NEIL SAYER SCALE MODELS

009 La Meuse

HISTORY

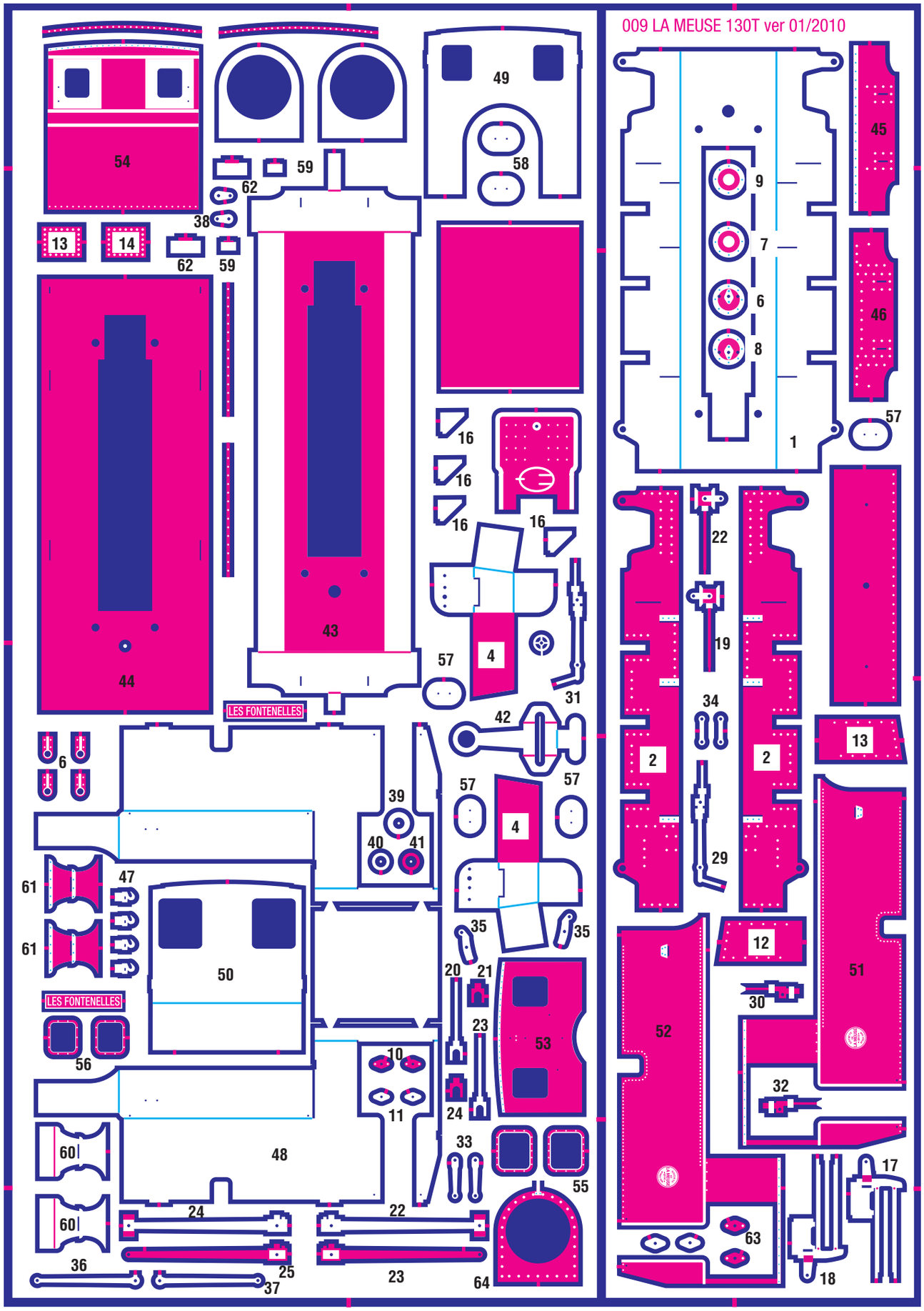
After WW1, Soissons area was totally destroyed. Not one of the numerous sugar factorys remained in working order. In 1921, five owners of destroyed factories became shareholders of a new society: La Société des Sucreries et Distilleries du Soissonnais (S.D.S.). They built a large and modern sugar factory in Bucy-le-Long, a suburb of Soissons.

The factory received beet crops collected by two narrow gauge railways and brought down from the plateau to the valley by two “blondins”. At this time, second hand war rolling stock was very easy to obtain. But S.D.S. purchased brand new locomotives from Société de la Meuse in Belgium. The first order was for a 062 T locomotive, numbered 3035 and was delivered in August 1922. This first machine was followed in 1923 by three other 062 T (Nrs 3073, 3074 and 3075).

These locomotives had a 1700mm wheelbase and 65cm diameter driving wheels. They weighted 13,5 tons. A new order was placed in 1925 and delivered in 1926. For this third order, La Meuse studied a new model, slightly lighter than the first one (13 t), with a 260 T wheel arrangement and 1600mm wheelbase (60cm dia driving wheels). Seven had been delivered from 1926 to 1938 for the two last ones (Nrs 3931 and 3932). La Meuse built eleven locomotives for S.D.S.

S.D.S. ended its railway activities in 1948. At this time, the locomotives were stored, in good condition, in two railway stations at Acy and Vregny. S.D.S. tried to sell the machines but only three found new owners. One for “Sucrerie Piot” at Mitry-Mory (Seine & Marne). This one ended as static boiler at this factory in 1959. The last 2 went to “Sucrerie agricole de Maizy” (Aisne) where they were numbered “8” (3932/1938) and “9” (3931/1938). In 1964, they were in use at Maizy.

French enthusiasts saved them. N°9 going to Musée des transports de Pithiviers and it is still in use there, named “LES FONTENELLES”. N°8 went first “Chemins de fer du haut Rhône” then to “Chemin de fer de la vallée de l’Ouche”. These locomotives were known to be powerful and very easy to drive. At Maizy, they usually hauled 150 ton trains.


