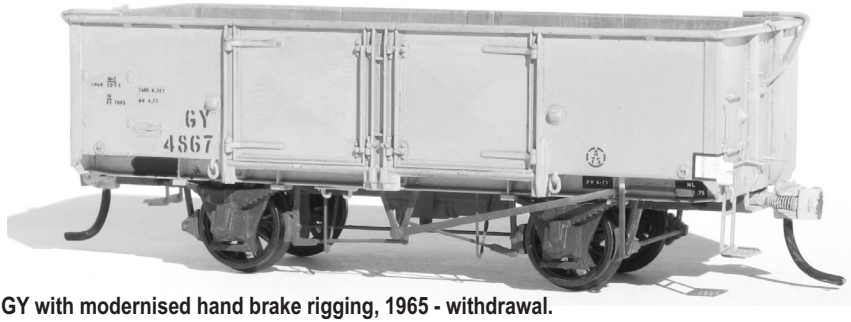
Steam Era Models
C/- P.O. Rhyll, Victoria, 3923.

VICTORIAN RAILWAYS 'GY' WAGON

Prototype Notes

The GY wagon fleet was one of the largest single classes of goods vehicle in VR service and was primarily a bulk commodities wagon, although general goods could be carried. They were constructed by government workshops and contractors between 1939 and 1953, with conversions from GZ, IZ and HY wagons swelling the total to more than 6,200 by 1970. The GH wheat hopper and G general purpose wagon are direct conversions from GY wagons. The wagons represented by this kit were numbered 1-910, 2001-3729, 3380-6149 and 15870-17030. The last group of numbers were conversions from HY wagons that took place between 1961 and 1965.

☐ **GY with original handbrake rigging, 1957 - 1968.**



☐ **GY with modernised hand brake rigging, 1965 - withdrawal.**

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

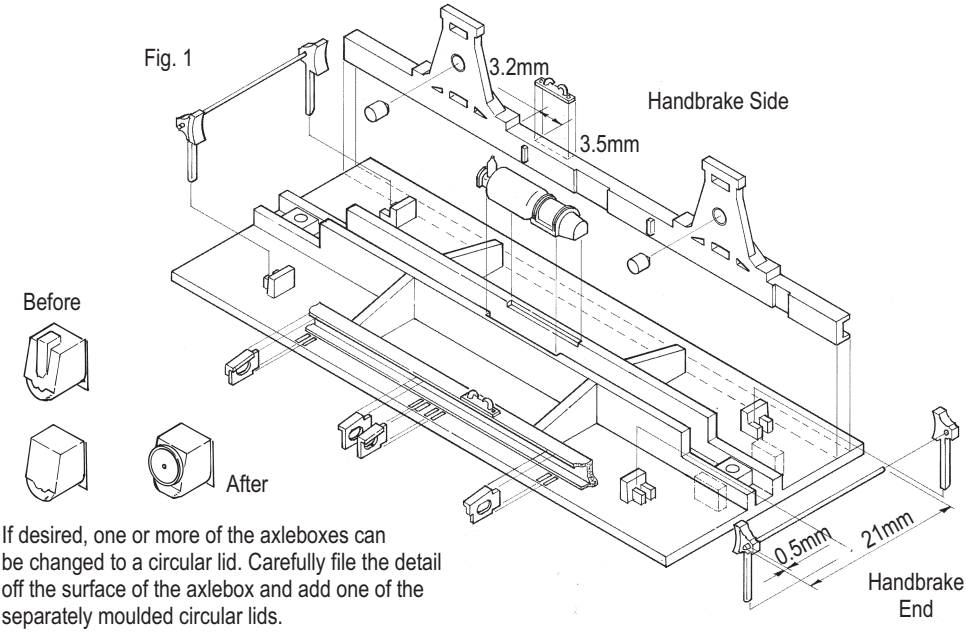
Assembly

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 90º 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 180º, the half etched line goes to the outside.

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

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. One side sill has small ribs moulded on the inside face, so it will be necessary to make notches in the piece of wood to accommodate them during this step. This work will ensure that the side sills are installed at 90° to the floor.



If desired, one or more of the axleboxes can be changed to a circular lid. Carefully file the detail off the surface of the axlebox and add one of the separately moulded circular lids.

Refer to figure 1, identify the handbrake end of the floor and use a pair of side cutters to remove the blocks adjacent to the centre sills at that end.

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 side sill with the notches in the back is installed on the handbrake side of the floor and the ends are flush with the ends of the floor.

