

**London & North Western Railway
London Midland and Scottish
British Rail**

**Open Carriage truck diagram 466
c1900-1954**

Prototype information

This was the standard LNWR vehicle for transport of horse drawn, motor road vehicles or other light bulky loads by passenger train. They were originally rated to carry 5 tons, but by the end of their lives they had been uprated to 8 tons. Earlier vehicles had the exterior pattern of w-iron and vehicles built before 1906 had no handbrakes but these were added later. Like many LNWR vehicles of the period two kinds of brake cylinder, the horizontal and vertical types, were fitted indiscriminately. Unfortunately it is not possible to tell which vehicle had which type of brake gear. Our model is later version of carriage truck with the w-irons on the inside of the solebar and the vertical type of brake cylinder.

A total of about 350 of these trucks were built, several survived until 1954.

Livery

London and North Western Railway

The body sides were dark chocolate brown, with the edges of the outer faces lined in chrome yellow. The underframe and fittings were black.

London Midland and Scottish Railway

After the grouping of 1923 carriage trucks were painted LMS crimson lake, probably without lining. This colour was retained for the rest of their lives in revenue service albeit in a more dilapidated state on the final survivors under BR ownership. The underframe and fittings remained black.

The surface of the floor would presumably be wood coloured.

Sample Numbers

It is believed that the earlier LNWR numbers can be obtained by subtracting 11,000 from the later number.

Later LNWR Numbers	LMS Numbers	Later LMS Numbers
11001, 11008, 11012-7, 11035, 11095,	4842-5177 (this block covers all the vehicles)	40941,41375, 41381-41517
11104-111, 11250-3		41430-62,
11270/8/80, 11323-9,		41538-41674,
11347-51, 11442, 11583, 11625, 11457		
11445-9, 11553-7,		
12016-49, 12095-113.		

BR survivors are known to have included M41584, M41600, M41601, M41668, M41671 and M41684.

References

An Illustrated History of LNWR Coaches (including West Coast Joint Stock), D Jenkinson P162

Historic Carriage Drawings, volume 3, non passenger coaching stock P66

British Railways Non-Passenger Rolling Stock, Railways in Profile Series nos 6, G Gamble, Frontispiece

LWR Liveries, HMRS, Talbot, Millard, Dow, Davies, Ch6, P86

Required to complete

Maunsell 14mm carriage wheels, paint.

Assembly

Assemble the parts in the following order, the numbers used match those found on the frets.

- 1) Sub-floor. Bend down the solebars and their bottom edges outwards, the buffer beams down and their bottom edges inwards, now lay the part upside down and glue in place;
- 2) Spring hanger detail. Fixed axleguard end. These parts fit inside the solebar lined up with the corresponding parts on the axleguards themselves. Note that the rivet detail faces outwards.
- 3) Solebar detail. For the side with the V-hanger close behind the solebar. The two vertical groups of three rivets align with the V-hanger and there is a group of five rivets forming an inverted W over each axleguard. Fit in place.
- 4) Solebar detail. The other side. Fit in place.
- 5) Pivoted axleguards. Bend to shape as shown in the drawing. Fit between the brackets you have bent down in the floor with the axleguard stays at the outboard end and using a 25mm length of wire thread this through the holes in the brackets and the matching holes in the axleguard and then secure the inboard end of the wire to the floor to allow the axleguard to pivot. Now fit brass bearing cups into the axleguard holes.
- 6) Brake block detail. Glue in position on hangers 7 and 8, place on a soft material such as corrugated card, pass a pin through the hole in the hanger and the brake block detail to ensure accurate location.
- 7) Brake hangers. Fixed axleguard end. Bend down the hangers and safety loops and solder or glue in place with the locating tongues through locating holes in the axleguards.
- 8) Brake hangers. Pivoted axleguard end. Fit as above.
- 9) Brake linkage hanger. Fixed axleguard end. Bend over the top flap and the small prong at the other end. Fix the flap with glue or solder above the floor ensuring the hanger is vertically downwards and located in the notch between the axleguards. From thick wire cut a piece 30.5mm long for the handbrake shaft and another 15mm long for the vacuum brake shaft. Fit the vacuum brake shaft through the holes in the V-hangers threading on to it the;
- 10) Vacuum brake lever. At the outboard end, pointing towards the etched circle under the floor, bend over the rectangular end flap first. Thread also;
- 11) Pull-rods. First bend over the small prong at each end. The shortest end is furthest from the floor and passes below the handbrake shaft. Secure the ends of the vacuum brake shaft with solder or glue and the prongs on the pull-rods ends should be glued into the holes nearest to the floor on the brake linkage hangers.

