

Midland Railway

D418 Fruit milk van 25' wb van

Prototype information

The D418 fruit and milk was a three compartment van of which some 25 were built in 1893 to drawing 970. They were numbered 517-41. All vehicles were originally oil lit and it may be that some fruit and milk vans were converted to gas, probably between 1892 and 1902, when the 6 wheeled carriage conversions were undertaken. Parts for gas lighting are included. It is likely that torpedo ventilators were added at some stage after 1902, two per compartment either side of the gas lamps.

It is known that instructions were given in 1904 for handbrakes to be fitted to non-passenger coaching stock, presumably this instruction included fruit and milk vans but no photographic evidence has come to light. A handbrake has been provided based on other NPCCS vehicles. This would require the removal of parts of the steps to give access to the lever. The actual date of fitting if at all is not known.

Eleven vans survived to 1933 but they were extinct by September 1944, with the exception of a departmental van, which survived to 1956. Numbers were as follows:

	MR	LMS 1923	LMS 1933
Fruit & Milk Van	517-541	1569-1593	38437-38460

Livery details

Body sides and ends, crimson lake, mouldings black with gold lining on edges, yellow from about 1900, no lining at the extreme edges, no lining on the end mouldings. Droplight frames were probably mahogany when new. Solebars, headstocks and buffer bodies crimson lake lined in gold or yellow until about 1902 then unlined red-brown until 1912, then finally black. Wheel centres indian red. All other fittings below the solebars, black. Roof and fittings, light grey. Lettering and insignia, see diagrams for placing. We have no information at present regarding LMS insignia on these vehicles, but the probability is that LMS in 3" letters and the number in 3" serif figures would have appeared in the waist panels, the LMS towards the left and the number towards the right. The transfers are of the Pressfix type.

References

Midland Railway Carriages Volume 2, R E Lacy, G Dow P425
Midland Carriages, D Jenkinson, R Essery, P159 and P167

Assembly

Packet 1

Underframe castings

Vacuum pipes 2 off
Steam pipes

Gas cylinder, 2 off
50mm length chain
Vacuum cylinder 2 off

Miscellaneous

0.33mm wire, x1
0.7mm wire, x0.5
10BA nuts and bolts x 4

Packet 2

Axleboxes 4 off

Transfers

Packet 3

Roof castings

Oil lamps 3 off
Torpedo vents, 6 off

Oil lamp socket covers 3off
Gas lamps 3 off

Packet 4

Set sprung round buffers

The underframe fret includes parts for the earlier drawing 348 underframe which was only used for the earlier D529 all brake van.

- 1) Floor, raise the rivets on the w-irons and end of headstocks and then bend to shape
- 2) Solebar detail, V-hanger side, (Note parts 1a and 2a apply to Brake Van only). Raise rivets and fix to floor.
- 3) Solebar detail, raise rivets and fix to the other side.
- 4) Buffer beam detail, raise rivets by coupling hook and fix in place at each end.
- 5) Buffer base, fix in place and fix buffer bodies.
- 6) Brake Block detail, left.
- 7) Brake Block detail, right.

Fit these to parts 8-11 on the side of the bend lines.

- 8) Brake hangers, fixed axle guard end. Fit to the floor, the locating tabs fit into the slot in the centre of the w-irons.
- 9) Brake linkage hanger. Fit to the floor between the W-irons with flap above the floor and located lengthwise in the slot.
- 10) Pivoted W-irons, raise rivets and bend to shape. 11.Brake hangers, fit to pivoted W-irons. Pivot part 10 to the floor by folding down the flaps and passing a length of wire through the matching holes, thus securing the assembly to the floor and allowing it to pivot. The brake linkage hanger(part 9) goes on the outer side of the axle for Drg.348 and on the inner side of the axle for Drg.456.
Brake shaft. Cut from wire a length of 16mm for Brake van, 17.25mm for Parcels or Fruit and Milk vans if fitted with external handbrake. Before fixing, thread on parts for brake gear as required, read notes to parts 12, 12a, 14, 15 and 16.
- 12) Brake lever and pushrod for standard underframe, drawing.456. Runs along the centre line towards the pivoted axleguard end. Lever goes upwards towards the floor from the shaft.
- 14) Brake cylinder lever fruit and milk van. Fix to brake shaft and brake cylinder, which fits under the floor in the marked circle.
- 15) Brake cylinder lever, brake van. Use instead of part 14 if constructing your underframe to drawing 348, ensure the cylinder is placed 4mm along from the marked circle.
- 16) Hand brake drop arm, brake van. Fit to brake shaft and to the locating slot in the centre of floor (drawing 456).

