

North Eastern Railway London and North Eastern Railway

Diagram C2 8 ton High sided goods wagon

The Prototype

The NER had been building 8ton open wagons since the early 1880's and the 1893 diagram book refers to them as High Sided Goods Wagons but only those built from the early 1890's were designated Diagram C2. Until the introduction of the C9 and C10 high sided goods wagons in 1908 the C2 was the mainstay of the open fleet. In 1911 there were 11,191 8ton open wagons in service the majority would in all probability have been Diagram C2s.

This kit enables the early build version of the C2 (from 1886 onward) with No6 type axle boxes to be built; as well as the later build (1900 onward) with No2 axle boxes, diagonal exterior strapping and improved brake gear.

When first built the C2 was fitted with single side brakes with shoes on both wheels. As from c1897 new and, most probably, repaired wagons were fitted with the recently introduced Morton duplex brake gear, ie two brake levers facing the same end. From 1906 the Morton Cam brake was fitted as standard.

The C2 fitted with clasp brakes and piped for use in passenger trains were also used as an open fish wagon until 1896. On withdrawal they were converted back to high sided goods wagons. For fish traffic wagons would have been allocated to particular towns.

From the introduction of larger high-sided goods wagons from 1908 these wagons would have been progressively replaced. It is unlikely that any would have been extent after the early 20's.

These wagons travelled the length and breadth of the country and were a common sight in goods yards particularly in Southern Scotland and Northern England.

References

"British Goods Wagons from 1887 to the present day" by Essery, Rowland & Steel

North Eastern Record Vol 2 p86.

from 1886 to 1920's

For OO, EM, P4 and S4

Features: White metal body, and detailing components
Required to complete: 12mm split spoke wagon wheels, paint, couplings, transfers

Assembly

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

Assembly is best carried out using low melt solder or an epoxy resin such as Araldite. For small parts use Superglue. A combination of several techniques will be needed to obtain the best results.

Check the fit of the wheel bearings and bore out the axleguards/axleboxes if required with a 2mm diameter drill. Attach the axle boxes to the sides using the solebar detail for alignment. Ensure they are square. For earlier wagons use the rounded bottomed axlebox for later wagons use the square boxes. Fit the ends to one side, ensuring all is level and square. Having ensured the axles are held securely but not tightly in place by the bearings glue the bearings in place. Fit the other side with the

wheels in position and again check all is square using a flat surface such as a glass sheet. If required gently tweak the wagon to bring all four wheels into contact with the glass surface. Cut the plasticard floor to shape and glue into the wagon interior.

If building a post 1900 wagon add the etched strapping to the side, see wagon sketch (P2) for position. Fit the buffers to the ends with the bolts at the 12 o'clock, 6 o'clock and 9 o'clock positions. Cut the plasticard floor to size and glue in place.

Add brake gear:

Single side brake version:-

Remove the cast V iron from one side. Fit the brake shoe/safety loop assembly to the V-iron side. Take an etched V and emboss the riveted detail from behind, using a pointed tool in the half etched holes. Slip over the doorstop and into the sole bar slot. This slot may require cleaning out. Attach the etched V in place ensuring it is in line with the cast V. Finally attach a right handed brake lever.

Morton Duplex Brakes (same end levers):-

Attach the brake shoe/safety loop assembly to one side. Form the brake cross shaft by cutting the supplied 0.7mm wire to fit between the cast V's. Pass it through brake shoe assembly and attach it between the V's. Fit the brake levers in place ensuring one is right and the other left handed.

Morton Cam Brakes:-

Attach the brake shoe/safety loop assembly to one side. Form the brake cross shaft by cutting the supplied 0.7mm wire to fit between the cast V's. Pass through brake shoe assembly and attach between the V's. Fit the brake levers in place ensuring the Morton cam lever is on the brake shoe and the right handed lever on the other side.

From supplied rolled wire attach brake safety loops. These should be a loop of wire adjacent to the brake shoes.