Glue or solder the cast vacuum brake cylinder onto the floor using the etched circle to locate its accurate position. Then glue the flap of part 10 on the centre of the lower face of the vacuum cylinder.

Now fit the 30.5mm piece of wire that is the handbrake shaft, threading onto it the;

- 12) Handbrake drop arm. The end of this part engages the outboard side of the stops on the pull-rod 11. Glue or solder all in place with the shaft projecting equally on either side of the vehicle. 13. Long handbrake lever.

- 14) Handbrake reversing lever. Fit these two as shown to the handbrake shaft and the bracket near the vacuum cylinder. The cranked part of the lever points upwards and is just above the bottom of the solebar when the brake is off.
- 15) Short handbrake lever. Fit to the handbrake shaft diagonally opposite part 13.
- 16) Outer brake block connecting bars. Twist the central pull-rods through 90 degrees, bend over the prongs at each of the ends, fit between the outer pairs of brake blocks with the prongs through the holes, and the central prong through the remaining hole of the brake linkage hanger, secure in place with glue or solder.
- 17) Inner brake block connecting bars. These are numbered out of sequence and should not be fitted until the wheel sets are in place.
18. and 19. Brake pull-rod safety loops. Bend the fixing flaps and secure beneath the floor with the projecting ends in their small locating holes.
- 20) Axleguard tie-rods. Glue to the outer faces of the axleguards. Then glue the axlebox/spring castings in place on the outer face of the axleguards.
- 21) Handbrake lever stirrups. Bend to shape as shown in the drawing. Trim off any excess and glue in place to the back and underside of the solebars 2mm in from the right hand end, with the handbrake lever threaded through the stirrups.

Body Assembly

- 22) Floor lower layer. Bend to shape as shown in the drawing.
- 23) Floor upper layer. Bend the edge strips flat back on top of the floor and bend the ends down. Fit inside part 22 and secure with glue from underneath.
- 24, 25 and 26. Sides. Fit one of each in order on the inside of one side of part 22, then repeat for the other side. 27. Top edge of the sides. Glue in place with the rows of holes inwards, the slots fitting over the clip racks projecting from part 25.
- 28) Lamp irons. Bend the fixing flaps, then pass through the holes in the buffer beams and secure from the inside.
- 29) Buffer beam detail. Fit over part 28 with the wheel plate supports uppermost and ensuring the brake pipe holes are aligned. Bend up the lamp irons .75mm out from the ends.
- 30) Wheel plates. Glue into the recesses on the floor, two at each end.
- 31) Side strapping for corner posts. Glue the part with four rivet heads/nuts to the end uprights of the sides. Turn the remainder below the side and on to the solebar, and glue.
- 32) Side strapping for inner uprights. Fit similarly to parts 31.
- 33) Wheel beams. Fold along the etched lines to the correct shape, then pass through the holes at the ends parts 34.
- 34) T handles. These project through the holes in parts 33 to pass through the holes in part 27 in a suitable position to restrain the wheels of the vehicle that is being transported.
- 35) Strap clips. Bend in half, leaving a gap of about 0.75mm between the halves. Pass through the racks on the top of the sides, then squeeze the ends closer together to retain them.

Now fit the completed body to the underframe. Note that the locating tabs will only locate one way round. Secure with glue or solder where the tabs project through the floor below. Referring to the orange card, fit the sprung buffers.

- 17) Inner brake block connecting bars. These pass below the axle to the bottom prong of the brake linkage hangers. With care these can be sprung into place without securing with glue or solder to allow change of wheels. However for extra security just secure at the brake blocks, you should still be able to change wheel sets if required.

