

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

**D126 corridor brake first**

**Prototype information**

The LNWR only produced three designs of corridor brake firsts. The most numerous was the Cove roof D126 built 1906-7. This four compartment design had a seating capacity of just 16 and perhaps it is not surprising they did not last in this form. In late 1922 all were converted to D210A brake composites by the addition of third class seating into two of the compartments adjacent o the van portion. A second lavatory some 3ft 6 ½” wide was also fitted in the van portion of the carriage with an additional window. The guards compartment was reduced to 16’9¾ “. The carriages were turned out in full LNWR livery in late 1922 or early 1923.

These carriages were not dual fitted with both the vacuum and Westinghouse brake and in all probability were equipped with Stone’s electric light throughout their life. The first carriage was withdrawn in July 1941 and the last in July 1953. It is interesting that two were exported to Northern Ireland by British Railways in 1948 and became GNR(I) numbers 467 and 468.

**Number information**

LNWR	First period LMS	Second Period LMS
5604-23, as built		
5990 }		
5992-6010,} as D210A	9661-80	7059-78

**References**

- An Illustrated History of LNWR Coaches (including West Coast Joint Stock), D Jenkinson P79
- A Register of the West Coast Joint Stock, R M Casserley, P A Millard
- Selected LNWR Carriages A Detailed Commentary, P A Millard
- An Illustrated History of LMS Standard Coaching Stock, R Essery, D Jenkinson, P41

## Construction notes

### Parts list

#### Packet 1

Underframe castings

Dynamo 1 off

Vacuum cylinder 2 off

#### Packet 2

Bogie castings

Bogie side plates 4 off  
(9' deep frame)

Bogie end plate 4 off

#### Packet 3

Investment castings

King posts 2 off  
12BA nuts and bolts x 4

10BA nuts and bolts x 2

#### Packet 4

Roof castings

Torpedo vents, 20 off

Deck(roof) lights, 4 off

Lavatory water tank fillers, x3

#### Packet 5

Set sprung round buffers

#### Interior items

Polystyrene strip 0.030" x1  
Polystyrene strip 0.020 x 2  
Glazing strip, 2 off  
Seating

#### Roof materials

Timber roof  
Covering material  
Microstrip, 2 lengths

#### Miscellaneous

0.5mm wire, x3  
0.7mm wire, x0.5

You are supplied with extra vents and lavatory water tank fillers, so you should have some spare parts to allow for loss.

### Underframe

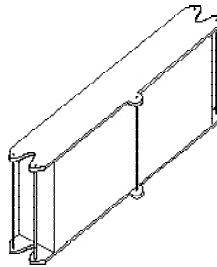
Cut or snip out floor from stepboards, place the stepboards carefully to one side. Taking the floor drill out the 4 end pilot holes to accommodate 12 BA bolts provided. Then drill out the 2 bogie centre pilot holes to accommodate 10 BA bolts provided. Do not fold up the vee hangers yet. Punch the rivet detail on the solebars to represent the rivets. Do this on a firm surface, taking care not to distort the floor.

Solder the solebars to the floor using the location slots. Taking the full length stepboards, tin the inner face of one board and then fold through 180 degrees with the half etched tab to the inside. Supporting the stepboard in a vice run your soldering iron along the edge. Repeat this process for each full length stepboard. Attach the full length stepboards into the solebars using slots.

Now fit the lost wax king posts, 35mm apart, thread 0.5mm wire through the holes to form the trussing. Taking the lower stepboards, tin the inner face of one board and then fold through 180 degrees with the half etched tab to the inside, solder. Using etched droppers fit lower stepboards in place.

### The battery box and underframe fittings.

First of all drill out the pilot holes to accept .05mm wire. Then carefully scribe a centre line on what will be the outer face of the battery box, use this as guide when lining up with the base. Fold the sides to 90 degrees, then place in position on base plate with the scribed centre line in line with the centre hole. Then repeat this for the top plate and thread the wire through the holes. Place a battery box between each king post on both sides



Position the dynamo some 16mm (4') from the adjacent bogie axle centre line and 3mm from the carriage centre line. The dynamo may require a triangular packing piece to ensure it is vertical and the pulley slightly lower than the wheel axle.

Fold the vee hangers and thread 0.7mm wire through the holes and through etched brake linkage components, the hole in the floor next to the vee hangers gives the position for the cast vacuum brake cylinders.

Fold the vee hangers and thread wire through the holes and through etched brake linkage components, the hole in the floor next to the vee hangers gives the position for the cast vacuum brake cylinder. For dual fitted carriages, castings are provided for the Westinghouse system. The brake reservoir should be fitted transversely near a bogie and the pump in centre of the carriage between the king posts.

### **Bogies**

Clean any flash from bogie sides and transom castings. Cut brass stretchers and radius plates out from the etch. Drill out the pilot holes in the stretchers to accommodate 8 BA bolt, which you should now solder into place on the carriage floor in readiness to accept the bogie. Solder the two radius plates in the slots on the brass stretcher. Then solder the transom ends in place. Drill out the pre-marked axle centres on the cast side frames. Solder one side frame to the brass stretcher, fit bearings and wheels to choice and solder the other cast side in place.

