

Hunslet 125 H.P. Body Kit Assembly Instructions



Two batches of these diesel locomotives were produced in Leeds by the Hunslet Engine Company for the African Manganese Company. The first batch built in 1935 was rated at 114 horse power and the second 1941 batch, 125 horse power. These were “first generation” locomotives sharing many of the running components and cab details with the company’s contemporary steam locomotives.



General Assembly Instructions

Do take time to read through the instructions and understand how the parts fit together before reaching for the glue pot. Where ever possible parts have been designed to be symmetrical but occasionally parts have to be left or right handed so take care to follow the instructions carefully at these points.

Gluing

Most parts in this kit are either laser cut acrylic sheet (Perspex) or 3D printed engineering nylon. These may be glued with epoxy resin and cyanoacrylate “super glues” however we highly recommend EMA “Plastic Weld” for acrylic parts in this kit. This is a solvent that works by capillary action, i.e. hold the two parts together and apply the solvent to the join rather than applying to a surface and then pushing the parts together. *Please use in a well ventilated room!* Please note that polystyrene glues or solvents (e.g. Mekpak) will not work.

We also recommend using aero modeller’s “canopy glue” for sticking pre-painted components together as super glue can sometimes produce smoke effects on painted surfaces.

Painting

This is very much a matter of personal choice. Most of this kit is styrene sheet and resin components so any of the usual modelling paint will work well however we find also that auto car paints in aerosols work very well.

The key to any type of paint is to ensure you apply a grey or matt red primer first. We advise using an “etch primer” on the metal chassis before spraying with your preferred top coat. The white nylon components are best primed with a thinned down light grey paint that gets into nylons pores so the top coat has a good surface to bind to.

Tools

The following tools will be required:

- A sharp modelling knife or scalpel
- Side cutters (for removing components from sprues)
- 1.5 mm, 2mm, 3 mm and 4mm drill bits
- A small file, sand paper or an emery board “nail file” (included in kit)
- A 6mm flat bladed screw driver
- A 5.5mm spanner (for M3 bolts) or needle nose pliers

Suitable batteries for your model

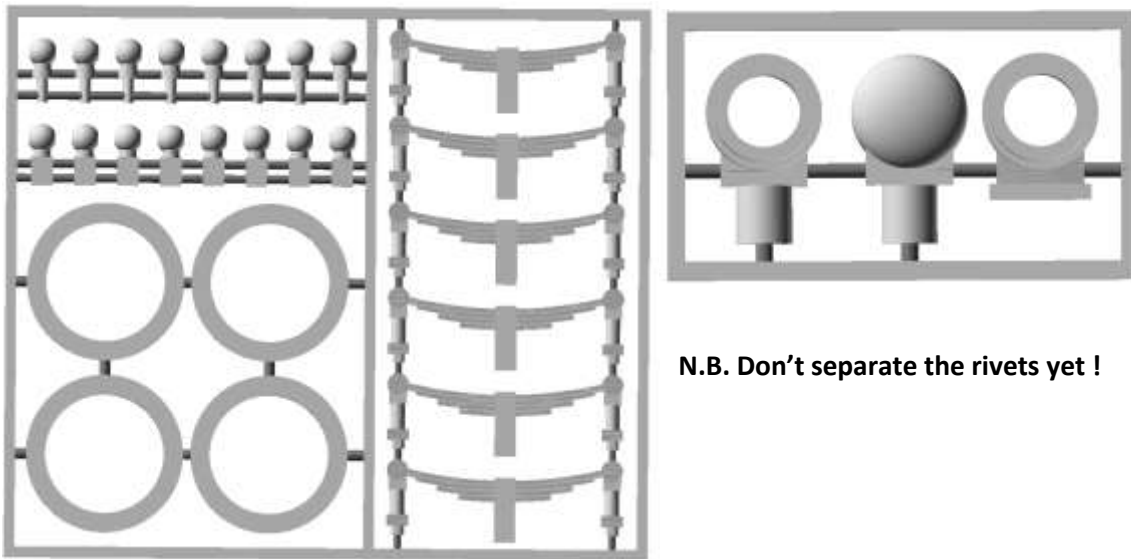
The motor used in the Roundhouse chassis is rated as 6 to15 volts but experiments with a 12volt battery produced something akin to an Intercity 125 so we would recommend a battery between 6 and 9 volts. There is plenty of room under the bonnet so you should have a wide choice of battery technologies e.g. 2 cell LIPO or 6 cell NiMH

Step 1 – Component Preparation

The 3D printed components in this kit are of two different types, both of which need preparing in different ways.

