

Bagnall Saddle Tank Locomotive

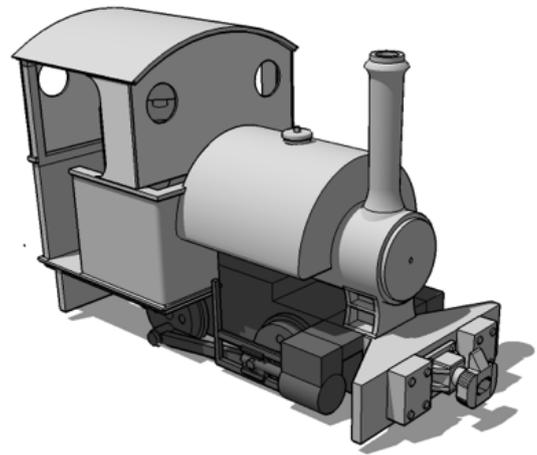
NPL-010



Prototype Info

W.G. Bagnall Ltd's Castle Engine Works in Stafford turned out it's ubiquitous narrow gauge saddle tank locomotives over many decades. From industrial concerns across the UK ranging from quarries to breweries and then abroad during the war, many survived to be re-sold and found use across the globe and as far away as India and Japan.

The Narrow Planet model represents a generic example and includes details that allow the modeller to replicate many different prototypes, and it's simple construction rewards careful assembly and provides the modeller a good basis for further detailing if they so desire.



Thank you for purchasing this Narrow Planet kit, we hope you enjoy building and operating it. Please read through the instructions thoroughly before beginning assembly.

Parts required:

0.45mm brass rod.
Glazing material.

Tools required:

Sharp craft knife or scalpel
Tweezers
Needle file
Emery paper or boards
Superglue

About the kit

The kit is comprised of a 3D printed plastic body shell and a fret of etched nickel silver detail parts. Only simple folding of these parts is required and they can all be glued in place. We recommend sparing use of liquid superglue for assembly, ideally using a bottle with a thin applicator nozzle.

Due to the nature of the 3D printing process, some support material may still be present on the body shell. The plastic used is quite brittle so handle the cab support framework with care, yet it is easily cleaned up and smoothed with a sharp knife and fine wet and dry paper or emery boards.

Please note this is a scale model for adult collectors and not intended for children under 14 years of age.

Chassis fixing

The kit is designed to fit a Minitrains Krauss 0-4-0 chassis. The mechanism is well known for it's good running qualities. Please read assembly notes for details of how to fit the chassis.

Couplings

The kit is supplied with modified Narrow Planet Bosna couplings but alternatives could be sourced from RT Models.

Assembly Notes

1) Clean up the 3D printed body

Use a fine wet and dry paper (320 then 640 grade if possible) in water to achieve a smooth finish to the cab sides and tanks. Rinse the model in a white spirit to remove any traces of printing residue or grease from handling. Remove the parts from underneath boiler. These are 2 couplings, 4 buffing blocks and a support block to glue behind the front buffer beam.

2) Check the donor chassis

Before removing the body from your donor locomotive it is suggested you run the model in following the manufacturer's instructions. The body can be removed by unscrewing the funnel and gently pulling the body from the chassis, being careful to not damage the valvegear. The cab can be a tight fit around the motor so care should be exercised. Note once the body is removed the cylinders are no longer held in place so handle the chassis carefully.

3) Test fit the body

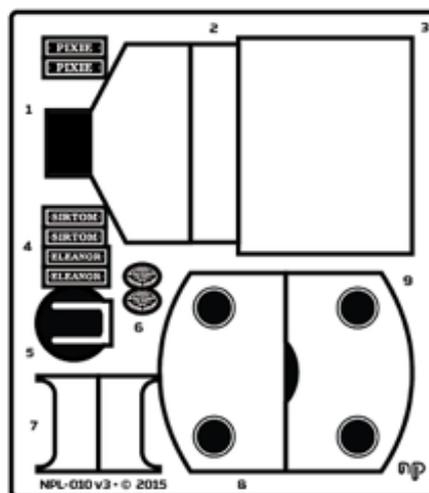
Offer up the kit body to the chassis to check for alignment and fitting. No adjustment should be necessary, but if required remove a small amount of material with a sharp craft knife to the clip moulding underneath the boiler.

4) Priming

Remove the body from the chassis. It is suggested that a coat of primer is applied to the body at this stage. The model is printed in a material that should be safe to use with most model primers, however we recommend the use of the Halfords 'plastic' primer. Once dry and imperfections in surface finish can be addressed with more 640 grade wet and dry paper and a further coat of primer.