009 LA MEUSE 130T ver 01/2010
LES FONTENELLES
LES FONTENELLES

Introduction

Please read these instructions carefully and familiarize yourself with all of the parts. This kit is made up from etches in nickel silver and brass along with brass castings. All etched parts must be carefully cut out using either a craft knife with the fret supported on a strong flat surface or a pair of very fine modelling side-cutters and the cusp removed. Only remove the parts as you need them this saves time looking for missing parts. Although the etched parts look flimsy, once soldered up have great strength. Please note that all of the half-etched fold lines appear on the inside, unless told otherwise.

Tool list
100W soldering iron (as the model gets more parts added on it will need more heat to allow the solder to flow)

Various solders (the pilot model was built using 145° solder and power flux, make sure you rinse off with water once soldered up)

Cutting broaches and small drills

Craft knife

Miniature pliers flat and round nosed

Swiss needle files

Tweezers

Jewellers screwdrivers

A small mini drill of the dremel type

Graham Farish 08 diesel shunter chassis

Modifications.
Before dismantling the chassis check that it runs ok. Using the exploded diagram of the loco to locate parts, remove the body by undoing the 4 screws that hold it on. The brake gear is also removed by pulling them down. The footplate/dummy outside frames are then removed this may need gently prizing off with a small screw driver, this should leave you with a chassis looking like this (photo 1). The only other modifications to the chassis are to replace the screw at the rear of the chassis, this becomes the front on the La Meuse, with a longer one, it also provides the pivot point for the front pony truck. Note that the chassis is now used the opposite way round in the La Meuse. The rear crank pin is removed and drilled with a 0.5mm drill and replaced with a cut down lace pin so the shaft is about 2.5mm long this is to allow for the coupling rods and return crank to be fitted. Note that all fold lines are on the inside unless otherwise stated.

Building the chassis
Take part 1, place it on the chassis upside down, the mounting holes will have to be elongated so that they line up with the ones in the chassis. Once this has been done turn it upsidedown and tack solder the 14ba nuts on using the chassis and 14BA screws as a template (photo 2). These nuts raise the footplate to the right height. Once happy with the position remove from the chassis and re-enforce the nuts with solder. Cut the 4 mounting screws down to about 4mm long, once in position these can be filed flush with the top of the footplate. Fold down the side frames, then press out the rivet detail on the side frame overlays, part 2, these form part of the footplate supports. Solder part 2 onto part 1 (photo 3).

Solder on the re-railing bracket detail, front and rear part 3 (x4), using the holes in the chassis to line these up (photo 4).

Next we'll deal with the running gear both sides are the same.

Fold up the ends of the cylinder part 4 (photo 5) and re-enforce the folds with solder note that the tab goes to the rear of the cylinder. Bend up the cylinder wrapper. Solder this in place, repeat for part 5. Punch out the rivet detail on both the rear, part 6/8 and front, part 7/9, cylinder covers. Solder the rear cover on along with the valve detail, made up from parts 10 and 11 (photo 6). Use the holes in the rear of the cylinder to line these up. Solder on the front covers try and get the rivet detail the two opposite ones vertical, although this isn't important.

The tab on the rear of the cylinder fits in to the slot on the chassis, solder this in place making sure the the bottom of the cylinder is parallel to the bottom of the chassis (photo 7).

Bend up the detail cylinder wrappers parts 12/13 (Photo 8), solder in place these are handed and the tapper goes towards the front of the cylinder. The steam chest, parts 14/15 (photo 9) are added. Solder in the footplate supports parts 16, there are 3 on each side. Fold up the motion bracket, part 17/18 (note that the half etch is on the outside of the slide bars) the radius arm pivot is bent back on itself into the half etch (photo 10), solder in place using the tab to locate it in the chassis slot, this slot may have to be opened out a bit on the chassis (photo 11). The small notch in the outside top of the motion bracket will have to be increased to about 1.5mm this is to clear the footplate valance.

The next stage is to make up the connecting rod and cross head. Use the minimum amount of solder on these parts (photo 12). Parts19, 20 and 21 make up the crosshead and piston rod. Hold parts 19, 20 and 21 together and soldered up. Once soldered trim the piston rod to 8.5mm in length. The connecting rod is made up from parts 25 and 26 soldered together, the half etched part at the crosshead end form the back part of the crosshead. The pivot is made up from the lace pin with the head filed down (photo 13). Assemble the crosshead and connecting rod with the lace pin (photo 14) . This shows the use of a paper washer to prevent the parts soldering together. Put a thin piece of paper inbetween the pivoting faces which is wetted with water to stop the surfaces soldering together, touch the part to be soldered quickly with soldering iron. This piece of paper is then torn away from the pivot. If you do solder it up solid, carefully dismantle the parts, remove all traces of solder and try again. With practice this works nearly every time.

Now repeat this for the other side. Now this is the time to test run the chassis with the crosshead/connecting rod in place (photo 15).

Valve gear
Note: The valve gear rivets are made up (the same as the crosshead/connecting rod pivot) from the nickel plated brass lace pins. Hold in a pin vice and file down until almost all of the head is filed away leaving just enough to stop the pin from going straight through the hole. Once soldered in the backs can be trimmed off.

Use the paper washer method when soldering up the valve gear to prevent the moving parts being soldered up. Solder up parts 29, the valve rod and its detail overlay and 30, the hole in part 30 will have to be drilled again so it lines up with that on part 29 (photo 16). The links are made up from parts 33 and 34. At this point carefully take off the crosshead/connecting rods as it is easier to assemble all of the valve gear parts off the loco. The assembled valve gear parts crosshead/connecting rod valve rod and all the links should look like this (photo 17). Make sure that you have all the parts

the right way round and that each part is correctly positioned either on top or below the other part. Carefully study photos 17 and 18.

