The 4mm wagon and van kit

CRD109

Caledonian Railway
London Midland & Scottish Railway
British Railways

Diagram 109 15T Twin Bolster Wagon
Period: 1913–c1955



NOTE: this pack contains parts for a pair of wagons as shown above.

For 00, EM, P4 & S4
Features: white metal kit, and detailing parts
Required to complete: split spoke 12mm wagon wheels, bearings, paint, 3-link couplings, transfers

The Prototype
A useful wagon used for the carriage of all manner of long loads such as tree trunks, girders, rail, tubes and sawn timber, the D109 twin wagon set consisted of two wagons permanently coupled together by a link and pin. One hundred pairs were built in 1913 with heavy duty Iracier axle boxes and self-contained buffers.

Wagons of this type had a working life of 30-40 years and photographic evidence shows survivors until at least 1955. They would mostly have been seen in the industrial heartlands of Scotland and Northern England.

References
British Goods Wagons from 1887 to the present day by Essery, Rowland & Steel
Jim MacIntosh, Caledonian Railway Association – personal communication
Caledonian Railway Wagons and Non-Passenger Coaching Stock by Mike Williams, pp139-140

Interested in the Caledonian Railway?

Caledonian Railway Association:
http://www.crassoc.org.uk/

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) 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.

Note that the sides are handed – the end with the double row of vertical rivets is the outer end.

Drill out the holes (0.9mm) in the bolsters to take the stanchions, which will be formed from the 0.9mm wire. Drill out the hole in the rubbing plate again to take 0.9mm wire; this will be used to couple the two wagons permanently together.

Check the fit of the wheel bearings in the axle boxes and drill out with a 2mm drill as necessary. Fix the ends centrally to the cast floor. The end with the rubbing plate goes at the stanchion end of the floor. Ensure the ends are square.

Attach one side in place ensuring it too is square on the floor. With wheel sets and bearings in place, fit the second side and ensure the wheel sets are square. The wheels should run freely; if necessary, pack or bore the bearing holes as required. When satisfied, secure the second side in place. Ensure the wagon is level and square using a flat surface such as a glass sheet. If not, a gentle tweak will ensure that all four wheels are in contact with the surface. Fit the buffers, with the ribs being horizontal.

Orient the wagon so the bolster is to the right. Fit the brake shoes casting to the nearest side. Form the brake cross shaft by cutting the 0.7mm brass wire to fit between the vees and fix in place. Make up the brake levers and guides according to the enclosed sheet and attach them to the solebar and cross shaft. You will need to shorten the lever at the handle end by folding it back on itself. Ensure the plain lever is on the same side as the brake shoes. Fold up and attach the brake safety loops around the brake push rods, adjacent to the brake shoes. The exact position varied from wagon to wagon.

Form the stanchions from the 0.9mm wire supplied. They should stand 8mm tall above the bolster. File the stanchion top flat. Fit the shackles to the bolster so that they fall outside the stanchions. Slightly radius the rubbing block. This completes the first wagon.

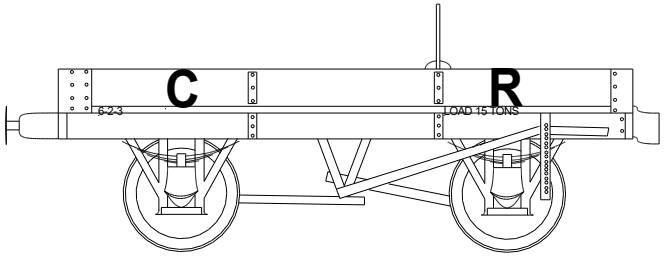
Repeat all the above for the second wagon, which is an exact duplicate of the first, such that when they are coupled together, the brake gear is on opposite sides of the two wagons.

The wagons may be coupled permanently together now, or alternatively this may be done after painting. Cut a 20mm long piece of 0.9mm diameter wire and bend one end at right angles 5mm from the end. Thread the straight end through the rubbing plate holes in both wagons. When the wagons are close coupled bend the protruding straight wire at right angles.

Finishing
Clean and degrease the model, using white spirit prior to painting. For white metal 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 dry lettering** available from the Caledonian Railway Association rather than waterslide or ‘Methfix’ type transfers.

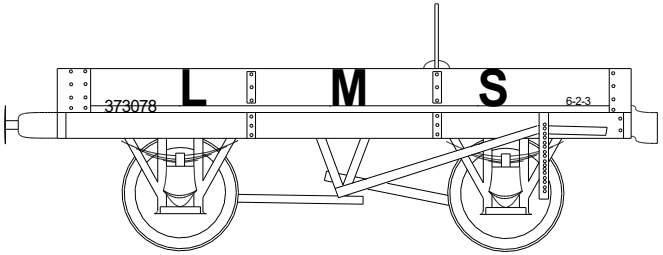
Livery

Caledonian Railway c1913-1923



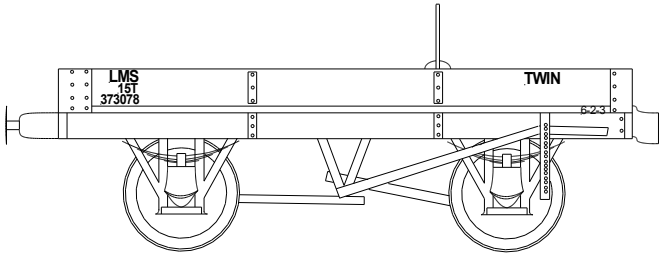
Bodywork, solebars and buffer housings: red oxide, Precision Paint P436
Underframe/brake levers, solebar ironwork: black
Insignia: white, HMRS sheet 20, Caledonian Railway Association sheet.

London Midland & Scottish Railway 1923-1937



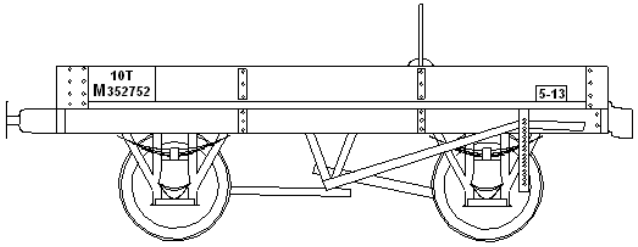
Bodywork and solebars: grey, Precision Paint P38
Ironwork below solebars: black, Precision Paint P975
Insignia: white, HMRS sheet 6, Old Time Workshop sheet 4701

London Midland & Scottish Railway 1937- 1948



Body: bauxite, Precision Paint P39
Ironwork beneath solebars: black, Precision Paint P975
Insignia: white, HMRS sheet 6, Old Time Workshop sheet 4701

British Railways 1948 - demise



Body, headstocks: light grey, or bare timber with insignia on a black patch, Precision Paint P126
Ironwork beneath solebars: black, Precision Paint P975
Insignia: white, HMRS sheet 25, Modelmaster sheet 4619

The sketches show the left hand wagon of a pair, but both wagons of a pair were lettered in the same manner, e.g. for BR, the number on both was at the left-hand end, with the tare to the right.

It will be appreciated that many wagons would not have been repainted immediately upon a livery change and would remain in a well-weathered version of the previous livery or even bare weathered timber.

Numbering

These wagons ran in consecutively numbered pairs: 72983 & 72984; 72985 & 72986; and so on continuously up to 73181 & 73182. The LMS renumbered them, but not by simply adding 300000 as for other types. The only pair known is 352751 & 352752, which became BR M352751 & M352752.

Acknowledgements

51L thanks members of the Caledonian Railway Association for their help and 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.

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