13. and 13a. Hand brake lever and Lever stirrup. Use if required on the Fruit and Milk vans. Bend the stirrup to shape, see sketch, then fix to solebar. Thread the lever through the stirrup, bend the end of the lever around to form a loop.
- 17) Lower step supports. Raise the rivets on the solebar brackets and bend to shape.
- 18) Lower steps, these make the steps into "double thickness &', bend to shape and fit to parts 17, then fit into place on the van. If you intend fitting a hand brake the lower step on the V-hanger side must have a section about 17mm long cut away to allow the brake to be operated. This section is between the centre support and the next to the right. This step must in this case be cut into two before being fitted in two sections.
- 19) Brake block connecting bars (short). See brake rigging diagrams, fit according to the type of underframe you are constructing.
- 20) Brake block connecting bars (long). Fit temporarily- these must be removable to allow you to fit your wheels.
- 21) Gas cylinder brackets, optional. Fit into locating slots either side of the floor if required. Do not fit cylinders yet.
- 22) Safety loop for pushrod, drawing.456.
- 22a) Safety loop for lower pullrod.
- 23) Safety loop for part 20., fixed axle guard end.
- 24) Safety loop for part 20 pivoted axle guard end.
- 25) Coupling hooks. Use 2 layers to each hook for strength.
- 26) Coupling upper link.
- 27) Coupling centre section.
- 28) Coupling centre section lever pivots to part 27.
- 29) Coupling lower link.
- 30) Side chain eyes. Fit into holes in the buffer beam if required, removal certainly by 1922.
- 31) Side chain hooks. Connect to part 30, five links of chain per hook.
- 32) Upper step, lower layer, for Parcels and Fruit and Milk vans, raise rivets on the brackets and bend to shape.
- 33) Upper steps, upper layer fix to parts 32, then fit assembly to parts 17(lower step supports) so that the upper step is level with the lower edge of the solebar.
- 34) Brake right hand step, lower layer. Raise the rivets and bend the brackets to shape.
- 35) Brake right hand step, upper layer. Fix to part 34.
- 36) Brake left hand step, lower layer. Raise rivets and bend the brackets to shape.
- 37) Brake left hand step, upper layer. Fix to part 36. Fitting the steps. As on other vehicles, the upper steps are level with the lower edge of the solebar on the Brake Van, but they are attached with their own brackets. The left hand step is centred over the left hand axle. The right hand step has its outer end 6mm outward of the right hand axle.
If you fitted the optional parts 21(gas cylinder brackets) now fit the gas cylinders in place. Now fit the axle bearing cups and wheels. Carefully lift part 20(connecting bar) out of the way and spring the wheels into place.
Spring-axle box castings. At the fixed axle guard end, trim any excess length at the outer end so that the casting fits within the headstock when centred on the W-iron.
Fit the buffers, follow the instructions on the card with the buffers. The couplings are retained by threading a piece of wire through the hole in the bracket in the floor and through a hole in the hook.
You can now paint the underframe.

The body

- 38) Side, inner layer.(dog box side on the brake). Bend to shape, curving the tumblehome to match the shape of the ends. 39.Side outer layer, first curving the tumblehome as on part 38, then pass the door hinges of part 38 through the etched holes on part 39 to provide location. It is normally sufficient to fix from the inside at the hinges and around the edges.

- 38a and 39a. Brake only, side without dog box, assemble as parts 38 and 39.
- 53) Brake only. Look out left hand side.
 - 54) Brake only. Look out right hand side.
 - 55) Brake only. Look out front. Curve this at the top and bottom to match the profile of parts 53 and 54, assemble parts and fit to body sides.
 - 40) Step end.
 - 40a) Milk van only. Step end inner layer.
 - 41) End steps. Form the end tumblehome to match the side profile, fit the end steps from the rear of the inner end, then fit the end lamp irons parts 42 again from the rear but do not bend to final shape until you have fitted the outer layer over the step and lamp irons to provide accurate location.
 - 43) End without steps. Curve the tumblehome as part 40. Fit end lamp irons parts 42 from the rear then overlay outer layer over lamp irons to ensure an accurate fit. Bend lamps irons up. Assemble the body ensure right angle corners, from wire fit end hand rails only in the provided holes.
 - 48) Door vents (not the fruit and milk van). Fit to the etched bases in the upper door panels., ensuring the narrower louvre is at the bottom.
 - 49) Waist level door hinges (not the fruit and milk van). Fit the hinges on the upper waist moulding.
 - 50) Corner lamp irons. Raise rivets, bend as shown on the sketch and fit as shown on the end view.

Modellers now might wish to fit the pre-formed brass roof in place, and detail with the castings provided then possibly fit a captive nut to a scrap piece of brass and soldering this in place between the body sides and drilling a hole in the floor so a matching bolt may secure the body in place. Alternatively the body can be glued to the floor after final detailing using the tabs on the body sides and the slots in the floor.

As viewed from the V-hanger side of the underframe the end steps are on the left.

Final detailing after painting/lining and fitting transfers

- 44) Ring door handles, used when first built. Probably changed by 1922 to the more common T pattern.
- 45) T door handles- the later type.
- 47) Lever handles. Used on the right hand door of each door when T handles were fitted
Fit the underframe to the body having referred to the comment above.

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Version 2.0
Issued: July 2001