Chowbogie.gif

### **Carriage sides**

Now solder or glue in place by passing the hinges through the pre-etched holes in the carriage sides from the back. The carriage ends are prepared next and then joined to the sides. Place the roof cradle to one side for later. Carefully remove carriage side from fret. Take care to form the tumblehome curve below the waistline by forming it around a half inch tube or a suitably profiled piece of wooden skirting board, the amount of curve is shown by the carriage end. Now carefully remove the etched droplights with integral hinges from the etch.

Chowdoor.gif

Bend hinges as shown in the diagram and locate in the pre-etched holes in the carriage sides. Now solder or glue in place by passing the hinges through the pre-etched holes in the carriage sides from the back. The ledges formed now by fitting the droplights and hinges gives the position to fit the roof cradle. Place the commode handles in place. There are two holes per handle. Whilst modelers may prefer to attach handles after painting the carriage it is necessary to ensure they fit at this stage. On the corridor side there is an error in the etched position of the holes. The lower of the two holes is incorrect. This can be remedied easily by filling the two lower incorrect holes and drilling new as shown in the drawing using a 0.65mm drill bit.

Carefully cut door and window ventilators, fit short vents in the panel over each door and the longer vents over the corridor windows.

## Carriage ends

Carefully remove carriage ends, part 5, part 6 and both component parts number 7. Drill out the pilot holes for the end handrails and grab rails on each end. Fold part 5 to form the steps by folding each to 90 degrees and the wings to support the sides by folding each to 90 degrees. Locate the steps by fitting from the inner face of the end with pre-etched slots. Secure with solder or glue. Fold part 6 to form the wings to support the sides at the other end of the carriage by folding each to 90 degrees. Secure with solder or glue, avoid covering up the holes you have already prepared for the grab rails. Before folding parts 7 mark centres to line up the two holes at each end of the carriage floor, drill to accommodate 10 BA bolts, now fold up part 7 to make a three sided box. Solder parts 7 to the inner faces of each end, leaving enough space to fit the 0.030" polystyrene floor.

Lnwrend2.gif

Solder or glue the carriage sides to the ends, ensure squareness, tack solder first then when satisfied run solder into each corner joint. Fit handrails and grab rails from wire to the ends. Fit the roof cradle on the ledges of the droplights and inner ends, then fit the brass compartment divisions to stiffen the sides. Fit door furniture after painting. Trial fit the floor to body, adjust if required, solder 10 BA bolts in place on upper faces of each part 7.

## The Roof

The roof provided is the correct profile for the LNWR cove roof stock and is manufactured from close grained highly stable wood. Also provided is the roof covering material. This is glued on to the wood using an impact adhesive such as Evo-stick. Allow a slight overhang at each end. We are aware that many modelers have used high quality white card as an alternative. Again attach using an impact adhesive.

When the covering is securely fixed to the roof mark out the positions of the torpedo vents and roof grab rails as shown on the scale drawing. The torpedo vents are positioned in pairs over the centre of each compartment each some 8mm (2') from the carriage centre line. The deck lights were situated above the rain strip to the passenger compartment side of the double luggage doors. Lavatory water tank filler caps were positioned on the roof centre line close to the partition between the lavatory and the adjacent compartment. Having detailed the roof paint it as a separate item. Later when the carriage is ready for final assembly glue the roof in place or secure it with small self-tapping screws from underneath through the roof cradle.

## Interior fittings

The 0.30" polystyrene floor must be cut to length and two holes drilled at each end to accommodate 10 BA bolts. Use the 0.020" polystyrene to make the compartment partitions. Carefully remove the corridor etch. Fold the full length half etched line to 90 degrees. Fold the toilet ends of the corridor etch. Carefully remove the corridor side extension plates and solder them to each end of the corridor etch. Carefully attach to the polystyrene floor leaving a corridor 9mm wide. Using the bulkheads to give the profile of the compartment partitions cut the required number from the 0.020" polystyrene and glue in place. Cut the seat moulding to fit each compartment and again glue in place.

## **Corridor connections**

It is recommended that the etched corridor connections are assembled, painted and then fitted complete to the carriage ends. Please follow the instructions in the enclosed packet.

## **Finishing**

Clean and degrease your model, using white spirit before painting. For etched brass and white metal models an etching primer, such as Precision Paints PS1, is essential. Follow the manufacturers instructions bearing in mind that only a light covering is required. The model should then be painted using the livery of your choice.

After painting, clean your model using a tissue soaked in white spirit. Letter your carriage to suit your chosen period. Suitable lettering is supplied by the HMRS and paint by Precision Paint for the LNWR, LMS and BR periods. It will be appreciated that some carriages, those at the end of their useful life, would not have been repainted by their new owners and earlier liveries could have been around for many years. The London and North Western Railway used a painting cycle of 5 to 6 years and so LNWR livery survived to around 1930. The following information is offered as a guide and modelers are advised to obtain suitable photographs and consult the suggested references listed above.