Nylon component preparation

The smaller nylon components in this kit have been sprued together to reduce costs and ease packing. The parts will need separating before assembly, this is best done with a sharp pair of side cutters but a sharp modelling knife will suffice. In the following diagrams the dark grey areas are the sprues to be removed.



Resin component preparation

The cab roof and bonnet top are 3D printed using a photo sensitive resin. These have barely visible layer lines but there are occasional blemishes. These are easily sanded out with the supplied emery board.

N.B. we have built in a mounting point for 50mm diameter audio speaker in the cab roof. If you do want to fit a speaker here we suggest you make sure it fits now.

Step 2 – Roundhouse chassis

Before assembling the chassis as per Roundhouse's instructions, a couple of points need considering.

Switch position

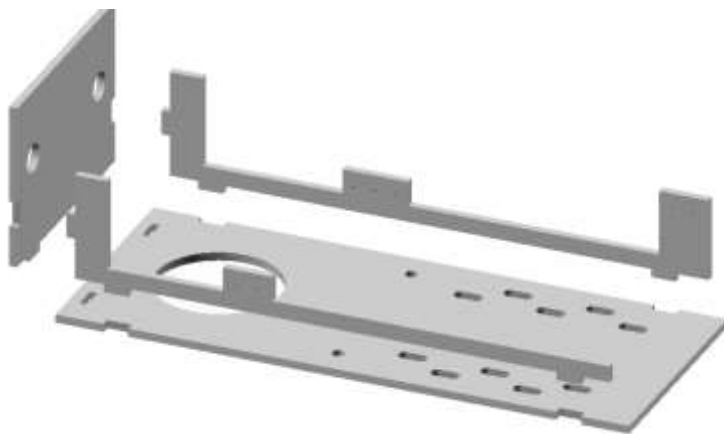
We have anticipated that you will be fitting your loco with remote control and so having a single on-off switch either in the cab or under the removable bonnet will be fine. If however you wish to use manual control, then you will probably wish to put the direction switch on the chassis where it is easily accessible. If this is the case we suggest you work this out and drill a suitable mounting hole in the frame plate *before* you assemble the chassis. You may also want to do the same for a battery charging socket.

Additional chassis details

Our body kit includes nylon details to be fixed to the chassis. These components have little locating pegs and we suggest you pre-drill your frame plates with locating holes. These holes will accurately locate these items and provide a better key for the glue. Included in the kit is a MDF marking up jig to aid you with this. Simply place the jig over the axle bearings, check the various chassis mounting holes match the jigs (the frame plates are handed) and centre punch through the little holes marked with arrows. Flip the jig over to do the other frame plate. Now drill these holes with 2 mm drill, preferably in a pillar drill but an electric hand drill will do.

If the thought of drilling these holes worries you then can dispense with them by simply trimming off the locating pegs on the detail components and gluing them directly to the chassis.

Assemble the chassis as instructed choosing the **motor position that drives the centre axle**. We suggest you pre-paint the frame plates and at least paint and install the springs before fitting the wheels. Use the four hex head 3mm bolts provided in the body kit to attach the buffer beams to the chassis. This will free up four cheese head screw for attaching the body to the chassis later.

