



# NPL-006 Manning-Wardle "Midget"

## Prototype Info

The prototype engine was built by Manning-Wardle for the Cape Government Railway in 1902, with the works number 1583. The engine was used in the construction of the Avontuur Branch line and remained on the line afterwards.

The engine was assimilated into South African Railways in 1912, being renumbered as NG20. It was sold into industrial service, to the West Rand Consolidated Mines near Krugersdorp, in 1921. Withdrawn in the 1950s, the engine was stored and later remains today. The kit represents the engine when operating on the Avontuur Branchline in the 1910s.

Tools required:

- Sharp craft knife or scalpel
- Razor saw
- Tweezers
- Flat nosed pliers
- Bending bars or engineer's square
- Emery paper or boards
- Wirecutters

Parts required: 0.7mm brass wire

## About the kit

The kit is comprised of a 3D printed plastic body shell and a fret of etched nickel silver detail parts. For the majority of the parts, no folding 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. Notes on particular details of application are given below.

Due to the nature of the 3D printing process, some support material may still be present on bottom-facing edges of the body shell, particularly inside the cab windows and the front grille cut out. Check the coupling slots in the buffer blocks 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 emery boards.

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

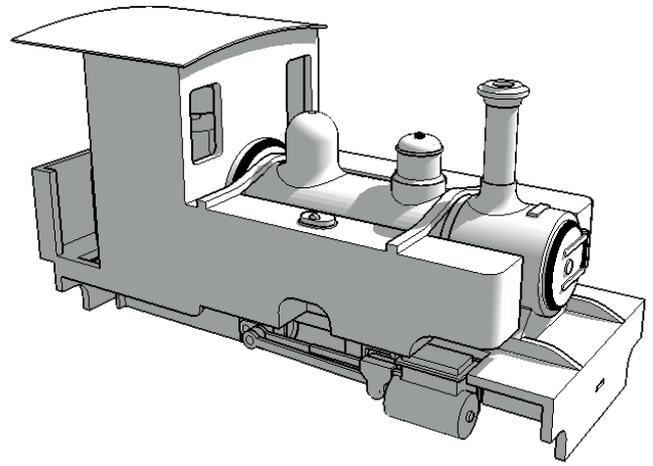
## Chassis fixing

The kit is designed to fit a Minitrains Fiddletown & Copperopolis 0-4-0 chassis with minimal modifications. The mechanism is well known for its good running qualities. Please read assembly notes for details of how to fit the chassis.

## Couplings

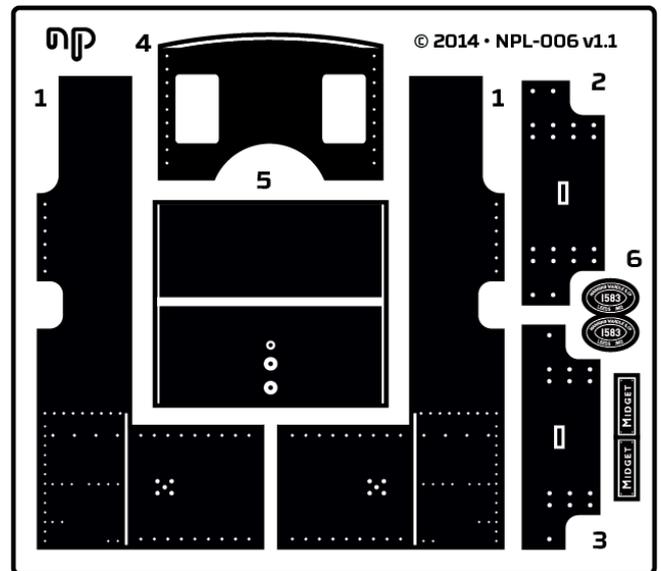
The kit is supplied without couplings, we recommend you select your preference from the RT Models range (for a UK outline model).

Alternatively, if you wish to add automated couplers the Greenwich coupling can be used with a small slot left to fit an assembled coupling though the etched buffer beam overlays, by bending the tail 90° downwards behind the rear surface of the bufferbeam to provide a suitable area to attach the coupling. These are available from the Greenwich and District Narrow Gauge Railway Society.



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.

## Detail Parts • NPL-006 v1.0



1. Tank and cab-side overlays
2. Front bufferbeam overlay
3. Front bufferbeam overlay
4. Cab front overlay
5. Cab roof
6. Nameplates and works plates

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.

## 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 white spirit to remove any traces of printing residue or grease from handling.

### 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 • Modifying the Chassis

As designed, the donor chassis will not fit the 3D print. It is required to cut the section forward of the cylinders off using a razor saw or junior hacksaw. This should then be filed to give a flush clean edge parallel with the cylinder moulding.

### 4 • 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 around the interior of the cab floor and the locating hole under the boiler with a sharp craft knife. Alternatively, a small amount can be filed off the chassis to give a snug interference fit with the chassis.

### 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. It is recommended that all parts are fitted with superglue.

First of all, the front cab sheet (4) can be cut out and applied to the front of the cab area. Then, you can look to attach the two cab-side overlays (1). With both of these, it is recommended that you apply the etch from the cab end, leaving the end which folds around the front of the side tanks projecting out from the front of the model. Once the initial glue has dried, you can then curve the etch around the front of the tank and glue it into place. Repeat for the other side. The cab roof (5) can then be curved gently and glued onto the cab shell.

The two bufferbeam overlays are different sizes, refer to the drawing overleaf and note the number of rivets on each. The larger overlay (2) is intended for the front bufferbeam with the (3) being for the rear. Ensure the coupling slots in the overlays align with the slots in the printed body to aid fitting Greenwich couplings, if using.

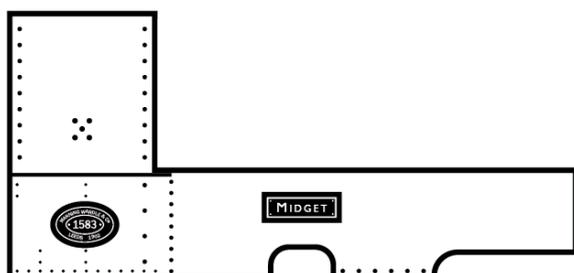
It is recommended that the nameplates and works plates (6) are applied after painting. Refer to the diagram below for prototype placement.

### 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.

### 7 • Priming

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.



## Painting and finishing

The actual colour for 'Midget' is unknown, although it is suspected to have been delivered in the standard Manning-Wardle 'Holly Green' livery lined in Yellow. The smokebox and cab roof should be painted matt black.

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 then be cut out carefully and removed.

Your choice of couplings can then be fitted.

## 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 Jon Reeves and James Hilton.

If you have any queries about the model or instructions please get in touch.

## Contact Details

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