

KE 4 wheel hearse Assembly instructions

Between 1865 and 1886 thirteen 4-wheel hearses were built for NSW's northern (6) and southern (7) systems to cater for funeral traffic to the Rookwood and later Sandgate and Woronora cemeteries. The northern vehicles were renumbered when the systems were merged in 1889.

By 1892 twelve remained in service and were given the code KE. Numbers included 625, 647, 657, 658, 665, 712, 718, 729, 747, 775, 805, and 833. Around 1914-15 they were withdrawn from regular service. The nine that had not been condemned were subsequently converted into tool vans and around 1922 were numbered in the service stock register (L93, L94, L97, L 178, L671, L923, L932, L972 and L998).

This model covers the 4-wheel hearses with straight panelling on the ends.

Recommended adhesives:

Superglue Used for gluing polyurethane parts together and for gluing brass castings or nickel silver etches to urethane parts. Some brands of superglue may not work with the plastic in this kit. Green Zap-a-Gap is a glue that works.

Warning:

The cast roof support posts on the top of the body are very fragile and easy to break off, particularly the corner ones (those on the sides, ends and centre have been reinforced). If they do break off, 3D printed spares have been included. Trim the broken post level with the roof and drill a shallow 0.7mm hole in the roof. Position the replacement post in the hole and super glue it in place. Once the roof is glued on, the support posts should be secured firmly enough to prevent accidental damage.

Chassis:

Remove the underframe/W-iron from the nickel silver etch. Take particular care when cutting the tabs holding the W-iron tie-bar and overlay (arrowed in Photo 1) as they are easy to bend out of shape. While they can be bent back to shape, every time it is bent the metal fatigues and it will eventually break.

Using a hold and fold or similar tool fold the sides and ends of the chassis to 90° and run a fillet of solder along each the bend lines to add strength.

Solder the four waisted bearings into the etched holes in the W-irons. The flange must be on the inside of the frame (the side of the etch with no writing on it). As the brass bearings can vary in diameter, the etched holes may need to be opened up - a tapered broach is preferred but a round file will do. Use a minimal amount of solder as excess will make it harder to fit the spring/axlebox castings later.

Referring to Photo 2, overfold the W-iron tie-bar overlay (large arrow) 180° away from the half etched bend line (small arrow) so that it sits on top of the tie-bar across the bottom of the W-iron.

Referring to Photo 3, overfold the tab with the two rivets (arrowed) 180° so it sits on top of the now double thickness tie-bar. Apply a small amount of solder to the lower edge and allow it to wick into the join. Avoid getting excess solder on the detail.

File off any excess tab material from the ends and bottom of the tie-bar on each W-iron.

Remove any flash from the urethane spring/axlebox castings and the solebars. Take care to avoid damaging the fine detail. A sharp knife with a sharp narrow pointed blade is recommended.

One of the solebar castings has to have four holes drilled in the middle to attach the outside V-hanger for the hand brake. Sit a solebar casting against the chassis and using the holes in the etch as a guide, mark the location of the holes. Drill 0.4 mm holes through the solebar making sure they are square and vertical, otherwise they won't match the etched holes in the outside V-hanger. Glue the solebars to the chassis.

Check that each spring/axlebox casting fits against the W-iron and against the solebar. The holes in the axleboxes can be opened up slightly with a drill and the tips of the waisted bearings can be filed back a little to

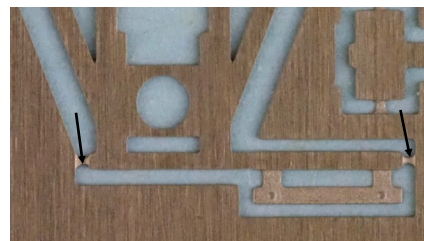


Photo 1.

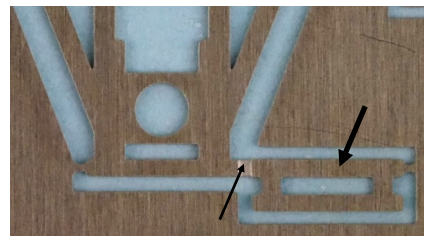


Photo 2.



Photo 3.

position the axlebox correctly. Glue the spring/ axlebox castings to the W-irons.

The kit is designed to take screw or 3-link couplers. If you want to fit Kadee couplers, the half etched centre portion of the ends of the chassis will need to be removed to allow coupler boxes to be fitted.

Drill holes through the buffers with a 0.75mm drill. Fit the brass buffer heads and glue them in place. A recess for the coupler shank will also need to be cut out if you choose to fit Kadees.

Glue a buffer beam to each end of the chassis making sure they don't protrude above the top of the etch.