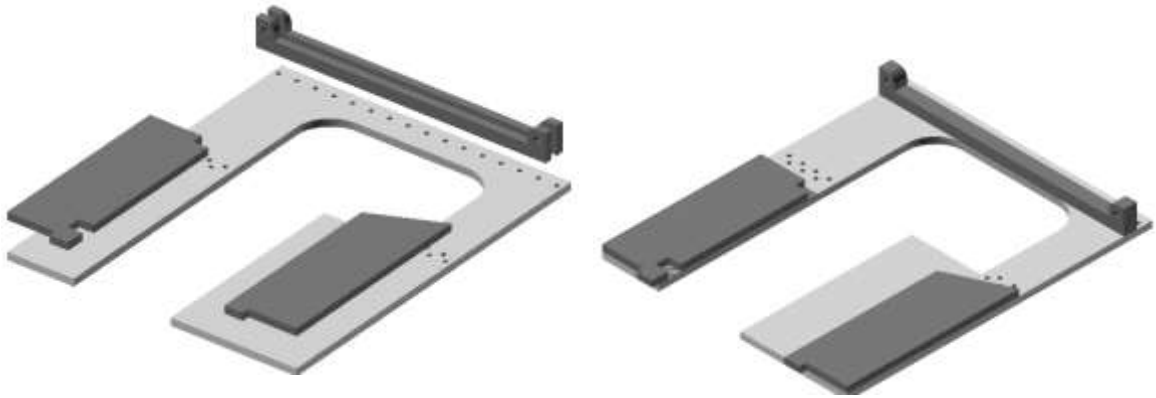


Assemble the battery mounting plate from the kit and bolt to the central frame spacer with two of the 3mm cheese head screws.

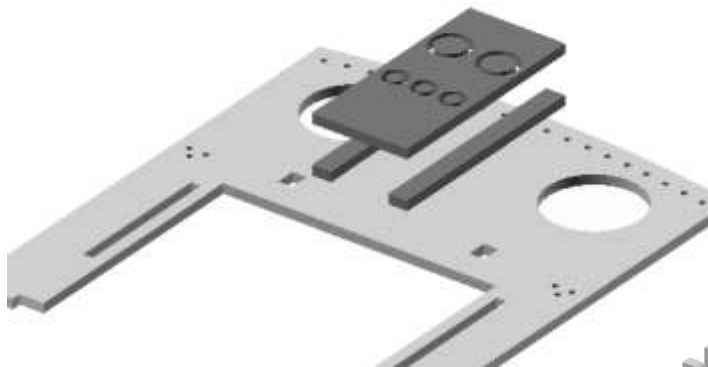
Now install your battery, control gear, charging socket etc. onto this plate. We strongly suggest you try and fix all components to this plate to minimise damage if your loco ever derails and tips over. You should now be able to test drive your chassis and drop the completed body unit onto it later.

Step 3 – Cab Preparation

Glue the console side and the rear cab sheet strengthener in place. Ensure the bottom and side edges are flush as shown. Glue two halves of the cab locating lugs together and glue just above the door frame as shown, **not flush with the cab top**.

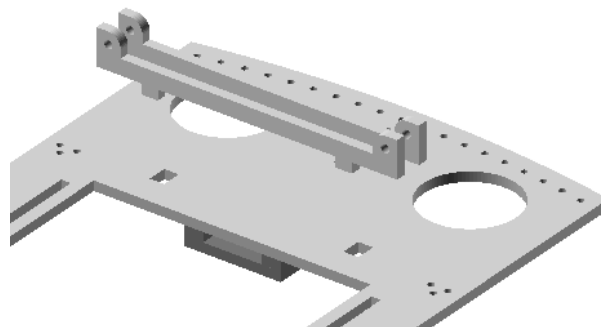


Repeat for other side, **assembling as a mirror image**.



Glue the upper console in place on the cab front sheet. The console should be flush at the bottom leaving a little gap at the top. This has been designed as a way to route any wires you may want to the roof.

