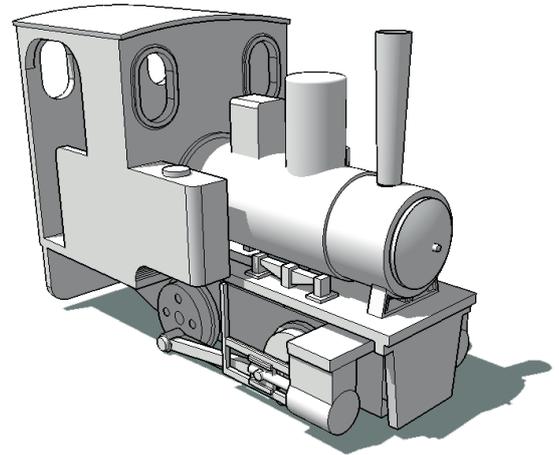


**O&K 40hp Contractor
Locomotive**
NPL-003
NP

Prototype Info

The prototype O&K well tank was available in a range of standard designs and primarily marketed as a 'contractors' type locomotive, supplied to small industrial firms for internal narrow gauge networks or construction projects. In the UK they were used for both and there are a number of the 30 and 50hp examples preserved, arguably the most famous being Penrhyn's Eigiau, a 30hp machine, now based on the Bredgar and Wormshill in Kent. Our model depicts a machine that is sized between the 30 and 50hp designs and is based upon factory sourced prototype drawings.



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:

0.33 and 0.45mm brass rod.
Glazing material.

Tools required:

Sharp craft knife or scalpel
Tweezers
Needle file

Emery paper or boards

Superglue
0.35 and 0.45mm drill bits
Twist drill or minidrill

About the kit

The kit is comprised of a 3D printed plastic body shell and a fret of etched nickel silver detail parts. No 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 bottom facing edge of the body shell, particularly inside the cab windows. Check the coupling slots in the buffer beams as these often have a support strut inside. The plastic used has similar properties to the ABS commonly used in injection-moulded kits and may be easily cleaned up 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 its good running qualities. Please read assembly notes for details of how to fit the chassis.

Couplings

The kit is supplied without couplings, we recommend you select your preference from the RT Models range (for a UK outline model).

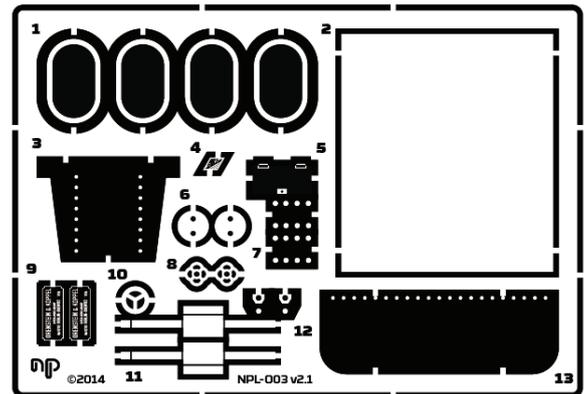
Alternatively, if you wish to add automated couplers the Greenwich coupling can be modified to fit to the etched buffer beam overlays, by bending the tail 90degrees downwards behind the loop pivot to create a flat surface to superglue to the bufferbeam. These are available from the Greenwich and District Narrow Gauge Railway Society.

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 inside the cab floor – the details can be put to one side, but the smokebox door should be fitted at this stage with superglue.

Detail Parts • NPL-003 v2.1

Carefully remove each part from the fret as required using a sharp knife on a cutting mat or similar hard surface, and clean up the tags.



- | | |
|---------------------------|----------------------------|
| 1. Window frames x 4 | 8. Clack valve handles x 2 |
| 2. Cab roof | 9. Works plates x 2 |
| 3. Front bufferbeam | 10. Smokebox door handle |
| 4. O&K motif (smokebox) | 11. Cab steps x 2 |
| 5. Tool box hatch | 12. Steam dome flanges x 2 |
| 6. Water filler lids x 2 | 13. Rear bufferbeam |
| 7. Steam pipe flanges x 2 | |

2 • Check the donor chassis • Before removing the body from your donor locomotive we suggest 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.

