



## **N Gauge Society Kit 47 BR (Ex-LMS/LNER) Highfit Twin Pack NGSK0470**



*Ideal kit for beginners*

Kit contains plastic parts, one-piece plastic chassis, and wheels to complete two wagons.

*To complete this kit you will need: Liquid Plastic Cement, Paint, Transfers & Varnish*

*No Soldering Required*

### **The Prototype**

The basic 5 plank open goods wagon was built in large numbers by all railway companies prior to the 1923 grouping, by the big four themselves after this date, and it continued with British Railways after nationalisation. The wooden ends were susceptible to damage from heavy loads moving during shunting so in the late 1920s, the LMS developed the distinctive wood lined corrugated steel ends. The LNER's answer in 1945 was an all steel body (albeit still with a wooden floor). Both designs were initially manufactured without vacuum brakes, but as British Railways continued making them to more or less the same design, they started to introduce vacuum brakes, and retrospectively started fitting them to the early builds. Some of the robust LNER wagons even survived long enough to be converted to air brakes.



*LNER design (left) B487176 OHV HIGH at Chester C&W 27/08/1979 and LMS design (right) B485963 OHV at Gloucester Llanthony 26/05/1978. Both images © Paul Bartlett and reproduced by kind permission.*

### **Getting Started**

First, read the instructions thoroughly all the way through and be sure you are confident that you have identified all the parts. It is recommended that you adhere to the suggested order of assembly, though with experience, you may choose to deviate. The kit has been designed to cover two types of van; decide before you start which one you wish to build.

### **General Notes On Construction**

Naturally, the N Gauge Society wants you to achieve the best results you can. These simple guidelines should help:

- Read the instructions through fully before you begin
- Use a sharp knife to separate the parts from the sprues
- Clean off any flash or moulding pips with sharp knife and wet 'n' dry sandpaper
- Check fit before gluing
- Use a small paint brush to sparingly apply liquid plastic cement when joining parts
- Photographs of the prototypes will help you

***But above all .... TAKE YOUR TIME!!***

## N Gauge Society Kit 47 – BR (Ex-LMS/LNER) Highfit Twin Pack

These wagons could be found carrying virtually anything that could not be fitted into a van – timber, crates, bricks, wheelsets, etc., and in the 1960s many found their way into china clay and sand/shingle traffic. Inevitably, towards the end of their career, many drifted into the engineers' fleet where their untidy state would make an interesting model.

For such simple wagons, there are numerous subtle differences to be found over the years, though this is perhaps understandable given the quantities in which they were built.

The distinctive dimples on the outside of the LNER all steel open housed sheet hooks on the inside for holding ropes to secure loads (since unlike a wooden body, nails could not be hammered in where and when required!). These were a later addition, and the early LNER built wagons did not have the dimples (easily represented on the model by carefully scraping them off with a sharp knife). Some early examples were built with a wooden door, while some of the later steel doors were reinforced with additional strips (easily represented on the model by using microstrip).

Many of both types were often fitted with a sheet rail, and this can be represented with a piece of wire, or even for the LMS version, swap the ends with the ones in N Gauge Society Kit 36 BR Shock Open & Van Twin Pack.

### Livery and Lettering

LNER livery was light grey for unfitted wagons and light bauxite for fitted wagons. Lettering consisted of NE above 13T above the wagon number, all left justified on the bottom left of the left-hand side. Some were additionally labelled 'HIGH STEEL' / 'NOT TO WORK' / 'OFF LNE SYSTEM' on the left. The tare was located on the bottom right of the right-hand side; vacuum fitted wagons were labelled 'XP' above 'WB 10-0'. LMS livery was their mid-grey freight colour for unfitted wagons though later examples were unpainted wood with black painted steelwork, the simple lettering being '13T LMS' and wagon number in a line on the bottom plank on the left-hand side.

