



## GUARDSMAN

Thank you for buying this locomotive kit from Boot Lane Works, please read all the instructions carefully before assembly.

### Tools & Adhesives

I recommend a few tools to help you assemble your kit –

- Small Bench Vice
- Modelling Knife (*I use a scalpel*)
- Tweezers, Pliers, etc...
- Needle Files, various shapes
- Wet & Dry abrasive paper (*the mixed selection from Halfords is very good*)
- Selection of small twist drills, including 1.5mm & 2mm diameter
- A 90-degree angle (*I use a set block, but a small set square will work well*)
- Personally, can't manage without my small, tapered reamer, look for them on eBay!  
*TAKE CARE WITH THE REAMER - MAKE A SMALL CUT, TRY, AND CUT AGAIN*

I also recommend the following adhesives –

- Super Glue  
*I use Gorilla Super Glue*
- PVA

### ***A little about the printing process.***

*The printer extrudes a filament of plastic, layer by layer, to create an object. As it does so, it can leave tiny ridges along the object.*

*The printer can also leave a bit of a "squish" from the build-plate and there is usually a tiny "ridge" around the flat surface of the object that was attached to the build-plate.*

*For best results, clean the ridge off with a file.*

### **THE RESIN PARTS ARE BRITTLE AND MUST BE HANDLED WITH CARE**

*The resin is hardened by an ultraviolet light process but continues to adsorb the light after the process. Please ensure the resin is thoroughly painted to stop the hardening process.*

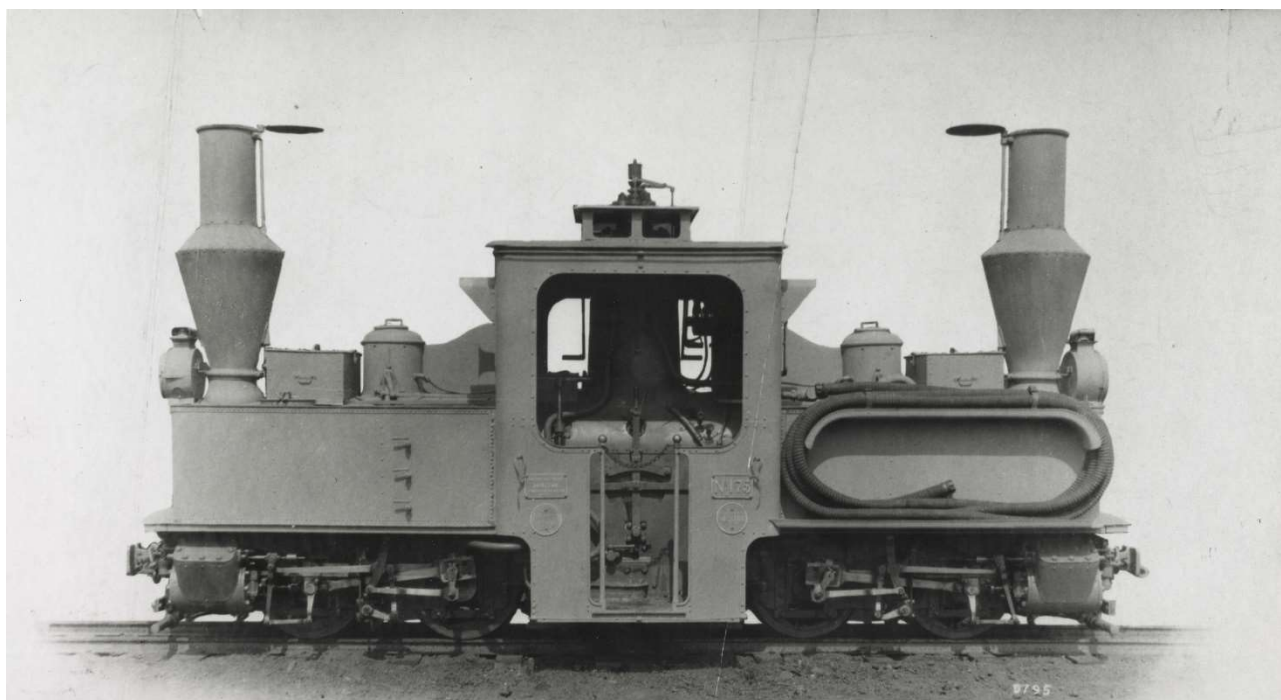
### **THE ACRYLIC IS ALSO BRITTLE, CARE SHOULD BE TAKEN DURING CONSTRUCTION**

## THESE INSTRUCTIONS ARE FOR THE BODY ONLY – THERE ARE SEPARATE INSTRUCTION FOR THE BOGIES

Please bear in mind that this kit, although intended for garden use, is still a small power unit, designed for hauling a handful of wagons or a couple of small carriages.

