

Welcome Wagons WW13

16 ton Mineral (2 & 4 shoe brake)



HISTORY

The 16T open mineral wagon was the most numerous type built by BR from 1950 to 1957, the first diagram being 108, although there was 16T steel opens to Diagrams 101,102,103,104, but these wagons were built for the Ministry of Transport and then taken into BR ownership.

As for the Diagram 1/108 these were all welded bodies with side and end doors, built by numerous builders and were mostly built without vacuum brakes, variations with some lots had top side doors and some with bottom doors in the floors. Under the 1955 Modernisation Scheme it was decided to fit Vacuum brakes but was not fully carried out due to complications in coal mines and discharge points. And so this fleet of unfitted Morton two and four shoe brake gear continued to form the bulk of the fleet, with some twenty and a half thousand being built.

The running numbers and lot numbers are too varied to list here, but the first wagon number B70400 to B594749 only had a few gaps in the numbering.

A good ref. book for this particular wagon is (WAGONS OF THE MIDDLE BRITISH RAILWAY ERA) by David Larkin, ISBN 978-1-905505-7. As well as the ones listed below.

Ref. Books: -

British Railways Wagons the First half million

By Don Rowland.

ISBN 07529 03780

British railways Goods wagons in Colour

By Robert Hendry.

ISBN 1 85780 094X

British Railway wagons, open and hoppers

By G. gamble

ISBN 1 900298 06 6

British Railway Wagons No.1, Open & Hoppers

ISBN 1900298 015

Web Reference

<http://paulbartlett.zenfolio.com/brmineral108internal/h12e9fc4e#h2fcccec>

Parts List

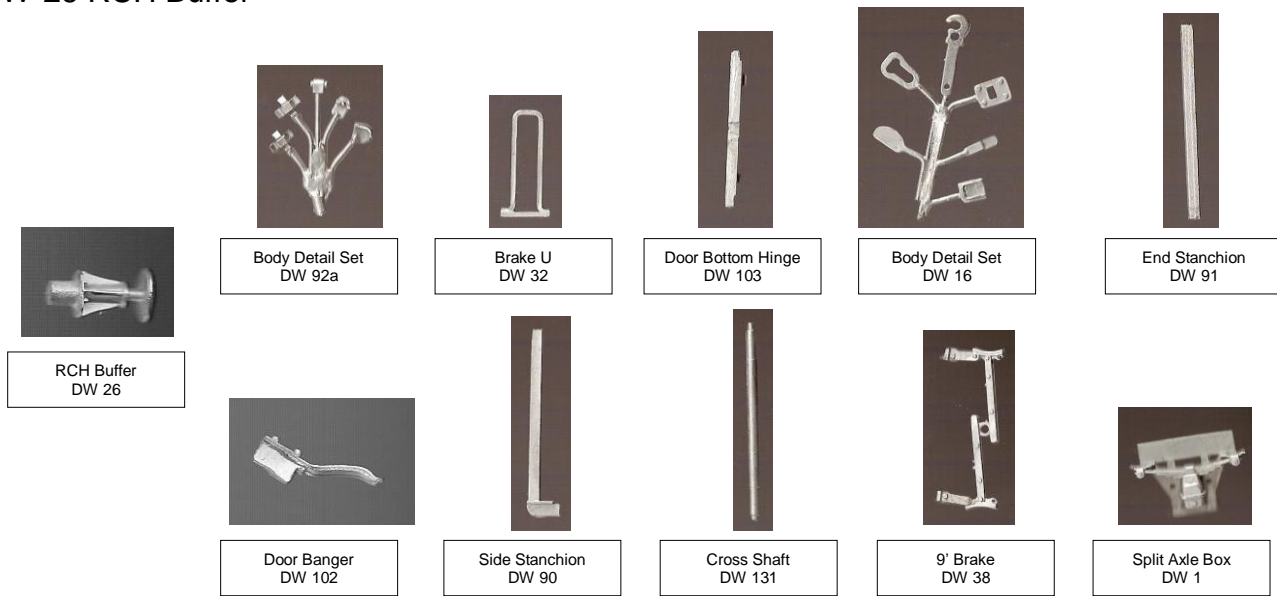
Etch
Coupling springs x 2
Spilt pins x 2

Instructions
Coupling links x 4

W/M castings

DW-1, Split Axle Box x 4
DW-38, 9' Brake x 2
DW-90, Side Stanchion x 8
DW-91, End stanchion x 2
DW-103, Door bottom hinge x 2
DW-26 RCH Buffer

DW-16, Detail set x 2
DW-32, Brake U x 4
DW-131, X Shaft x 8
DW-102, Door banger x 2
DW-92a, Body detail set x 4



ITEMS REQUIRED TO COMPLETE, 2 x sets of 3'1" 3hole wheels sets, Slaters 7122 or Welcome Turned Steel Insulated Wheels c/w ball races.

Note: - Some parts of the kit will require some small amount of filing to achieve a snug fit of parts, i.e. the ends of solebars and cross members.



