

O-Aust Kits

PO Box 743

ALBANY CREEK QLD 4035

Phone (07) 3298 8283 (7.00pm to 9.30pm ONLY)

Facsimile (07) 3298 6297 (24 hours)

Mobile 0419 680 584

Email pa_rl_krause@bigpond.com

Web www.oaustkits.com.au

NSWGR 'MLV' LOUVRE VAN

1:43 KIT



PROTOTYPE NOTES

The MLV louvre van was a timber bodied steel-framed vehicle that was constructed in a number of versions over a long period. For the version that this kit represents, a total of 286 vans were built between 1937 and 1951. They were allocated various numbers

Over time they were fitted with strengthened under frames and 2AE bogies to permit running at passenger train speeds. They were also fitted to take marker lights at each end.

In later years some were fitted with curve frame or cast drop frame 2BJ bogies.

All vans had twin compartments and originally had a double corrugated steel roof. A smooth curved roof later replaced this.

The kit as supplied offers the smooth curved roof option fitted with 2AE bogies. Instructions to fit a corrugated steel roof are included, but the required parts are not supplied.

KIT PARTS LIST

1 floor casting
 2 end castings
 2 side castings
 1 roof casting
 4 end bracing beams
 2 lengths of "H" beam
 8 queen posts
 1 brake cylinder
 1 air tank
 2 brake rod levers
 2 yard brake spider wheels
 2 train pipe hoses
 4 buffers
 4 coupler lift bar support brackets
 4 2AE bogie sideframe castings
 2 bogie stretcher castings
 2 wagon bolster castings
 4 collars for bogies
 8 inner brake shoe castings
 8 outer brake shoe castings
 8 brass bearings
 4 wheel sets
 24 eyebolts for use as tie down rings
 Brass wire 0.8mm
 Brass wire 0.5mm
 1 sheet transfers
 2 sprues of marker lamp brackets

YOU WILL NEED TO SUPPLY

Couplers -the kit has been designed to fit Kadee #804 or #805 couplers but feel free to substitute.
 Turnbuckles (4) - for the truss rods
 (If installing the corrugated steel roof) - O Gauge corrugated iron; 3 lengths 040 x 080 styrene; 3 lengths 020 x 060 styrene; 15 nut/bolt/washer castings.
 Two screws for attaching bogies

TOOLS REQUIRED

Large files and needle files
 Superglue
 Pin vice and/or 'Dremel' tool and drills (0.5mm or #76 & 0.8mm or #67)
 Drill to suit the screw for mounting bogies.
 Soldering iron (variable temperature)
 Low melt and resin cored solder
 Craft knife, tweezers, small pliers, side cutters, and scissors
 Fine wet or dry paper
 Small clamps or alligator clips
 Modelling putty
 Decal setting solution
 Piece of glass or surface plate (steel)

ASSEMBLY

Note:

Read ALL instructions before commencing assembly to understand the correct sequence.

All flash on the castings should be removed before assembly.

Some castings may have air bubbles - these are easily puttied if desired and will not affect the end result.

Occasionally a casting may be warped. This problem is easily rectified by placing in hot water in a flat-bottomed container for a couple of minutes and allowed to cool on a flat surface.

The instructions for the assembly of this kit assume that the person assembling the kit has some basic kit building skills.

The quality of the finished product is dependent on the care taken in its assembly.

If you have any problems please feel free to contact O-Aust Kits direct.

BODY ASSEMBLY

It is recommended that the body castings be washed in warm water and liquid detergent, rinsed clean in warm water to remove mould release compound and air dried before commencing assembly.

Step 1 The corners of the sides and ends should be filed to a smooth surface to ensure a clean joint in the corners. The sides fit between the ends.

Step 2 Attach one of the side castings to an end casting, taking care that it is flush along the top edge and at the corners and square. When happy with the position, apply glue and hold firmly in place until the glue sets.

Repeat the process for the other side and end.

Step 3 To make up the body, join the two ends/sides together ensuring that the joints are square and the corners are flush.

Ensure the corners are square using the roof as a guide. When happy with the position, apply glue and hold firmly in place until the glue sets.

Leave until completely set.

Step 4 Join the roof and the sides/ends to form the wagon body ensuring that the joints are square and flush. When happy with the position, apply glue and hold firmly in place until the glue sets.

Step 5 Firstly; check that the dimensions of the floor casting match those of the assembled body. Make adjustments to the floor casting where necessary, keeping in mind that any adjustments (+/-) need to be made equally to each side/end.

