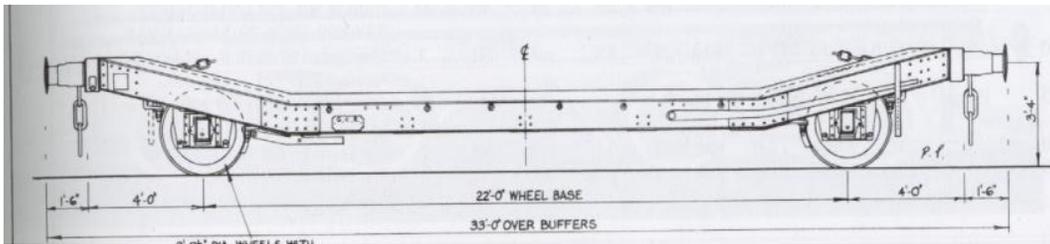


Masterclass Models
GC/LNER Mac N/BR 20T/25T Lowmac instructions



Historical Notes

The 20T Great Central Lowmac design, of which 20 were built in 1913, were classified as Mac N after the grouping. The LNER continued the design with the addition of vacuum brake and steel bufferbeams as the Mac NV, and in the Second World War the solebars were deepened to produce the 25T Mac PV. The LNER built 30 for the LMS, and the GWR also built 15 for itself at Swindon. Finally BR built 215 further examples as various diagrams, 2/243 being the most numerous. They included unfitted, vacuum and Westinghouse braked examples, and were by far the most common BR Lowmac design.

Numbering schemes:

| Company | Diagr | Code | Year | Number | Numbering and Notes |
|---------|-----------------------|-----------------------|--------|--------|---|
| GC | 109 (LNER 5129) | Mac N. 20T | 1913 | 20 | 37733-52. LNER numbers prefixed by 5. Last example withdrawn in 1958. Wooden bufferbeams. |
| LNER | 143 | Mac NV. 20T | 1939 | 55 | 230913-230967. Vacuum fitted. Steel bufferbeams |
| LNER | 173 | Mac PV. 25T | 1943-5 | 80 | 260848-260877, 263274-263298, 278484-278508. Vacuum fitted. No side lip. |
| LMS | P54A | UIR. 25T Lowmac MO | 1944 | 30 | 700700-700729. Lot 1342. Built by LNER. No side lip |
| GWR | G42 | Loriot P | 1943-5 | 15 | 42354-42368. Lot 1448 |
| BR | 2/242 | Lowmac EP, SC | 1950 | 38 | B904500-904537. Same design as Mac PV (vacuum fitted) No side lip |
| BR | 2/243 | Lowmac ER,WP,MS | 1951-6 | 126 | B904538-565,572-629,642-661, 675-694. Built Swindon. Unfitted |
| BR | 2/246 | Lowmac WBB, ES | 1953-4 | 10 | B904566-571, 630-633. Vacuum fitted |
| BR | 2/247 | Lowmac EU | 1955 | 13 | B904662-674. Westinghouse braked for continental working |
| BR | 2/253 | Lowmac MS,SH,WP | 1958-9 | 28 | B904695-722. Vacuum fitted |

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
- 4 x 2-443 Plain wagon buffers (or similar according to prototype)
- 2 x TBD. Vacuum cylinders (if fitted 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 and fold up the underframe unit (part 1). Cut out the floor (part 2) and fold it to match the underframe. It is important to get a good match.
2. Choose the solebar overlays to match your chosen prototype (part 3a, 3b or 3c). Solder in place, ensuring they are centralised.
3. Cut out the solebar lower lips (part 4), fold over the mounting tags, and fold to match the solebar overlays. Solder in place.
4. Solder in place on the overlay the appropriate solebar plates (part 5a or 5b) and brake lever plates (part 6a (LNER) or 6b(BR)). There is no brake lever plate required for the GC lowmac.
5. Cut out and solder in place the inner bufferbeams (part 7) and bufferbeams (part 8). Add the buffer bases (part 9), drawgear covers (part 10) and coupling hooks (part 11).
6. If appropriate for your prototype, add the sides (part 12) to the edge of the floor.
7. Cut out the floor end sections (part 13) and lower sections (part 14). Solder them together. If the sides have been fitted, the floor ends will need thinning slightly to fit between them. Form the ends of the sections to match the profile of the floor. Solder in place.
8. Cut out the axleguard assemblies (part 15). Do not fold up at this stage. Fit the top hat bearings. Solder in place the axlebox layer 1 (part 16). Note these are handed and have a small hole to align them correctly. Fold up the end of this part to form a rectangular section. Add the other axlebox layers (part 17 – note there are spares of this part)
9. Now fold up the axleboxes, brakes and V hangers. Fit 5.25mm diameter wheels, check they run freely, and remove them again.
10. For the GC built wagons, remove the outer brakes and V hangers, and ignore sections 11-13. For other types, fold up the brakes and V hangers.
11. Fold up and fit the brake stretchers (part 19). Fit the vacuum cylinders.
12. If building a vacuum-fitted wagon, fold up the cylinder mount (part 18) and solder into the slots on part 15. Fit the vacuum cylinders.
13. Thread 0.3mm brass rod into the V Hangers, and fit brake lever rodding (part 22), brake push rodding (part 21) and vacuum cylinder linkage (part 20). Solder everything in place.
14. Solder the completed assemblies to the underside of the floor.
15. Choose the appropriate brake levers (part 23a or 23b). Fold up the brake lever ratchet into a box shape. Solder the lever in place on the solebar.

References

1. Tatlow A Pictorial Record of LNER Wagons OPC 1976 pp98-99
2. Tatlow LNER wagons Vol 1 LNER Southern Area Wild Swan 2005 pp142-143
3. British Railway Wagons - the first half million, Don Rowland pp122-23
4. The LMS Wagon, Essery and Morgan David and Charles 1977 p97
5. GWR Goods Wagons, Atkins Beard & Tourret pp157-158
6. <http://gallery6801.fotopic.net/c291057.html>
7. <http://gallery6801.fotopic.net/c228657.html>
8. <http://gallery6801.fotopic.net/p504907.html>