Instructions

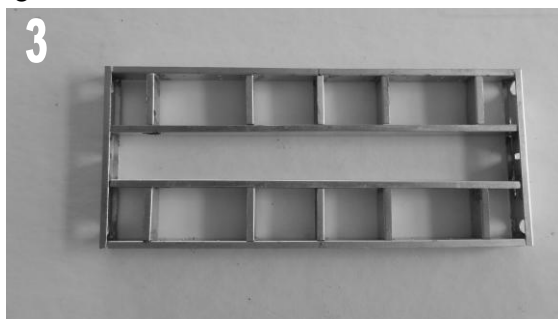
1. Take body (1), fold up top lip through 90° then fold again through 90°. Fold up sides and ends; solder up seems to form a box. **Photo 1**



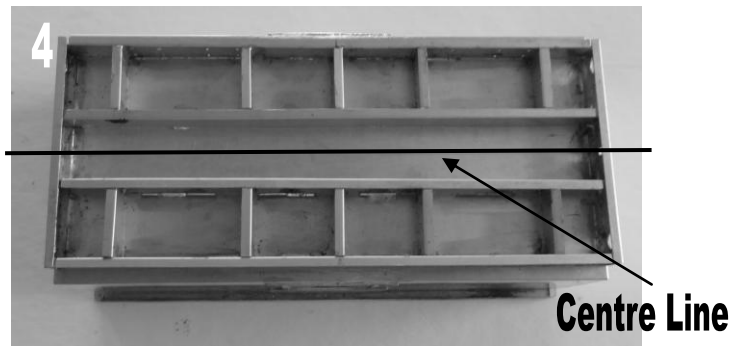
2. Now fit door overlay (19) 1 each side centre of body. **Photo 2**



3. Take solebars (2) push out rivet detail and fold to form  shape, now take inner solebars (3), buffer beams (4), and cross members (5) ten of, fold up to form  shape.
4. Fit solebars to buffer beams so the outer edge of solebars is flush with ends of buffer beams.
5. Take one cross bar and solder to inside face of solebar on wagon centre line 1 to 2 each side (58mm from outer edge of buffer beam).
6. Now fit four cross member (5) on inside face of solebars with the open part of the U towards the buffer beams at 12mm from the face of buffer beam.
7. Now repeat with the last 4 cross members, this time 39mm from buffer beam with the open part of the U towards the centre of the wagon.
8. Now fit the inner solbars (3) up against cross members (5) and between buffer beams. Make sure all is square. **Photo 3**



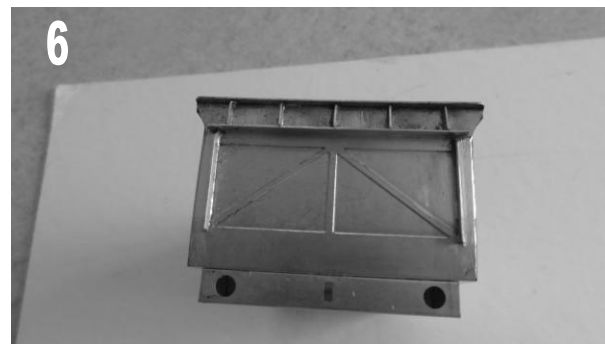
9. Draw a centre line down the length of the underside of the wagon floor. Then solder the chassis frame to the wagon floor ensuring the coupling holes in the buffer beam are on the centre line. **Photo 4**



10. Fit detail 6-11 to the door end of the wagon.



11. Take end top frame (6). Remove the support brackets (triangle shapes) and fit these to the top edge of the wagon under the lip. **Photo 5**



12. Using the pattern on the etch as a guide fit the two side bars (9) with sloping tops upper most. **Photo 6**

13. Fold up end lower frame (7) and fit to the lower part of the door under the side bars. **Photo 7**



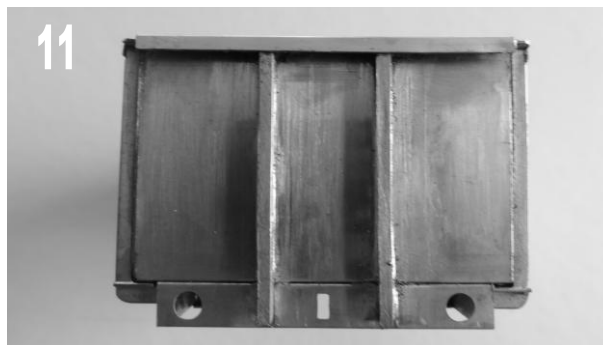
14. Now fit the centre rib (11) to the middle of the door and then top rib (8 longer end) between the side bars. **Photo 8**