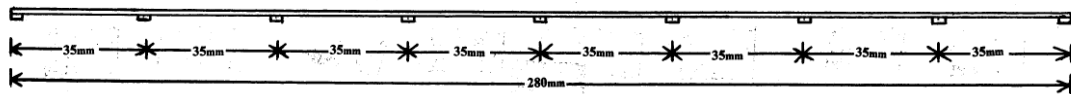
Now join the wagon body to the floor by inserting the floor casting into the body. Take care that the floor sits evenly within the body.

When happy with the floor position, apply glue and hold firmly in place until the glue sets.

Step 6 The vertical end braces can now be glued in position, two on each end, in the grooves in the end castings. The drawing at Step 14 will assist if unsure of the correct location.

Optional Step – Installation of Corrugated Steel Roof.

Use the 040 x 080 styrene strip to form 3 brackets as per the following drawing.



Attach these brackets along the length of the roof, one central and the other two 3.5mm from each edge respectively (refer to the drawings at Steps 8 & 14 for further details if necessary).

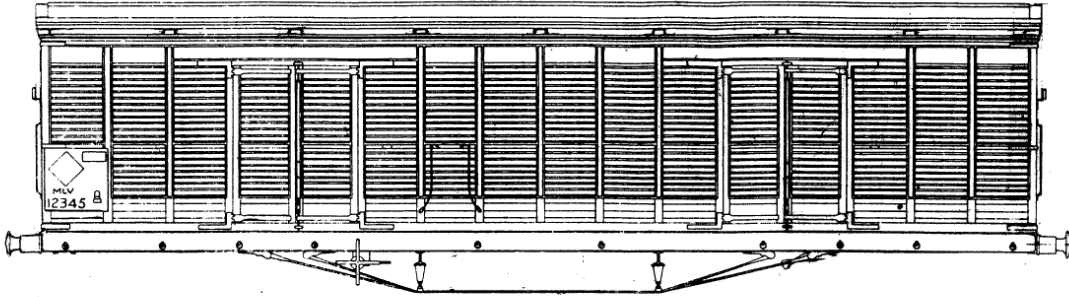
Pre-curve the corrugated sheet by carefully bending between the fingers and glue to the brackets previously installed on the roof.

Using the 020 x 060 styrene strips, glue on top of the corrugated sheeting immediately over the previously installed brackets.

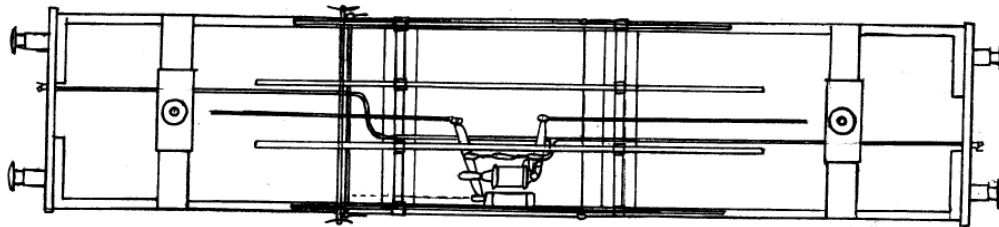
Install nut/bolt/washer castings to complete the installation.

Step 7 The vans were fitted with tie down rings along the sole bars, 10 each side and 2 at each end (2 each). 24 rings are supplied and should be installed at the relevant locations. Dimples on the solebar and end castings indicate the locations. Refer to the drawings at Steps 8 & 14 for further details.

Step 8 On each side of the van, handrails were provided. Fabricate these from 0.8mm brass wire and install as per the following drawing.



Step 9 Fit the brake cylinder, air tank, brake rigging and air pipes to the chassis beams as per the following drawings. Support brackets are cast onto the floor casting to assist with location.



Step 10 The yard brake bracket and grade control valves are part of the floor casting. For the yard brake assembly, the ratchet handle is on the outside of the bracket and pointing to the end of the wagon. A length of 0.8mm brass wire forms the yard brake shaft between the two spider wheels; the ratchet shaft is 0.5mm brass wire. You may also wish to fit a chain link (not provided) between the yard brake shaft and the brake rod lever. A length of 0.5mm brass wire joins the grade control valves.

Step 11 Adjust the length of the wagon bolster to fit (it has been made longer than required). File the two bars on the topside of the bolster so that they are a snug fit in the channels molded in the floor casting. Glue the wagon bolsters in place on the underside of the floor using 5-minute epoxy adhesive. Place the assembly on a sheet of glass to make sure that the assembly is level, then clamp in position until the epoxy sets.

Now is a good time to drill the holes in the bolsters for attaching the bogies with self-tapping or metal thread screws at Step 25.