Finishing

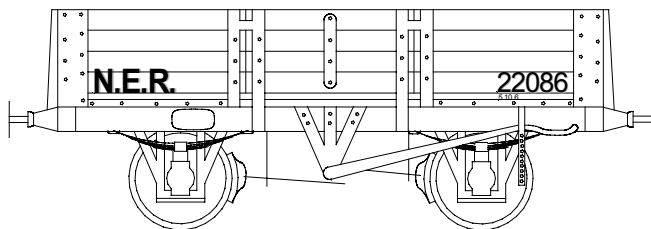
Clean and degrease the model, using white spirit prior to painting. For white metal parts use and etching primer,

such as Precision Paints PS1. After painting clean the model using a tissue soaked in white spirit. **This is especially important if you are using the "Pow Sides" dry lettering** rather than waterslide or 'Methfix' transfers.

Livery

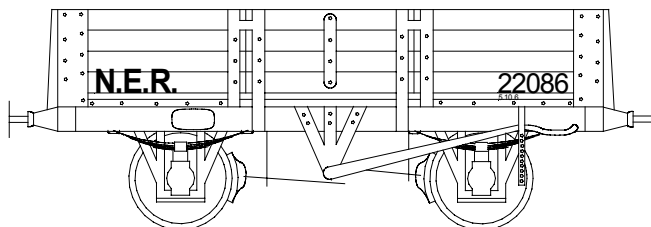
Letter your wagon to suit your period. Suitable lettering is available from HMRS, Modelmaster and Pow Sides; paint from Precision Paint for the NER, and LNER periods.

North Eastern Railway to 1903



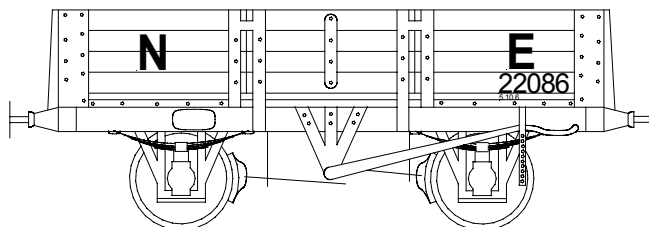
Bodywork, and solebars NER grey
Precision Paint 530
Underframe/brake lever black
Letters and numbers white, shaded black
Pow Sides sheet E264

North Eastern Railway 1903-1911



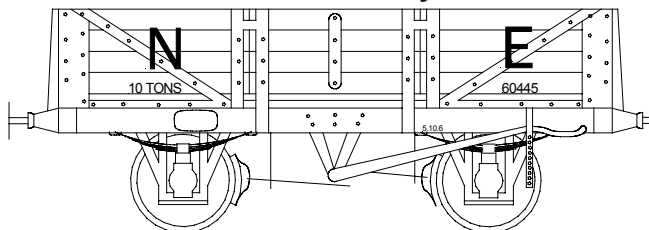
Bodywork, and solebars NER grey
Precision Paint P530
Underframe/brake lever black
Letters and numbers white shaded black after 1903
white without shading.
Pow Sides sheet E262, Fox FRH 4325

North Eastern Railway 1911-1923



Bodywork, and solebars NER grey Precision Paint
P530
Underframe/brake lever black
Letters and numbers White Pow Sides sheet E262,
Fox FRH 4325

London and North Eastern Railway 1923-Demise



Bodywork, and solebars grey Precision Paint P66
Underframe/brake lever black
Letters and numbers white HMRS sheet 12,
Modelmaster Sheet 4702

Sample numbers include:

(Build and withdrawal dates in brackets)

Diagram C2 built before 1900

22086 (1893-1913), 24154 (1893 1914), 25374 (1893 -
1913), 25438 (1913-1917), 27137 (1995 1915), 60445
(1895-1920), 77516 78012 (1893-c1915), 76763-80112 (1893-
c1915)

Diagram C2 built after 1900:

12176 (1900-1925), 12728 (1900-1927), 14217 (1899-
1927), 25435 (1899-??), 25460 (11898-1927), 25487
(1901-1927), 25594 (1901-1928) all Morton Duplex brake
levers.

96566-97365 all Morton Cam brake levers.

See the 51L website for a current set of instructions at:
www.51l.co.uk. For further help or information please
email: info@51l.co.uk

Acknowledgements

51L would like to thank the following for the help and
assistance in preparing this model:-
Michael Grocock, David and Clare Williamson

Interested in the North Eastern Railway?

