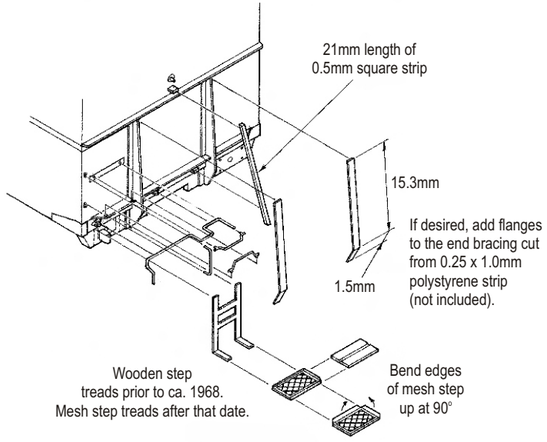
End details

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 6.

Fig. 6



Brass etchings (6) are supplied for the horizontal handrails, which fit in holes moulded in the ends and into the holes drilled in the bracing earlier. Use part (5) for the vertical handrail. To attach the handrails, apply a small amount of ACC on the end of a pin to each hole and apply the handrails with fine tweezers.

Uncoupling levers

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

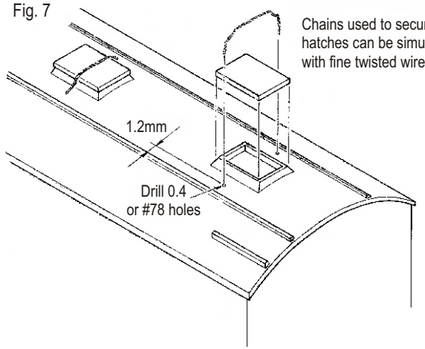
Install the uncoupling levers on the ends of the wagon, secured in the moulded brackets with ACC or little cubes of 0.015" polystyrene (not included).

Roof details

Battens have been moulded integrally with the roof, but separate battens are also supplied, which allow for a gap between the surface of the roof and the main part of each batten. To use the separate battens it is necessary to first carefully shave off the integral battens from the roof and smooth the surface with fine emery paper. Cement the roof battens to the roof, exactly where the moulded battens used to be. If necessary use the second roof supplied as a guide for positioning.

Install an ice hatch on each base, as shown on figure 7.

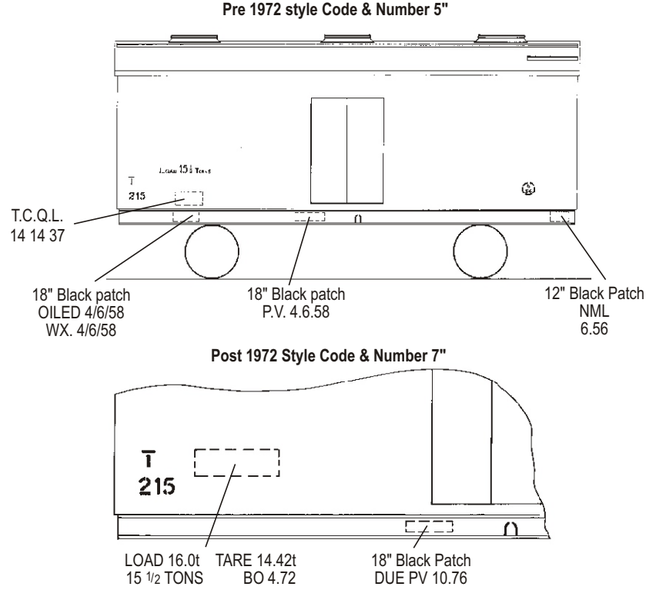
Fig. 7



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 8 for the placement of lettering.

Fig. 8



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.

Steam Era Models
C/- P.O. Rhyll, Victoria, 3923.

VICTORIAN RAILWAYS 'T' VAN WOODEN BODY, 15' 0" WHEELBASE

Prototype Notes

The T van was designed for the carriage of perishable goods requiring refrigeration in summer, although other classes of goods could be carried under certain conditions. The wagon was cooled with ice and heavily insulated to remain cold for several days.

The model is based upon the 15 Ton capacity wooden version first introduced in 1909, but constructed in batches over the years up to 1924 and numbered 192 to 417. Originally built with 6 wheel underframes, these wagons were rebuilt in the 1930s with auto' coupled 4 wheel underframes. One batch of wagons, numbered 343-392, constructed in 1922-23, differed slightly in having end bunkers for the ice, which meant that there were only two hatches on the roof and they were quite close to the ends. Between 1958 and 1961 all these end bunker vans were rebuilt to 'standard' form. Substantial end bracing was fitted to the vans commencing in 1950 and, with the completion of the auto' coupler program, buffers were removed from 1954 onwards and shunters' steps installed in lieu. The kit is representative of a 15Ton van from the mid 1950s until withdrawal in the late 1970s to early 1980s.

The April 1996 issue of the Australian Model Railway Magazine features an article on the 15Ton T vans which provides further information on their history.

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

Assembly

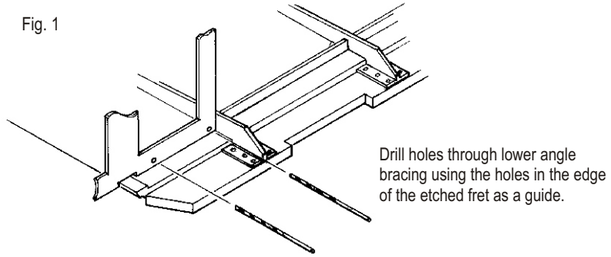
It is recommended that this kit be assembled with a liquid solvent such as Testor's or MEK. Carefully remove parts from the runner system using a sharp knife or sidecutters and do not twist parts off. Trim the 'hooks' moulded on the back of some parts with a small pair of side cutters. Some parts are 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.