Cement the brake cylinder to the centre sills, orientated 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 four brackets on each side that support the door stanchions, locating them against the side sills and between the small ridges moulded to the floor. Each part is slightly different, so ensure that the parts are arranged and orientated as shown on figure 1. Finally cement a rope hitch to the bottom flange of each side sill.

Brake rigging

Parts for the brake rigging are provided on the etched brass panel, with part numbers etched adjacent to each part. The hand brake rigging (7) includes detail layers that are best attached while the brake rigging is still part of the brass fret. Fold the detail layers into position, as shown on figure 2 and secure with solder. Either pre-tin the mating surfaces before folding or use solder paste. Only after the layers are soldered in place should the connecting tags be removed and the edges dressed smooth by careful filing.

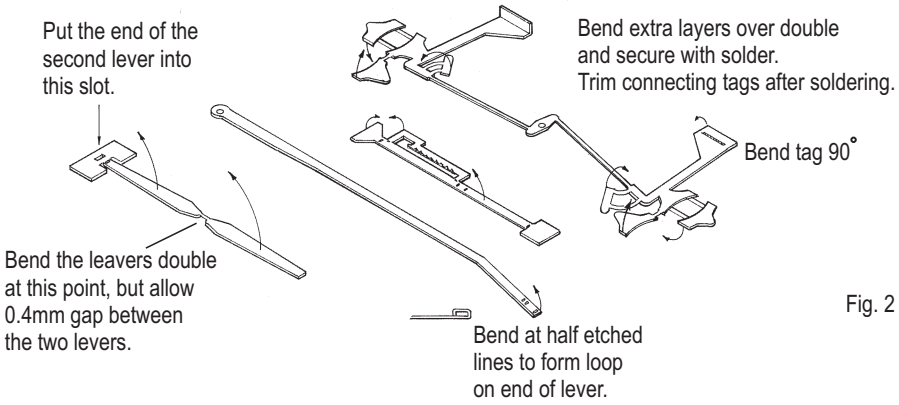


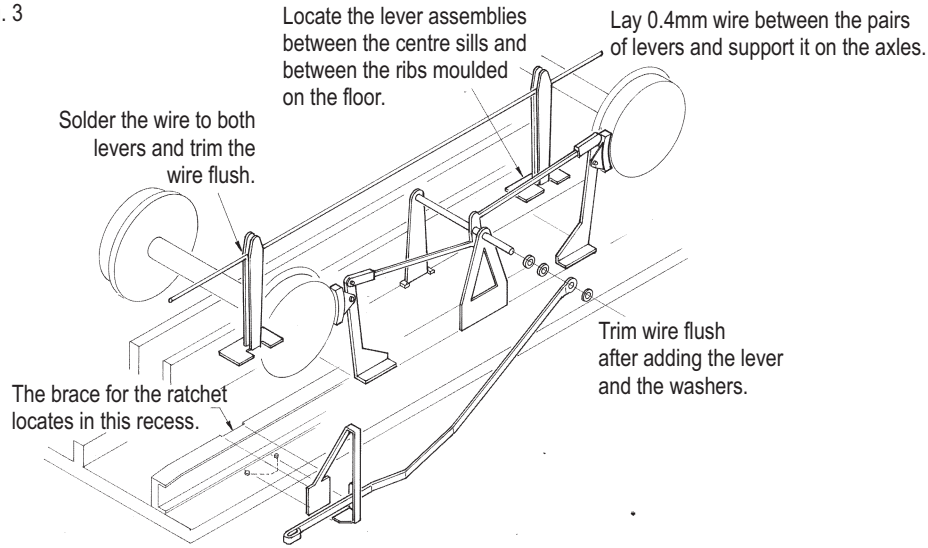
Fig. 2

Form the handbrake ratchet (11), the handle on the end of the hand brake lever (5) and the air brake levers (2) to shape, as shown on figure 2.

Refer to figure 3 for placement of the brake parts on the underframe.

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 the length 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 the levers. Also trim the tags between the levers.

Fig. 3



Use ACC to attach the vee hanger (8), the central support (9), the handbrake rigging (7) and the brake ratchet (11) to the floor. Recesses in the back of the side sill together with small lumps on the floor assist with positioning these parts.

