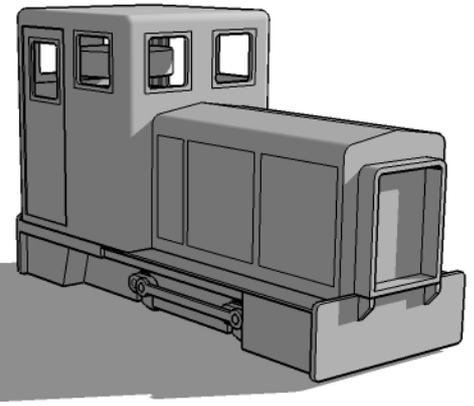


**Hungarian Forestry  
NS3 Locomotive**  
**NPL-005**  
**NFP**

### Prototype Info

The prototype series of this small diesel locomotive were built by LKM in Germany as NS3f diesels for a number of forestry railways in Hungary after the Second World War, specifically where the standard C050 diesel was found to be lacking tractive effort on the steeper and longer lines of the Szilvássvár ad system. Initially built with 50hp engines these were replaced with larger 60hp units when they were rebuilt with new cabs better suited to the harsher winter climate. Today a number of examples have survived in use on tourist railways although there are none in active forestry service.



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 and 0.9mm brass rod.  
Glazing material.  
Fluid lead or liquid gravity.

#### Tools required:

Sharp craft knife or scalpel  
Tweezers  
Needle file

Wet and dry paper

Superglue  
0.45 and 0.9mm drill bits  
Twist drill or minidrill

### About the kit

The kit is comprised of a 3D printed plastic body shell, a fret of etched nickel silver detail parts and a fret of 3D printed detail parts. All parts can be glued in place and 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 wax residue may still be present. Your kit has been cleaned prior to sale, but it is recommended that you wash the 3D printed parts in white spirit and gently rub with an old tooth brush.

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 and Copperopolis steam locomotive 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 includes detailed 3D printed buffers with a coupling lip on the top face. These can be simply glued to the buffer beam at the correct height to match your existing rolling stock. Due to the solid nature of the Minitrains chassis it has not been possible to provide slots for Greenwich couplings.

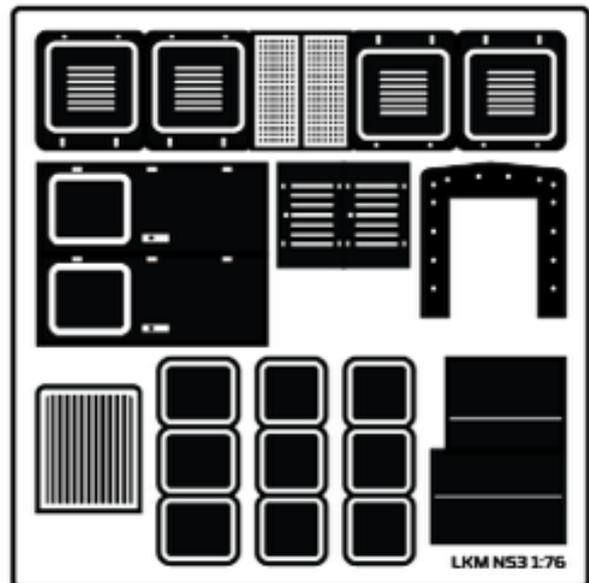
### Assembly Notes

#### 1) Clean up the 3D printed body

Separate the body and chassis by removing the small sprue parts. Remove the sprue of details from inside the chassis. Use a fine wet and dry paper (640 then 1200 grade if possible) in water to achieve a smooth finish to the cab rear, roof, sides and top of the bonnet. Rinse the model in a white spirit to remove any traces of printing residue or grease from handling.

#### Detail Parts NPL-005 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.



#### 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 chimney and giving it a gentle pull to unclip it from the chassis. There will be two wires connected to the headlamp, these should be cut off as close as possible on the chassis pick up plates.

#### 3) Test fit the body

Offer up the kit chassis to the Minitrains chassis to check for alignment and fitting. The body should be a tight fit between the buffer beams. No adjustment should be necessary, but if required remove a small amount of material with a sharp craft knife or file.

#### 4) Priming

Remove body and then the kit chassis from the Minitrains 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 any imperfections in surface finish can be addressed with more 1200 grade wet and dry paper and a further coat of primer if required.

## 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. First of all the bonnet grill can be located and secured using a drop of superglue along the edges of the 3D print. The grill and bonnet panels should be located along the sides with base about 1mm from the foot plate and equal gaps, note the bonnet panels should have the longer hinge at the bottom. The cab doors should fit into the recesses on the cab, note both doors are identical (as prototype). Now drill the holes for the bonnet handrails, cab door handles and cab door handrails (0.45mm). Bend these up from 0.45mm brass rod and superglue into position. The exhaust is simply a 0.9mm section of brass rod, with a hole drilled in the bonnet accordingly. The window frames are quite fiddly and so a needle or offcut of brass wire can be useful to transfer a small amount of superglue onto the reverse whilst they are held in tweezers prior to fitting.

The 3D printed chassis should have the battery boxes fitted – note the correct orientation is with the central latch at the bottom edge. You can leave the couplings off the model if you intend to paint wasp stripes. The brake actuator on the Minitrains chassis can be added to the kit chassis in front of the rear fairing with the sloping edge, under the footplate.

## 6) Weight

The Minitrains chassis is tail heavy so it is necessary to add weight to the front of the locomotive to counteract this. Fluid lead or liquid gravity can be added to the small battery boxes either side at the front of the chassis, and inside the front portion of the bonnet, secured with superglue and left to dry thoroughly before re-assembly.

## Painting and finishing

The prototypes were supplied in dark green with a red chassis – and this was supplemented by yellow striping on some examples. Buffer beams were initially red, but later examples have wasp striping applied, note this is inverted with the point at the bottom, i.e. a true V pattern. Cab door handles are steel, cab side handrails are yellow. Lettering is often small stenciled white lettering, sometimes including the forest railway logo on the cab side.

The cab door window frames are wooden, so these can be detail painted. Glazing material should be added from the underside of the body prior to finishing.

The supplied 'Bosnian' style coupling can be painted and glued to the buffer beam to suit your rolling stock.

## Acknowledgements

This kit was initially developed for the 2014 Dave Brewer challenge where it was awarded the 'commended' prize. We would like to thank members of the 009 Society, Greenwich and District Narrow Gauge Modeller 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](http://www.narrowplanet.co.uk)  
[info@narrowplanet.co.uk](mailto:info@narrowplanet.co.uk)

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

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