MALKY'S S.A.R. MODELS

SAR Brill Model 55 Railcar
3D Printed Version

Noel Reed Photo

The Prototype: The Brill model 55 railcars were introduced to the SAR by Commissioner Webb in 1924 and were a standard type used in the USA. A total of twelve cars were purchased, numbered from 4 to 15. In the 1930s six cars were converted from petrol to diesel engines, with the remainder being converted by 1954. The radiator housing was extended forward from the standard US location, with an appropriate forward extension of the frame.

Initially the cars ran on country branch lines, to Spalding, Gawler, Strathalbyn, Victor Harbor, Mt Pleasant, Truro, Waikerie, Paringa and Loxton. When the larger Model 75 cars were introduced, the 55s were taken off the longer runs and largely relegated to suburban duties, where they continued until 1968. Typically they ran in pairs back-to-back to avoid the necessity of turning.

Paint Schemes: When introduced the cars were painted royal blue with yellow lining. By 1934 they had been painted a brown colour. The scheme was brown overall, with the roof and front extension silver and radiator black. In the 1950s the cars were repainted in the Hawthorn Green and Cream Centenary scheme with silver roof, and silver on the insides of the rear vestibule stairs. Lettering was gold with drop shadows of red and black (a little hard to reproduce in N scale). The radiator was black and the front extension beneath the radiator was silver (see photo above).

For More Information:
Much of the information used in the development of the kit and presented here was gleaned from the notes of the *Modelling the Railways of South Australia Convention* pp 3-473 – 3-577 and the line drawing in that article, as well as the SAR line drawing. The article gives a complete listing of all the cars and their history.

Steam Locomotives and Railcars of the SAR (MERM, 1986) also has information and more photographs.

The Comrails web site: http://www.comrails.com/sar_locos/r_b_brill55.html is a wonderful source of information on these (and other) cars and some of the photographs in these notes are courtesy of that site.

Volume 5 of *A History of the South Australian Railways* by Ron Stewien has a full history and also colour photos on p52 of No 4 in the brown colour scheme and No 12 in green and cream. P56 has further useful colour photos.

Train Hobby Publications *Railway Stations - Greater Metropolitan Adelaide* has a good photo of No 12 on p26 illustrating the colours.

Photo courtesy Comrails website

The Kit: The 3D printed version of this kit, available from Shapeways (Malky's N Scale Models by dmjenkins - Shapeways Shops) consists of a three-part body with additional parts for underfloor details. Etched brass cowcatcher, headlight and taillight as well as decals are available separately from MSSARM (Decal_and_Parts_Price_ListV34.pdf (dmjenkins.net)). The kit is intended to use the Tomytec TM03 mechanism. Assembly of the components should be done with cyanoacrylate adhesive (superglue). Note that two alternative nose castings are included: one for the SAR railcars with extended radiator, and one for the original SAR version, also suitable for modelling US prototypes.

Note: *Before starting, read through the instructions and give consideration to painting the nose and steps before final assembly – it will be easier to mask and paint these parts before assembly.*

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, assisted with a toothbrush.
2. Check fit the steps into the rear of the body and check that they fit neatly under the doors. The bottom of the rear extension should fit flush with the bottom of the body sides. It is recommended that the hole for the coupler be located and drilled before assembling this part to the body. When a good fit is achieved, the steps should be glued to the rear of the body.
3. Check that the nose piece fits neatly in the cab end of the body. The bottom of the nose should fit flush with the bottom of the body sides. It is recommended that the holes for the coupler and cowcatcher be located and drilled before assembling this part to the body. When a good fit is achieved, the nose should be glued to the body.
4. Mechanism: It is necessary to trim 2 mm from the rear end of the mechanism (see diagram). The portion marked red in the diagram should be removed. Check that the mechanism fits between the body sides and between the steps and the front.
5. Couplers: it is recommended that Microtrains Z scale couplers be used, to give a more realistic size for this diminutive vehicle. They should be fitted to the bottom of the nose extension and the rear extension of the steps, drilling using the centre marks provided.
6. Details: the battery box and fuel tank should be glued to the underside of the mechanism on the left and right hand sides, respectively. For locations see the photos below or the drawing in the MRSAC notes on p3-478. Paint these parts before fitting to the mechanism.
7. The brake gear details should be glued to the sides of the mechanism bogies, covering the three holes and so that the brake shoes line up with the wheels. It would be preferable to paint these parts before fitting to the mechanism.

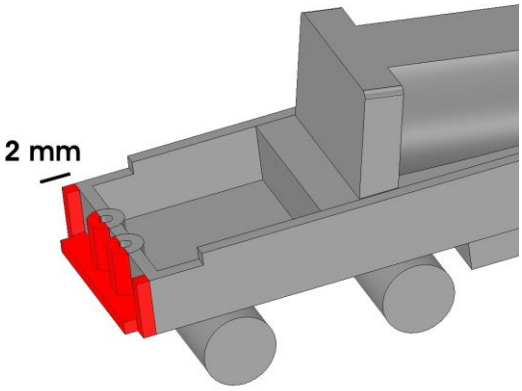

Photo Comrails website

Photo Malcolm Jenkins

8. The horn, which should be bent from a small brass pin, should be fitted vertically into a hole drilled above the right hand centre pillar of the driver's cab (see photos).

9. Headlight: the headlight should be cut from the etch fret using etch snips or a craft knife. The light is to be laminated out of a total of four circular pieces. The second from the front also contains the mounting frame. The front piece has the raised outline of the headlight. The parts can be assembled either by soldering or with superglue, after carefully cleaning in vinegar and then water. Once the four circular elements have been combined to give the depth of the lamp, the pin on the bottom of the frame should be bent backwards at 90°. The pin can then be inserted in a 0.7 mm hole drilled centrally at the lower edge of the roof at the front. The rear light is similar, but with three laminations and a vertical pin.

Photos M. Jenkins

10. Cowcatcher: once separated from the fret, the two shunter's steps should be bent forward by approximately 90°. Note that the half-etched lines for these folds are on the *front* of the etch. The half-etched line for the fold in the lower bar is on the *back*. Then, while holding the top bar and two side bars of the cowcatcher flat with steel rules or similar, gently raise the centre of the lower bar by inserting a narrow tool under it, so as to form the shape of the cowcatcher. The pins on the upper bar are inserted into two 0.7 mm holes drilled on the underside of the front extension. The cowcatcher upper bar should sit just below the Microtrains Z scale coupler box.
11. Painting: first wash the model in warm soapy water, rinse and dry. Apply an etch primer, then the appropriate colour scheme (see notes on paints below).
12. Apply decals: the SAR is located on the upper letter panel above the windows. The number is applied to the left hand side of the front, and centrally below the windows on either side (see photographs). Lettering was the same for both the brown and green and cream colour schemes.

Paint Colours

For the green and cream Centenary scheme: Humbrol No 2 Brunswick Green is a good representation of the green. For the cream, Humbrol No 41 Ivory has a white colour, while No 74 Linen (matt) has more of a cream hue. Roof silver, step interiors silver, front extension silver, radiator black.

For the underbody a matt black and suitable weathering would be appropriate.

For the overall brown scheme, photos seem to show a shade of red/brown rather more brown than the traditional regal red of the redhens and other rolling stock. In-service photos show roof silver, step interiors silver, front extension silver, radiator black (although the museum example has brown nose extension).

Acknowledgements

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Photos Comrails website