



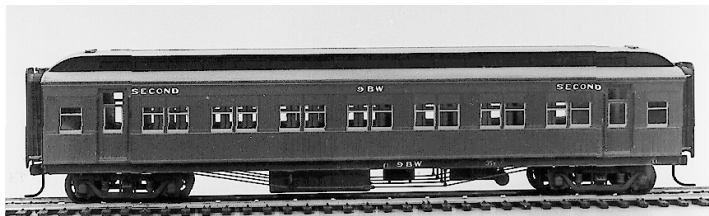
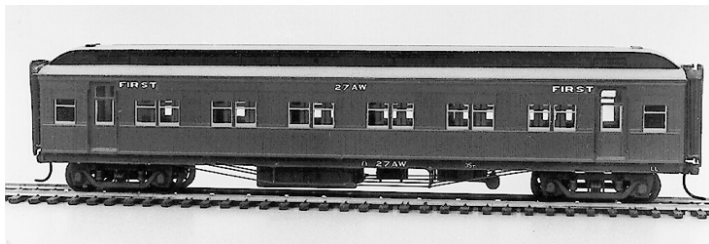
C/- P.O. Rhyl, Victoria, 3923.

## VICTORIAN RAILWAYS 'W' CLASS PASSENGER CAR

### Prototype Notes

The 58' clerestory roofed corridor passenger cars represented by this kit were introduced into Victorian Railways service from 1911 to 1922. Thirty five AW first class, thirty nine BW second class and forty seven ABW composite cars of this type were constructed and further cars with semi elliptic roofs (some 64' long) were produced 1924-26.

The cars were utilised on main, cross country and branchline service and with the 71' E stock, provided the backbone of the V.R. passenger fleet for more than 50 years. Originally gas lit, all W cars were converted to electric lighting from the mid 1920's. They also initially featured bevelled mirrors above the windows and three horizontal rails across the lower window panes. These features were eliminated in the 1920's. Screw couplings were replaced with auto couplings and transition hooks in the 1930's. Our model represents a car in its final condition as operating from the early 1950's to the mid 1980's.



*Models illustrated have been fitted with couplers (not included).*

### Preparation for assembly

This is not a difficult kit. It has been designed to be assembled by modellers of average skill, however the kit contains more than a few parts and certain assembly sequences should be followed. Read the instructions carefully before starting assembly.

### Necessary equipment

Tools required are a sharp knife such as X-acto or surgeons scalpel, a fine tooth razor saw or piercing saw, an assortment of needle files, a pair of tweezers for applying small parts, your choice of liquid plastic cement such as Testors or M.E.K. with #1 sable brush for application and a tube of ACC type cement (ZAP or superglue).

## Preparation of parts

This consists of cutting parts off their sprues and removing parting lines and flash with small files and sharp knife. Refer to figure 10 for parts identification. Because of the design of the tooling one car side and one clerestory side will be loose in the bag. All other parts should be left on the sprues until required.

## Preparation of sides

In order to mould the small horizontal bar in the compartment and toilet windows it was necessary to provide a vertical feed from the top of the window opening to the centre of this bar.

**DO NOT** use a knife to cut the runner away. Firstly create a gap in the centre of this runner with a heated knife blade or Dremel tool. Support the bar with a suitable packer and trim the remains of the gate with a sharp knife. (Refer to figure 1)

Remove the moulding gate from the back of the corner pillar at each end of the sides. File off the base plates for the queen posts moulded onto the bottom of the side sills (refer to figure 2).

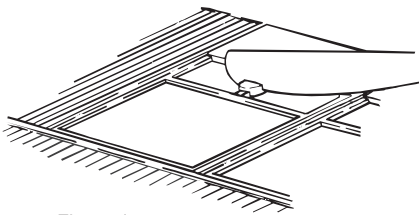


Figure 1

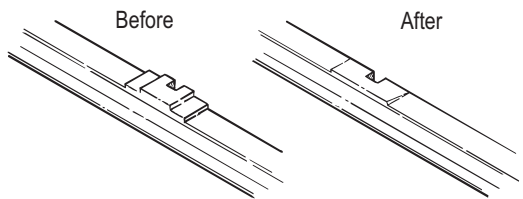


Figure 2

Paint the window sashes at this stage in a "muddy" grey colour: Humbrol grey #40 with a dash of brown or Floquil "concrete".

## Installation of windows

Cut from the clear plastic provided 12 (for an AW) or 14 (for a BW) window panes each measuring 15mm x 8mm. These should be carefully cemented in the recesses in the back of the sides for the main windows. Cut 4 further windows 7mm x 8mm and cement these in the openings at the ends of the sides. These windows should be painted pale grey on one of the sides as they are the toilet compartments.

