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SHO Guards Van
Assembly instructions

In 1937, two 42'-4" long SHO guards vans were built by Ritchie Bros on the underframes of bogie hearse wagons (BKE 562 and 636). The underframes retained their 2AD bogies.

SHOs had a central guards compartment with a luggage compartment at each end. Each luggage compartment was accessed through a pair of outward opening doors on each side. A feature of these vans was the four loading lights along each side just below the letter board.

In 1960 they were withdrawn from general service and transferred to the Publicity Section of the railways and were given L-series service stock numbers.

Both vehicles were withdrawn in 1970.

Recommended adhesives:

Superglue for gluing polyurethane (PU) parts together and for gluing brass castings to PU parts. Some brands of superglue may not work with the plastic in this kit. Green Zap-a-Gap is a glue that works. Acrylic contact adhesive is recommended for securing the clear window material to the inside of the body.

Recommended bogies:

This kit requires 2AD bogies. These are available as RTR form from SDS Models or in kit form from Stephen Johnson Models.

General:

1. Remove any flash from the window openings in the doors with a sharp knife. Take care to avoid damaging the window frames. A knife with a narrow pointed blade is recommended. Drill all the holes in the sides and ends for the handrails at this stage.

2. Cut the clear glazing material into pieces which will fit into the cast window openings. Put these aside until after the car has been painted. Don't remove the protective plastic coating until you are ready to glue the windows in place.

Body shell:

3. Glue a piece of 8mm angle to the inside of each end so that it is level with the bottom of the end. This provides a flat surface to secure the floor.

4. Assemble sides and ends. It is best to trial fit each joint to ensure the parts fit neatly together before applying any glue. Use the gutter line as a guide to locate the ends at the correct height. Make sure the resulting assembly is square and isn't twisted.

5. Fit the roof insert into this assembly. There are two little arrowheads cast into the sides of the roof. These mark the location of the roof in relation to the guards compartment doors. Glue the roof insert to the sides and ends. Fill the resulting join with body filler and remove any excess with wet and dry sandpaper wrapped over a small flat block. This step may need to be repeated several times to remove any trace of the join.

6. Drill and glue the round roof vents into pre-marked holes in the roof.

7. Two pairs of buffer beams are supplied - one for a screw coupler and the other for Kadees. Choose one and drill 0.75mm holes through the buffer stocks then glue a brass buffer head into each of these holes. Glue the buffer beams to the body assembly.

Floor / chassis:

8. Glue the battery boxes, generator, circuit board air reservoir and brake cylinder to the appropriate pads on the floor casting (see Photo 1).

9. With the floor in position, determine the correct location of the Kadee couplers in relation to the face of the buffers (#16 Kadee couplers will mount directly on the pad at each end). Mark the centre of the coupler mounting hole of the coupler then drill a . Drill a 2.05mm hole through the floor and the angle glued to each end. Tap an M2.5 thread in end angle and drill a 2.9 mm clearance hole through the floor (Diagram 1). Secure the floor and coupler to the body shell with M2.5 countersunk head screws.

10. Drill and tap the bogie pivot holes with an M2.5 thread. Fit the bogies with pan head screws and check the coupler height. Adjust as required.

11. Drill 4 x 0.5mm holes in the square raised sections to accept the mounting pin on the brass queen posts. Drill 0.5 mm holes in the castings on the solebar for the pins that secure the truss rods.

Drill 9 x 0.5mm holes in the dimples along the centre of each solebar for brackets supporting the step running the length of the car.

12. Drill 0.4mm clearance holes in the ends of the queen posts and truss rod pins to ensure they will accept the 15 thou wire truss rods.

13. Glue the step mounting brackets to each of the solebars.

14. Insert the queen posts and mounting pins onto a length of 15 thou wire. Bend the truss rod to shape then glue the assembly to the holes in the solebar.

15. Solder the etched steps to the mounting brackets along each side.

16. Fold the etched steps and apply solder the inside of each bend to add strengthen each assembly. Locate these below the guards doors and using the two holes in the top of the step mark and drill two holes in the underside of the solebar. Solder short pieces of wire to the holes in the etch and use these to glue and pin each step into place.

Finishing:

17. Bend and fit handrails from 10 thou wire.

18. Drill and glue marker lamps to each end.

19. Glue the vertical I beams to each end.

20. Paint and decal. The body of vans were painted either Venetian red or deep Indian red with a black underframe. The vehicle code and number decal goes on the ducket while the word 'GUARD' is applied to the centre of each guards door.

21. Fit the window material.

References:

General assembly techniques: Branchline Modeller No. 1

Coaching Stock of the NSW Railways (Eveleigh Press) Page 162-163

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

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

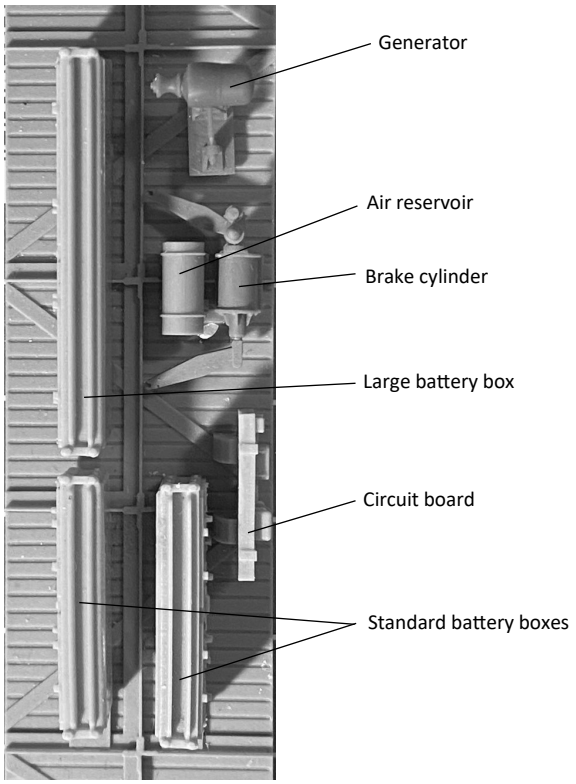


PHOTO 1. Arrangement of underbody

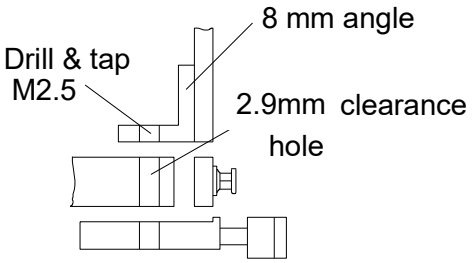


Diagram 1. Securing coupler and floor to body

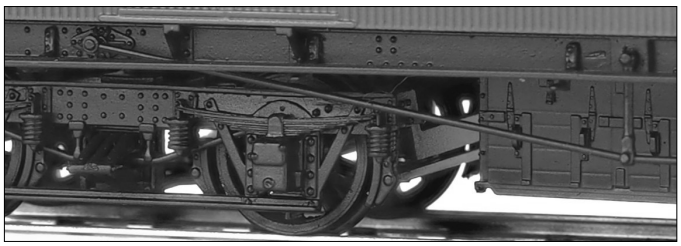


PHOTO 2. Truss rod / queen post arrangement