This assembly is now ready to be added to the chassis. From the top, slide the connecting rod down at 90 degrees between the slide bars until the crosshead is positioned between the slide bars (photo 19). With the crosshead at the rear of the slide bars carefully twist the connecting rod until it is horizontal. Align the piston rod and valve rod with the holes in the cylinder.

Using parts 35, 36 (lefthand side), 37 (righthand side) and 38 make up the return crank assembly. Using the lace pins supplied make these up in the same way you made the valve gear. Solder the crank pin into the large end of the return crank, part 38 and file the head off completely. The radius arm, part 35, goes outside the radius rod, part 36/37 and the radius rod goes outside the return crank. Add the front and rear re-railing bars from 0.7mm wire cut to a length of 18mm. The chassis should then look like this (photo 19).

Remove the screw in the chassis (photo 20). Thread on first part 39 and then parts 40 and 41 (These parts have been replaced with a top hat bush) onto the 10BA countersunk screw, solder these together . Then thread on the small piece of tubing, which should be filed down to about 1.5mm in height. This will replace the original screw which you removed from the chassis and forms the pony truck pivot. Fold up the sides of the pony truck, part 42 and reenforce the joints with solder. Fold back underneath the t-shaped part at the front trapping the pony wheels in the pony truck (photo 21). The pony truck is fixed to the chassis with the screw and a 10BA nut on the top also traps the wire to the motor, you can see this in photos 23 and 24 of the finished chassis.

Building the body

Bend down the buffer beam ends on part 43, and angle the rear coupling mounting down, re-enforce this joint with solder. This locates in the coupling mounting pocket of the chassis. Solder this to part 44 using the holes to line them up
Cut 2 lengths of 1 x 1mm angle to fit inbetween the buffer beams. Using a scrap piece of etch as a gauge file down one side so that the inside is the same depth as the etch. The smaller side of the angle is soldered to the footplate. Emboss rivet detail on the rear buffer beam overlay part 45. Solder this and the front overlay, part 46 onto the footplate. Solder in buffer beam hooks, part 47 into the slots in the buffer beam (photo 25 & 26)).

Before removing part 48 the inner body etch solder a piece of scrap etch over the doorway, which is later removed. This helps to keep the body ridged while assembling it onto the footplate (photo 27).

Fold down the sides first, then the tank tops and finally the front of the tanks. Both the front and rear cab parts fit inside of the cab sides. Using the tabs, locate the front cab, part 49 and tack solder in place, once happy, remove the dummy roof. Using the half etch line put a small bend in part 50, using the sides as a template for the angle. Again using the tabs as a guide tack solder the cab rear in place. Once happy the tabs on the bottom of the cab should line up with those on the footplate. It helps to file these tabs down each side to form a taper and also reduce their depth so that the body sits on the footplate squarely with no gap. The cab is then soldered to the footplate (photo 28).

Take the cab side overlay, be careful with this part as the roof upright at the rear is easily bent. Do not punch out the rivets under the cab roof on this and parts 52,53 and 54, as there are new etched parts for these. I found when punching these out it distorted the parts to much. Punch out the rivet detail on the tank front step supports. Using the inner cab as a guide bend round the front of the tank, then using a piece of small round bar finish off bending it around so that a good fit is obtained. Repeat this with part 52 and solder them onto the cab (photo 29). Solder on the cab front overlay, part 53 (photo 30). Carefully put in the bend on the rear cab overlay and solder in place.

Next solder in place first the front spectical plates, part 55 and then the rear ones, part 56. Solder on the etched rivet detail that goes just underneath the roof, sides part 57 and ends, part 58 (photo 31, this photo is referred too in alter operations).

Put in the white metal tank weights with a spot of glue to hold them in place. Drill out 0.4mm holes for the tank filler handles, tank top handrail, bottom of the cab handrails and the handles on the rear spectical plates these are all marked on the etch, all of the handrails are made from 0.3mm wire. Make up the tank fillers by soldering together 2 part 57's. Part 58 forms the lid of the tank fillers with some 0.3 wire forming the handle (photo 31). Bend up the tank top hand rail and solder in place.

The tank foot steps, part 59, are soldered into the slot on the front of the tanks, use a piece of blue-tac to hold them in position while doing this (photo 32).

Bend up the bottom step on part 60 and solder on a piece of 1 x 1mm angle onto the top, opposite side. Add the detail overlay, part 61, and the step, part 62. Then using a piece of blue-tac to hold in place (photo 33), solder this to the footplate (photo 34).

Bend up 4 cabside handrails. These have a 90° bend at the bottom and are soldered into the holes either side of the cab opening. The top are bent round and soldered onto the inside of the cab (photo35). Make up the handrails that go either side of the rear windows. At this stage I soldered in place the white metal backhead, although this can be done at later stage.

The fire box top is soldered onto the boiler (photo 36) then holes drilled where marked for the boiler fittings the sides of the boiler, marked in blue are filed down until they slide between the tank weights, with the bottom of the firebox casting sitting in the tank tops. You will have to gently prise apart the tanks tops at the front to allow the Firebox /boiler to slide in. Add the lost-wax boiler fittings (photo 37). A sand dome operating lever was made up from wire and part 63 soldered onto the side of the sand dome. This lever then goes back through a hole drilled in the right hand side of the cab, a small pilot hole is etched on the cab overlay (see photo 40). The lost-wax steam pipe is trimmed to fit, a small amount of bending may be necessary to give a good fit. This is then trapped between the steam dome and the boiler when the steam dome is fitted. Glue in the safety valves on top of the steam dome

Drill holes marked on the smokebox casting, first for the lost-wax chimney. Then a hole for the 10ba nut in the bottom of the smokebox. The etched smokebox front, part 64, is then added. A small piece of wire is added to the smokebox door. Then the handle, part 65, is added (photo38). The head of the body mount screw may have to be fied down. Name plates are then added if required, this can be left untill the model has been painted. You should then have a model like this (photo 39). If for some reason the clearence underneath the boiler is tight, the worm cover can be removed or taken off to file down (photo 40).