Cut four windows at 6.5mm x 4.5mm and four at 6.5mm x 8mm and cement in the upper and lower apertures of the side doors respectively.

Finally cement two windows each 5mm x 7 mm behind the apertures in the end doors.

Care should be exercised when cementing windows in place to use the minimum amount of cement in order to prevent marks on the clear plastic.

If the model is to be spray painted it is advisable to mask all window sashes at this stage.

## Assembly of sides and ends

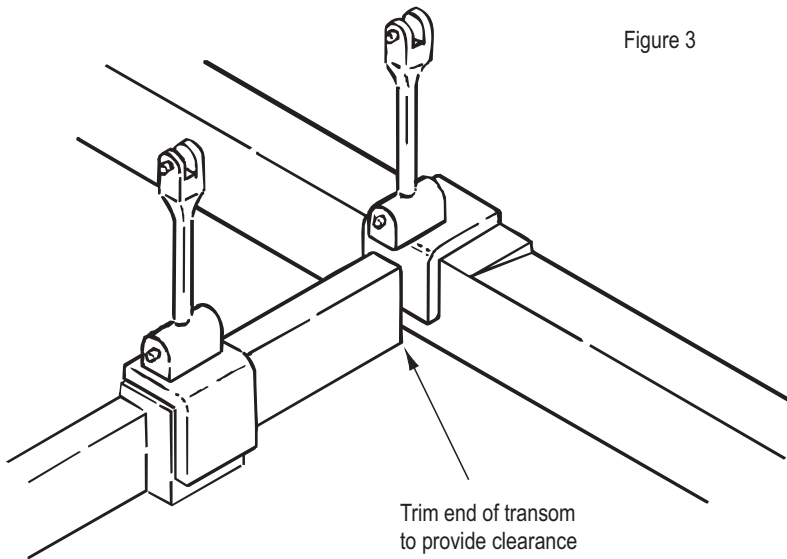
Check the fit of sides and ends. It may be necessary to trim the ends of the side sills slightly to achieve a good fit. When a satisfactory fit is achieved the ends and sides should be cemented together to form an open box. Note that when viewing the car side with the two opaque toilet windows, the end with the extra detail for the passenger emergency brake (End 2) is to the right.

## Underframe and trussrods

Drill four #76 or 0.50mm holes at each end of the floor moulding, at the places marked near the bolster for the ends of the trussrods. Trim about 0.3mm off the end of each underframe crossmember at the queenpost positions. This will allow clearance for the brackets which secure the outer queenposts to the back of the side sill. Install the underframe in the box formed by the sides and ends. The side of the underframe with extra ribs moulded in place for the brake cylinder and triple valve goes on the same side as the frosted toilet windows.

Cut the queenpost castings free from their runner with a fine toothed jewellers saw or razor saw. Clean any burrs or flash from the castings with fine needle files. Check that the nylon line for the trussrods will fit in the notch in the end of each queenpost.

Glue the four inner queenposts to their positions on the transoms with superglue. Glue the outer queenposts to the back of the side sills so that they are in line with the inner posts. Refer to Figure 3. When the glue has dried make any necessary adjustments so that the posts are all standing up straight and perpendicular to the floor.



Cut the nylon thread supplied into four lengths, each about 250mm long. Tie a knot in one end of a length and thread the other end down through a hole in the floor. Thread a turn-buckle onto the nylon before poking this end back up through the floor at the other end of the underframe. Pull the nylon tight, **straight** along the underframe, and secure with some superglue where it goes up through the floor. When the glue has dried, stretch the nylon up and onto the ends of the queenposts. Secure the turnbuckle centrally between the queenposts with a drop of superglue. Repeat the process for the remaining three trussrods.

## Detailing the Underframe (Refer to inverted view, figure 4)

- Remove the air reservoir and reservoir support bracket from the sprue. Cement the reservoir centrally to the support bracket in the curved recesses.
- Cement the reservoir and its bracket to the underframe. A small bump is provided on the centre sill to aid in positioning. After allowing about half an hour for the cement to harden the small bar which spaced the two bracket halves apart can be carefully removed by cutting with a sharp knife. In the meantime go on with the following steps.
- Cement each battery box front to a battery box rear. Cement the battery boxes to the underframe with the detailed faces outward and the backs against the small bumps moulded on the underframe transoms.
- Cement the brake cylinder / lever moulding to the underframe with the front end of the cylinder placed against the small bumps moulded to the supports.
- Cement the triple valve to the supports adjacent to the brake cylinder. The raised bump on one side of the triple valve should face outward, with the valve itself being positioned close to the side sill.
- Cement the generator and switch panel to their supports moulded on the underframe.