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, we recommend Halfords 'plastic' primer. Once dry, any imperfections in surface finish can be addressed with more 640 grade wet and dry paper and a further coat of primer.

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 of tabs

First of all the window frames (1) can be attached – a needle or offcut of brass wire can be used to transfer a small amount of superglue onto the reverse whilst they are held in tweezers prior to fitting. The tool box hatch (5) is on the driver's side of the cab, and the position can be estimated from photos. The sand dome has a flange (12) applied both sides at the base, and the smokebox has the riveted panel (7) applied to the lower sides. This should be gently bent to a slight curve using your fingers. The water filler lids (6) should be attached at this stage. Drill out the holes (0.33mm) for handles through the lids into the 3D print. 0.33mm wire used for the water filler handles and 0.45mm wire is used for the cab handrails. Bend these up from brass wire and superglue into position. The sandbox should have two straight pipes that are bent up from 0.45mm brass curved to match the boiler and attached both sides, the gentle curve can be formed around the handle of a craft knife. The buffer beam overlays (1, 13) are simply superglued in position. Finally the smokebox door handle (10) can be fitted.

Further details can be added to super detail your model, and parts for these are included within the cab floor. These include the steam pipes to the front cylinders, linked to the valve on the side of the steam dome (the larger of the three details). The clack valves are also included (the smaller pair of details), these can be fitted in front of the tanks on each side of the boiler. The small hand wheels (8) fit to the lug on the side of these and 0.45mm brass wire can be used to represent the pipe work back to the cab. Hinges for the smokebox door can be spare etch fret or plastic strip, safety valves can be 0.7mm wire or plastic on top of the steam dome. A turned brass whistle finishes off the cab. Study a prototype photo for inspiration, there were plenty of variations. Gently curve the roof (2) to fit the radius of the cab front and rear but do not fit it at this stage.

The cab steps (11) fold up with the fold lines on the inside. First use needle nose pliers to fold up the back edge of the cab step, and then fold up the brackets. Note the flat edge goes against the rear buffer beam, and the small tab is used to secure under the footplate.

6 • Weight • To improve the performance of the model it is suggested that fluid lead or liquid gravity is added within the boiler and side tanks. These are accessed through the cab. This is available from Eileen's Emporium or any plumbing supplier. It is recommended that this is secured with superglue.

Painting and finishing

The standard works colour for an O&K locomotive was black, although many were supplied in customer specified paintwork. 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 and the roof should then be fitted. Crew can be added, a number of figures from the Dapol range will fit each side of the motor and go some way to hiding this in the cab.

The works plates 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. There are a pair of cabside plates (9) and small diamond motif (4) that should be fitted to the smokebox door above the handle. Your choice of couplings can be fitted.

Fit the body to the chassis and secure in place with the longer chimney provided in the kit.

Variants

Additional detail parts are provided with the variant versions of the O&K loco. See www.narrowplanet.co.uk/products/NPL-003 for full details of these kits.

NPL-003a • Eigiau • Fit the additional front bufferbeam to align with the bottom edge of the small integral buffer beam on the body, the wider edge is the top.

Nameplates are positioned on the cab sides above the works plates, and nameplates and works plates should be painted red.

In current preserved condition Eigiau is painted mid-green with black and straw lining, and red frames and bufferbeams.

NPL-003b • P.C. Allen • Nameplates are fitted on the sides of the steam dome, and number plates at the top of the cab sides just below the line of the top of the front windows. Both sets of plates are painted red. The works plates included in the kit are not fitted.

In current preserved condition P.C. Allen is painted plain black with red frames and bufferbeams.

NPL-003c • Utrillas • Nameplates and the alternative scroll-type works plates are fitted on the tank and cab sides, respectively.

In current preserved condition Utrillas is painted plain black with red frames and bufferbeams.

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 is part of an expanding range of European prototypes and was designed by James Hilton. If you have any queries about the model or instructions please get in touch.

Contact Details

www.narrowplanet.co.uk
info@narrowplanet.co.uk

27 Terminus Avenue, Bexhill-on-Sea,
East Sussex, TN39 3LS

NPL-003 and variants • second issue • December 2014