**We DO NOT guarantee this chassis if used for “Heavy Haulage”!**

GUARDSMAN was inspired by the Péchot-Bourdon Double Fairlie locomotive.



*The Péchot-Bourdon locomotive was the final development of the Double Fairlie type, developed by Captain Péchot of the French artillery to operate on 600 mm gauge railways associated with field artillery and fortresses.*

*The design was chosen with the belief that if one boiler or set of valve gear was damaged by enemy fire, the loco could continue to operate!!!*

*The primary difference between a Fairlie and the Péchot-Bourdon is that the latter only had one steam dome. Only one design was constructed, an 0-4-4-0T. About fifty examples were constructed in 1906, and a further 280 were constructed during World War I, some by the American Baldwin Locomotive Works.*

*(Wikipedia quote)*

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Much of the body kit is screwed together using M2 8mm nuts & screws.

The main parts are the tanks, the cab, the firebox, the cab roof frame & the “tank top” boiler detail. These are filament printed and will all require rubbing down to achieve a good finish.

The production model was painted with Halford grey primer, which was “rubbed down” with 400 wet & dry (using wet). The process was repeated several times to achieve the desired finish.

The majority of other details, chimney, dome, etc. are resin printed and have a much finer finish.

I painted the main parts, before attaching them together. I found this easier than trying to paint the model after construction.

## CAB

The cab has beading detail for the opening on either side, this beading also acts as the fixing point for the handrails. The lower fixing points are in the footplate. The holes in all these fixtures will require opening out to accommodate the 1.5mm brass rod.

The window frames attach to the outside of the cab, they are slightly smaller than the window opening, this will allow the 1mm acrylic "window glass" to be offered up from within the cab. I used tiny dabs of PVA to secure the windows in place, as it dries clear.

The firebox locates inside the cab and offers rigidity to the whole structure. There are locating lips on the firebox that fit flush along the edge of the footplate floor. The firebox may be glued in, although I found the fit to be so good on the production model that I did not glue it into position.

*(See TANKS below)*

The firebox also offers a good central location for batteries if desired? However, I located the batteries in the tanks of the production model.

Other detail in the cab includes the dome, two regulator handles from either end of the dome, two fire-hole doors and a central reversing lever.

The cab roof is built up from the roof frame, the roof itself (0.5mm Plastikard) and the top-box.

*The top-box is curious, my best guess is its intended use was to disperse escaping steam from the safety valves into the atmosphere without a column of water vapour, which would have given the locomotives position to enemy emplacements?*

## TANKS

The tanks are attached to a 2mm acrylic piece with X4 M2 8mm screws. These self-tap into the base of the printed tank. The large hole offers motor clearance, while the smaller central hole is used to attach the bogie.

The tank is attached to the cab by X4 M2 8mm screws and X4 M2 nuts. I located the nut in the tank and the screw head in the cab. Access was difficult, but not impossible, I did leave the firebox from the cab until I had attached the tanks.

Tank detail includes a filament printed boiler top. This piece represents the top of the boiler and the inside edges of the tanks. This piece should be glued to the centre of the 2mm acrylic tank top. The tank tops seem to be a "dumping ground" for much paraphernalia!

There are holes in the acrylic to locate the tank fillers, and a slide switch.

We supply a slide switch that matches the holes in the tank top, should you wish to use it?

There is also a filament printed toolbox with a corresponding square hole that may be located over the switch to disguise it. I finished the toolbox with wooden strips (also included in the kit) and once attached to the switch, the tool-box may be slid along the tank top to operate.

Two oil cans have been provided as further tank top detail.