Contact the North Eastern Railway Association.
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c/o 8 Prunus Avenue
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Hull
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For details see: www.51l.co.uk.

Wizard Models

Wizard Models stocks a wide range of components,
paints, transfers and other necessities for the 4mm
modeller in OO, EM and P4. A full price list, for 50p + SAE
can be obtained from: -

Wizard Models.

PO Box 225, Macclesfield, Cheshire. SK10 4GB

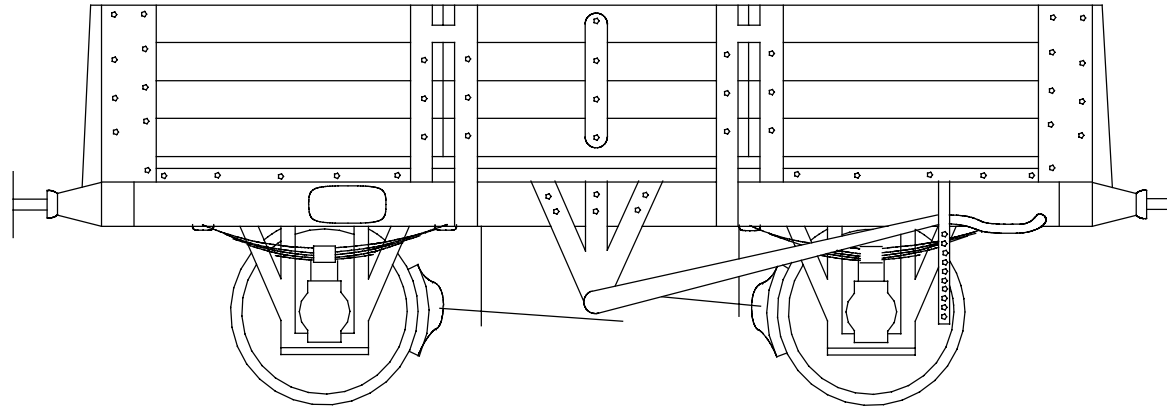
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and down load your searches see:

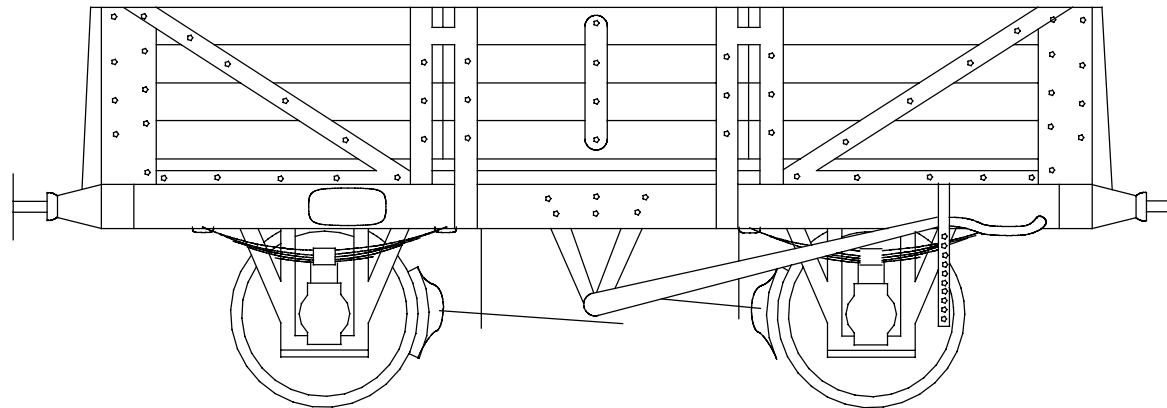
www.wizardmodels.co.uk

Diagram C2 as built 1886 to 1900



Brake gear originally single sided shoes both wheels, after 1897 Morton duplex (levers both sides same end, shoes one side).
Axle boxes No 6a round pattern.

Diagram C2 as built 1900-1907



Brake gear originally Morton duplex (levers both sides same end, shoes one side), after 1906 Morton Cam.
Axle boxes No 2 square pattern, side strapping.

Note: the North Eastern Railway up rated wagons on repair or during maintenance to the current standard applying at that particular wagon works.

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