I must thank Eric Fresné for his help in this project and recommend his book "70ans de chemins de fer betteraviers en France' on the sugar beet lines in France, published by LR Press, although in French has superb photos and drawings.

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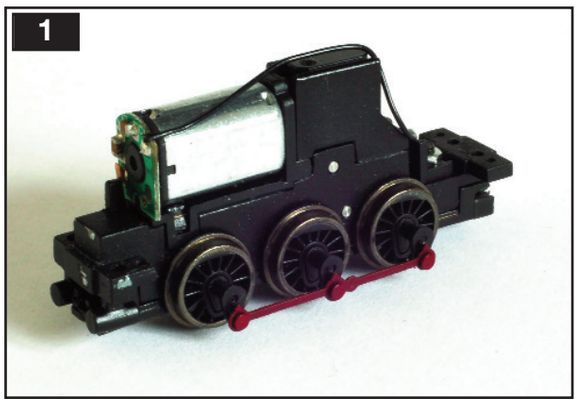

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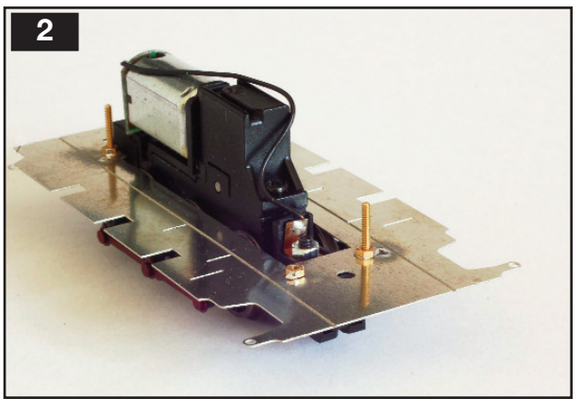

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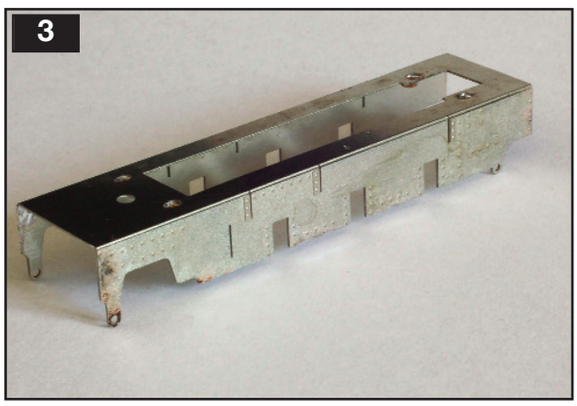

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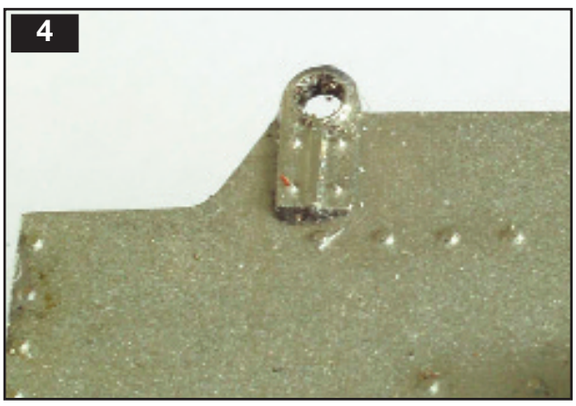

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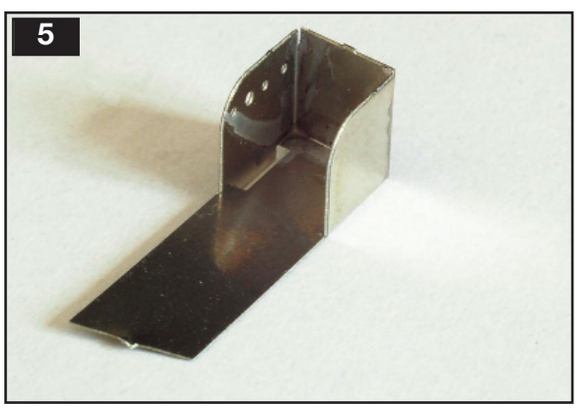

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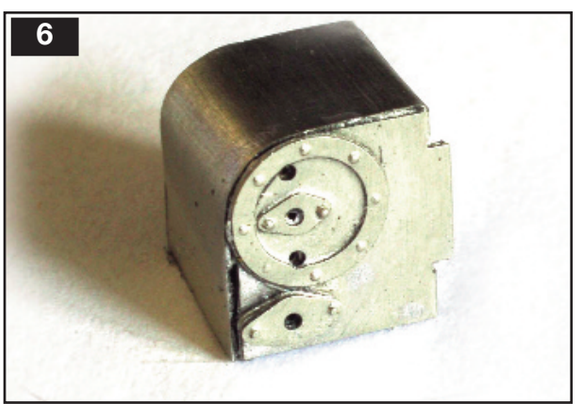

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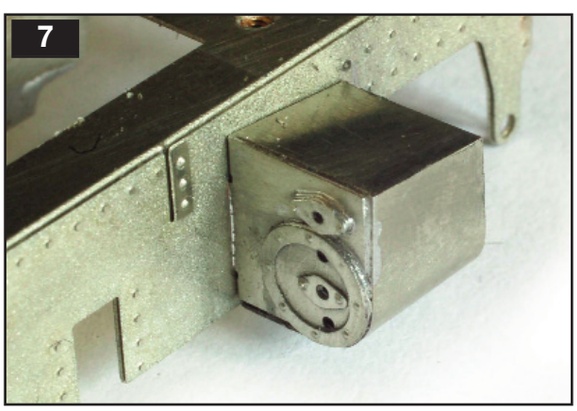