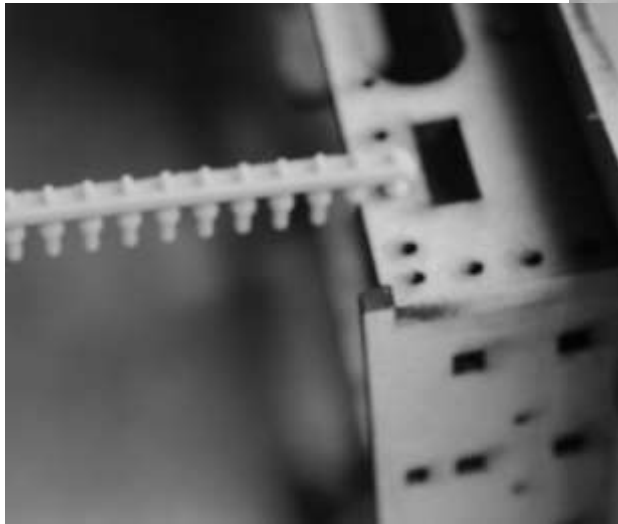
Now glue the two halves of the bonnet locating lug to the other side of the cab front.



Step 4 – Cab Rivets

With a pair of clippers trim the supplied rivet head sets into “combs” as shown.

With a 1.5mm drill bit ensure all the rivet holes in the cap plates are free of glue etc.



Add a spot of super glue into a rivet hole and poke the body of rivet down into the hole so the head rests on the cab side.

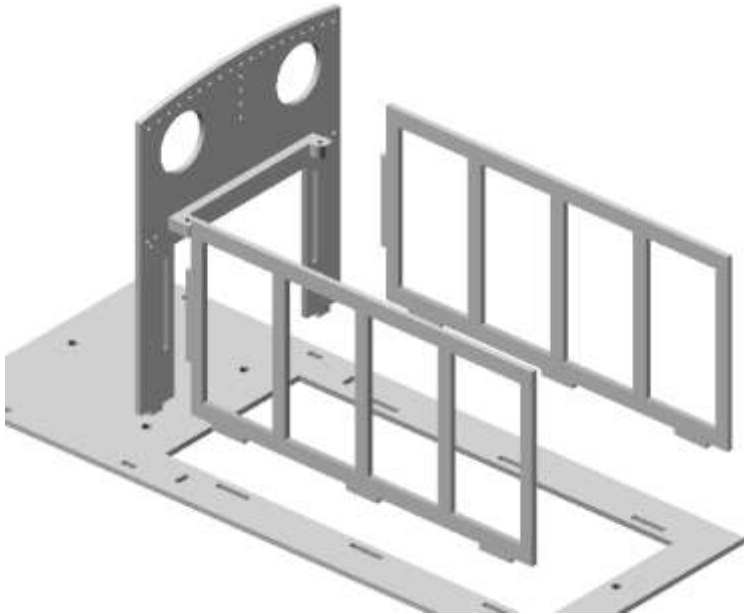


Snip the rivet from the “comb” with a pair of side cutters and clean off any sprue residue with a couple of strokes of the emery board.

Repeat for most of the rivets on the four cab sides. We suggest you leave the last 2 or 3 rivets closest to the edges until after the cab has been assembled. This way it is easier to clean up the corner joints.

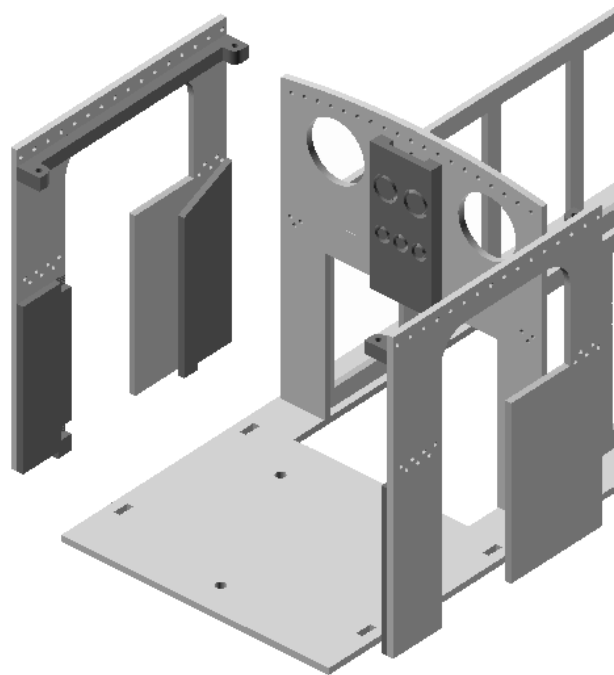
N.B. we have provided a few extra rivets in the sets in case!

