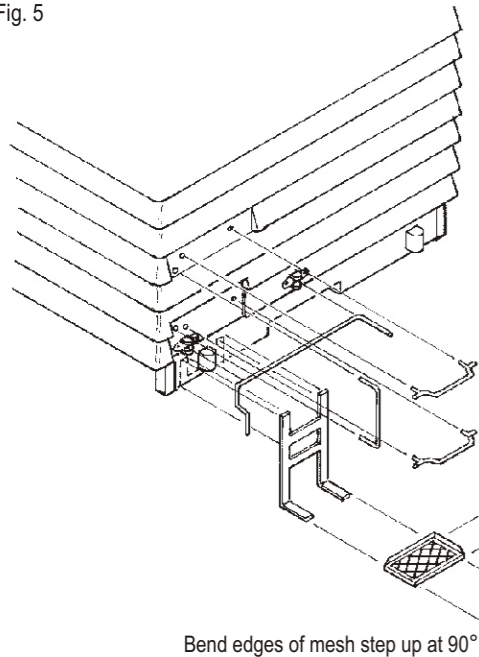


Shunter's steps

Assemble two shunter's steps from parts 1 and 3 or 4. Wagons were fitted with steps with wooden step treads (3) when the buffers were first removed around 1957. The step treads made from expanded metal mesh date from about 1968. If building this version, bend the edges of the etched step (4) up at 90° before attaching the step tread to the frame with solder or ACC. Attach the shunter's steps to the ends with ACC, as shown on figure 5.

Fig. 5



Install the uncoupling lever on the end of the wagon, secured in the moulded brackets with ACC or a little cube of 0.015" polystyrene.

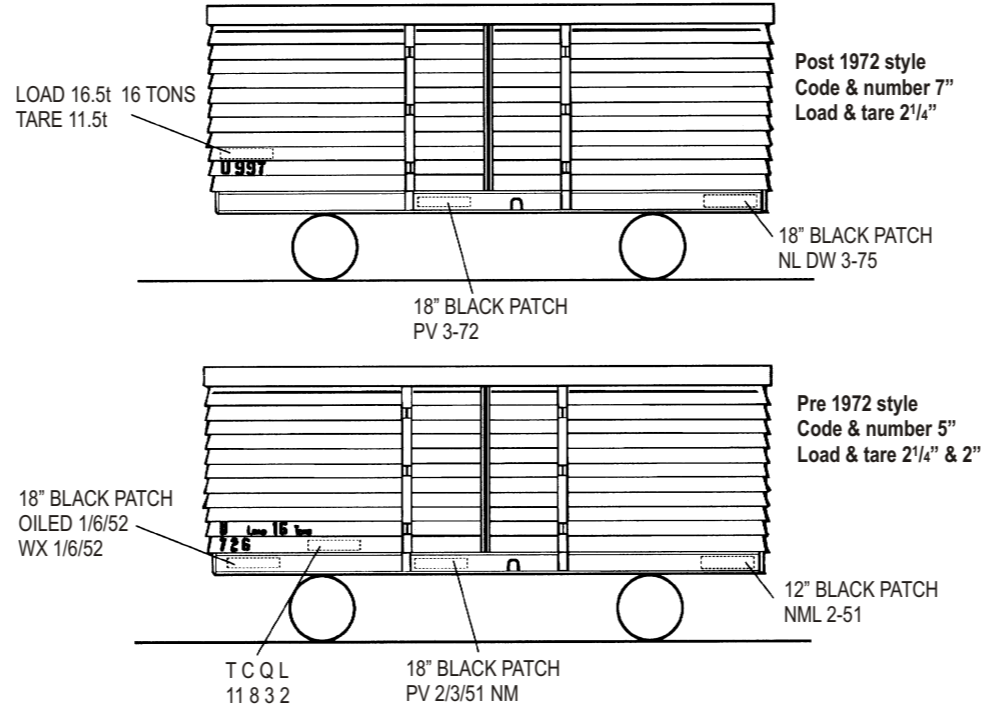
Brass etchings (6) are supplied for the horizontal handrails, which fit in holes moulded in the ends. To attach the handrails, apply a small amount of ACC on the end of a pin to each hole moulded on the ends and apply the handrails with fine tweezers.

Wooden step treads prior to about 1968.
Mesh step tread after about 1968.

Bend edges of mesh step up at 90°.