British Railways livery for both wagons was similar to the pre-nationalisation ones, with the continuation of grey for unfitted wagons and bauxite for fitted wagons. The shades of grey and bauxite changed (to a lighter grey and a darker bauxite) in 1964 but in practice, many wagons could be seen in their original colours long after that date. Lettering was generally '13T' above the number on the left-hand side and tare on the right-hand side, with 'XP' above 'WB 10-0' above the tare on fitted wagons. After 1964, data panels were introduced with number, weight and (if appropriate) TOPS code and 'XP' in a white box on the left-hand side and a black backed data panel on the right-hand side.

At the end of revenue earning service and upon transfer to the engineers' department, once again, the former livery was initially retained, usually with an update to the number and TOPS code to reflect engineering use. Additional lettering could be the letter 'E'. The lettering 'D C E' / 'LONDON' in yellow was found on the door of the steel Highfits. Those wagons that did receive repaints for engineering would have received olive green. Whatever livery they wore, their external condition deteriorated even further in engineering use!

The small rectangle on the left-hand side of the LNER wagon and on the end of both wagons was a chalkboard (for shunters to add destination instructions) and should be painted black.

The following is not an exhaustive list, but gives typical examples of livery and condition. Key: P= Page; PI = Plate.

- *British Railway Goods Wagons In Colour* by Robert Hendry: P43 (LNER)
- *British Railways Wagons (The First Half Million)* by Don Rowland: P32 PI19 (LMS)
- *Railways In Profile Series No 1 (British Railway Wagons – Opens & Hoppers)* by Geoff Gamble: P18 PI 15 (LNER); P25 PI 29 (LMS); P25 PI 30 (LNER).
- *Working Wagons Volume 1 1968 – 1973* by David Larkin: P41 (LMS & LNER)
- *Wagons Of The Early British Railways Era (A Pictorial Study Of The 1948 – 1954 Period)* by David Larkin: P13/19/21 (LNER); P17 (LMS).
- *Wagons Of The Middle British Railways Era (A Pictorial Study Of The 1955 – 1961 Period)* by David Larkin P13 (LMS).
- *Wagons Of The Final British Railways Era (A Pictorial Study Of The 1962 – 1968 Period)* by David Larkin P8 (LMS & LNER).
- *LNER Wagons – An Illustrated Overview* by Peter Tatlow: P23/4 (LNER) including diagram.
- *Official Drawings Of LMS Wagons No 1* by RJ Essery: P40/1 (LMS) including diagram.
- *British Railway Modelling (May 2001) – Modern Image Freight 1950s Style Part 4* by David Larkin (LMS)
- *British Railway Modelling (June 2001) – Modern Image Freight 1950s Style Part 5* by David Larkin (LNER)
- *Model Railways (January & February 1990) – LNER Opens* by Eric Kemp

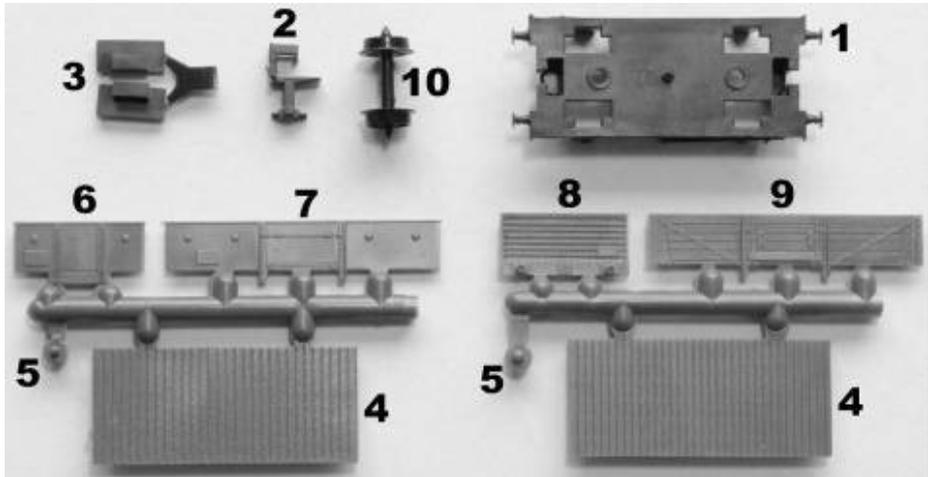
## N Gauge Society Kit 47 – BR (Ex-LMS/LNER) Highfit Twin Pack

