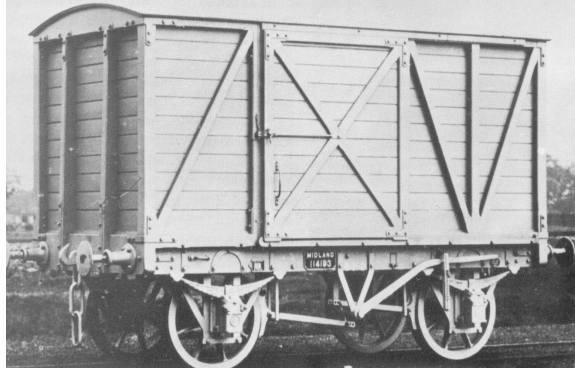


Masterclass Models

MR Vans and Cattle Wagons



The MR built a large number of outside framed vans during its existence. D353 was a 15' van (9' WB) of which over 1000 were built from 1880-1891. D357 had the height of its sides increased by 12", and was constructed from 1892-1906 (over 3000). D363 followed (1902-1916) with the body lengthened to 16' 6", and 4000 were built.

Almost 2500 of the Coke Hopper were built between 1888 and 1912. This characteristic design lasted into the 1940s.

Cattle wagons followed a similar pattern to other companies, with their size increasing as the years went by. D293 was a 'medium design (16'3" long, 10' WB built 1885-1893) and was followed by the more numerous D298 (19' long, 11' WB). The LMS Standard Cattle Wagon which followed was in fact a MR design of 1922 but only completed from 1923 onwards.

Assembly instructions

Parts required

2 x	MR wagon etch (each etch covers one side and end only).
1 x	MR underframe etch.
4 x 2-041	Rolling stock axle bearing cups
2 x 2-209	6mm plain spoke wagon wheels (or similar according to prototype).
4 x 2-441	Ribbed wagon buffers (or similar according to prototype).
1 x 2-346	Turned brass vacuum cylinder (for fitted chassis)

0.3mm brass or nickel silver rod
solder and tools

General

Certain parts of the etch are very delicate, and therefore care is needed when cutting both them and adjacent parts out. Spares are provided of certain small or delicate items.

Although it is possible to assemble the kit using superglue, for these instructions soldered construction is assumed.

Unless otherwise indicated, fold lines for 90 degree folds are on the inside of the fold, for 180 degree lines on the outside of the fold.

Parts on the underframe etch are numbered. An enlarged picture of the etched fret is provided for clarification. Study this and the instructions carefully before beginning assembly.

Underframe

1. Cut out the underframe etch (part 1) from the fret. If the underframe is to be used with a body kit including bufferbeams, remove the inner bufferbeams from the etch, and shorten the underframe to match the body.
2. Bearing cups may be soldered in place before or after folding the underframe into a U section, according to preference. Fold up the underframe sides into a U shape. Fit the wheels into the underframe and adjust for free running without excessive slop. Remove the wheels.
3. If fitting DG or similar couplings, foldup boxes are provided as mounting points. If not required, leave them flat.
4. Cut out the inner and outer solebar etches (parts 3 and 4), and the cosmetic wooden solebar (part 5 or 6). If cast axleboxes and springs are preferred, remove the etched ones provided. If building a wagon with double V hangers, use Part 5, otherwise part 6. Shorten the solebars to match the underframe length if needed. The cosmetic solebar is provided with a drop bar. Remove this if not fitted to your prototype. Now fit the inner solebar overlay to the underframe, using the bearing cups as locating lugs. Cut or file off the bearing cups flush with the solebar overlay. Fit the outer solebar overlay and cosmetic solebar.
5. Fold up and solder the axlebox etches, file off the remaining tab, and locate in place. Ensure you have them nice and square. Spares are provided in the case of mishap. Axleboxes are provided for both earlier grease (10) and later oil (11) types, consult your prototype for the correct ones. Some wagons ended up with a combination of both!
6. If bufferbeams are being fitted, cut out the parts (7) Fold up and solder the three layers to form the correct thickness, and file off the tabs Solder into place, ensuring they are accurately located over the buffer holes, and that the rounded section is facing downwards. Detailing etches are also provided for the coupling hook and its mounting plate.
7. Cut out and fold up the brake gear (part 2). If building 2-shoe brakegear, one side should be broken off and discarded. Solder the brakegear in place on the underframe in the tabs provided.
8. Insert the wheels, and check that they do not foul the brakegear. Remove them again.
9. If building a fitted underframe (a very few examples of MR wagons received vacuum gear in LMS and BR days), solder the vacuum cylinder in the hole provided.
10. Thread 0.3mm brass wire through the V Hangers, making sure you include the appropriate vacuum cylinder linkage (part 9) for a fitted underframe. The rod runs across the wagon for Morton brakegear. For independent brakegear, two short rods should be provided on the two sides of the underframe. Leave sufficient rod protruding to attach the brake levers later. Carefully solder the various parts in place.
11. Fold up the brake levers (part 8). Small location pips are etched on the levers where bends are required. First form the main profile of the lever – guides are found on the etch to assist with this. Next fold up the brake lever ratchet into a box shape. Now solder the brake levers in place onto the rod protruding from the V hanger, and into the slots provided in the solebar. Trim off the excess brass rod.
12. If you have built an underframe with only one brake lever, carefully fill the hole in the solebar on the other side with solder or filler.

Body

1. Each side and end is formed from four layers, in order
 - Planking
 - Framing (two layers)
 - Strapping

For the vans an additional two layers are provided

- Door framing
- Door strapping

For the cattle wagons, the planking (layer 1) is provided with handed pairs, one of each should be used to locate the divider supports at the same end of the wagon. You may wish to carefully file away the etching cusp on the framing layers, to avoid this forming unsightly ridging on the model.

2. The layers are soldered together using Association axle bearing cups or 1mm rod as location guides in the holes in the etch surround. Make sure you get the various layers the correct side up and right way around. Once all the layers have been combined, the etch surrounds may be removed by cutting the tabs with a sharp scalpel. For the vans, the surrounds to Layers 1-3 should be removed from the rear, for layers 4-6 from the front.
3. For the coke wagon, the tops of the sides and ends should be filed smooth and filled if necessary to form the impression of a single piece of timber.
4. The resulting sides and ends are fixed together around the floor. Take care to ensure that the sides and ends have correctly interlocked (the sides fit inside the ends).
5. The strapping on the sides protrudes beyond the ends, and is bent round and fixed to the ends now. Using a steel ruler or similar will ensure a sharp corner to the strapping.
6. For the cattle wagons, two layers are provided to form the divider used to provide smaller space within the wagon when requested by the customer.
7. Curve the roof to the correct profile, and solder to the body.

References

1. An Illustrated History of Midland wagons Vol 1 and 2, Essery, OPC 1979