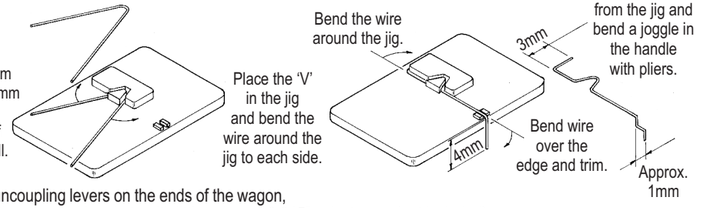
Uncoupling levers

Form two uncoupling levers to shape from the 0.3mm wire, as shown on figure 6.

Figure 6.

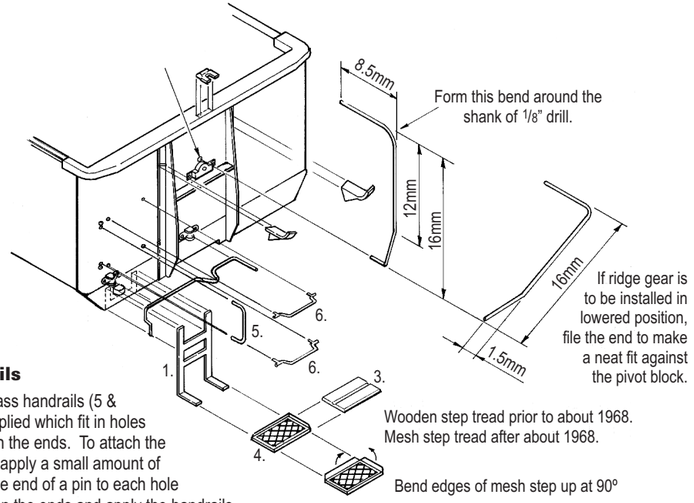


Install the uncoupling levers on the ends of the wagon, secured in the moulded brackets with little cubes of 0.015" polystyrene (not included).

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 mesh 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 7.

Figure 7.



Handrails

Etched brass handrails (5 & 6) are supplied 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.

Ridge gear

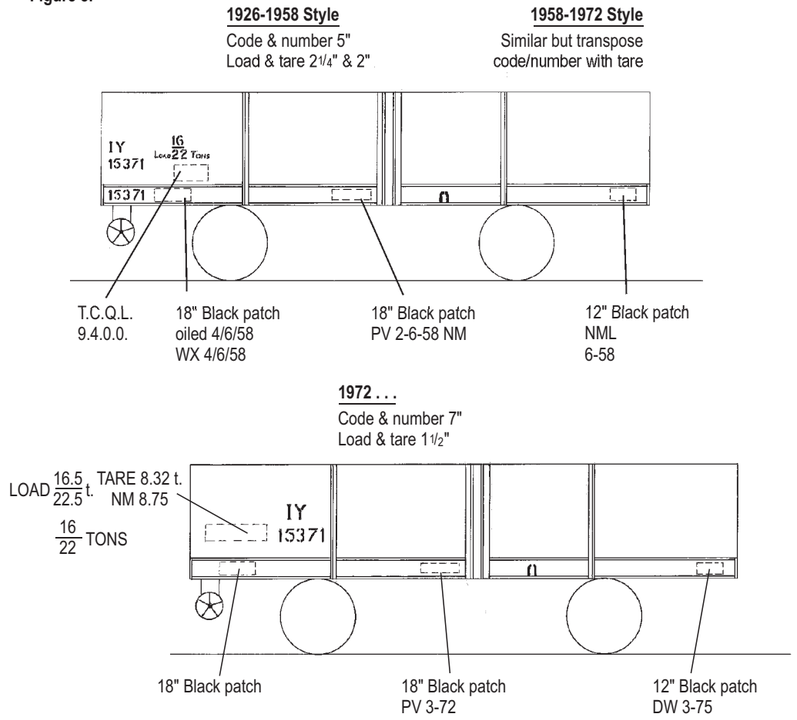
Bend tarpaulin supports to shape from 0.7mm wire. If the support is to be installed in the upright position drill a 0.7mm diameter hole in each end, directly above the pivot moulded on the end and secure the support with ACC. If the support bar is to be installed in the lowered position, just form the 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. Also cement a ridge gear support to each end stanchion, using the little mark incorporated in each stanchion to guide the location. Spares are provided of these parts in case one should disappear into orbit or the carpet.

