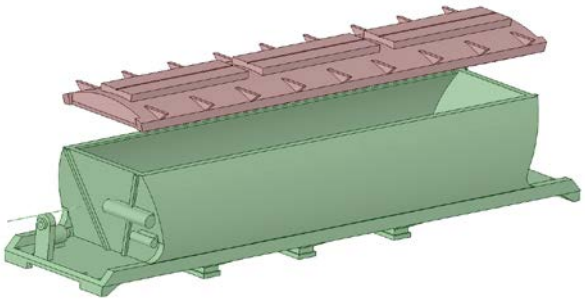
MALKY'S N-SCALE S.A.R. MODELS

SHBX/AHGX Grain Hopper

The Prototype: A total of 108 new grain hoppers were produced for the SAR and later ANR from 1970 to 1981 and originally coded SHBX. They were later recoded to AHGX. The initial batch of 52 was built by Mechanical Handling of Rosewater.

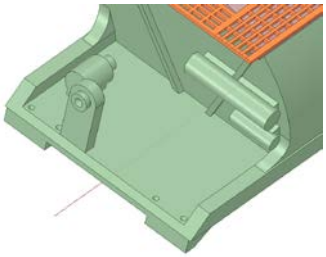
The Kit: The kit can be purchased from Shapeways and consists of two parts printed in Shapeways Smoothest Detail plastic: a body shell and roof. The kit requires etched metal walkways and ladders, available with the custom decal sheet from MNSSARM. Microtrains bogie mounted coupler roller bearing trucks with short extension are also required to finish the model.



1. Clean the parts thoroughly to remove any remaining wax from the printing process. This is essential to ensure good paint and glue adhesion. Cleaning can be by soaking in suitable solvent, such as isopropyl alcohol or metho, assisted with a toothbrush. Further clean-up or polishing may be required to remove the fine grooves left by the printing process. This is best done by scraping very gently along the grooves with the back of an Exacto blade, followed by fine sand paper, about 800 grit.

2. Check fit the roof into the body. It should be a light press fit into place. Do not glue at this time – suitable weight must first be added to the bottom, and it is preferable to drill for the bogies and test fit them before final assembly.

3. Determine whether the ladders are to be fitted both on the same side, or on diagonally opposite corners. This depends on the particular prototype and period. Then drill two holes in the floor plate at each end. Small indentations are moulded into the 3D print at the appropriate locations. Drill with a 0.5 mm drill.



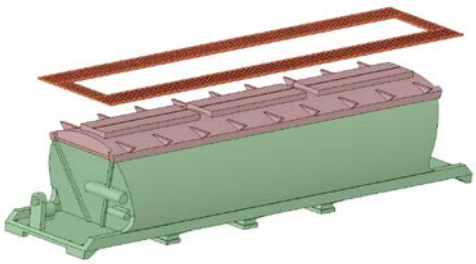
4. Drill the holes for the bogie pins with the body upside down.

5. Determine how much weight is needed to bring the wagon up to a suitable weight. Fit and fix lead or other material in the bottom of the hoppers.

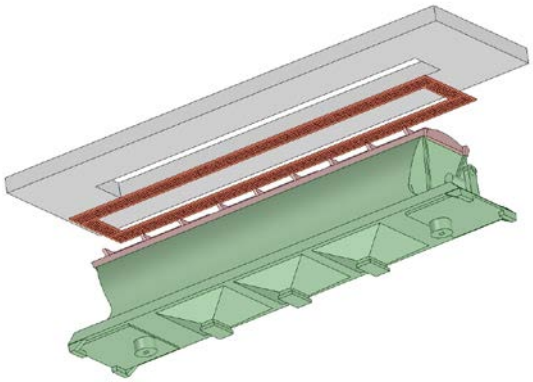
6. The roof can now be glued in place using cyanoacrylate super glue.