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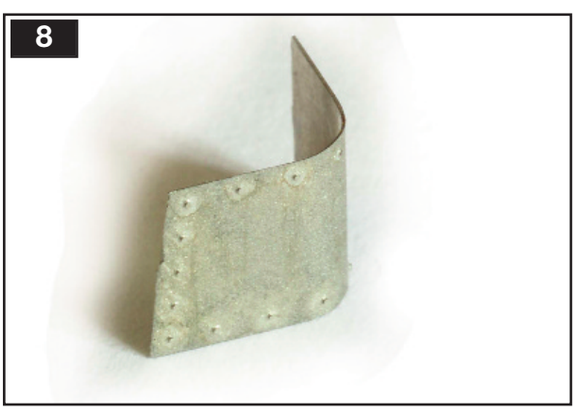

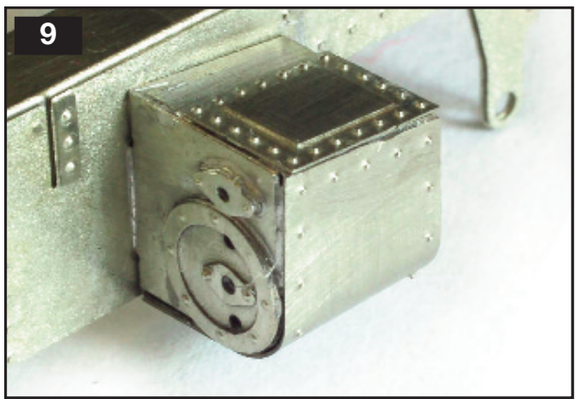
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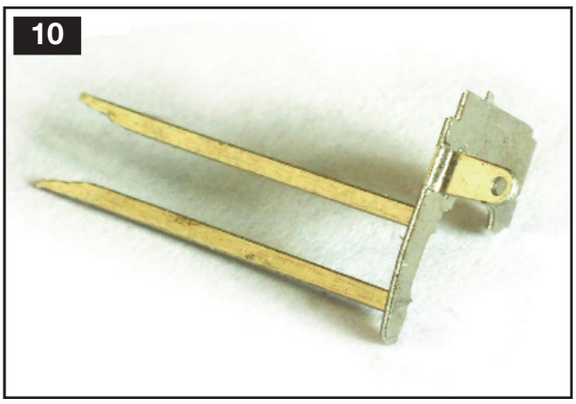
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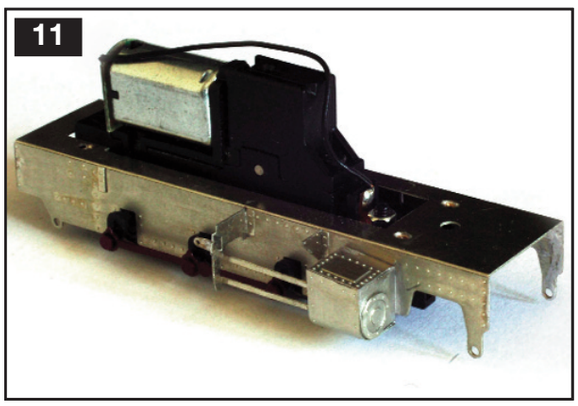
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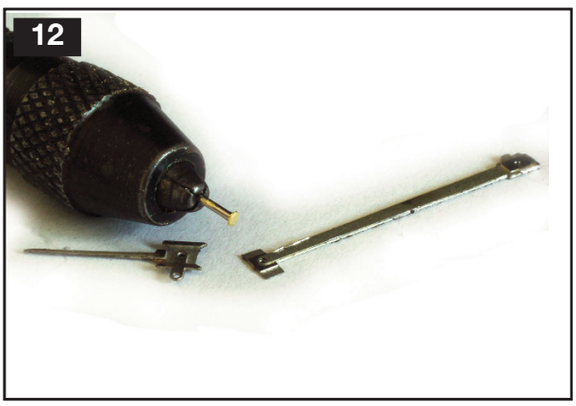
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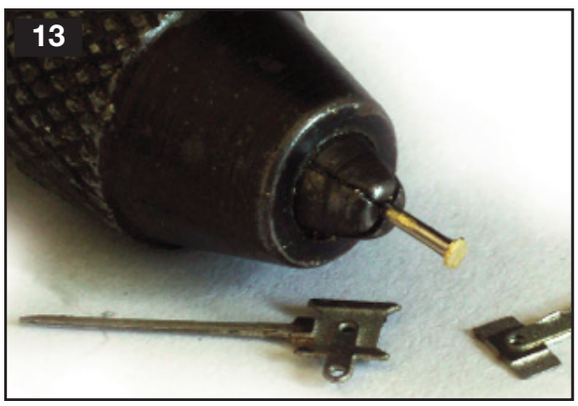
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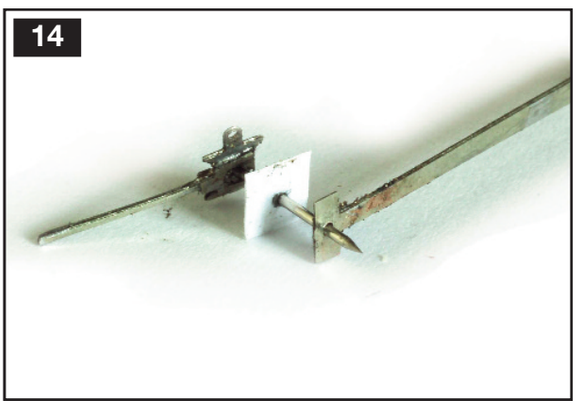
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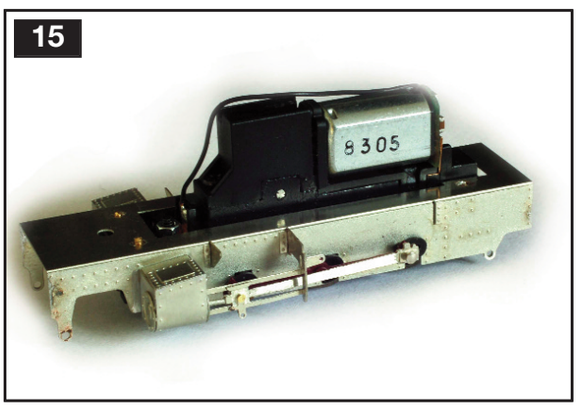
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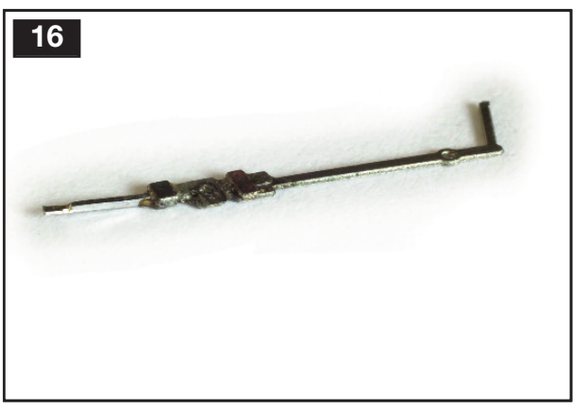
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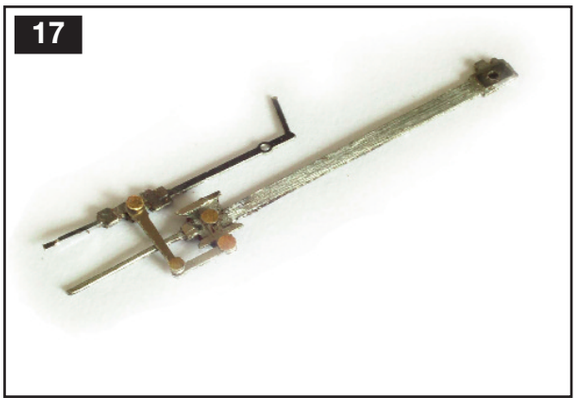