- <http://paulbartlett.zenfolio.com/> 'Paul Bartlett wagon photographs' Paul Bartlett's useful web site (LNER & LMS)

### Parts

Four sprues (two of each type) are packaged with this kit. Unpack the separately packaged Peco chassis packs. Use the following photograph and table to identify all the parts. Keep all the parts in a container or re-sealable bag to avoid loss and only remove parts from the sprues as you need them.

Part Number	Quantity	Description
1	2	Chassis
2	4	Coupler
3	2	Coupling Retainer (x2)
4	4 (2 spare)	Floor
5	4 (2 spare)	Vacuum Cylinder
6	2	LNER End
7	2	LNER Side
8	2	LMS End
9	2	LMS Side
10	4	Wheels



### Construction

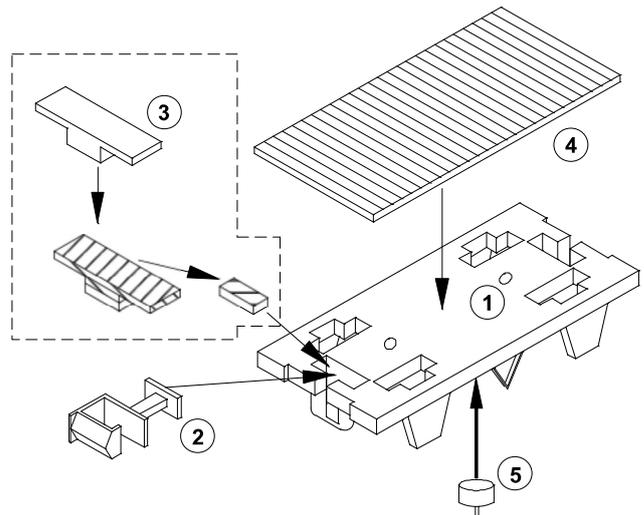
Only a few basic tools are required – a sharp craft knife, wet 'n' dry sandpaper, and tweezers (preferably fine point):

- Construction is the same for both the LMS and LNER versions unless noted.
- A liquid polystyrene glue such as Mekpak is best, using a small paint brush to apply small amounts to joints.
- It may be easier if the body and chassis are left as separate units for painting and then glued together after painting.

**NOTE** Some details are omitted from some diagrams for clarity.

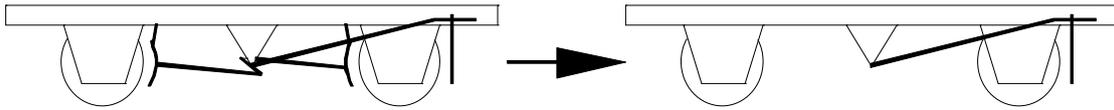
### Chassis

1. Remove the two round locating lugs on top of the Peco chassis (**Part 1**) and any trace of the injection point in the middle, so that it is flat. Test fit the floor (**Part 4**) to make sure it sits flat on top of the chassis (but **DO NOT GLUE!**) The lugs underneath locate into the coupling pockets on the chassis.
2. Remove the floor. Put the couplings (**Part 2**) into the coupling pockets at each end of the chassis. Refit the floor and check that the couplings sit level and move freely. If the couplings sit up at an angle, remove the floor and carefully sand the bottom of the lugs. If the couplings droop downwards, remove the floor and add a shim of thin plasticard to the bottom of the lugs. Repeat the appropriate remedial action until the couplings sit level. Do not glue the floor on at this stage.
3. *This step is an alternative method of retaining the couplings.* Cut the wide flat tops off the Peco coupling retainers (**Part 3**) leaving a plug 1mm in height, then put them into the coupling pockets. Make sure that the couplings sit level and then apply a very small amount of glue to the top of the coupling retainers. Cut the lugs off the floor pieces leaving just 0.5mm which will be enough to easily locate the floor in the correct position on the chassis. Do not glue the floor on at this stage.