Body

Two holes need to be drilled in the angle bracing above the headstocks on each end for a handrail. Holes have been etched in the perimeter of the etched brass fret to act as a template. Position the fret as shown on figure 1 and use a #80 or 0.35mm drill in a pin vice to drill holes through the etching and plastic moulding.

Fig. 1

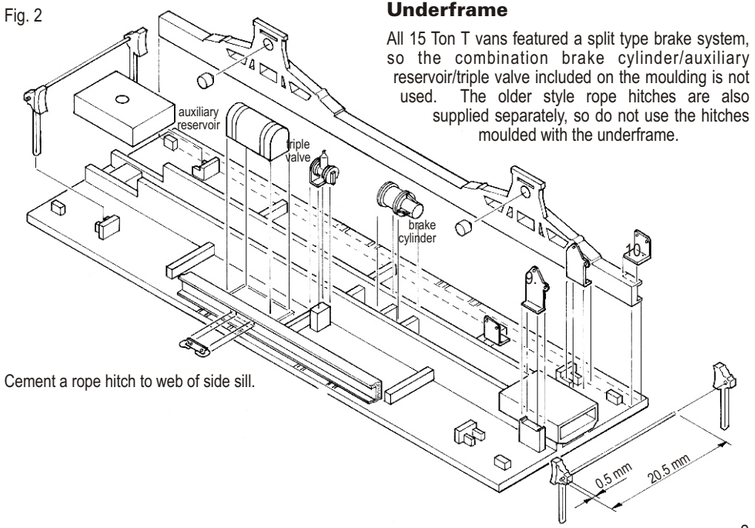


Drill holes through lower angle bracing using the holes in the edge of the etched fret as a guide.

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

Check the fit of the floor moulding in the body. It may be necessary to trim a very small amount from each edge of the floor to ensure a neat fit. It will also be necessary to enlarge the opening in the headstocks, so that the top of the opening is flush with the ribs on the floor that support the coupler.

Fig. 2



Cement a rope hitch to web of side sill.

Underframe

All 15 Ton T vans featured a split type brake system, so the combination brake cylinder/auxiliary reservoir/triple valve included on the moulding is not used. The older style rope hitches are also supplied separately, so do not use the hitches moulded with the underframe.

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 brake cylinder, triple valve and auxiliary reservoir to the underframe, positioned as shown in fig 2.

Cut two pieces of 0.5mm wire, each 20.5mm 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.

Cement a rope hitch to the web of each side sill, displaced about 6mm from the lateral centre line and away from the handbrake end.

Couplers

The kit is designed to use Kadee No5 or No58 couplers (not included). Assemble the couplers in their draught-gear boxes and clip the ears off each side. Attach the couplers to the floor with cement and/or #2 x ¼" 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

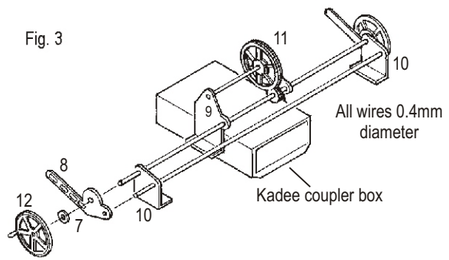
Parts for the brake rigging are provided on the etched brass panel, with part numbers etched adjacent to each part. Holes are etched as appropriate, but it pays to check that the 0.4mm wire can pass through the holes in the various parts before removing the parts from the etched fret. If necessary, the 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 2.

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 3, 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.

Fig. 3



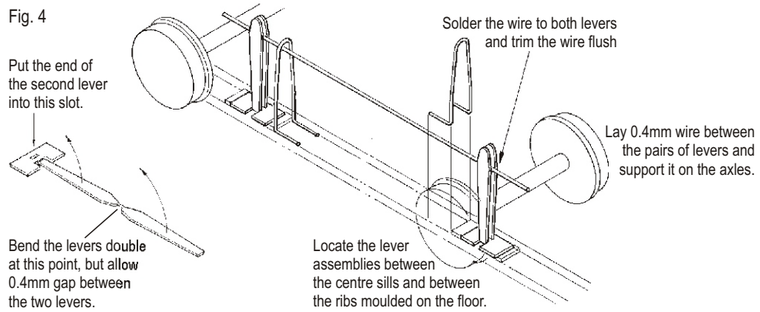
Position a ratchet wheel/pawl lever (8) over the pairs of wires at each handwheel bracket and secure with low-melt solder or ACC. Trim the outer wire flush with the pawl lever.

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 4. 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 wire flush with the outer face of each pair of levers. Also trim the tags between the levers.

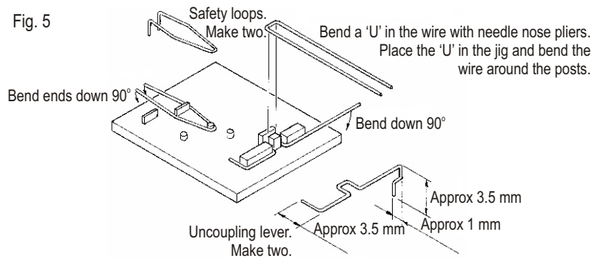
Fig. 4



Safety loops

Safety loops were 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 5, which shows how the rest of each loop is formed to shape.

Fig. 5



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 assembly

Carefully lower the body down over the underframe so that the cut-outs in each headstock are located over the coupler draft gear boxes. The pins moulded on the back of each side should also rest on the top edges of the floor. When satisfied with the fit, carefully cement the body to the underframe. Add some weight such as sheet lead and attach it to the upper surface of the floor with superglue. Finally cement the roof on top of the body, so that it overhangs the sides and ends evenly.