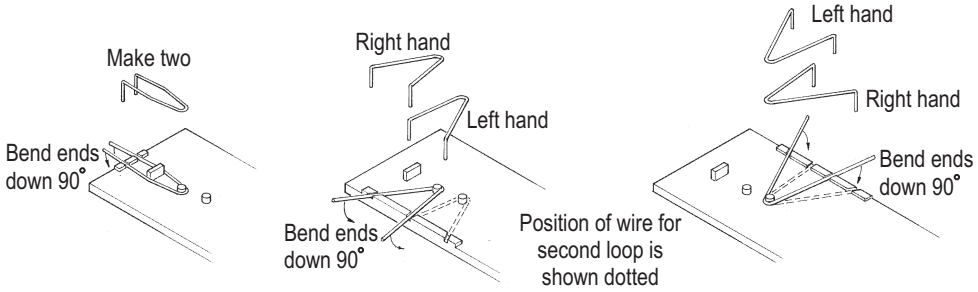
Thread a 15mm length of 0.7mm diameter wire through the holes in parts 7, 8 and 9 and secure with ACC or solder. Add two washers (4) to the wire outside the vee hanger.

Form shallow bends in the brake lever at the half etched marks and thread it though the opening in the ratchet, before placing the hole in the end over the 0.7mm wire. Add a third washer to the outside of the lever and secure with solder or ACC before trimming the excess wire flush with the last washer. If the wagon is to be in traffic the lever should be positioned in the stepped recess at the top of the ratchet, but can be placed towards the bottom of the ratchet if the wagon is to be parked on a siding.

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 the wire into pieces 30mm long and form each into a 'U' shape, by bending around the shank of a 1.0mm or #61 drill. Refer to figure 4, which shows how the rest of each loop is formed to shape.

Fig. 4



Saftey loops for air brake

Safety loops for original handbrake

Safety loops for modernised handbrake

Two identical loops are needed for the air brake rigging as well as a L/H loop and a R/H loop for the handbrake rigging. Attach these loops to the floor with ACC, using the ribs moulded on the floor and the back of the side sill to guide placement. Refer to figure 5.

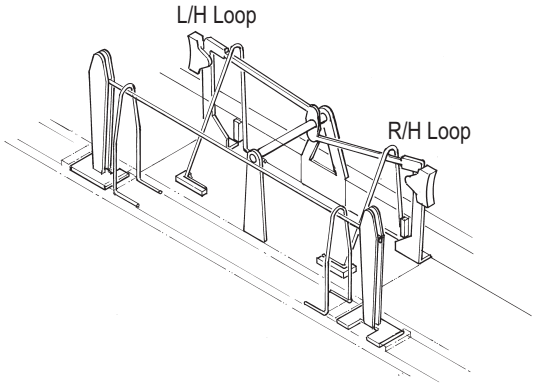


Fig. 5

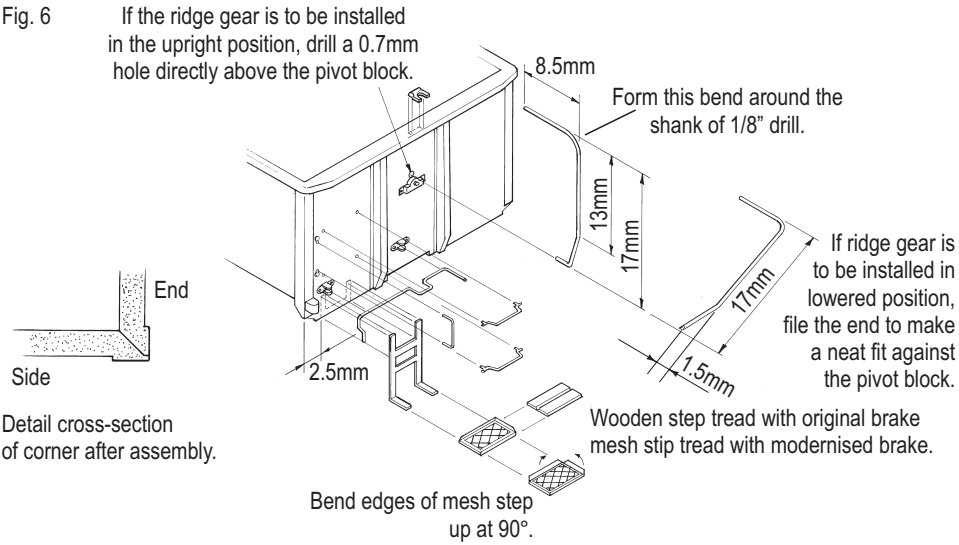
Couplers

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 or #2 x 3/16 pan head screws (not included) using the holes moulded between the centre sills at each end of the floor.

Body

Check the fit of the sides and ends. Note that the sides overlap the ends by a very small amount, as shown in the detail cross-section on figure 6. It may be necessary to file a very small amount from the end of the coping on the top edge of each side to get a perfect fit. When satisfied, 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°.

Fig. 6



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 and the extensions of the door stanchions come down even with the brackets that extend from the side sills. The shallow step moulded in the back of each side should also rest on the top side edges of the floor. When satisfied with the fit, carefully cement the body to the underframe.