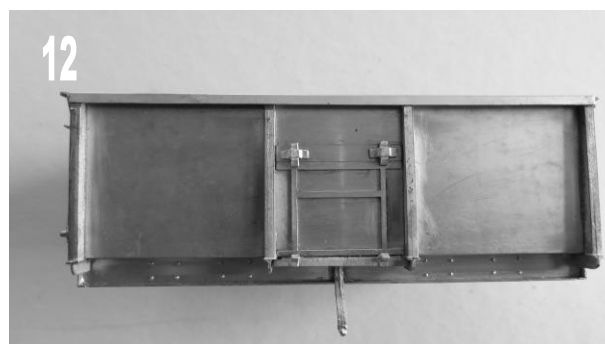
15. Next fit the two diagonal parts (10 longer end) to the wagon door and then fit the 3 door hinge castings and 2 door catches from the detail set DW92A. Fashion 2 handles from the 0.7mm wire supplied and fit to the base of the door. **Photos 9 & 10**



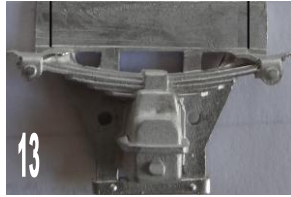
16. Now fit the two end stanchions DW91 to the non door end of the wagon and also the 4 side corner stanchions DW90. **Photo 11**



17. Take the door banger DW102 and attach to the solebar on the centre line of the door. Then fit the bottom door hinge rail DW103 to the underside of the body so it aligns with the doors. Now take the remaining side stanchions DW90 fit to the body side up against the hinge rail and door overlay etching and locate under the top lip. **Photo 12**



18. Fit buffer beam detail, coupling plate, couplings and RCH buffers. **Photo 13**



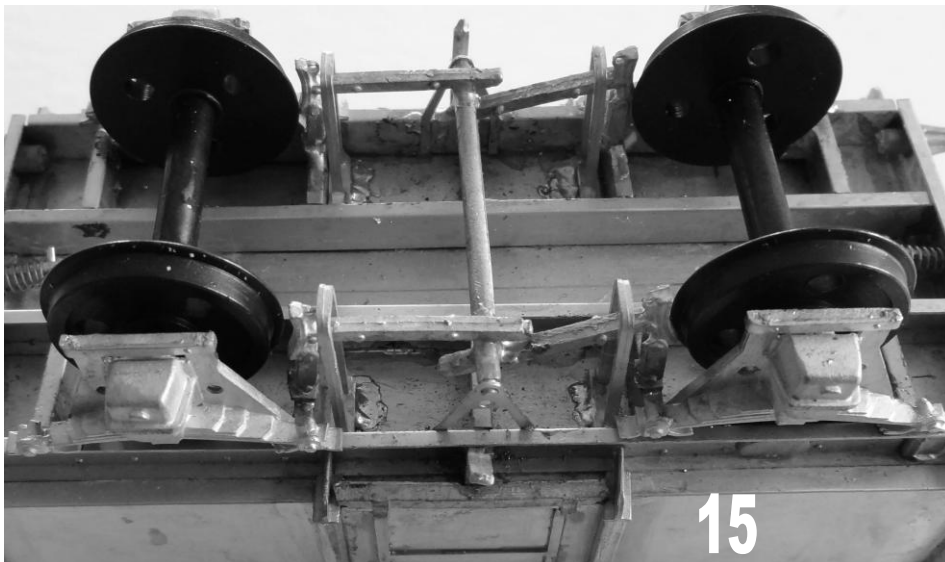
19. Take the axle boxes drill out and fit the bearing that came with your wheel sets. Remove 2mm of material from each side of axle box top plate to allow them to fit up against the solbar. **Photo 14** Then fit to chassis aligning to the rivet detail on solbar. Also fit the builder's plate and load clip DW16 to solbar. Refer to Web Reference for photographs.

20. Now fit V hangers (13)(14) on wagon side centre line

21. Remove the brake pin down bars (16) from the etch, fold to shape and fit to the solbar. Then add hand brake handles. (15) Note the double hole brake handle fits into (14).

22. Now fit the brake cross shaft DW131

23. Take one of the 9' brake sets DW38 and carefully cut in half at the cross shaft hole. Thread over one of the halves the brake safety U DW32, then fit the brake assembly to the cross shaft and to the cross member (5) Refer to **photo** for positioning of brakes. Now repeat other end and then carry out the same procedure with the other side of the wagon if you require 4 shoe brake version **Photo 15**



24. Finally fit the axle box tie strips (18) these locate between the bases of the w irons.

25. Now fit the body top corner plates from the casting sprue DW92a.

26. Give the model a good wash in soapy water to remove any trace of flux and when completely dry apply your chosen paint.

The finished model.



Etch Key

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|-------------------------------|--------------------|------------------------|-----------------------|
| 1. Main Body | 6. End Top Frame | 11. Centre Rib | 16. Pin down Bars |
| 2. Outer Solebars | 7. End Lower Frame | 12. NOT USED | 17. Brake Links |
| 3. Inner Solebars | 8. Top Rib | 13. V Hanger (1 hole) | 18. Axle Box Tie Bars |
| 4. Buffer Beams | 9. End Side Rib | 14. V Hanger (2 Holes) | 19. Door Overlays |
| 5. Chassis Cross Members x 10 | 10. Diagonal Rib | 15. Brake Handles | 20. NOT USED |