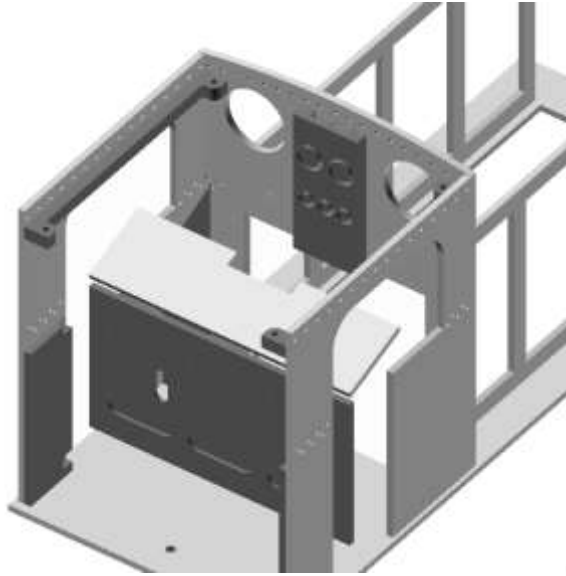
Step 5 – Bonnet & Cab



Glue the bonnet sides and cab front to the foot plate.

Glue the cab sides in place. Take care to get the cab corners as flush as possible. Minor imperfections can be filed off but it's easier to get it right first time.

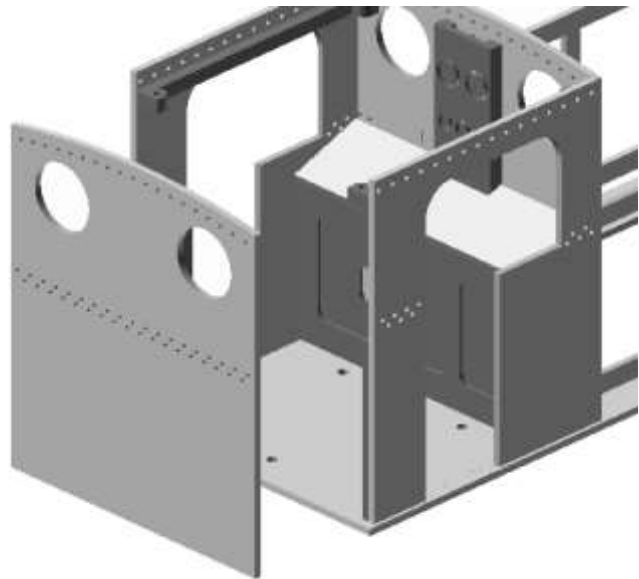




Glue the control console side and top in place. Note the switch hole can be positioned either on the left or right hand sides.

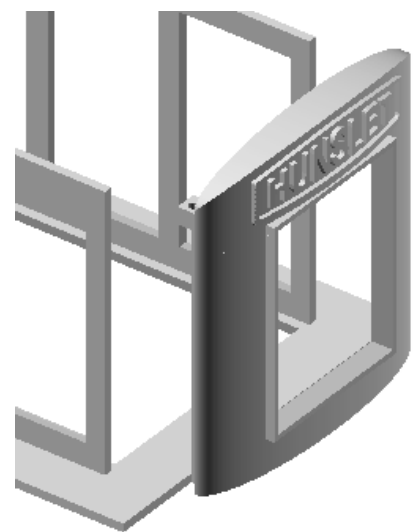
Glue the cab back on, again taking care to get the corners as flush as possible. Once the glue is set check all cab corners and address any imperfections with filler and sanding. *TIP applying a quick squirt of primer paint at this point really helps to check the corners.*