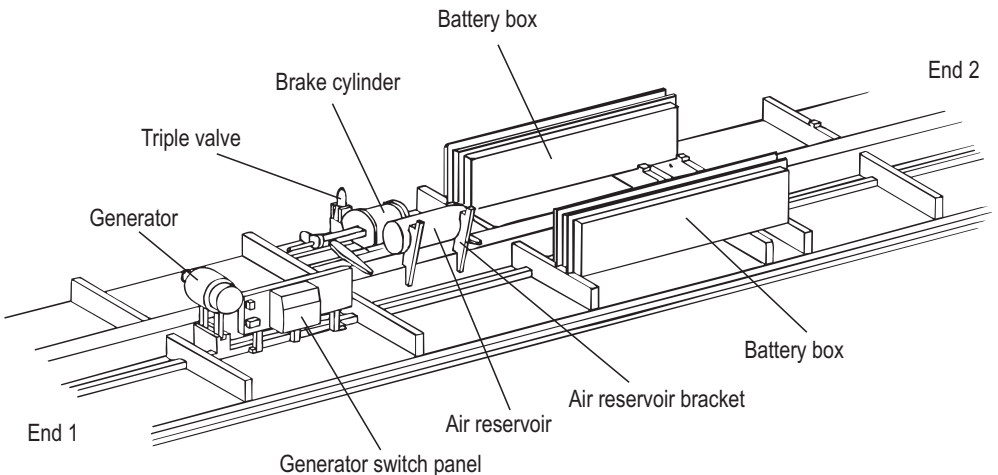


Figure 4

## Interior detail

Basic interior detail is provided in the form of a printed cardboard sheet from which compartment and corridor partitions as well as the two toilet compartments can be constructed. Cut the components from the sheet using a sharp knife and arrange in the car as shown on figure 5.

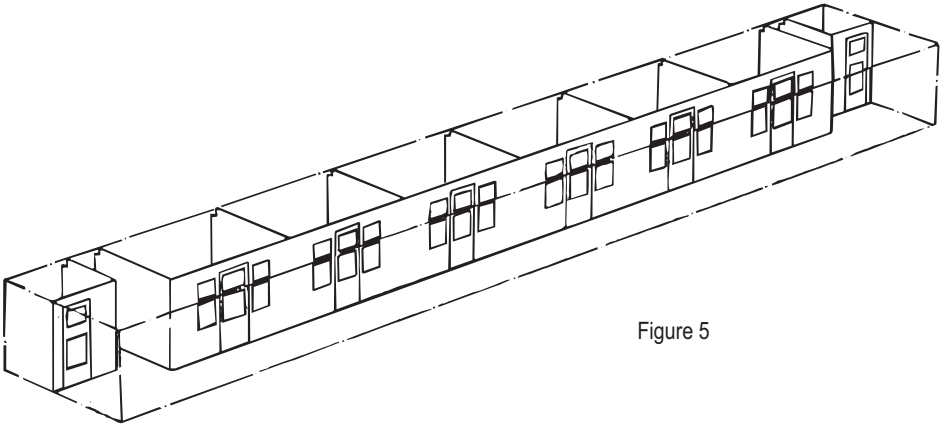


Figure 5

## Detail of ends

Remove the runner from the openings of inner and outer diaphragm plates. Telescope the inner and outer diaphragm plates into one another and check that the two parts can move in and out freely. Carefully file the curved guide at the top of the outer diaphragm plate if necessary. When everything is operating smoothly, cement one diaphragm spring to each inner diaphragm, located in the channel section at the top edge.

Cut a strip of lightweight tissue (gift wrapping tissue) 23mm wide and colour dark brown with a texta colour marker (the type with a spirit base ink is best). Fold the strip into a concertina with each fold about 1.5mm apart. Cut 4 sections from this strip, each with 4 folds and 3 reverse folds.

Carefully cement the folded strips of paper each side of the diaphragm plate assemblies as illustrated in figure 6. Finally cement the diaphragm assemblies to the end walls centrally between the collision posts.

Cement the end step to the place provided at end 2. (See figure 7).

Cut four strips of 0.010 inch styrene sheet 1mm x 26mm and cement centrally over each collision post web.