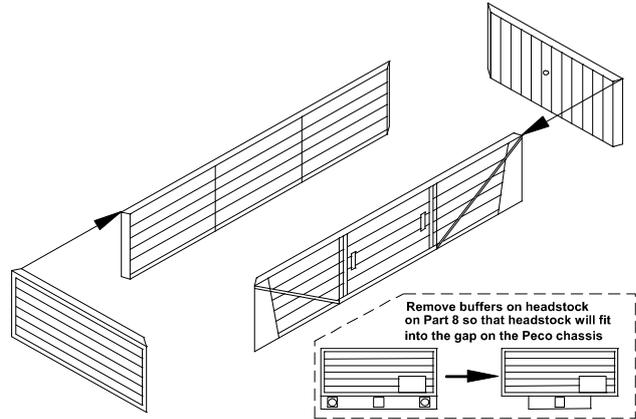
## N Gauge Society Kit 47 – BR (Ex-LMS/LNER) Highfit Twin Pack

4. Glue the vacuum cylinder (**Part 5**) under the chassis over the 'Pe' of Peco (for fitted wagons only). For unfitted wagons, instead remove the brake shoes and linkages (but not the V-hanger and brake lever) from *one side only*.



### Body

5. Glue an LNER end (**Part 6**) to an LNER side (**Part 7**) to form an L-shape. Glue an LMS end (**Part 8**) to an LMS side (**Part 9**) to form an L-shape. The corners of each part have a 45 degree mitre to make a clean corner, and make sure that the corner is square. Also make sure that the parts are the right way up! Repeat for the other side and end to make another L-shape for each wagon.
6. Glue the two L-shapes of each wagon together to make a box, checking that all the corners are square.
7. Glue the floor (**Part 4**) inside the body. If it will not fit first time, use wet 'n' dry sandpaper to gently sand the edges until it fits. The bottom of the floor should be flush with the bottom of the body.
8. The basic body of both wagons is now complete and can be glued to the chassis.



**NOTE** If you use an uncoupling system such as the Peco magnetic uncoupling lifter arms, you may need to reduce the height of the headstock pieces in order to ensure that the couplings lift far enough.

### Painting And Transfers

9. The secret to a good finish is in preparation and planning ahead. Paint the wagon body grey, bauxite or olive green as appropriate; the inside of the LNER wagon a 'rust colour'; the inside of the LMS wagon a light brown to represent unpainted weathered wood; chalk boards black. While the chassis is already black, it will benefit from a coat of matt black to remove the plastic finish. Give the wagon body a coat of gloss varnish as this will help the transfers to adhere.
10. To apply transfers, soak them in a dish of warm water for a few seconds, drain off the water, lay on a flat surface and then use the tip of a cocktail stick to check that the transfers will move free of the backing paper – if not, return to the water and repeat this step. Once the transfer moves, place it on the model and use the tip of the cocktail stick to hold one end to the model while pulling the backing sheet away with tweezers. There should be time to make a few adjustments as necessary.
11. Leave all transfers to dry for half an hour and then apply a 'decal setting solution' (such as Micro-Sol) if required which will help the transfers to lie and form over detail such as planking and the corrugated ends. Then leave overnight before applying a coat of matt varnish to seal the transfers to the model.
12. Finally, fit the wheels – place the end of one axle in an axle cup on one side, then place the other end over the axle cup on the opposite side. Use a small screwdriver to gently ease the chassis away from the wheel until it drops into the axle cup. Check for free running – sometimes, the axles can be a bit stiff, but swapping the axles or reversing them can cure this.

**NOTE** The Peco chassis packs are often supplied with spoked wheels which are incorrect for these wagons although it's not really noticeable, however, the correct solid wheels are available separately.

***Congratulations! Your model is now complete.***