Painting and Decals

The wagon should be painted overall VR Wagon Red with white lettering. We recommend Steam Era Models Wagon Red spraying enamel. Decals are provided for both metric and imperial load/tare and codes. Refer to figure 6 for the placement of lettering. If a model has been constructed with a 'split' brake system, it can be numbered 993, 996, 999, 1000, then 1004, 9, 15, 16, 17, 20, 22, 24, 26, 27, 31, 34, 38, 43, 44, 47, 48, 50, 51, 53, 55, 58, 61, 62, 63 or 65. The rest of the vans numbered between 992 and 1066 were rebuilt as UB bogie vans. Vans with combination brake systems and wheel handbrakes were numbered 1067 to 1216.



To Apply Decals

1. Trim the decals close to lettering to remove excess film.
2. Immerse in water for ten to fifteen seconds and then set aside on a tissue until the decal straightens out.
3. Slide the decal into position. If it is necessary to adjust the final position, use a small brush that has been dipped in water.
4. Use a damp cloth to soak up excess water.
5. Use a decal setting agent such as Solvaset to assist the decals to snuggle down over rivets and other raised details.
6. A flat finish, such as Testor's Dulcote, applied to the entire model will give a uniform flat finish and hide the decal film.



C/- P.O. Rhyll, Victoria, 3923.

VICTORIAN RAILWAYS 'U' LOUVRE VAN WIDE DOORS AND WHEEL HANDBRAKE

Prototype Notes

The U van was designed for the carriage of perishable goods, although other classes of goods could be carried under certain conditions. Seventy five vans numbered from 992 to 1066 were built with six wheeled underframes at Newport Workshops during 1925. These vans also featured a 7' 0" wide doorway each side and a corrugated iron double roof. During 1934-35 forty four vans from this series were rebuilt with auto' coupled bogie underframes and recoded UB, whilst the remaining thirty one vans were rebuilt with four wheeled underframes and also fitted with auto' couplers. A further two hundred vans were built new with four wheeled, auto' coupled underframes at Newport and Bendigo Nth Workshops between 1934 and 1939, being numbered 1067 to 1266. This kit can be assembled to represent a van from the series 992 to 1216, which features a wheel type handbrake, wide doors and a corrugated iron double roof. The final fifty vans built at Bendigo Nth during 1939, as well as two hundred four wheeled vans with a similar style body constructed at Newport Workshops in 1946/47 and 1951/52, featured a lever style handbrake.



Model illustrated has been fitted with couplers (not included).

Assembly

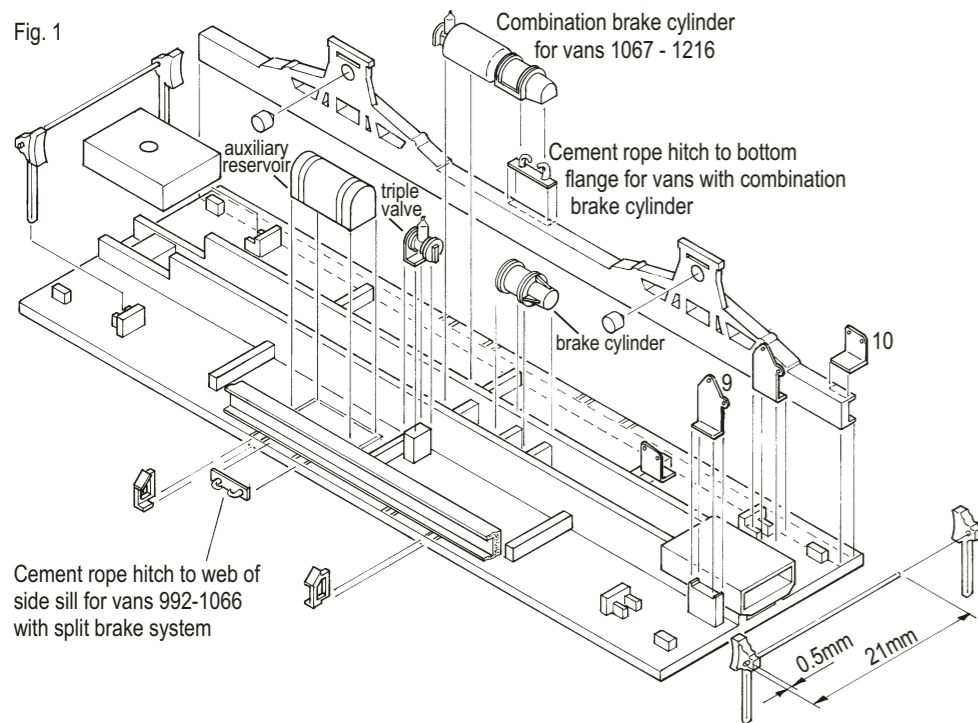
It is recommended that this kit be assembled with a liquid solvent such as Testor's or MEK. Carefully remove parts from the runner system using a sharp knife or sidecutters and do not twist parts off. Trim the 'hooks' moulded on the back of some parts with a small pair of side cutters. Some parts are made from etched brass. Half etched lines are provided where parts are to be folded to shape. As a general rule, where 90° bends are to be made, the half etched line goes to the inside of the fold, but where the brass is to be bent double at 180°, the half etched line goes to the outside.

