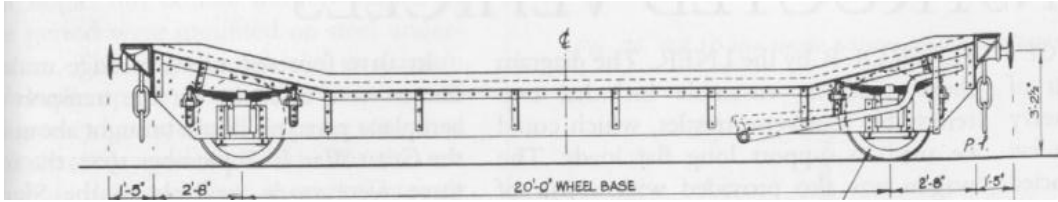


## Masterclass Models

### GE/LNER Mac K/BR diagram 2/244 14T Lowmac instructions



#### Historical Notes

The Great Eastern Railway began construction of 14 ton low machinery (Lowmac) wagons to diagram 25 in 1886. By 1914 a total of 162 examples had been constructed to this and the similar diagrams 50 and 75 (plus another 3 with deeper frames of 25T capacity to diagram 27 – not covered by this kit). All came into the possession of the LNER who coded them as Mac K (diagrams 6015, 6033 and 6055). At nationalisation in 1948, 83 still remained in service. BR did not create new designs for Lowmacs, instead constructing additional builds of designs from the Big 4, remarkably one of which was the GE Lowmac, which was by this time a design already over 60 years old. 52 were constructed to diagram 2/244, with code Mac EK.

#### Numbering schemes:

GE:	Diagram 25 (built 1886-92)	21903-22/33-52
	Diagram 50 (built 1899-1905)	21651-730/954-63/91-22000
	Diagram 75 (built 1913-14)	21603-24
LNER:	GE numbers prefixed by 6	e.g. 621903
BR:	LNER number prefixed by NE	e.g. NE 621620
	BR built examples (1953-4)	B905020-905071

#### Assembly instructions

##### Parts required

1 x	Lowmac etch
4 x 2-041	Rolling stock axle bearing cups
2 x 2-201	5.25mm plain disc wagon wheels (GE built wagons had spoked wheels but these are not available and are not visible behind the frames in any case).
4 x 2-443	Plain wagon buffers (or similar according to prototype).

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

##### Assembly

1. Cut out the main underframe unit (part 1) and solder four axle bearings into the recesses provided. Do not fold up the underframe unit at this stage.
2. Using the bearings as locators, solder the solebar overlays (part 2) on to the underframe unit, ensuring the slots in the two parts line up.
3. Solder the four layers of axlebox overlay (parts 3-6) onto the assembly. Please note that these parts are spaced on the etch so that both axleboxes on one side can be done at once. **Therefore only cut out the axlebox layers after you have soldered them to the underframe assembly.**
4. Now fold up the underframe assembly, sides first and then ends. Insert the wheels into the bearings and check for free running. Remove them again.
5. If necessary, clear the slots in the solebars using a piece of scrap etch. Insert the main (part 7) and end (part 8) cross members into their respective slots, ensuring they are sitting down snugly.
6. Fix the bufferbeams (part 9) to the ends of the underframe, ensuring they are sitting flush against the ends. Add the coupling housing cover (part 17) and coupling hook (part 18). Fitting DG style couplings to this wagon may require some ingenuity and a large slot cut in the bufferbeam!
7. Bend the sub-floor (part 10) to match the profile of the underframe and solder in place.
8. Choose whether you will use the early (part 11) or late (part 12) floor. The early floor with longitudinal planking is shown on drawing of the wagons, but the author has only seen pictures of the later version with transverse planking, and certainly by the time GE diagram 75 was constructed in 1913, the later version was in use.
9. Bend the floor to match the profile of the underframe and solder in place, ensuring it is centralised – the eight holes in floor and sub-floor can be used for this purpose. The buffer covers at the ends have to be bent to sit horizontally, and will be a snug fit over the bufferbeams, so some filing to make them fit may be needed.
10. Solder the floor sides (part 13) in place.
11. Add the brake ratchets (part 14) in the holes provided at the right hand end of the solebars.
12. Decide whether early (part 15) or late (part 16) brake levers will be fitted. Fit them to the holes in the solebar using a piece of 0.3mm brass rod, and solder them to the brake ratchets.
13. Fit buffers.

## References

1. Tatlow A Pictorial Record of LNER Wagons OPC 1976 p96
2. Tatlow LNER wagons Vol 1 LNER Southern Area Wild Swan 2005 pp211-213
3. British Railway Wagons - the first half million, Don Rowland pp122-23
4. <http://gallery6801.fotopic.net/c380615.html>