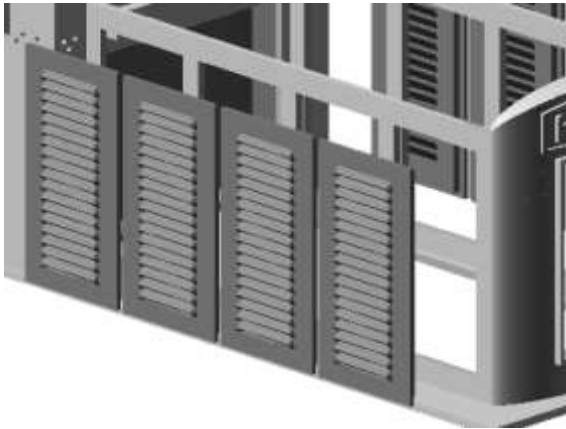
When satisfied proceed to fix in the remaining rivets into their holes close to the edges.



Trim the radiator assembly away from the bonnet front (they are printed as a single component to reduce costs). The radiator can now be painted separately and fitted after the body has been painted.

Glue the bonnet front in place.

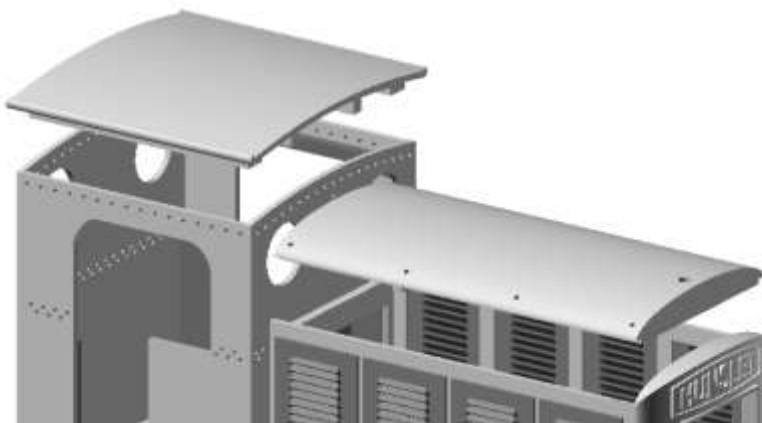
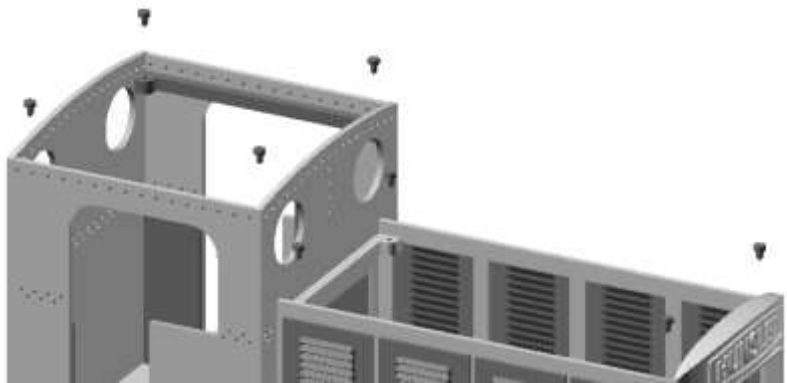




Glue the eight louvered side panels into the gaps in the bonnet sides.

Check orientation of the louvres

Screw eight M2 self-tapper screws into their pilot holes in cab sides and bonnet sides. These are for the magnets to “grab” onto.



Check the fit of the cab roof and bonnet top. If necessary file of a little resin so that parts fit with a gentle push.

TIP Temporarily push in two spectacle rims in the cab front so you can be sure you can get the bonnet on and off.

Glue the eight 4mm diameter magnets in their sockets in the cab roof and bonnet top (you may need to use a 4mm drill bit to clean out the holes) . Check the parts fit again.

