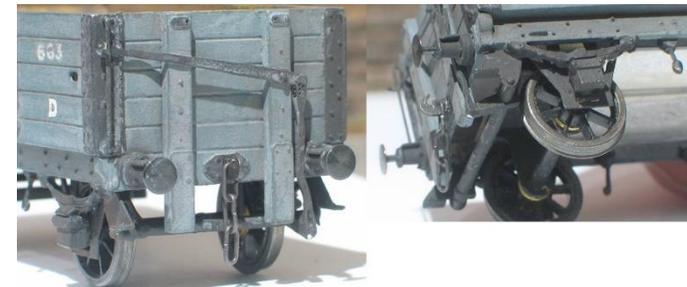
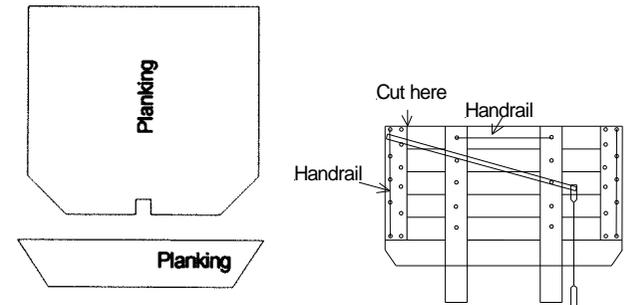
Please read these instructions before starting to build your kit. Examine all the parts and familiarise yourself with their assembly. Remove any moulding flash and ensure all parts fit correctly. Assembly is best carried out using low melt solder or an epoxy resin such as Araldite. Glues like UHU, Multibond or Thixofix can also be used. For small parts use superglue. A combination of several methods will give best results. For etched parts we recommend soldering.

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. Drill out the pop-marked handrail holes in the ends to 0.5mm. In the blocks situated beneath the solebars, drill out 0.7mm holes for the hopper release handles (monkey's tails).

Fix two axleguards to one side, aligning them with the detail on the outside of the solebar which should ensure the axle spacing is the correct 38mm (9'6"). [Some kits are supplied with the axleguards cast as part of the side.] 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.

From the top fit the hopper floor into the body (detail uppermost, raised bar parallel to the sides). Cut the planked plasticard according to the full-sized template below to form the hopper ends (30mm wide x 27mm tall, planking vertical) and side ramps (32mm wide x 6mm tall, planking horizontal) and glue in place. Fit the buffers to the ends with the step uppermost.



With a fine piercing saw, cut a small slot adjacent to the left-hand corner plate at the top of each end to locate the brake ratchet lug. Drill a shallow 0.5mm hole (depth 2-3mm) in the right stanchion in line with the centre of the third plank (already pop-marked). Detach the etched brass parts from the fret and clean off any tags. Sweat the vertical links together in pairs, ensuring the ends are

open to form forks. Twist the assembly through 90° so the upper fork (multiple holes) is parallel to, and the lower fork (single hole) is at right angles to the end. Attach the brake ratchets to the ends, locating the lug in the previously formed slot. Fit a lever and crank in each end. The handle end should crank in enough to locate in the ratchet and pass under the left-hand grab handle. Pass a 0.3mm wire 'pin' through the upper fork in the vertical link, trapping the handle in place. Attach this assembly to the stanchion post with a 0.5mm pivot pin. Bend up the step plates, checking the fit of the brake shafts in between these and broaching out the holes as required. Fit the plates behind the solebars, abutting to the rear of the buffer beam. Locate the brake shafts between the plates with the brake operating link fitting between the vertical link's forks.

Form six end handrails from 0.5mm wire and fix in place. Lastly form "monkey's tails" from 0.7mm wire and fix in place in the blocks on the solebar backs.

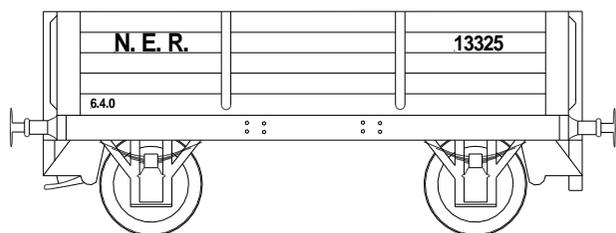
Finishing

Clean and degrease the model using a solvent such as white spirit prior to painting. For whitmetal parts use an etching primer such as Precision Paints PS1. The model should then be painted using the livery of your choice. After painting clean the model using a tissue soaked in white spirit. This is important when using rub on (dry) transfers such as Letraset or Powsides rather than waterslide or Methfix types.

Livery

Letter your wagon to suit your period. Suitable lettering is available from HMRS, Modelmaster and Powsides; paint from Precision Paint for both the NER and LNER.

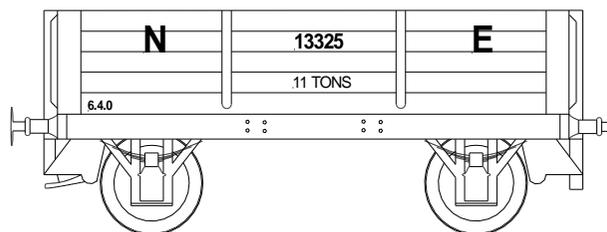
North Eastern Railway 1889-1911



Bodywork, solebars: NER grey, Precision Paint P530

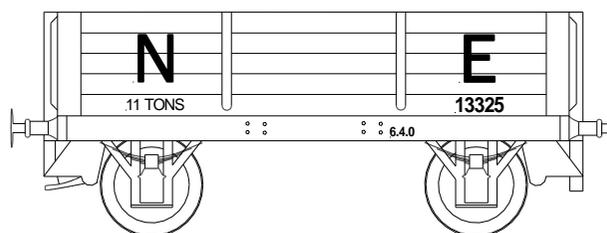
Underframe/brake levers: black
Insignia: 1889-1903, white shaded black, Powsides sheet E264; 1903-1911, white, Powsides sheet E266, Fox sheet FRH4325

North Eastern Railway 1911-1923



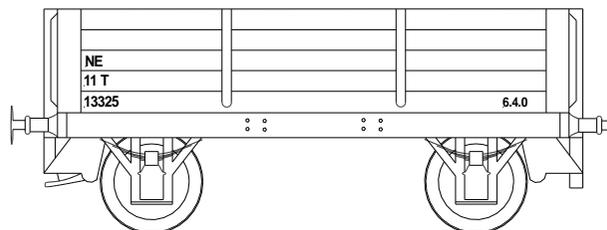
Bodywork, solebars: NER grey, Precision Paint P530
Underframe, brake levers: black
Insignia: white, Powsides sheet E266, Fox sheet FRH 4325

London & North Eastern Railway 1923-36



Bodywork, solebars: grey, Precision Paint P66
Underframe, brake levers: black
Insignia: white, HMRS sheet 12, Old Time Workshop sheet 4702

London & North Eastern Railway 1937-withdrawal



Bodywork, solebars: grey, Precision Paint P66
Underframe, brake levers: black

Insignia: white, HMRS sheet 12, Old Time Workshop sheet 4702

Sample numbers

Running numbers are known to include:
167, 663, 13287, 13325, 40210, 49821, 49823, 54009, 54400, 54671, 64012, 64022, 82538-83037 (built 1895), 87150-399 (1898), 95526-645 (1900).

A later version of these assembly instructions may be available on the Wizard Models website. For further help or information please email:
andrew@modelsignals.com

51L

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Wizard Models

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

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