

The 2mm Scale Association
Part Ref 2-363
BR Banana Van Diagram 1/242

This kit represents a British Railways 1/242 Banana Van with 10' wheelbase 4-shoe vacuum fitted underframe. The prototype was built in four lots at Faverdale works between 1952 and 1956, eventually totalling 700 vans. The body was more or less identical to an earlier standard LMS design, but without end vents and 10' w/b u/frame in place of the earlier 9' one. The kit includes louvre vents for the LMS version but a 9' w/b u/frame will have to be purchased separately. See note 12 in the body assembly section if constructing an LMS version

To complete this kit you will also require:

2 axles 2-205	6mm Dia 3-Hole Disc Wheels (12.25mm Axles)
4 No 2-041	Brass Top Hat Bearings (<i>only sold in packs of 50</i>)
1 No 2-346	Turned Brass Vacuum Cylinder (<i>only sold in packs of 5</i>)
1 Set 2-443	Turned Brass Buffers (or cast whitemetal ones to choice)
1 Length	0.3mm Dia Straight Nickel Silver or Brass Wire

Plus couplings, paint and transfers to choice.

The Underframe:

1. Carefully remove the main underframe/axleguard unit from the etch.
2. Using a suitable broach ream out the axle holes until turned brass top-hat bearings (2-041) are a push fit. Ream out the small holes in the vee-hangers to suit 0.3mm wire.
3. Bend down to 90 degrees the axleguard/solebar sides using a pair of bending bars or a small vice. As usual the half-etched fold lines go on the inside of the bend. Bend down the buffer beams using a small pair of smooth flat pliers. If you wish to make use of the integral coupling mounts these should now be folded down out of the baseplate, formed to shape and soldered in place.
4. Carefully solder in the top-hat bearings ensuring that they are fully seated into the half-etched recesses. Test fit a pair of wheels (on 12.25mm axles) and check for free running. Carefully adjust the axleguards if required. The wheelsets should spin freely for 10 or 15 seconds when flicked, but should not be so loose as to fall out easily.
5. The cosmetic solebars fold over to form a double thickness piece. Pre-tin with solder the two inner mating surfaces before removing from the etch. Remove from the etch but be careful not to cut the two 'hinge' tabs connecting the two halves. Fold over and then sweat together, ensuring the two halves are accurately aligned. Carefully file off the two 'hinge' tabs from each solebar. The solebars include etched spring detail. You may prefer to use separate cast whitemetal springs and axleboxes in which case the etched ones may be cut off with side cutters and tidied up using files or emery sticks.
6. Solder the solebars to the main underframe unit ensuring that the top edges are parallel and that the springs fit neatly over the top hat bearings.
7. The etch includes axlebox covers. You can use these or separate cast whitemetal ones. The etched ones are formed by folding together the three layers using the etched tabs as hinges. Again pre-tin the mating surfaces before sweating together. Carefully file off the hinge tabs after soldering. Solder or glue to the spring units.
8. Ream out the holes on the brake unit to clear 0.3mm wire. Remove from the etch and fold down each side to 90 degrees. Locate the brake unit into the u/frame using the tabs and slots provided. There are long and short tabs to ensure assembly the correct way round. Thread a piece of 0.3mm nickel silver wire about 20mm long through the vee hangers and brake unit to ensure alignment and then solder the brake unit in place. Remove the wire.
9. Ream out the vacuum cylinder arm (the small strap with a hole at one end on the etch next to the coupling hook plates) to take 0.3mm wire.
10. Re-thread the 0.3mm wire through one vee hanger and one side of the brake unit. Then thread the vac cyl arm onto the wire, keeping the half-etched side facing inwards. Take the wire through the other side of the brake unit and opposite vee hanger. Tack solder it to the inside of the brake unit, but keep the vac cylinder arm free to slide for now.
11. Solder the turned brass vac cylinder onto the bracket on the brake unit. This bracket can be bent down a few degrees to put the vac cylinder on an angle. Refer to a photograph of your chosen prototype to get this right. The etched vac cylinder arm can now be aligned with the centre line of the cylinder. The end of the arm bends around the piston rod on the cylinder and needs to be soldered back on its self.
12. Ream the holes in the brake levers to 0.3mm and remove from the etch. Fold up as per the illustration. There is a profile guide etched into the fret to assist you with this task. Be aware that there is a cam and a non-cam lever and a vee hanger to suit each! Thread the lever over the wire and locate the bracket on the other end into the hole on the sole bar. The solebar hole may need opening out slightly first. This bracket can then be soldered from the rear of the solebar. The cam-lever side needs a further short piece of 0.3mm wire for its pivot. Trim the wires back flush with the levers once they have been soldered in place.
13. Now put the chassis to one side whilst you construct the body.