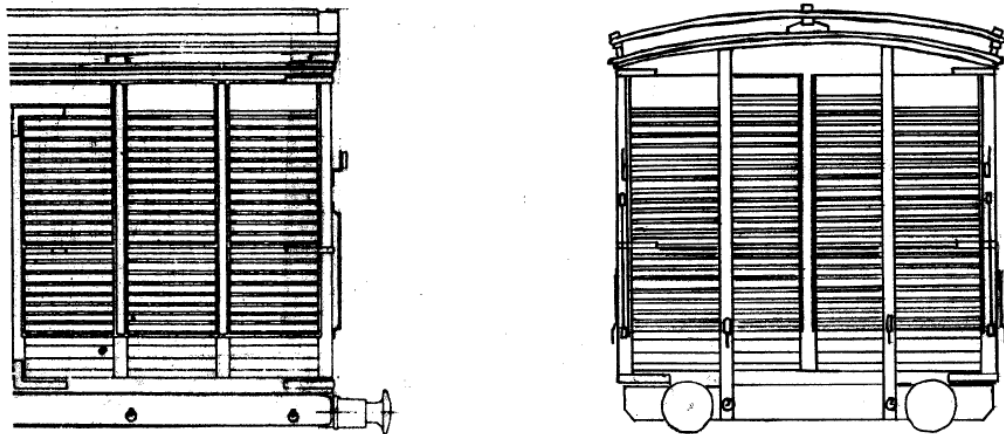
Step 12 Using the "H" beam supplied, cut to the correct length and then on one face drill holes for the queen posts to be fitted. The drawing at Steps 8 & 9 will assist with location of the beam on the chassis and of the queen posts to the beam.

Step 13 Bend up the truss rods from 0.8mm brass wire and glue in place at the points located in the floor casting.

An alternative option is to use fishing line, which needs to be stretched tightly in place while gluing.

Turnbuckles, either commercial castings or lengths of fine metal tube, will need to be glued to the truss rods before they are glued in place.

Step 14 The buffers are fitted to the ends of the wagon as per the following diagram:



Step 15 The ends of the MLV were fitted with grab irons and brackets for attachment of marker lights. The grab irons can be formed using 0.5 mm brass wire. Materials have not been provided for the marker light brackets, but they can easily be formed using brass wire or similar and filed to give the prototypic flat surface. The location of these are shown on the Step 14 diagram

Step 16 The coupler release bars should now be formed using 0.5mm brass wire and fitted using the brackets supplied. The location is shown on the Step 14 diagram

Step 17 Glue the train pipe hoses to the right of the coupler pocket in the buffer beam and attached to the air pipes installed in Step 10.

Step 18 Couplers of your choice should now be trial fitted as per the manufacturer's instructions, but not installed until Step 25, so that they are not damaged during construction (couplers are not supplied with this kit).

BOGIE ASSEMBLY

Note: To bring out the detail in the bogie castings thoroughly brush them with a brass wire brush obtainable from hobby shops, or a suede shoe wire brush from a shoe shop.

Step 19 Fit the brass bearings into the side frames supplied and secure with a dab of superglue. Some adjustment to the sideframes / bearings may be necessary.

Step 20 Fit the brake block castings to the side frames. The longer one is on the outside and the smaller on the inside. Dry fit to get them in the correct location relative to the wheel. Contact with the wheel must be avoided to prevent short-circuiting, but still be as close as possible for appearance. Some minor adjustment is possible after the brake blocks are glued in place

Once satisfied with the positioning, superglue or solder (using low melt solder) in place.

Step 21 Drill the two holes in each bogie bolster for attaching the side frames.

Step 22 Assemble the bogies by attaching two side frames to each bolster, with wheel sets in place. Secure the side frames to the bolster with the collars provided. These are preferably soldered in place using low melt solder (Carrs #70 is ideal) or alternatively glue if you prefer, **but do not use superglue**. If soldering, it is recommended that the surface be 'tinned' first.

FINISHING

Step 23 The wagon is now ready for painting. The entire wagon and bogies should be painted standard rollingstock grey. Any gloss paint that is plastic compatible should be suitable.

Step 24 Before applying transfers, ensure that the paint is thoroughly dry and dust free (NOTE: Transfers adhere better to a gloss surface).

Trim margins around letters and numbers as close as possible, place in warm water until transfer is almost ready to release from backing paper, then place on paper towel to absorb excess water. Wet area with decal setting solution, place transfer on model and slide transfer off backing paper into position. Apply decal setting solution over transfer, mop up excess solution with edge of kitchen paper and allow 24 hours drying time. To protect transfers and paint work, spray a thin coat of clear flat polyurethane (e.g. Testor's Dull Cote similar brand) over entire model. Allow 24 hours drying time in a dust free area.

Step 25 Attach the bogies to the bolsters with screws (not provided), and the couplers (not provided).

Weathering to your requirements is recommended.

You are ready to roll after lubricating the axles

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R. G. Preston
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