Prototype Information

The BLV code seems to have been a bit of a catch-all for various bogie louvre vans around the early part of the 20th century. There are a number of published photographs, but no two seem to be exactly the same, with a variety of underframes, 2 or 3 compartments, and so on.

This kit is based on BLV 15593, which is in the collection of the Dorrigo Steam Railway and Museum, and many photographs and measurements were taken from this during the preparation of this kit

Important General Information:

As this kit is mainly composed of polyurethane castings, ACC, or superglue, is the only suitable adhesive for fixing to the polyurethane. No other glues actually adhere to the polyurethane, although epoxy resins can be used for fixing such items as handrails, relying on a mechanical joint to the roughness of the casting. Some modellers prefer this as it gives a slightly resilient mounting, reducing the chance of a joint failure as a result of flexing with changes in temperature, etc.

Tools, Jigs and Clamps

Anyone that has made kits of this type will have acquired and armoury of their favourite tools. An M2 tap is required to tap the holes for the coupler and bogie mountings, should you choose to use the supplied system. No jigs are required beyond the supplied jig for soldering the steps. The use of this will be explained later.

Body and Underframe Preparation

As is usual with polyurethane castings, you should wash them thoroughly with a mild detergent to remove any traces of mould release or other deposits, and check them for straightness. An inward bow in the sides will be corrected when the underframe in inserted, but otherwise you will need to hold the part flat and straight, using clamps and so on, and gently warm the casting using hot water. Following cooling, the casting should retain the correct shape.

Due to limitations in the casting process, and a desire to avoid a horizontal joint in the corner posts, a "skirt" has been added below the sides and ends to bring the bottom of the body down to bottom of the corner posts. The side skirts are removed by holding the body upside down, and cutting with a razor saw just inside the corner posts, down to the level of the bottom of the body. Several passes of a sharp knife along the V groove at the bottom of the body proper will allow the skirt to be snapped off neatly. The end skirt below the buffer beam is simply filed off. Clean up the edges, especially around the corner posts.

Some modellers may choose to use 3-link couplings (not supplied), and in this case, the slot for the coupler shank will need to be drilled and "chased out" to allow for the shank.

Bogie Mountings

This kit is uses an M2 bolt to mount the bogies over which is placed a bush which provides the pivot for the bogie itself, and the stepped end of the bush retains the bogie without gripping it. This system requires that the hole in the bogie bolster is enlarged to provide a running fit with the bush, approx 3.1mm.

Bogie Assembly

This revision of the kit is supplied with Ian Lindsay archbar bogies in kit form. The instructions supplied are reproduced below, but before you assemble them, the hole in the bolster **must** be drilled, reamed or filed to 3.1mm, to give a nice running fit on the supplied bushes. This is almost impossible to do once the bogie is assembled.

Assembly Procedure

1. Prepare the body casting as previously indicated. Drill 0.3mm for handrails and rope rings, 0.8mm for the air hoses (2), and 1.0mm for the buffers (4), as indicated on the diagram.

2. Prepare the underframe as previously indicated. Drill 0.3mm for the trussrods (x8), 0.6mm for the queenposts (8), and 1.6mm for the bogie and coupler mounting screws (4). Tap the latter with an M2 tap ready to receive the mounting screws.

3. Test fit the underframe to the body. Depending on shrinkage of the castings, which varies slightly, you may need to perform a little judicious filing to ensure that they fit snugly, with the bottom of the body resting neatly on the solebar brackets.

   If you are using three-link couplers, you may need to create a slot in the underframe to allow for the internal mechanism of whichever coupler you are using.

   Weigh the components of the kit and determine whether you need to add any weight to correspond with your chosen weighting model. Fix suitable weights to the top of the underframe, and glue the underframe into place, using the barest minimum of glue to achieve a bond, and only at the ends. This will allow the body to be removed later, should it prove necessary, by breaking the bond with a thin tool such as a palette knife

   If you are going to use the supplied KD couplers, you will need to remove the marked section of the buffer beam, using files and/or a knife. Clean the cutout just down to the level of the coupler mounting pad, and test fit a coupler box.

4. Glue the brake cylinder mounting plates and the brake handle brackets to the underframe as indicated. Trim the spigot on the brake cylinder to about 1mm, and glue it to the mounting plate with the triple-valve end facing towards the end of the wagon.

5. Glue the queenposts in place, and form the truss rods from lengths of 0.25mm wire, bent according to the diagram. Make each truss rod in two sections, leaving a gap of about 1.5mm for the turnbuckles, noting that the turnbuckles are not in line, but at slightly random positions. Glue in place, to the floor and the queenpost, and "tweak" until the two loose ends are in line. Bridge the gaps with the turnbuckles, gluing at one end only to allow for any flexing of the underframe should you need to remove it later.