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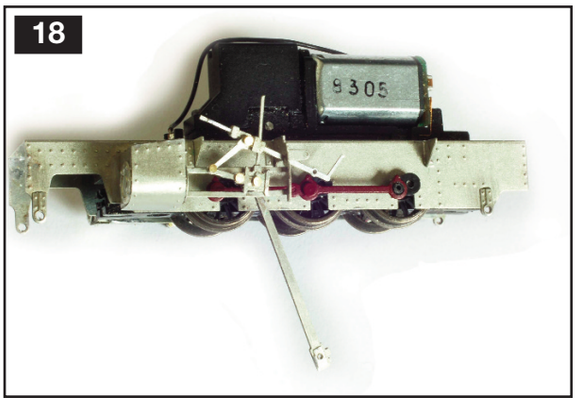

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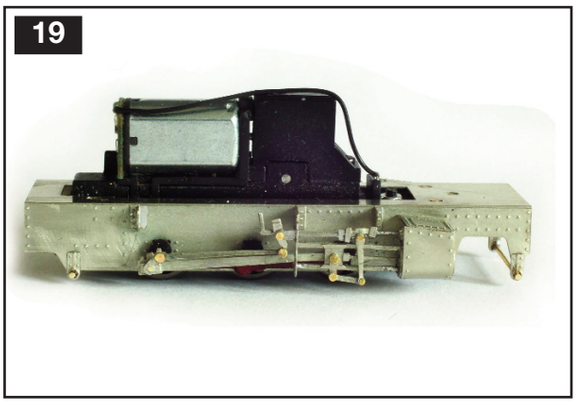

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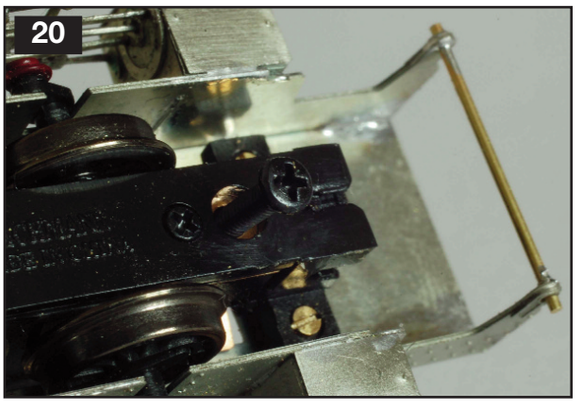

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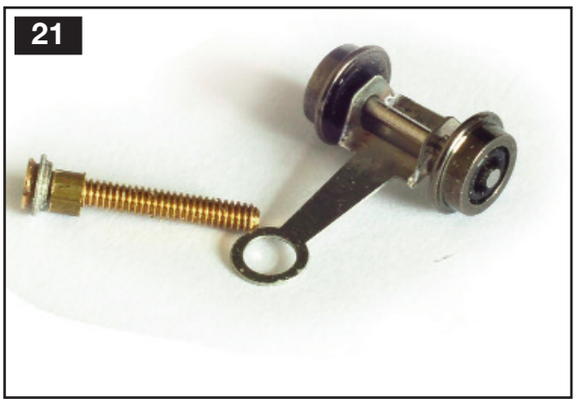

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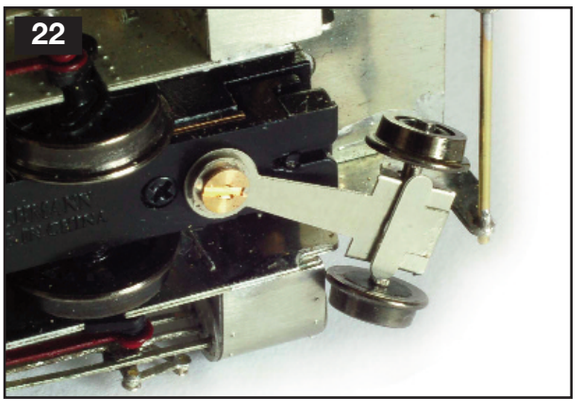