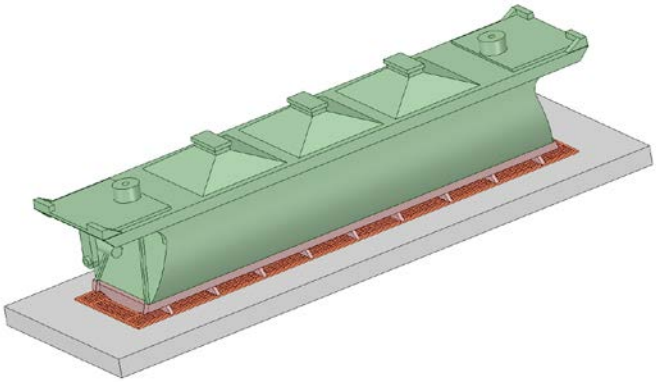
7. Separate the roof walkway and ladders from the etch fret. Clean by soaking in vinegar for about five minutes, then rinse in water and dry.

8. Test fit the walkway to the roof. Note that the spaces left at each end should be equal. Then glue in place with cyanoacrylate super glue on the support brackets. Use a slow-setting variety and apply sparingly to the top of each support bracket. To achieve a smooth, level walkway it is worth making a jig to support the walkway flat while downward pressure is applied with the wagon upside down. A simple jig can be made from balsa, at least 3 mm thick, with a central slot cut out to accommodate the roof hatches, approximately 8 x 70 mm. Once the walkway is correctly located, place the jig on top of the model, then carefully invert and apply moderate downward pressure for one



minute while the glue cures.

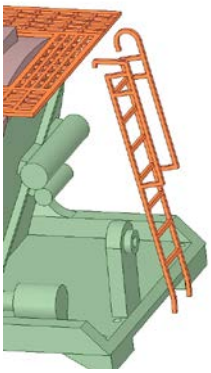




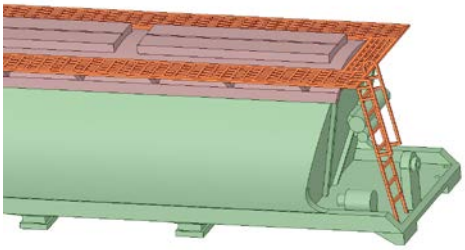
9. Fold the ladder sides to form the finished shape. It is usual to fold the sides ***towards the side of the sheet with the half-etched fold lines***. However, if you are fitting both ladders to the same side, then one will have to be folded the opposite way, to make an opposite-handed configuration (see photos of prototypes). Test fit the ladders into the holes drilled in the end floors, and check that they meet the roof walkway appropriately (it will be necessary to bend the ladders slightly towards the walkway). When satisfied, apply CN glue and fit the ladders permanently in place.

Folded Ladder

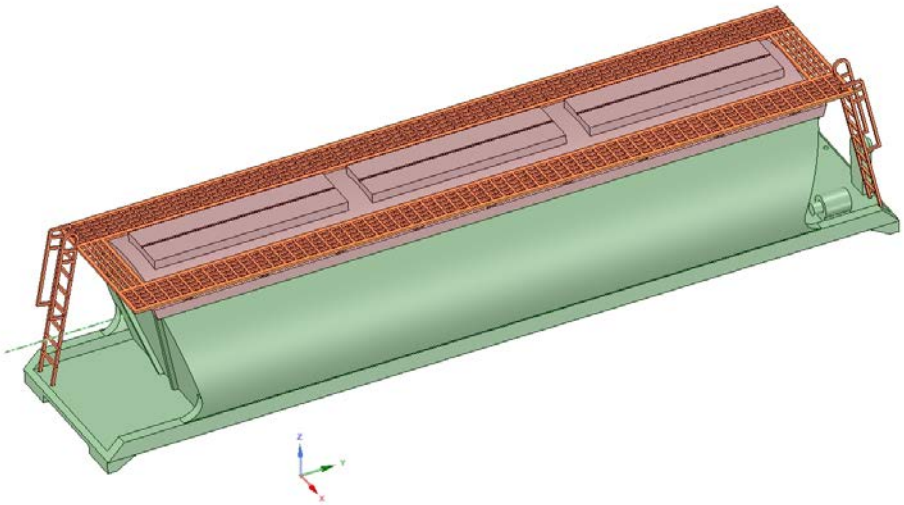
Opposite hand ladder



Ladder bent to slope



Ladder in place



10. Paint the parts. Apply an etch primer to the metal parts and primer to the plastic parts, then the appropriate colour scheme. The cars were originally delivered in yellow then repainted to the SAR light grey. Under ANR they became oxide red and finally green under AN.