The Body

1. Remove the planked body section from the etch and clean up the edges to remove all traces of the tabs you have cut. Do NOT start bending it to shape yet.
2. Generously tin with solder the rear of the diagonal side bracing/door hinge/door locking bar units whilst still attached to the etch.
3. Lightly tape the planked body portion to your work surface, ensuring you only tape in those areas not about to be soldered! Now overlay the etch over it and bring the first set of bracing into correct alignment with one of the body side sections (hinges centred on the door edges with equal overlap of the top corner braces at each end. The top edges of the top corner braces should be positioned level with the plank ends at roof eave level). Tape the etch down and then sweat the overlay into place with a clean iron and a little liquid flux. If any sections do not 'take' then introduce a little solder paste or a tiny slither of multi-core solder to the edges and re-solder. Untape the etch and repeat with the other overlay. The bottom edge corner braces may also be attached in the same manner but they are prone to become unsoldered during the body-forming process so you may elect to attach them separately after the body has been folded to shape.
4. The body may now be bent to shape. Tack solder the corner joint and check that all is square before fully seaming the joint with solder from the inside. Bend up the bulkhead brace and solder this in place across the centre of the body. This adds much needed strength to the assembly and should be done as soon as possible. If any of the corner braces have become loose during bending these should be re-soldered now before they snag and break off.
5. Fold the six body location tabs inwards to 90 degrees to give them some protection until required. Carefully bend in the roof support top flaps to match the end profile. Use smooth jawed pliers and lots of small tweaks rather than trying to do it in one.
6. Solder in the four door buffers. These have fold back tabs to help hold them in place. There are several spares on the etch in case of loss.
7. One at a time remove the short end angle irons and slotted backing plates from the etch and solder to the body ends. The top tab has a fold back section to help hold it position whilst soldering. If the slots in the backing plates are tight they can be eased by gently pressing in a scalpel blade whilst resting on a cutting mat.
8. Remove the roof and clean up the edges. Pre-tin the underside on all four sides. Roll the roof to match the body end profile. This can be achieved by firm but careful rolling with a piece of dowelling or metal bar 8-12mm in diameter. Work on a thickish pad of Kleenex tissue or kitchen paper towelling. Keep offering it up to the body until you achieve the desired profile. Do not press too hard when rolling or you may crease the roof. If you get it badly wrong the roof can be annealed (softened) by heating it to dull cherry red in a gas ring and allowing it to cool naturally. This will make the metal easily workable again.
9. Pre-tin the roof support top flaps and top curved edges of the body ends. Working upside down, position the body over the roof and align it to give equal overhang all round. Tack solder on the centre line at each end from the inside and check alignment. If okay solder up fully making sure the roof is pressed down firmly as you go around. The roof has been deliberately etched about 0.5mm too wide. Carefully reduce the width with an emery stick to give an overhang of approx 0.3mm on each side.
10. The body may now be offered up to the chassis. The body should be a good sliding fit over the underframe. You can rely on the six body location tabs (bend the ends down to locate into the slots of the top of the u/frame) or if using turned brass buffers, rely on the buffer spigots for alignment. Solder up once happy with the fit.
11. There are coupling hooks and backplates provided for detailing the buffer beam but be aware that these may foul your coupling latches if using DG's or BB's. As these vans were vacuum fitted (and some steam heated) you may wish to fabricate and fit suitable piping on each end. Photographs shown that steam heated vans had a square section vertical & diagonal steam pipe casing on the ends. This may be represented using styrene section.
12. *If modelling the LMS version you will need to fit louvre vents. These fold up to form a double thickness. The top edge (with the larger border) should be filed to an angle of approx 25%. There was one vent at the top right hand corner of each end. LMS vans to drawing 6162 may be represented by omitting the diagonal side strapping. See note 11 re steam pipe casings as some LMS vans also had these)*

Useful References:

British Railways Wagons, the first half million (Don Rowland, D&C 1985) pages 16,20,69 & 165
 Railways in Profile Series, No3 British Railway Vans (Geoff Gamble, Cheona 1997) page 54
 Railways in Profile Series, No11 British Railway Vans Vol 2 (Geoff Gamble, Cheona 2000) pages 24 & 25
 An Illustrated History of LMS Wagons Vol 1 (RJ Essery, OPC 1981) pages 22 & 23

BR Livery:

Brown Bauxite body, black underframe & grey roof.
 Suitable waterslide transfers are available from both Modelmasters and Fox.

Running Numbers:

Lot 2346	B880430-880679 (250 No)	Faverdale	1952
Lot 2598	B880680-880279 (50 No)	Faverdale	1954
Lot 2739	B880730-880979 (250 No)	Faverdale	1955
Lot 2866	B880980-881129 (150 No)	Faverdale	1956

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Etch Artwork by Bob Jones 2001. Instructions & Notes by Edward Sissling 2002.

THE 2MM SCALE ASSOCIATION

INSTRUCTIONS

BR BANANA VAN - PART - S2-563 (BODY) - S2 354 (CHASSIS)