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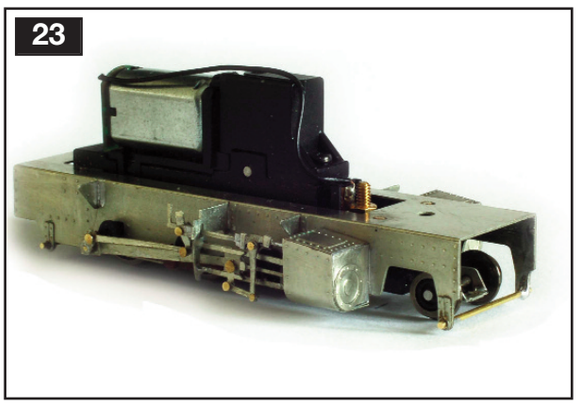

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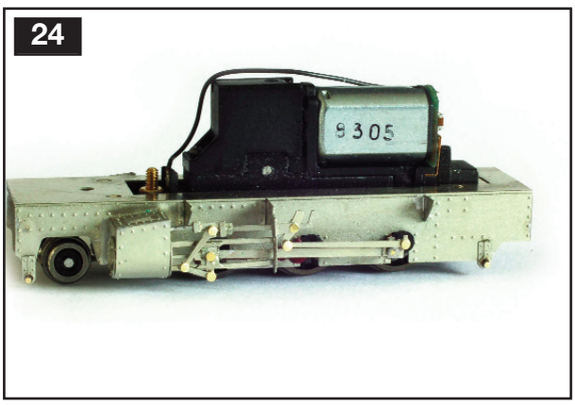

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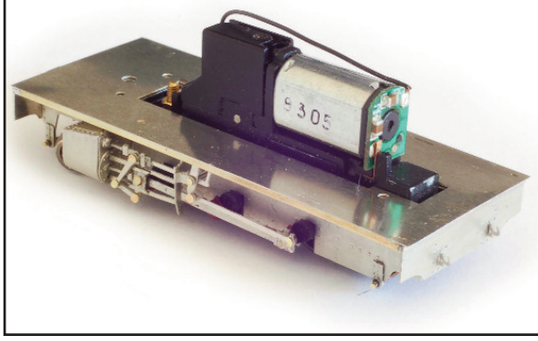

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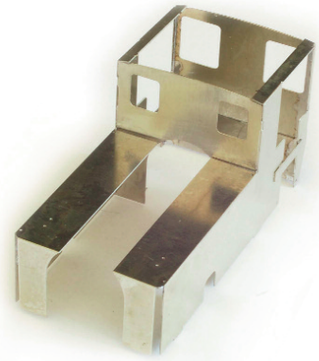

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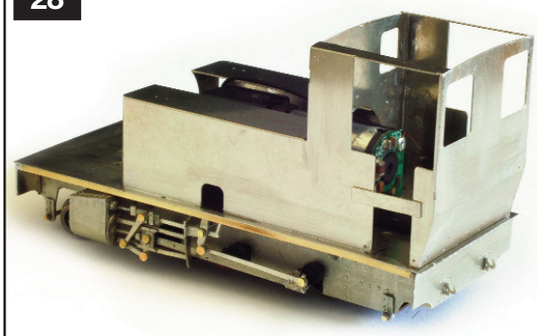

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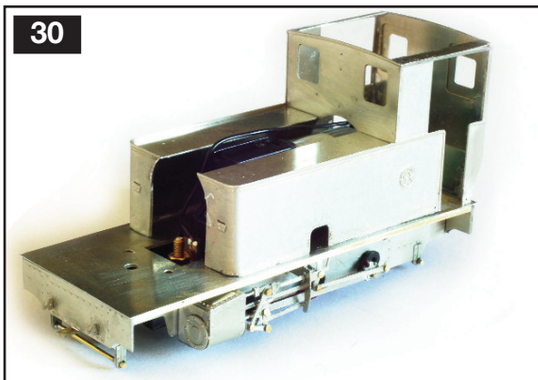

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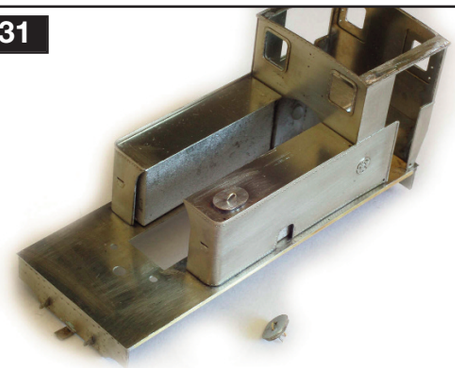

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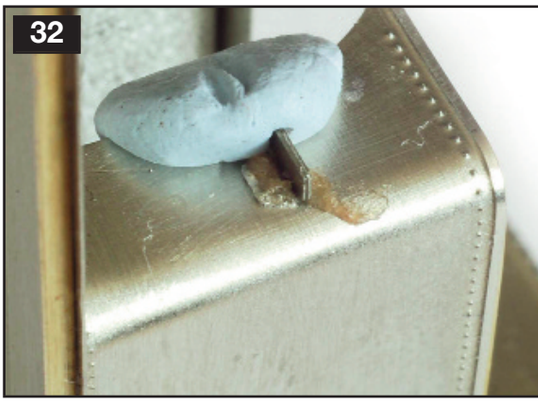