The chimney attaches (I used PVA again) to the front of the boiler detail. *The chimneys are an odd shape as they were fitted with spark arresting equipment, for obvious reasons.*

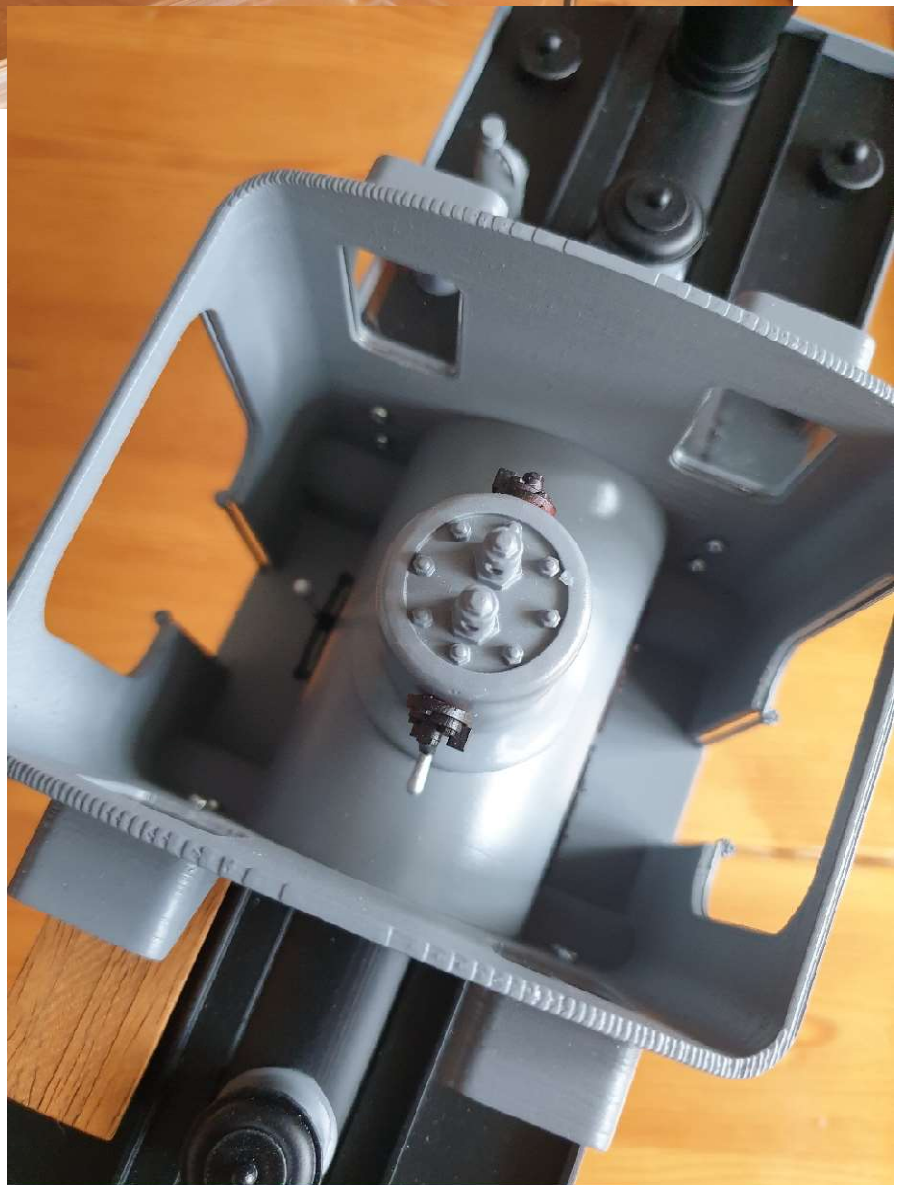
Small sand-pots are supplied.

Smokebox doors & handles should be fitted to the front of the tanks.

It is worthy on note that the tanks on one side of the locomotive had fuel-bunkers let into the cabs end of the tanks. I showed this detail when I riveted the tanks (*see below*). There is rivet head detail supplied, that you may wish to use.

I have found the best way to attach these are to mark a length of masking tape with 3-5mm pencil markings. Fix the tape along the line you wish to place your rivets and, using the point of your modelling knife stab a rivet, dab it in your chosen glue and place it alongside the tape next to the mark.

Repeat, repeat, repeat, repeat, repeat, repeat, etc... Then have a cuppa (or treat yourself to a Single Malt)!!!



*Andrew & Jacqui*

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