While they are still attached to the etch, drill a 0.45 mm hole in the bottom of each V-hanger. Remove the inner V-hanger (the one with extended tabs on the ends) from the etch and fit it into the pair of slots in the underside of the chassis. Twist the tabs with pliers securing it squarely to the chassis then solder it in place. File off the twist tabs level with the top of the chassis.

Fit the underfloor casting to the underside of the chassis. Note it has a slot in it to clear the inner V-hanger and that this slot has to be free of flash.

Remove the outside V-hanger from the etch and use short pieces of wire to pin it to the solebar through the holes drilled earlier. Solder it in place then trim and file the end of the pins close to the V-hanger to represent the bolts that fix it to the solebar.

Make a hole in the top of the brake handle ratchet to allow the end of the brake handle to fit through it then glue the part onto the solebar (Diagram / photo).

Solder a length of 0.45 mm wire to the etched brake handle and place it through the hole in the V-hanger while inserting the brake shoe casting onto the wire. Place the brake handle through the handle ratchet and when happy with its position place a small dab of super glue onto the wire where it passes through the V-hangers.

Take the urethane brake handle overlay and glue it onto the etched brake handle making sure it fits through the handle ratchet casting.

Fit wheels to the chassis. To prevent the W irons from splaying outwards, gently flex each pair outwards an equal amount. Orientate the brake shoe casting so they clear the wheels and glue the casting in place.

Fit suitable couplers and glue safety chains into their holes in the buffer beams.

Body assembly:

Clean the flash from around the base of the casting.

Drill 0.4 mm holes for the door handles (the brass T-handles are fitted after painting).

Clean the flash off the edges of the roof casting and check that it fits but don't glue it on until after the body is painted.

Attach the body casting to the chassis using glue or screws. 10BA screws are suitable. There are three

etched holes along the center line of the chassis that can be used to locate the screws.

Painting and finishing:

The body will need to be painted in the colour of the era being modelled (see the preamble to these instructions). Choices are Crimson Lake, Venetian red, Mortuary black or Way and Works grey. The top of the double roof is painted either white (when freshly painted) or grey. The chassis is black.

Prime the chassis and body/roof parts with an etch primer.

Paint the chassis black. The roof and roof capping on the sides needs to be black

Fit the brass T handles into the body The handles should be vertical then seal the body and the roof with a coat of either clear satin or clear matt.

The sides of the chassis needs to be gloss coated before applying the wagon number decal. Seal the chassis with a clear matt coat.

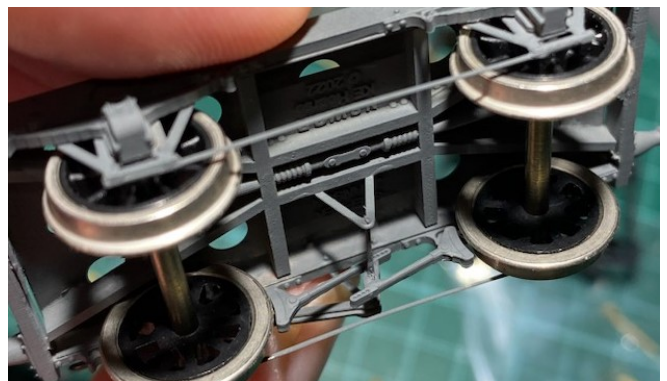
Weather to taste. When built timber panel work was painted 'lead colour' grey with framework, cornices, mouldings and all iron-work painted black. Varnish was then applied to the outside to protect the paint and give it a gloss finish.

References:

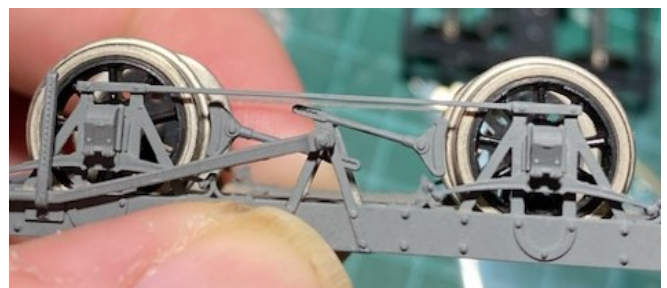
Coaching Stock of the NSW Railways Vol 1 (Eveleigh Press) Hearses Page 46-47.

Note: An electronic version of this document with clearer photos can be accessed at:

<https://stephenjohnsonmodels.com.au/instructions/>



ABOVE: Image showing the arrangement of the brake shoe casting in relation to the V-hangers looking towards the outside of the chassis.



ABOVE: Outside view of the relationship between the handbrake handle and the handle ratchet and the position of the brake shoe casting in relation to the V-hangers.