Painting and Decals

The IY wagons were painted all over wagon red throughout their lives, although the interior was always left unpainted. The wagons represented by this kit were numbered between 15220 and 15569.

Decals are provided which cover various periods in the wagon's history. Refer to figure 8 for the placement of lettering. The decals will adhere best to a gloss paint finish.

Figure 8.



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 a 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.

NOTE: DECALS ADHERE BEST TO A GLOSS SURFACE.

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

VICTORIAN RAILWAYS IY OPEN WAGON

Prototype Notes

The IY wagons were originally introduced to traffic as 20 tons capacity I wagons, featuring larger axle journals than the standard 16 tons capacity I wagon. Numbered 15220 to 15569 inclusive, they were placed on register from 1/10/1926 to 7/1/1927, but were recoded IY from 1939 and given a dual load rating of 16/22 tons. IY wagons were fitted with a wheel handbrake similar to that used on IZ wagons, instead of the lever handbrake fitted to 'standard' I wagons.

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

Assembly

It is recommended that this kit be assembled with a liquid solvent cement, such as Tamiya Limonene, MEK or Testor's. Whilst the assembly is quite straightforward, the following notes should be studied carefully as the sides and floor mouldings are 'handed' and must be assembled in their correct positions if an accurate model is to be produced.

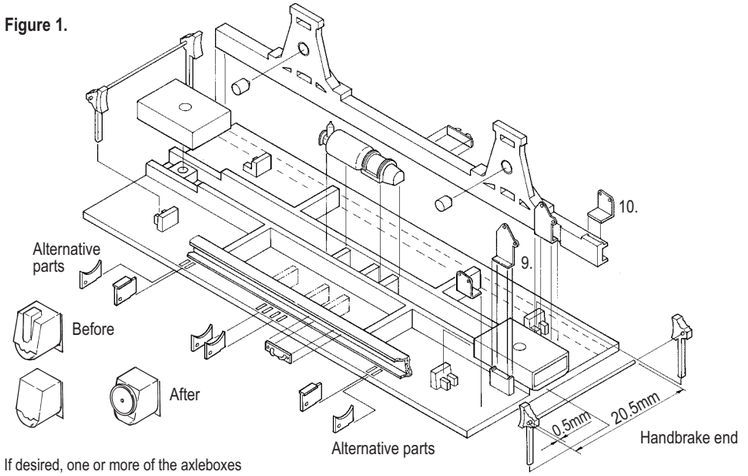
Carefully remove all parts from sprues as required. Use a knife or razor saw and do not attempt to snap parts off. Remove the moulded hooks from the backs of the side sills and brake shoes with flush cutting clippers. In all cases the 'fit' of parts should be checked before cementing.

Underframe

For the arrangement of parts refer to figure 1.

Use a sharp knife or side cutters to remove the three rectangular raised blocks towards one side of the floor. These are only required for a standard I/IA wagon and are shown chain dotted on figure 1. Identify the 'Handbrake End' of the wagon, which has two raised blocks located either side of the supports for the coupler.

Figure 1.



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.

Remove the draft, a shallow angle of about 3°, 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 axle box.

Four small discs have been moulded adjacent to one side sill. Whilst most IY wagons had axle boxes with flip top lids, in the 1950s some wagons were fitted with axle boxes that featured circular lids. To model a wagon with circular axle box lids, carefully file the detail off the surface of each axle box and cement a circular lid in place, as shown on figure 1.

Each side sill has some raised detail on the bottom flange at one end, which needs to be located at the 'handbrake end' of the floor. Cement each side sill to the floor, located against the ribs moulded on the lower surface and with the ends flush with the ends of the floor and with the wheelsets sandwiched between. Cement the brake cylinder to the supports between the centre sills, orientated as shown on figure 1.

Add four body brackets to each side, located up against the side sills and in between the shallow ridges moulded to the floor. Because the floor is also used in the B van kit, there are extra ribs moulded on the floor, so make sure the body brackets are located in the correct positions, so that they will align with the door pillars on the body. Alternative parts are provided for the outer brackets, so use one style or the other. The I wagons were built with outer brackets of the same shape as the inner ones, featuring a curved cut-out in the lower edge and photos show these brackets still in use in the late '50s and early '60s. Cement these brackets located hard up against the outer ridge moulded on the floor, so that the outer face of the bracket will align with the outer face of the door pillar when the body is installed. Photos taken in the '70s show many, but not all wagons fitted with

a plain bracket. If these 'modern' style brackets are used, cement them against the inner of the two ridges moulded on the floor, so that the web of these brackets will be centred behind the door pillars when the body is installed.

