



The 4mm wagon and van kit

NERDD002

North Eastern Railway
London & North Eastern Railway
British Railways

Diagram D2 8T Single Bolster Wagon with Patent Swivelling Bolster



From 1902 to c1950

Pack includes parts for two wagons

For 00, EM, P4 and S4

Features: white metal body, floor and detailing pieces, etched W-irons and stanchion posts

Required to complete: split spoke 12mm wagon wheels, bearings, paint, 3-link couplings, transfers

The Prototype

Single bolster wagons were used to carry out all manner of long loads including bulk timbers, rails, fabricated steel work and boilers. Generally they ran in pairs but could be seen in threes, fours and even fives as traffic required.

The NER introduced the diagram D2 single wagon with 'patent swivelling bolster' in 1902. Over the next two years some 300 wagons were built, with No.2A grease axleboxes, Morton Duplex brake gear and the original pattern wooden bolster. It is probable that D2 wagons were uprated during repair and given oil axleboxes, steel bolsters and possibly Morton cam brakes.

The kit includes optional parts for the latter two upgrades. The life of the D2 wagon was around 25-30 years.

Whilst it could be that some diagram D1 wagons were modified by the addition of swivel bolsters during maintenance, it is more likely that after 1904 single wagons were in fact built to D2 standard, but were allocated to diagram D1. It may be that the single wagon photographed in 1952 with a swivel bolster was a later Diagram D1 build.

In 1911 the NER owned 8,400 single wagons of which 300 were rated 10T and 6,099 rated 8T. The NER had more single wagons than any other LNER constituent. Some 8,400 were passed over in 1923 of which 2,717 were rated 8T and 5,725 at 10T. On retirement many single wagons were transferred to internal user work on the docks at Tyne Dock, Hartlepool, Hull and Middlesbrough.

References:

British Goods Wagons from 1887 to the present day; R Essery, D Rowland & W Steel

A Pictorial Record of LNER Wagons; P Tatlow p84

LNER Wagons Vol.2; P Tatlow, pp99-102

The North Eastern Record Vol.2; pp86-87

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North Eastern Railway Association

www.ner.org.uk

Acknowledgements

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

Assembly

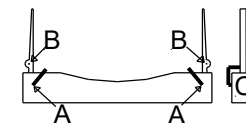
Please read these instructions before starting to build your model. Remove any moulding flash and ensure all parts fit correctly. We suggest wet fine emery paper (1200 grit) to clean up flash marks. Examine all the parts and familiarise yourself with their assembly. Assembly is best carried out using 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.

Fit one side to the floor plate followed by one end and ensure all is square. Attach the second side followed by the second end again ensuring the assembly is square. Fit the buffers in place with two of the bolt heads next to the outside of the wagon.

Assemble the etched W-irons according to the enclosed instructions. Ensure the W-irons are etch primed and painted black prior to attaching to the floor plate. In 00 modellers will probably choose to assemble the W-irons in the non-rocking mode, whilst in EM or P4 it may be useful to allow one W-iron to rock. Note the wagon has a 7'6" wheelbase. With the W-irons in place, check the buffer centre to rail top height which should be 14mm. If not, add plasticard packing to suit. Fix the W-irons in place and check they are parallel and square. Gently push the wagon along a flat surface; it should follow a straight line. If not, one or both W-irons are out of line and require adjusting.

Depending on what is supplied, attach the axlebox or axlebox/spring castings to the W-irons. The bearing holes will need opening up with a 2mm drill. We suggest that the top of the spring hanger is slightly filed away if a rocking W-iron is fitted at one end. If fitting Morton duplex brakes, plan to have the rocking end of the wagon adjacent to the levers. Alternatively open out the bearing hole in the axlebox to allow for bearing movement and attach the spring to the solebar.

Attach the twin brake shoe to the slide bar on the inside of one solebar. Poke a cast plain vee down the slot between the brake casting and the solebar, and use the supplied 0.5mm wire to align the holes. Fix the vee in place. Add a second vee to the other side of the wagon, this time fixing the wire in place as a full cross-shaft. For Morton Duplex brakes, fix a right-hand lever to the same side as the brake shoes, and a left-hand lever to the opposite side (i.e. both levers point to the same end of the wagon. Trim the cross-shaft ends. For Morton cam brakes, proceed as for Duplex brakes, but fix a cam lever to the side without brake shoes (i.e. the levers point to opposite ends of the wagon). Lastly add brake push rod safety loops by folding up from the supplied fret. The loops were J-shaped with the free end sometimes being bent over into a full circle. The loops should be positioned adjacent to the shoes.