Bogie assembly instructions

These archbar bogies (in model form) were originally designed to be assembled by screws, but due to shrinkage in the brass castings, it has become necessary to assemble them with soldered joints.

Ordinary electrical cored solder will do, or Carrs if you have it available

1. Remove each component from the sprue carefully using good sharp sidecutters or a razor saw. Take care as these castings are quite fragile.

2. File the stubs of the feeders from the ends of the castings, noting that the sideframes are meant to have about .030" (.8mm) overhang from the axlebox. Also, don't overdo the bolsters as they need to be no less than 21mm long and a little longer if possible.

3. File a champher on the top corners of the bolster stud on the back of the sideframes, the top is identified by the dimple. There is no dimple on the bottom! Make sure the sideframes are a neat fit into the bolster (a bit sloppy is preferable to tight). Tin (apply a small amount of solder) the underside of the bolster and the tops of the previously filed tops of the studs. Then solder one sideframe to each bolster (right way up)

4. Fit top hat bearings (supplied) with a small amount of Superglue or 5 min Araldite.

5. When the bits are cool enough to handle, test assemble with wheelsets to ensure that the bolsters are not too long or too short. Cut a piece or scrap craftwood or similar to fit between the sideframes and of a height that can be held in a vice or similar, to support the bogie during assembly. The length of this piece should also be just long enough to give a back to back of approx. 21mm. If you make it too short the axles may be too tight in the bearings. This bit is a little trial and error!

6. When you solder the second sideframe (with the previously tinned bits); you must use a very hot iron for a very short jab (try 1/2 second to start). Too much heat for too long and you may manage to damage the wheels. If you are concerned about heat transferring to the wheels, keep a container of water handy, and as soon as you have finished with the iron, dunk the bogie but keep the iron away from the water

Finally, if you have done everything as suggested, you should have a pair of very free running bogies

6. Solder or glue a length of 0.3mm wire for the brake handle, and a length of 0.25mm wire for the release between the brake handle brackets, Solder or glue the ratchet, brake handles and release levers as shown, noting that the release lever with the extra spigot goes on the same side as the ratchet.

7. Form the handrails on the ends from 0.2mm wire, and glue in place using offcuts of 30thou styrene to act as spacers. Form the roperings from 0.2mm wire, wrapping round a suitable mandrel about 0.5mm diameter, bending over a short "tail" to attach to the wagon. Fix the buffers in place, noting that the casting is slightly asymmetrical, and orienting for the best fit.

8. Cut the styrene roof battens to the same length as the roof of the body. Prepare the larger ones by gluing the brackets to one wider face. Each batten has 2 Z-shaped brackets and 10 C-shaped ones. The Z brackets have half-etched fold lines, and the C-shaped ones are formed by wrapping the half-etched portion around the shank of a 0.6mm drill bit. The drawing shows their location.

9. Fix the battens brackets to the roof of the body, the outer ones being approx 0.6mm shy of the edge, and the central one in the middle (duh!).

10. Prepare the corrugated iron for the roof by first curving it to match the curve of the wagon roof. Do this by placing the iron on a firm but resilient surface and gently rolling a piece of dowel, 15 to 20mm in diameter, across the iron. It will gradually take on the curvature – check frequently against the wagon roof until they match. Now cut the iron to the same length as the wagon roof, and wide enough to overhang the battens by approx 0.6mm each side. Use a sharp blade, such as a scalpel, and multiple very light strokes to do this. Take some off both sides, rather than all one side, as it is fairly difficult to curve the iron right to the edge using the above process. Do not fix the roof to the body at this stage, as painting the gap between the body roof and the iron will be almost impossible.

11. Solder together the steps, using the jig provided and 0.25mm wire for the rungs, and making sure that the half etched fold lines are both facing inwards. After cleaning up, twist the stiles though 90º. Leaving about 1mm untwisted above the top rung. Fold over the top of the stiles, and trim in length to fit the slots below the right hand doors. These slots are very shallow, as a limitation of the casting process, so the bent-over parts of the stile just provide location. Glue the top of the stiles to the face of the door sill.

12. Paint the body, and the inside of the roof at this stage. Photographic evidence would indicate that these vans have never been other than various shades of black, weathering back to bare wood over time.

13. Fix couplers and bogies in place, using the supplied top hat bushes for the bogies, and M2 machine screws.

14. Glue the roof in place - an acrylic contact cement seems to be the go here – it bonds both to the aluminium roof and the styrene. Fix the smaller battens to the top of the roof, directly opposite the inner battens, and paint the top of the roof.

15. Apply decals. It is very hard to find published photographs of these wagons with any lettering visible, but it seems that the code, number and (limited) weighing information were applied to the solebar as indicated on the diagram.