Etched brass parts should be attached to the plastic body with ACC i.e. superglue.

Underframe

Vans numbered between 992 and 1066, which were originally built with six wheeled underframes, featured a 'split' type brake system with a separate brake cylinder, auxiliary reservoir and triple valve. The higher numbered vans, which were built new with four wheeled underframes, had a combination brake system with the brake cylinder, reservoir and triple valve assembled as one unit. Parts are provided for both brake systems.

For best results the draft, a shallow angle of about 3°, should be removed from the top edge of each side sill. Glue a piece of 180grit aluminium oxide sandpaper to a flat surface, such as a piece of chipboard, and rub the top edge of each side sill over it. Use a second piece of wood with the edges planed at 90° as a guide. This work will ensure that the side sills are installed at 90° to the floor.



Press a delrin bearing into the hole in the back of each axlebox and cement the side sills to the floor, with the wheelsets sandwiched between. Ensure that the ends of the side sills are flush with the ends of the floor.

Cement the appropriate brake equipment to the underframe, dependant on which number series is being modelled, positioned as shown in fig 1.

Cut two pieces of 0.5mm wire, each 21.0mm long. Smooth the cut ends and press each end into the holes moulded in a pair of brake shoe mouldings, so that the wire projects from the outer face of each shoe by 0.5mm. Locate each assembly in the lugs moulded in the lower face of the floor and secure with cement.

Add the two brackets on each side that support the door stanchions, locating them against the side sills and between the small ridges moulded to the floor. These parts are handed, so ensure that the parts are arranged and orientated as shown on figure 1. Finally cement a rope hitch to each side sill. For vans numbered between 992 and 1066, each hitch should be placed centrally on the web of the side sill, so that it will be centred below the door panel furthest from the handbrake end. For vans numbered between 1067 and 1216, the hitches should be cemented centrally to the bottom flange of each side sill, as shown on figure 1.

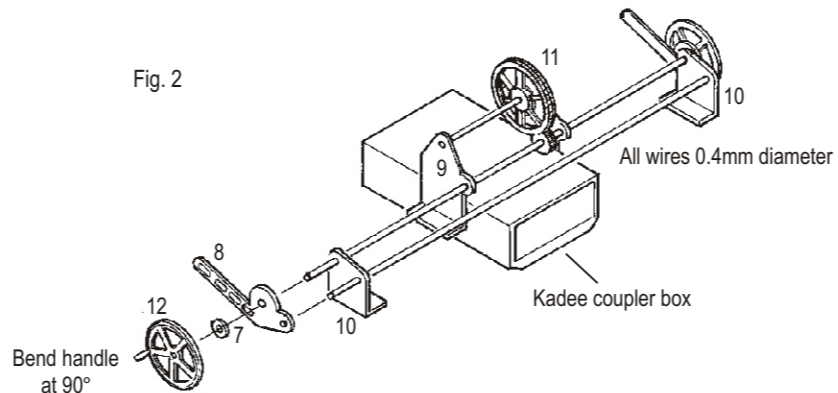
Couplers

The kit is designed to use Kadee No5 or No58 couplers (not included). Assemble the couplers in their draft gear boxes and clip the ears off each side. Attach the couplers to the floor with cement and/or #2 x 1/4" pan head screws (not included) using the dimple moulded between the centre sills at each end of the floor as a guide for drilling a suitable hole.

Handbrake

Parts for the brake rigging are provided on the etched brass panel, with part numbers etched adjacent to each part. Holes are etched as appropriate, but it pays to check that the 0.4mm wire can pass through the holes in the various parts **before** removing the parts from the etched fret. If necessary, the holes can be enlarged by careful use of a taper broach or 0.4mm drill.

Form the gearbox sides (9) and the handwheel support plates (10) to shape and use ACC to attach them to the support blocks moulded at the handbrake end of the floor and to the side sills, as shown on figure 1. Tin the back faces of the gearwheel (11), fold it double and sweat the two layers together, ensuring that the holes in both layers are in alignment. Alternatively, the two layers can be bonded together with ACC.



Thread two 30mm lengths and a 10mm length of 0.4mm wire through the gearbox sides and the handwheel support plates, as shown on figure 2, making sure to trap the gearwheel and pinion between the gearbox plates. Also make sure that the gearwheel and pinion are positioned closer to one gearbox plate, as shown. Secure the wires in place with low-melt solder or ACC. Trim the short wire flush with the sides of the gearbox plates.