### **London and North Western Railway Carriage livery**

The LNWR livery is often referred to as 'plum and spilt milk'. The lower panels and mouldings were a 'carmine lake' colour. Usually the vents were also lake. The upper panels were a shade of white created by the addition of a small amount of blue to the white base colour and the yellow effect of varnish. The carriage ends were painted chocolate not lake and the underframe and running gear black. Fixed window frame mouldings were usually indian red and the door and window drop lights varnished natural wood. On the rounds of the raised mouldings a gold coloured line (1/2") edged with a 1/8<sup>th</sup> white was applied. When applied adjacent to the carmine lake panel this white line was both sides of the gold. In contrast the white line was only on one side where the adjacent panel was white. The gold colour was made from a mixture of lemon and orange. A white line 1/8<sup>th</sup> was applied to the edges of the doors. The brake van double doors were given a slate waste panel for the marking of destinations.

The roofs were generally painted white but degenerated to a grey colour in service. The interior should be painted dark red for third class seats and darkish green for first class seats, wood brown for the compartment divisions and guards area.

We suggest the following Precision Paints:

Carriage carmine lake	P379
Carriage 'white'	P380
Lining tan	P381

### **London and North Western railway carriage lettering and numbering**

This was applied in the gold colour used for lining, Sans Serif style and edged in black. Class designation and other wording was applied to the waist panels of the doors and running numbers located just above the waste rail. Transfer crests were applied to the lower panels usually one or two to a carriage. Often monogrammed initials were also used. Suitable lettering materials are supplied by the HMRS sheet number 16.

## **London Midland and Scottish Carriage livery**

Suitable lettering materials are supplied by the HMRS, sheet number and paint by Precision Paint.

The London Midland and Scottish carriage livery was highly standardised and it is possible to be fairly sure what the livery was like for a given period. In general up to the war years carriages were painted every six or seven years. Carriages were painted crimson lake, a shade very similar to the Midland Railway shade. Until 1936 both the ends and sides were painted crimson lake but from that date the ends were painted black with the exception of driving ends of motor carriages which remained crimson lake. Detail work on the ends, steps, pipework etc was painted black. In 1946 the LMS changed the name to maroon although it is doubtful if any change in colour was discernible. However it does seem possible that the colour had become slightly darker over the years. Roofs were generally painted in the Midland style of light grey between the rain strips and black between the rain strips and cantrail. From 1933 onwards to outbreak of war the roof was specified to be a metallic aluminium type finish. The roofs quickly became dirty in service and more often than not were a muddy grey colour.

## **London Midland and Scottish lettering and lining**

Prior to the close of 1934 early 1934 all carriages were lined in Midland style. Raised beading was painted black and edged with a 3/8<sup>th</sup> gold for gangwayed stock or 3/8<sup>th</sup> pale yellow for non-gangwayed stock. These lines were edged each side with a 1/16<sup>th</sup> vermilion line. All three colours appeared on the beading and not the body panels. In all cases the lining followed the outline of the beading. Carriage ends were not lined and beading if present painted black as per the previous Midland practice.

From 1934 onwards a simplified lining system was adopted. This consisted of a 1/2" yellow line just below the cant rail, and a similar line above the tops of the windows. In addition just below the windows two 1/2" yellow lines separated by a 1" wide black line. The yellow lining had a darker shade than previously. During the Second World War lining was discontinued on the few carriages to be repainted. General touching up was the norm during this period. From 1946 lining was readopted and the yellow changed to straw.

Lettering such as LMS etc was applied to the carriage sides in serif characters 4" high. The colour was gold until 1934/5 when chrome yellow was used. The lettering was shaded in pinkish white to the left blending to dark red/brown below the characters, in turn the shading was shadow shaded to the right and below in black. Some pre-group carriages with shallow depth waist panels had 3" letting. The class type was marked on the doors 8" high rendered in gold. The LMS emblem was not used on non corridor stock and was near to the centre of the carriage. Insignia were generally placed as near to the centre of the carriage as possible in the waist panel. We suggest the use of HMRS sheet 1 for the early period, gold lining; or sheet 2 for the later period.

The following Precision Paints are suggested:

Crimson lake	P30
Carriage roof grey	P40
Carriage roof aluminium	P41
Lining gold (gangwayed stock)	P35
Lining yellow	P36
Vermilion	P37

## **British Rail**

Those gangwayed carriages which were repainted by BR were painted crimson and cream (blood and custard) and were lined. It is suggested that suitable photographs are examined as only some stock was repainted at all!

We suggest the following Precision Paints:

Carriage crimson red	P116
Carriage cream	P117
Roof grey	P131
Maroon	P108

## **Wizard Models 51L**

PO Box 225 ,  
Macclesfield  
Cheshire,  
SK10 4GB  
Tel and fax 01625 532944  
email: info @51L.co.uk

Version: 1.0  
Issued: May 2002

[www.51L.co.uk](http://www.51L.co.uk)