Six brake shoes have been moulded, but only four are required. Cut two pieces of 0.5mm wire, each 20.5mm long and smooth the cut ends. Press each end into the holes moulded in a pair of brake shoes, so that the wire projects from the face of each brake shoe by 0.5mm. Locate each assembly in the lugs moulded on the lower face of the floor and secure with cement.

Cement a rope hitch to the web of each side sill, located below where the larger doors will go on each side, but slightly closer to the location of the central stanchion.

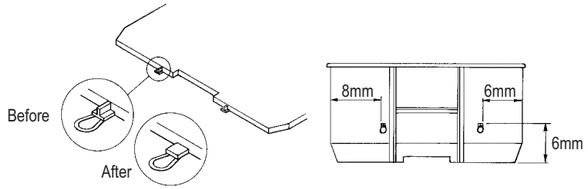
Couplers

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 2mm x 5mm pan head screws (not included) using the holes moulded between the centre sills at each end of the floor.

Body

Two lashing rings have been moulded on the bottom edge of each end. Use a sharp knife to carefully remove the ridge from the back of each lashing ring/bracket assembly, as shown on figure 2. The ring and its bracket can be carefully cut from the edge of the end and cemented in a new location, on the outer face of the end, as shown on figure 2.

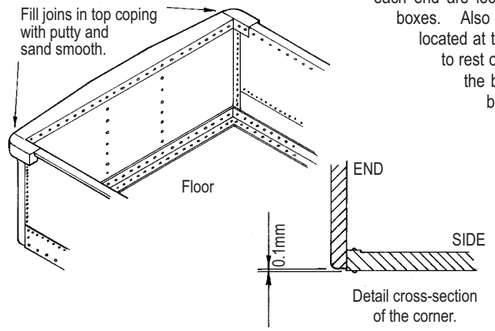
Figure 2.



Check the fit of the sides and ends. Note that the ends overlap the sides, so that the edge of the end is only about 0.1mm short of being flush with the sides. 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°.This is most easily done with the body upside down on a flat surface, so the parts are supported by their top edges.

Once the cement has hardened and the body has some strength, invert the underframe and carefully lower it down into the upside down body, so that the cut-outs in each end are located around the coupler draft gear boxes. Also ensure that the larger doors are located at the handbrake end. The floor needs to rest on the shallow rivet strips moulded in the back of each side and end. If need be, give the body a gentle pinch between forefinger and thumb to ensure that this happens. The conjunction of the rivet trips on the edges of the floor with the sides and ends represents the angle iron used to attach the sides and ends to the floor on the prototype. When satisfied with the fit, carefully cement the body to the underframe.

Figure 3.



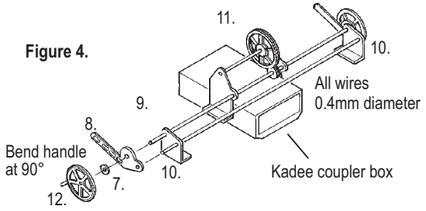
Handbrake

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 4, 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. Secure the wires in place with low-melt solder or ACC. Trim the short wire flush with the sides of the gearbox plates.

Figure 4.



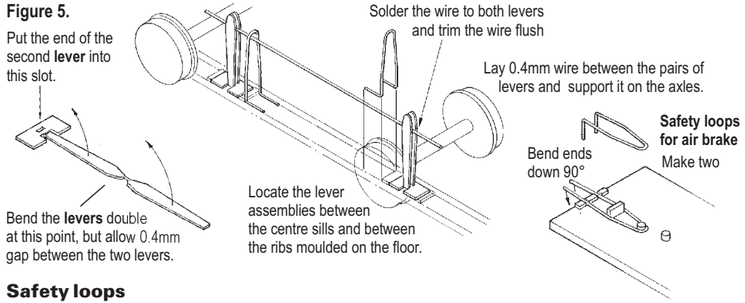
Position a ratchet wheel/pawl lever (8) over the pairs of wires at each handwheel bracket and secure with low-melt solder or ACC. Trim the outer wire flush with the pawl lever.

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 5. 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 50mm 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.

Figure 5.



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 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.

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.