11. Apply decals: For the yellow, grey or red paint scheme: the car numbers and brake symbols on the black panels to the left hand end of each side; the SAR shrike or ANR in boxes at the centre on each side (see photographs). For the green and yellow AN scheme: the yellow patch with the black AN symbol to the left hand end of the wagon (see photographs), black car numbers above the tare weight etc. For all schemes, the bogie exchange “X” symbol on each side and end (see photographs). Seal with Dullcote or similar.

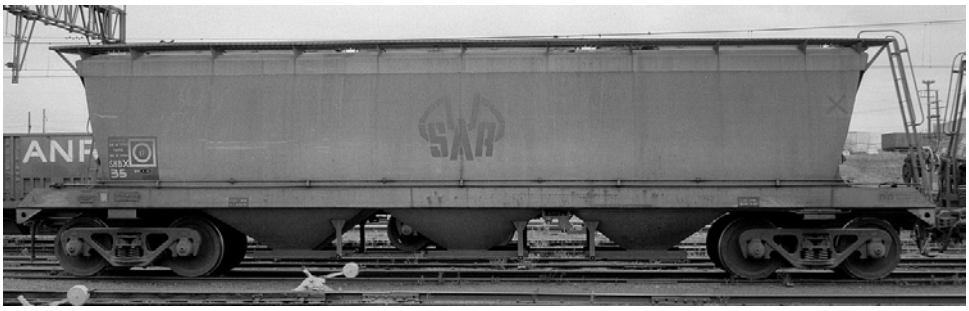
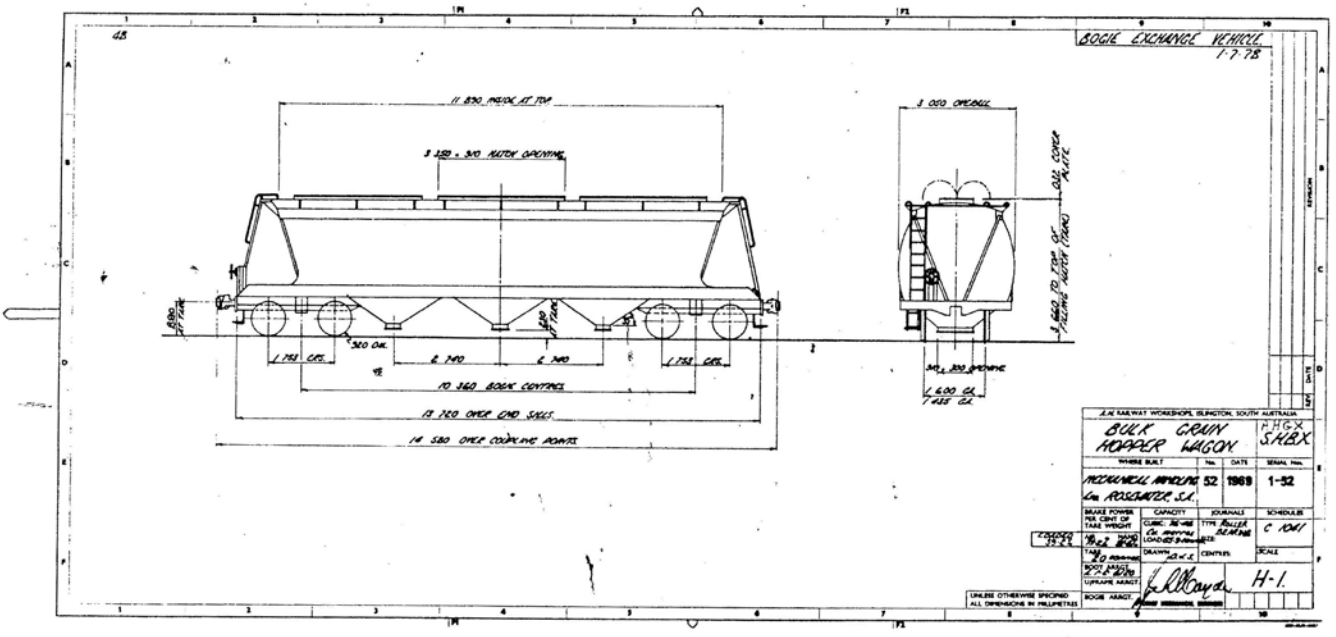


Photo courtesy Robx1

Photo M Jenkins



SAR publicity brochure photo 1972