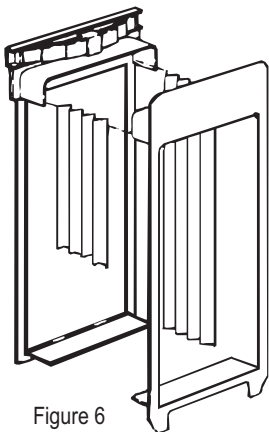


Figure 6

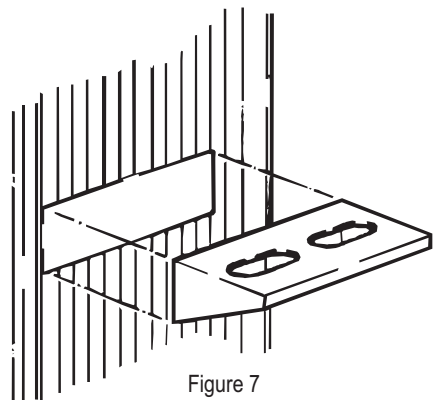
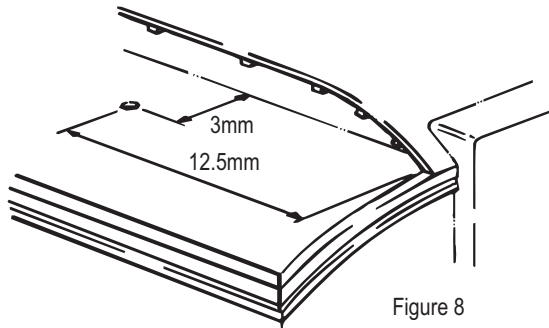


Figure 7

## Roof

Check fit of roof between ends and sides. Note that the water hatches are biased away from the side of the car with the toilet compartments. Cement in place. Cement the clerestory sides in place along each side of the raised centre section of the roof moulding.

Mark and drill a #70 hole at each end of the roof above the toilet compartments and cement a ventilator in each hole. (See fig. 8)



## Handrails

Cut 8 lengths each 17mm long from the 0.010 inch styrene rod provided and cement to the ends of the handrail stanchions either side of the vestibule doors.

## Bogies

Attach the bogies with the screws provided. It will be necessary to first cement one spacer to the lower side of each body bolster.

## Couplers

The underframe is designed to accept Kadee #5 or #58 couplers. The draft gear box may be glued directly to the floor after removing the side lugs. A gap of 0.5mm should be allowed between the face of the headstocks and the back of the lip moulded on top of the draft gear box.

## Handbrake

Etched brass handbrake detail is available in Steam Era Models kit E7. Each kit contains sufficient parts to detail 5 cars.

## Painting

Body sides and ends are V.R. Coach red, available in spraying enamel from Steam Era Models. Underframe and equipment, and bogies are all black. Roof should be an ochre colour prior to about 1960 when they were repainted dark brown. Position the decals provided as per figure 9.

## To Apply Decals

Trim decals close to lettering to remove excess film.

Immerse in water for ten to fifteen seconds, then set aside on a tissue until decal straightens out.

Slide decal into position. If it is necessary to adjust the final position, use a small brush that has been dipped in water.

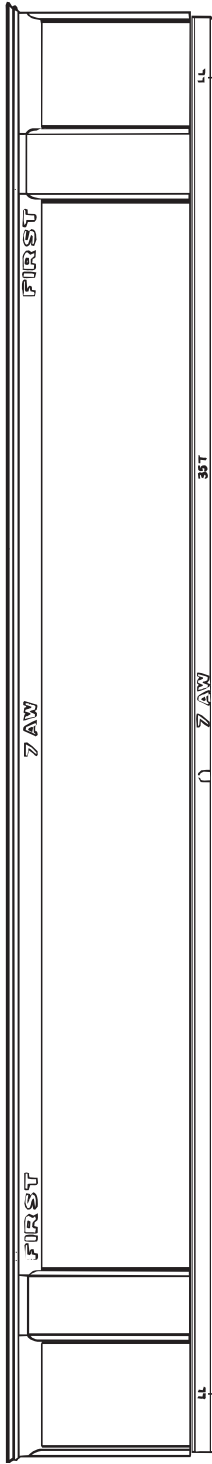
Use a tissue to soak up excess water.

The use of a decal setting agent such as Solvaset is recommended to assist decals in snuggling down over rivets etc.

A flat finish such as DDV or estapol matt applied to the entire model will give a uniform dull finish.

Finally remove the masking from the windows.

NOTE: Decals adhere best to a gloss surface.