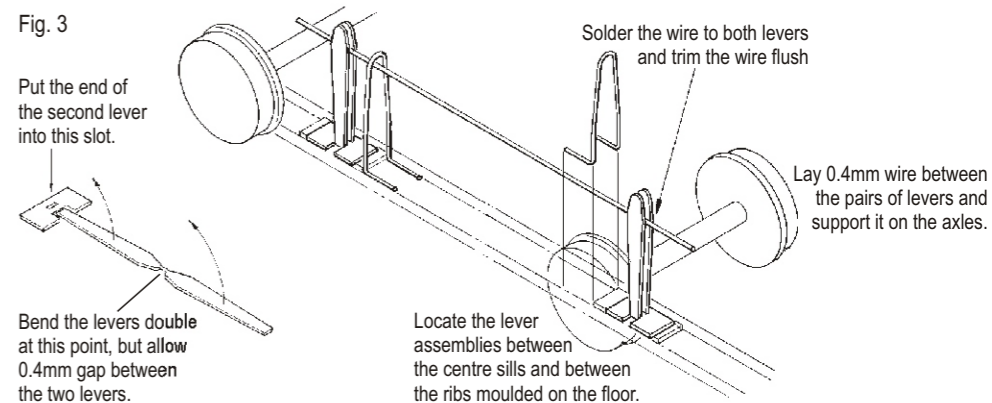
Position a ratchet wheel/pawl lever (8) over the pairs of wires at each handwheel bracket and secure with low-melt solder or ACC. Trim the outer wire flush with the pawl lever.

Thread a washer (7) over the inner shaft on each side. The handwheels (12) have a detailed face, which goes to the outside of the model. Bend up the handle at 90° to the circumference of each handwheel and reinforce the bend with a small amount of solder or ACC. Place a handwheel over the shaft on each side and attach with low-melt solder or ACC before trimming any excess wire flush with the face of the handwheel.

Brake rigging

Form the brake levers to shape, as shown on figure 3. Attach the brake levers (2) to the floor between the centre sills with ACC. There are ribs moulded to the floor to assist with positioning. Place a 55mm long piece of 0.4mm wire between the levers and rest it on top of the axles. Solder the wire to the levers and then trim the tags between the levers.

Fig. 3



Safety loops

Safety loops are positioned around the brake rigging to prevent parts dragging on the track in the event of a failure of any of the connecting pins. A jig is provided to assist with forming these to shape from 0.25mm brass wire. Cut two pieces each 30mm long and form them into a 'U' shape, by bending around the shank of a 1.0mm or #61 drill. Refer to figure 4, which show how the rest of each loop is formed to shape.

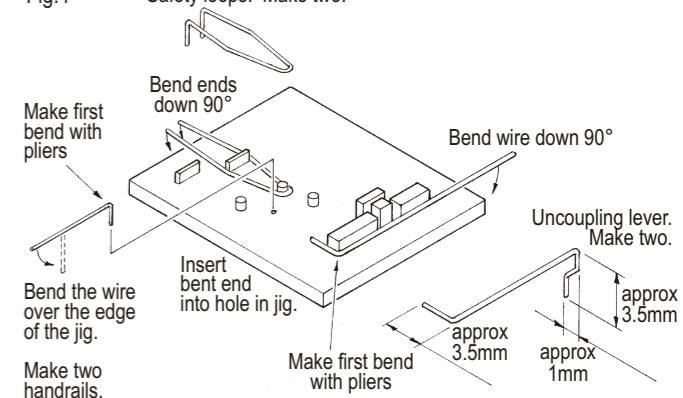
Two identical loops are needed for the air brake rigging. Attach these loops to the floor with ACC, using the ribs moulded on the floor between the centre sills to guide placement.

Body

Check the fit of the sides and ends. Note that the ends overlap the sides and there are short pins moulded on the backs of the ends to help with positioning the sides. Assemble one side and one end with cement and set aside. Repeat for the other side and end. When these two sub-assemblies have some strength, assemble them together to make an open box, ensuring that all the corners are at 90°.

Once the cement has hardened and the body has some strength, carefully lower the body down over the underframe so that the cut-outs in each end are located over the coupler draft gear boxes. The pins moulded on the back of each end should also rest on the top edges of the floor. When satisfied with the fit, carefully cement the body to the underframe. Finally, cement the roof on top of the body.

Fig.4 Safety loops. Make two.



Handrails

A vertical handrail needs to be formed for each end from the 0.25mm wire supplied. Refer to figure 4 for use of the bending jig. Attach the handrails to the ends with superglue, so that there is about 0.5mm clearance between each handrail and the tips of the louvers.

Uncoupling levers

Form two uncoupling levers to shape from the 0.3mm wire, as shown on figure 4.