



The 4mm wagon and van kit

GCRD021

Great Central Railway  
London & North Eastern Railway  
British Railways

**Diagram 21 (LNE-C 138 code 5159)  
10T 5-Plank Loco Coal Wagon**



**Period: 1899 – late 1940s  
For 00, EM, P4 and S4**

**Features:** whitmetal body and underframe, whitmetal buffers with steel heads, etched W-irons.

**Required to complete:** 12mm split spoke wheels, bearings, three-link couplings, paint and transfers.

**The Prototype**

Built from 1899 to 1912, these loco coal wagons were very similar to the diagrams 19 and 20 mineral wagons, but without end or bottom doors. At least 650 were built, with around 200 surviving until the Second World War, but only 7 reached Nationalisation.

**References**

A Pictorial Record of LNER wagons Vol.1, P Tatlow pp120-121

**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. Fine emery paper (1200 grit) may be used to clean up flash marks. Carry out a dummy run before assembly. Assembly is best carried out using low melt solder, or an epoxy resin such as Araldite. For small parts use superglue. To obtain the best results a combination of several techniques will be needed.

Before starting assembly, check that the holes in the ends will accept the buffers; if not, open up to suit (nominal 1/16" diameter) using a broach for final sizing. If required, also open out the slot in the headstocks to suit your chosen coupling hooks. File off the remains of the casting feeds on the inside of the springs, as these will foul the W-irons. You may also wish to fix the door bangers to the centre of the vee at this stage whilst the sides can still be laid flat.

Fix one end to a side, ensuring the parts are square and level. Fix the second side to the second end. Bring both assemblies together and tack them to each other. When satisfied the assembly is square, make the joints. Fit the buffers in place with the ribs at the 3, 6, 9 and 12 o'clock positions. Cut the planked plasticard floor to shape to fit above the solebars and headstocks and fix it in place.

Prepare the etched brass W-irons with the bearings, wheelsets and axleboxes in place according to the enclosed instructions, using the straight bridle bars. Laminate two of the supplied plasticard packing pieces together, then glue them to the one of the W-iron support plates. Repeat for the second W-iron. Place both W-irons on the floor using the crown plate coach bolts for positioning; the wheelbase is 38mm (9'6"). Check for a 14mm rail to buffer centre height and add more packing to the floor if required to achieve this. Ensure the packing will not be in the way of the brake shoe slide bar. When satisfied, fix the W-irons to the floor. If the wagon is gently pushed along a flat surface it should run in a straight line. If not one or both of the W-irons are out of line and should be adjusted.

Bore out the holes in the brake shoe casting, vees, brake levers and lever link with a 0.6 mm drill. Thread the wire cross-shaft through one vee, the brake shoe

casting and the second vee such that the brake rod to the left-hand wheel points downwards. Leave some of the shaft protruding either side to take the levers. Secure the shaft to the vees. Balance the shoe casting between the wheels and secure it to the shaft. EM and P4 modellers can tack the shoe casting to the inside of solebar; 00 modellers will need to add a bit of packing. Fix the plain brake lever to the non-shoe side and trim off the excess shaft.

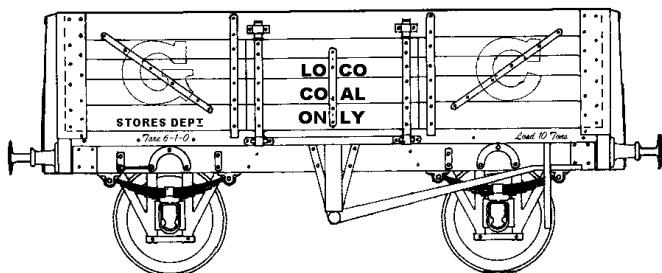
On the shoe side of the wagon, add the lever link to the cross-shaft, with the thicker end on the shaft and the link slightly below the horizontal. Fix both ends of the other brake lever to the solebar, so that the inner end hole is vertically above that on the thinner end of the lever link. Trim off the excess shaft. Form an elongated link between the brake lever and the lever link from the supplied soft iron wire.

**Finishing**

Clean and degrease the model with white spirit before painting. For the whitmetal parts, use an etching primer, such as Precision Paints PS1. The model should then 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 such as Powsides rather than waterslide or 'Methfix' transfers. After painting and lettering fit the couplings.

## Livery

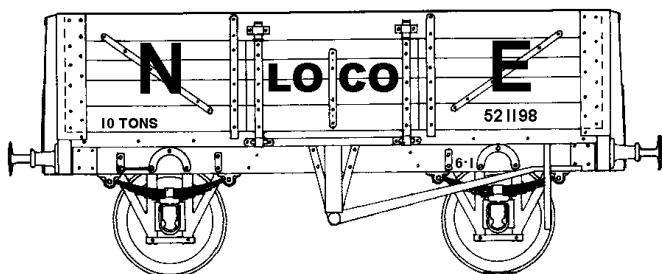
### Great Central Railway 1899-1923



Bodywork, solebars, headstocks including buffer bodies: dark grey, Precision Paint P606  
Running gear, brake gear: black  
Insignia: white

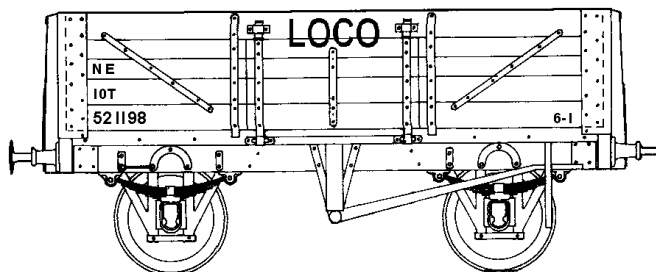
Note that the GC used cast number plates, rather than painted numbers, and that the position of "LOCO COAL ONLY" is our best guess from photos of other diagrams.

### London & North Eastern Railway 1923-1937



Bodywork, solebars: LNER grey, Precision Paint P66  
Underframe, brake levers: black  
Insignia: white, HMRS sheet 12, Old Time Workshop sheet 4702

### London & North Eastern Railway 1937-demise



Bodywork, solebars: LNER grey, Precision Paint P66  
Underframe, brake levers: black  
Insignia: white, HMRS sheet 12, Old Time Workshop sheet 4702  
Note that the position of "LOCO" is our best guess from photos of other diagrams.

It is not thought that any wagons would have survived long enough to receive BR unfitted wagon livery.

### Sample Number

21198

The LNER added 500,000 to the GCR number.

A later version of these assembly instructions may be available on the Wizard Models website.

## Wizard Models

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Wizard Models also stocks a wide range of components and other necessities for the modeller in 00, EM and 18.83mm.

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