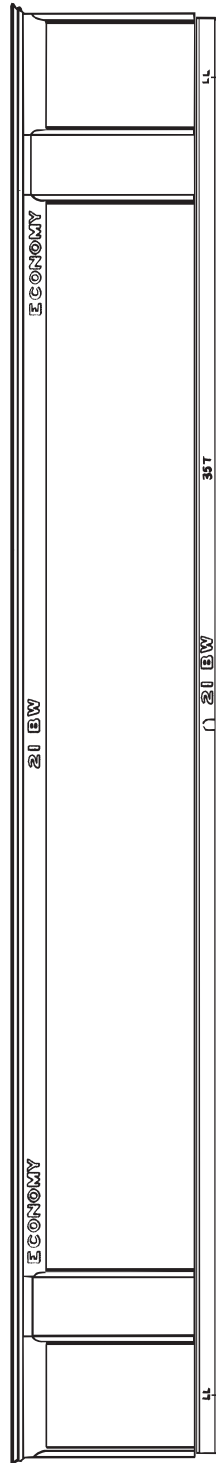


Even numbered AW  
Odd numbered BW

COMPARTMENT SIDE  
White/black lettering on letter board  
Plain white lettering on side sills

Odd numbered AW  
Even numbered BW

Figure 9



Odd numbered AW  
Even numbered BW

CORRIDOR SIDE

Even numbered AW  
Odd numbered BW

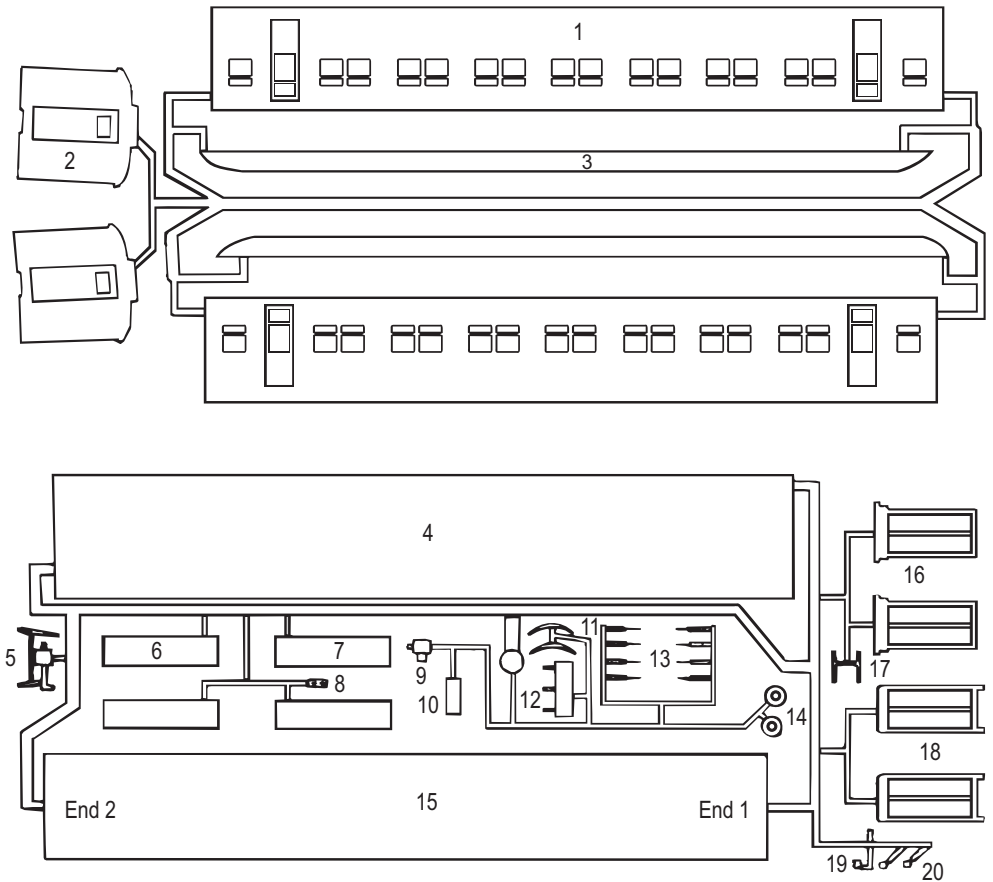


Figure 10

**Parts List**

- |                       |                             |
|-----------------------|-----------------------------|
| 1. Sides              | 11. Diaphragm Springs       |
| 2. Ends               | 12. Switch Panel            |
| 3. Clerestory sides   | 13. Queenposts (do not use) |
| 4. Roof               | 14. Bogie Spacer            |
| 5. Brake cylinder     | 15. Floor                   |
| 6. Battery box backs  | 16. Inner Diaphragm Plate   |
| 7. Battery box fronts | 17. Air Reservoir Support   |
| 8. Step               | 18. Outer Diaphragm Plate   |
| 9. Generator          | 19. Triple Valve            |
| 10. Air reservoir     | 20. Ventilator              |