If not already cast in place, attach the swivel plate to the centre of the wagon floor. Using your choice of bolster, bore 0.5mm holes for the shackles, A and the etched bolster pins, B. The latter should be sweated together in pairs. Shackles may also be formed from the 0.5mm wire supplied; these should be a square U shape as viewed in C. Bore 0.7mm holes in the centre of the bolster underside and the swivel plate. Use a short length of 0.7mm wire to attach the bolster to the swivel plate. The bolster may be attached permanently or allowed to move as desired. Attach the pins and shackles in place.

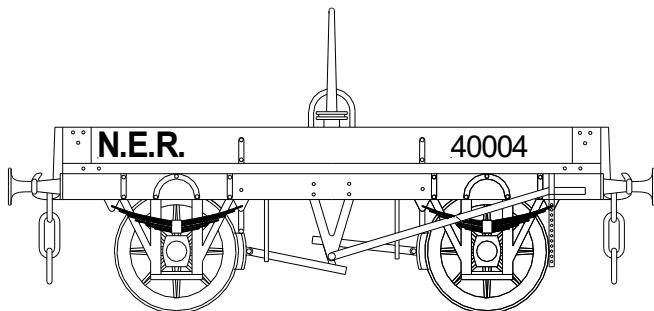
Finishing

Clean and degrease the model with white spirit before painting. For whitmetal 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 intending to use dry lettering** such as that available from Powsides rather than waterslide or 'Methfix' transfers. After painting and lettering fit three link couplings.

Livery

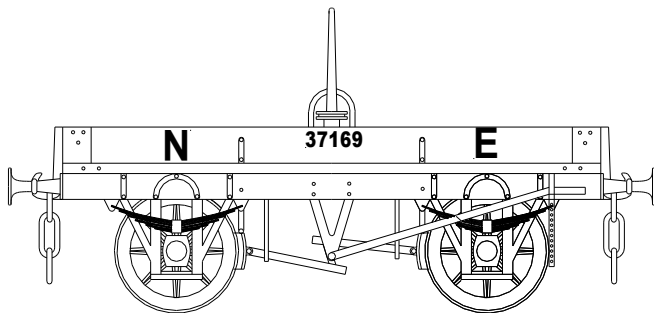
Letter your wagon to suit your period. Suitable lettering is available from Fox Transfers, HMRS, Modelmaster and Powsides and paint from Precision Paint for the NER and LNER periods.

North Eastern Railway to 1911



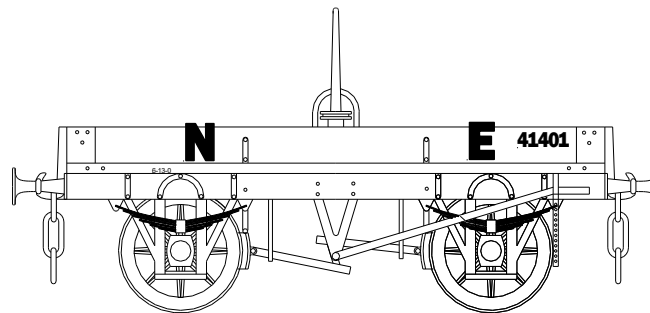
Bodywork, solebars: NER grey, Precision Paint P530
Underframe, brake gear: black
Insignia: white (unshaded from 1903), Powsides sheet E262, Fox sheet 4325

North Eastern Railway 1911-1923



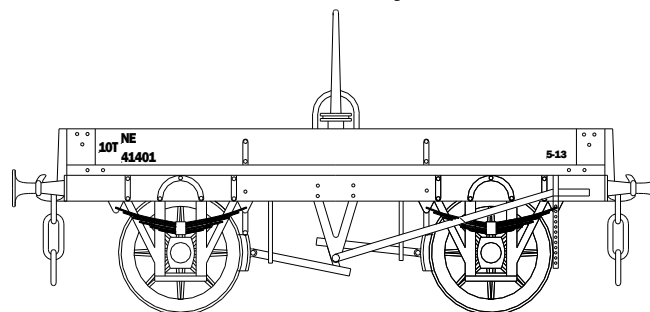
Bodywork, solebars: NER grey, Precision Paint P530
Underframe, brake gear: black
Insignia: white, Powsides sheet E262, Fox sheet FRH 4325

London & North Eastern Railway 1923-36



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

London & North Eastern Railway 1937-demise



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

It is unlikely that any wagons received the BR unfitted grey livery; faded LNER grey or unpainted wood would have been typical.

Sample Numbers

359, 3502, 3503, 3522, 3525, 12007, 37169, 39265, 39324, 40004, 41242, 41401, 41896, 42045, 62138, 62665, 65232, 65314, 62665

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

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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