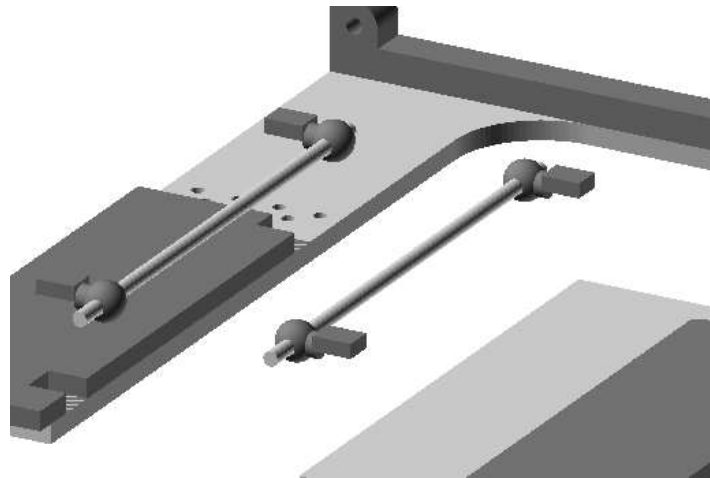
Check the fit of the bonnet hand rail knobs at this point. You will probably have to gently drill them out a 1.5 mm drill bit.

Now is a good time to paint the completed body unit, cab roof and bonnet top with your preferred livery. Also remember to paint the cab steps, air tanks and sanders now if you want them to match the body colour.

Step 6 – Hand rails and lights

Remove the 16 hand rail knobs from their sprues and paint. TIP
Temporarily thread them onto one of the 1.5mm brass rods to do this.

Thread pairs of the “flanged” knobs onto the 52mm brass rod and glue behind the cab door openings as shown. Suggest you do the rear ones first which have socket to position the flanges and do the front ones to match



Bend the two LED legs at right angles as shown and then glue the 2 halves of the head lamp around it shown. Glue into the hole at the bonnet front.

Thread four “spigoted” knobs onto a 126mm brass rod and then glue into the bonnet top as shown. Repeat for the other side.

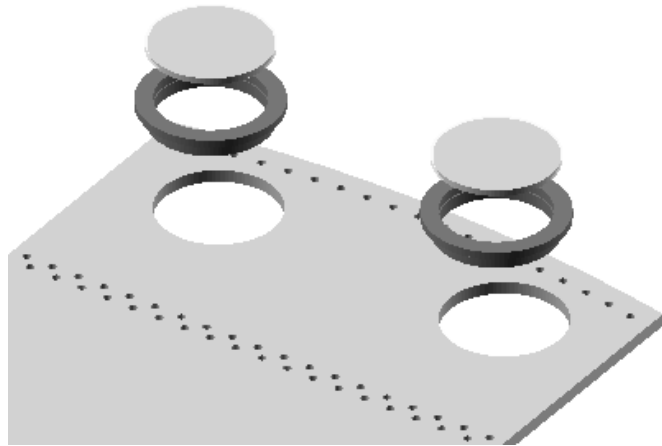


A rear lamp is also included in the kit although we have no photos of the rear of the locomotive to indicate exactly where it should be positioned. If desired pick a suitable location and drill a 4mm hole for the LED leads to pass through.

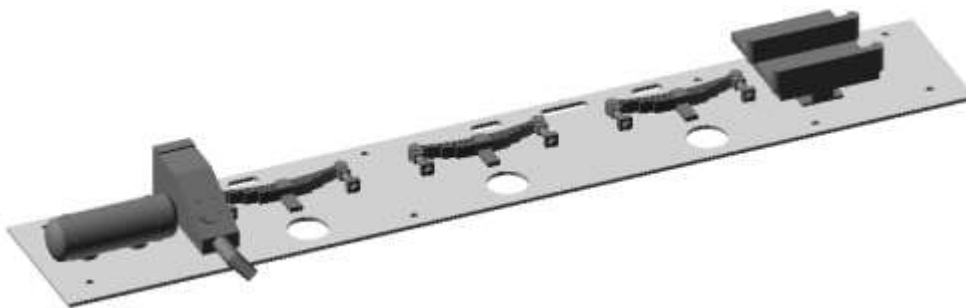
We have left you to work out how to wire up these two 9 volt LED's to your battery and or radio receiver!

