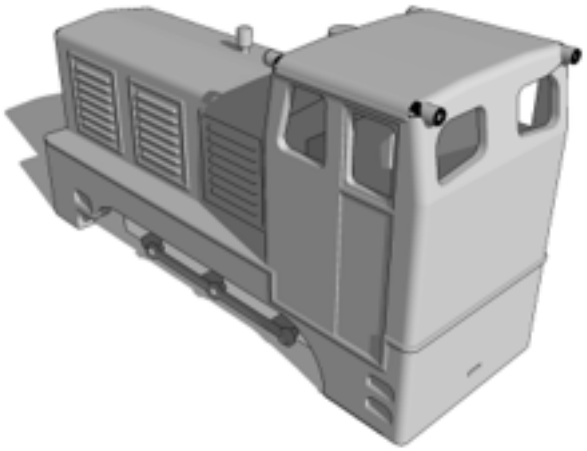
NPL-004
LKM V10C diesel
600-1000mm

Prototype Info

The prototype V10C was an industrial diesel built by LKM (Lokomotiv Karl Marx) at their factory in Babelsburg from 1957 and based upon their earlier NS4c. The locomotives had an air-cooled 6-cylinder diesel engine with an output of 102 hp with power is transmitted to the wheels via a mechanical four-speed gearbox. Depending on the gauge, the locomotive had an outer (600-762 mm) or inner frame (900-1067 mm). Due to their manufacture in large numbers and widespread use throughout East Germany many have survived into preservation and can be found in use across Europe.



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:
0.3 and 0.4mm brass rod.
Glazing material.

Tools required:
Sharp craft knife or scalpel
Tweezers
Needle file
Emery paper or boards
Superglue
0.3 and 0.4mm 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. Minimal 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 Graham Farish outside framed Class 08 diesel shunter 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

If you examine the buffer beams you will see that there is a slot in formed, which is to the correct height to mount a Greenwich coupling at 6mm from the rail. Assemble the Greenwich couplings according to their instructions and push into the slots, trim the tail and glue in place. These are available from the Greenwich and District Narrow Gauge Railway Society.

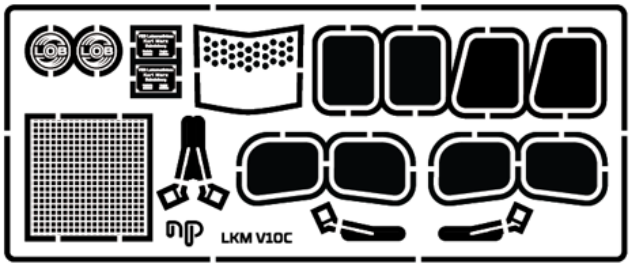
Alternatively there are detailed 3D printed buffers provided with a coupling lip on the top face. These can be simply glued to the buffer beam at the correct height to match your existing rolling stock.

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 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-004 v1.2

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 the four small screws in the corners of the underside of the chassis. The lighting conduit at the front of the chassis will need prying out from the chassis to allow the body to be removed. The kit includes some small fly crank extension pieces to modify the existing ones by adding a balance weight to their tail. These can be fitted with superglue, prior to painting to match your chosen prototype.

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, 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.

5) Detailing
Drill the holes (0.3 and 0.4mm) for handrails and grab handles. 0.4mm wire is used for the handrails and 0.3mm wire used for the bonnet door handles. Bend these up from brass wire and superglue into position. 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 on the centre of the back side. The exhaust shroud is formed by hand folding around the handle of a needle file, before being fitted to the 3D print with superglue. The bonnet top panels have a half etched line on the bottom side, and should be very gently bent along this line prior to fitting. Note the panel with the off-set crease should be fitted closest to the cab. The window frames and windscreen wipers 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.

6) Weight
To improve the performance of the model it is suggested that some strip lead is added within the bonnet. There is space to add this to both sides and still fit the donor chassis into the print. This is available from Eileen's Emporium or any plumbing supplier. It is recommended that this is secured with superglue.

Painting and finishing

Most LKM V10Cs were supplied in a light blue colour which has weathered and faded over time so you can use any mid to light blue as you wish. The chassis should be painted satin red on a blue example, and the window frames, handrails and raised edges along the body picked out in black. As many have had a long life, they have received a myriad of different colour schemes from Deutsche Reichesbahn black with a red chassis to all sorts of colourful private owner liveries, the brightest being orange on a red chassis. Don't be afraid of steering away from the typical East German blue!

Glazing material should be added from the underside of the body prior to finishing.

The works plates should be painted black, 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. Your choice of couplings can be fitted. The buffer beams come with slots for a Greenwich type to be fitted, or the supplied 'Bosnian' style coupling can be painted and glued to the buffer beam to suit your rolling stock.

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

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