Form two uncoupling levers to shape from the 0.3mm wire, as shown on figure 7.

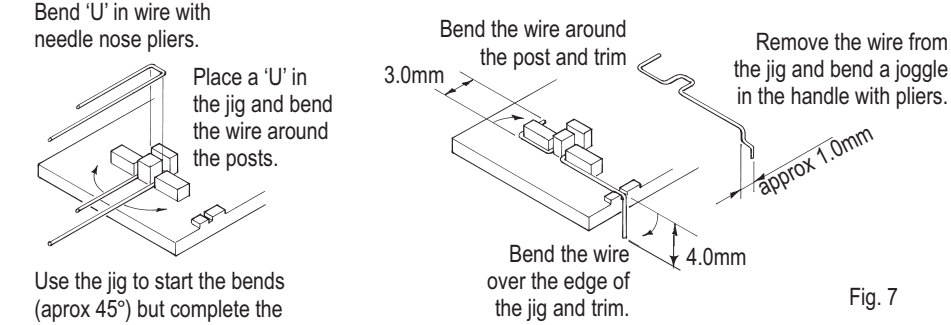


Fig. 7

Install the uncoupling levers on the ends of the wagon, secured in the moulded brackets with ACC.

Bend tarpaulin supports to shape from 0.7mm wire. If the support is to be installed in the upright position drill a 0.7mm diameter hole in each end, directly above the pivot moulded on the end and secure the support with ACC. If the support bar is to be installed in the lowered position, just form the bar into an 'L' shape and file

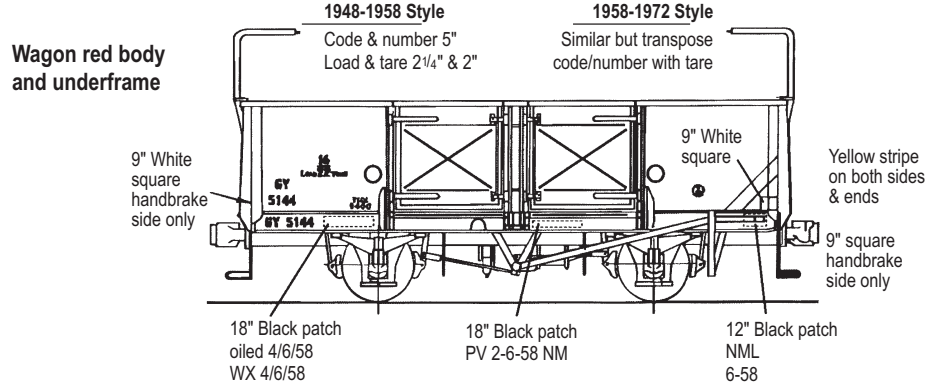
the end so that the bar rests against the curved edge of the pivot block. Secure the bar to the end and to the coping on the top edge of the side with ACC. Cement the retaining brackets for the ridge gear centrally on the top coping at each end.

Assemble two shunter's steps from parts 10 and 6. Wagons with the modernised handbrake generally also had shunter's step treads made from expanded metal mesh. If building this model, bend the edges of the etched step (10) 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.

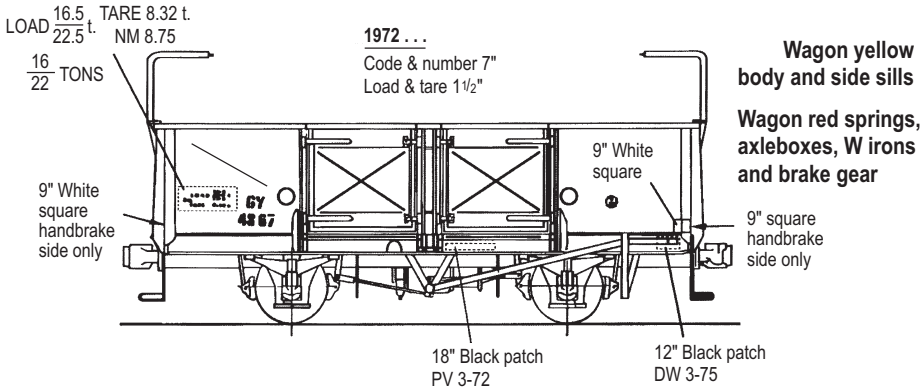
Etched brass handrails are supplied which fit in holes moulded in the ends. If the model is to be painted red with a yellow stripe, leave the handrails until after the wagon is painted and the yellow decal stripe is in place. The handrails for a red wagon can be painted while still attached to the etched fret.

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.

Painting and Decals.



The interior of all wagons was left unpainted steel.



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.