Step 7 – Cab windows

Paint the cab spectacle rims taking care not to get too much paint into the pane location ring shaped depressions on the inside rim. The panes have protection film on both surfaces; lift the edges of these with a sharp knife point so that you can finish peeling them off in a minute. “Pop” the panes into their locating rings and then carefully glue the four windows into the cab front and back (aero modellers canopy glue is excellent for this). Now peel off the protection film.



Step 8 – Chassis details



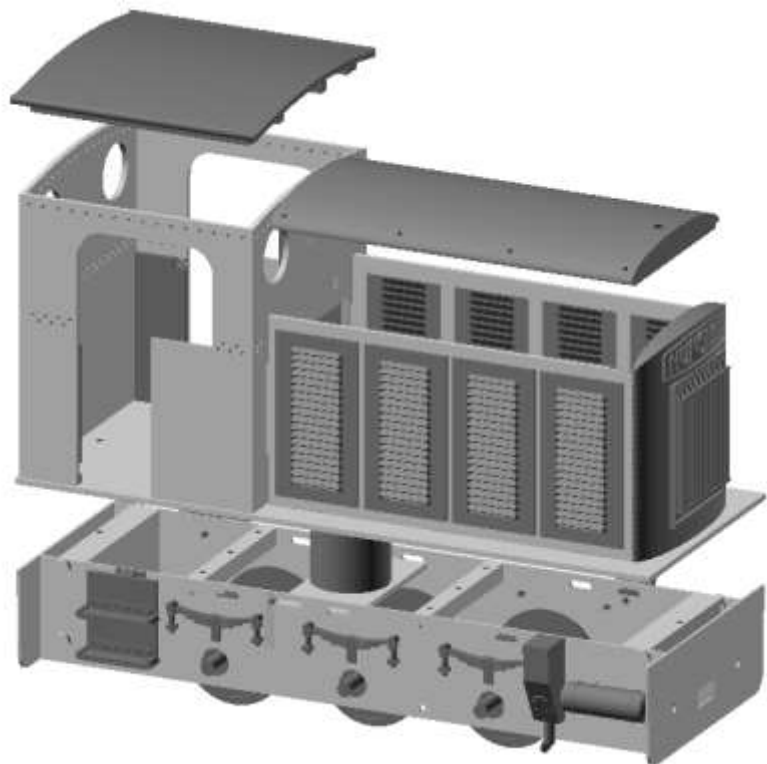
Glue the cab steps, air tanks and sand boxes into their locating holes in the chassis frames

Step 9 – Final assembly

Drop the body onto the chassis and secure with three M3 cheese screws in the cab and one directly behind the bonnet front.

Finished !

TIP: We highly recommend you always pickup your locomotive by the buffer beams, not by grasping the bonnet!



Packing List

Part	Quantity	
<i>Body Parts</i>		
Footplate and bonnet bag (2mm black acrylic)	1	
Cab parts bag (2mm black acrylic)	1	
Cab Roof (resin)	1	
Bonnet Top (resin)	1	
Bonnet front (white SLS nylon)		
<i>Details</i>		
Spring and window set (white SLS nylon)	1	
Cab steps (white SLS nylon)	2	
Air tank pair (white SLS nylon)	1	
Sand box pair (white SLS nylon)	1	
Rivet sets (white SLS nylon)	2	
<i>Headlights Bag</i>		
Head light parts(white SLS nylon)	1	
White 9v LEDs	2	
<i>Bits Bag</i>		
M3 10mm hex head bolts	4	
Bonnet hand rails (126mm long 1.5 mm dia brass wire)	2	
Cab hand rails (52mm long 1.5 mm dia brass wire)	4	
Window panes	4	
<i>Magnets Bag</i>		
4mm round magnets	8	
M2 4mm long self tapping screws	8	
<i>Other Bits</i>		
Emery board	1	
Chassis drilling template (2mm mdf)	1	