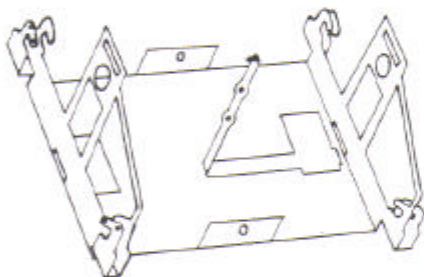
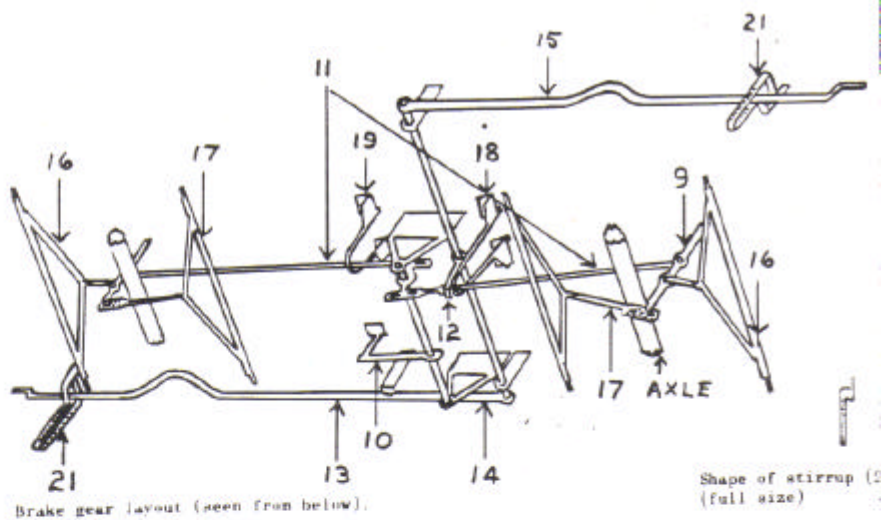
Having painted your model with reference to the livery details select your transfers from the ones provided. They are of the Methfix type. To use carefully cut out the item from the thick backing paper, lay down in position face down, wet thoroughly with a mixture of three parts methylated spirit (ethanol) and one part water. Adjust the position if required and press down with your fingertip. Allow 10 minutes to dry, wet the tissue with water and peel

away when it becomes loose. Allow a few hours to harden then gently wash away any surplus glue. The vehicle may now be given a protective coat of matt varnish.

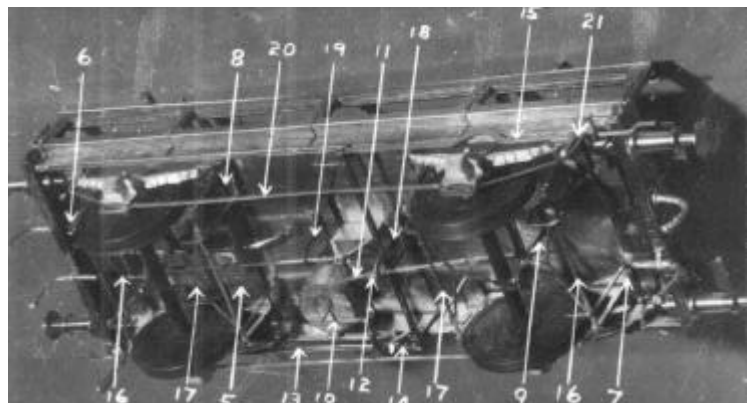
Finally fit the screw couplings. Bend the links, lever and centre section. Fit the assembly together as shown in the drawing. Retain by passing a wire through a hole in the drawbar and to the nearest hole on the underside of the vehicle.



BODY ASSEMBLY.
22. Floor lower layer. Bend to shape as shown.



Pivoted axleguards (5) after bending.



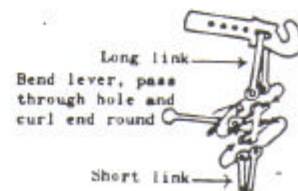
Original LNER insignia.



Later LNER insignia.



Early BR insignia. LMS insignia probably similar with no 'M' and 'LMS' at other end.



Wizard Models 51L
PO Box 225, Macclesfield
Cheshire, SK10 4GB,
Tel and fax 01625 585312
www.51L.co.uk
Email: Info@51L.co.uk

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