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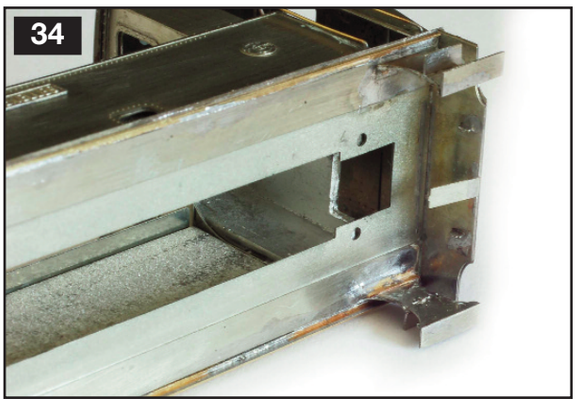

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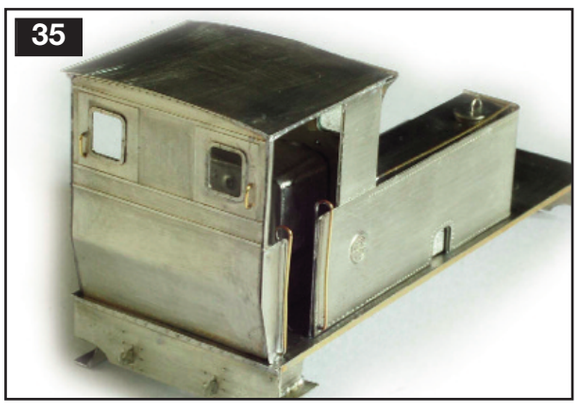

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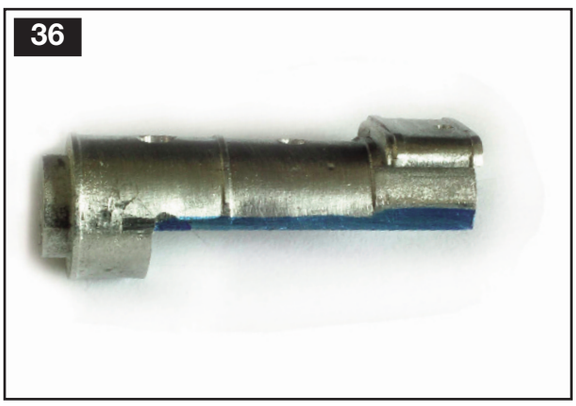

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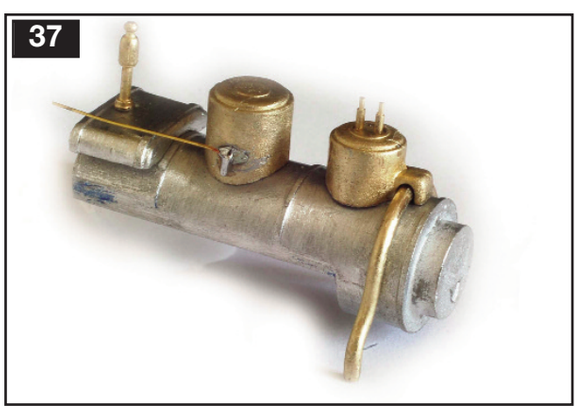

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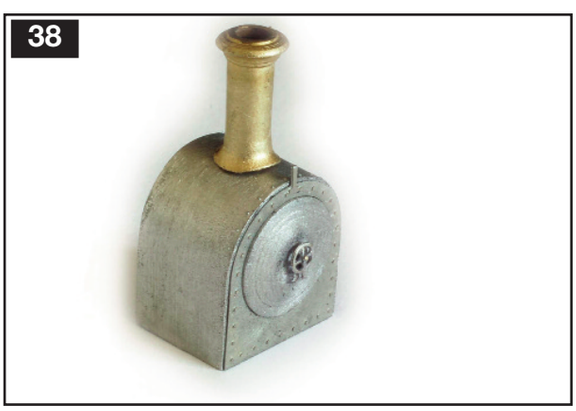

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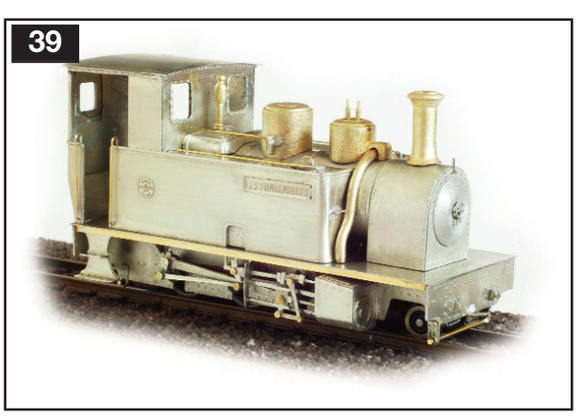

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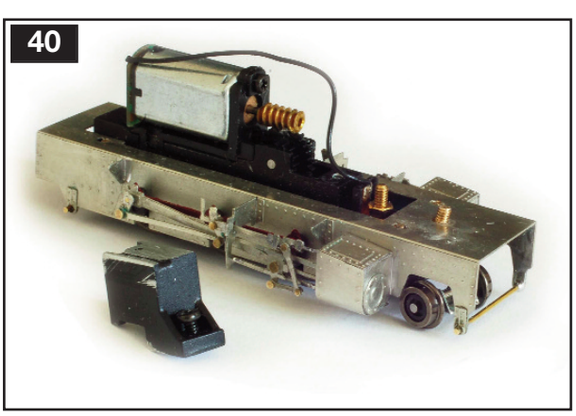

Parts list
Nickel Sliver:– Body/Chassis etch
White metal castings:– Boiler, firebox top, backhead, smokebox and tank weights x 2
Lost wax castings:– Chimney, steam dome, safety valves, sand dome, whistle and steam pipe.
1 x 1mm brass angle:– 2x footplate valance 1x cab step supports.
0.33mm brass wire:– handrails and sand dome operting lever.
14BA screws and nuts:– x 4
10BA nuts:– x2
10BA countersunk screw:– x1:– front bogie pivot.
10BA cheesehead screw:– x1:– body mounting.
Nickel silver plated brass pins:– x 20