Detail Parts NPL-010 v1.0

Carefully remove each part from the fret using a sharp knife on a cutting mat or similar hard surface to minimise the risk of damaging thin parts. Clean up the tags.



Parts:

- 1 • Front bufferbeam
- 2 • Rear bufferbeam
- 3 • Cab roof
- 4 • Name plates
- 5 • Smokebox door
- 6 • Works plates
- 7 • Cab sides
- 8 • Cab rear
- 9 • Cab front

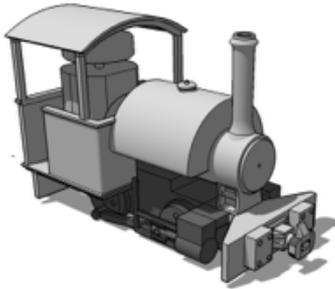
5) Detailing

The etched components can now be removed carefully from the fret using a sharp knife against a piece of glass, or using sharp snips. Once removed from the fret the edges can be smoothed down using a needle file to remove traces tabs.

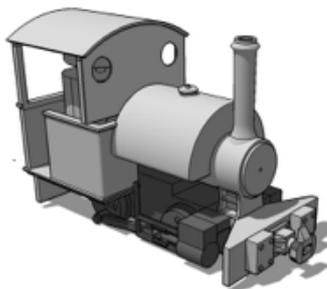
The rear buffer (2) beam is simple glued to the brace at the back of the cab. The front buffer beam (1) needs a 90 degree fold making, before being superglued to the underside of the smokebox saddle. The 3D printed support can be fitted behind the buffer beam to provide support for this once fitted onto the chassis.

The smoke box door (5) is simply fitted to the front of the smokebox. If you wish you can fit a smokebox door dart (not supplied, suitable example is available from Eileen's Emporium) and holes are provided to be opened up as required. Cab handrails can be fitted with 0.45mm brass rod.

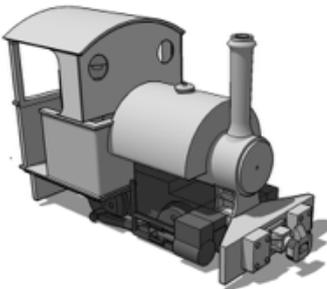
The model comes with various cab sheets to allow a variety of options to be modelled, as depicted below. Select your preference and secure with superglue. The roof (3) needs gently rolling which can be done by hand, forming around a Pritt-Stik glue or something of a similar diameter. For further additional detailing (such as steam pipes and valve gear) these can be fabricated using brass rod and section (not included).



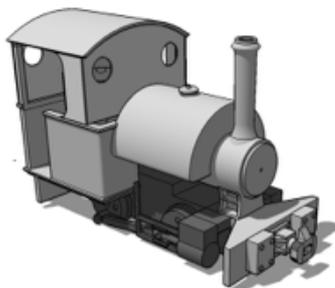
**Option 1:
Open Cab**



**Option 2:
Front Cab Sheet**



**Option 3:
Front Cab**



**Option 4:
Full Cab**

6) Weight

To improve the performance of the model it is suggested that fluid lead or liquid gravity is added within the boiler and saddle tanks. The boiler cavity is accessed through the cab, and the saddle tank is open from the underside. These weighting materials are available from Eileen's Emporium or any plumbing supplier. It is recommended that it is secured with superglue as this does not react adversely with the lead material.

Painting and finishing

There was no standard colour for these locomotives, but typical industrial examples were finished in unlined green. The cab interior was usually cream. The smokebox and cab roof should be painted matt black.

Glazing material should be added from the underside of the body. A crew member can be added, a number of figures from the Dapol workmen range will fit with minor surgery.

The works plates (6) and name plates (4) should be painted black whilst attached to the fret, once the paint goes tacky (about 5 minutes if using Humbrol enamel) then flip the plate over onto a piece of white card and using gentle finger pressure rub the plate in a circular motion. You will remove all traces of paint from the raised surfaces without scratching the metal. These can be cut out carefully and removed and secured on the model, using a small spot of superglue, or matt varnish.

Acknowledgements

We would like to thank members of the 009 Society and NGRM-Online for their feedback and support in the production of this kit.

About Narrow Planet

Narrow Planet was founded in 2010 and offers a custom etching service for unique nameplates, works plates and number plates for your model railway locos and stock. In any size or shape from 2mm:ft to 16mm:ft scales. Many manufacturers' styles are available, our full range and ordering information can be found on our website.

This kit was designed by James Hilton. If you have any queries about the model or instructions please get in touch.

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