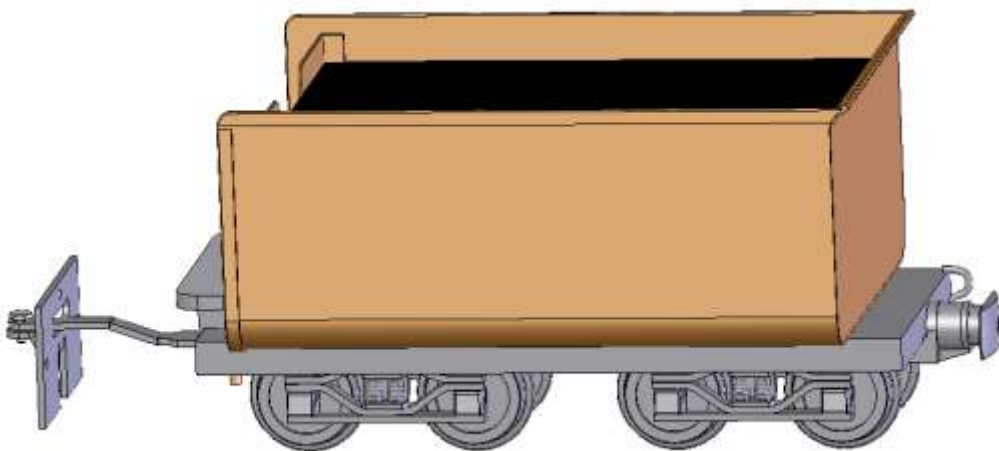




Modular Locomotive System

# HBK9 Fowler Tender Kit

Instruction Manual



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## HBK9 Fowler Bogie Tender Kit Introduction

These instructions cover the assembly of the Bogie Tender as used with our Fowler locomotive.

The kit is straight forward - most of the parts are self explanatory. A small number of holes will need to be drilled or filed to size.

First of all, check that all the parts are here. There is a list of the parts on the back of this manual. If any parts are missing, please contact ROUNDHOUSE.

### Assembly of the Brass Body Etch.

The main Bodywork consist of three brass etchings. These are: -

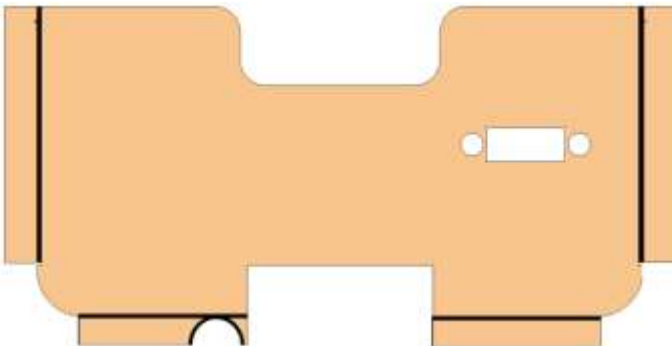
The Tender Body which already has the rivet detail embossed into it and is rolled and folded into shape.

The Tender Front Plate This will need the edges folding.

The Lamp Bracket This requires folding into shape.

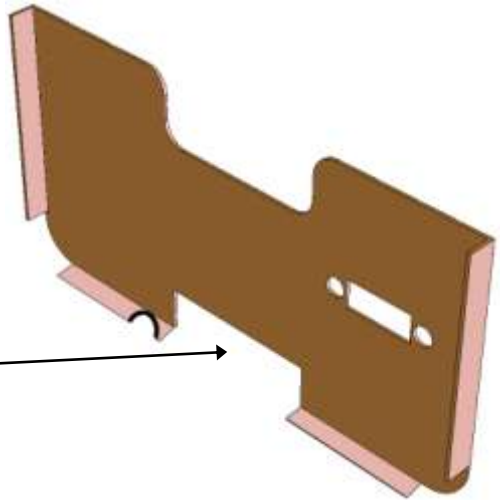
### Tender Front Plate

Take the Tender Front Plate and lay it down as shown in the drawing below.



To fold the edges use an ordinary pair of flat bladed pliers.

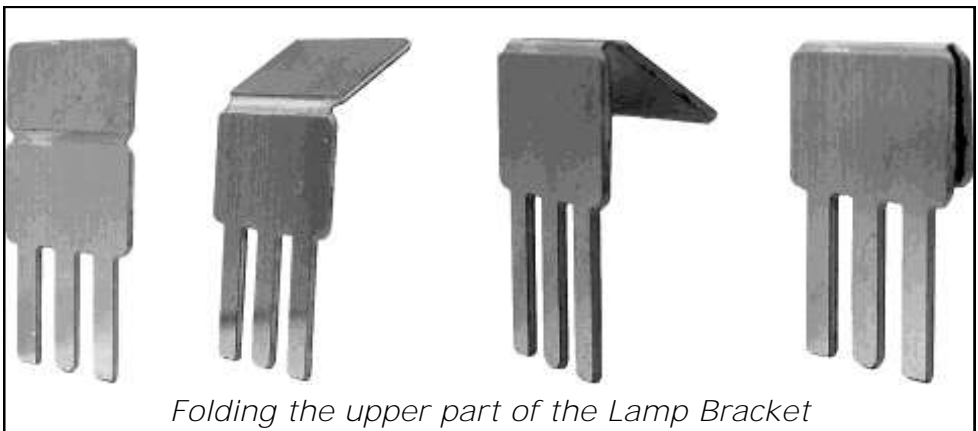
There are 4 fold lines etched into the sides and bottom of the Plate. The edges have to be folded upwards and into the etched fold lines, until they are at 90 degrees to the Plate.



The folded plate should look like this

### Lamp Bracket

Take the Lamp Bracket and lay it down so that the fold line is uppermost. Again, an ordinary pair of flat bladed pliers can be used. NOTE:- This time we are folding Backwards and Away from the fold line. Fold the upper half of the Lamp Bracket (without the three prongs), backwards until it is flat with the lower part.



We now need to fold the three prongs. The outer two prongs will be curved slightly as they will follow the contour of the rear of the bunker. The middle prong is the one that a lamp will sit on. This needs to be folded straight back. Refer to the pictures below, and using a pair of pliers, fold the prongs as shown.

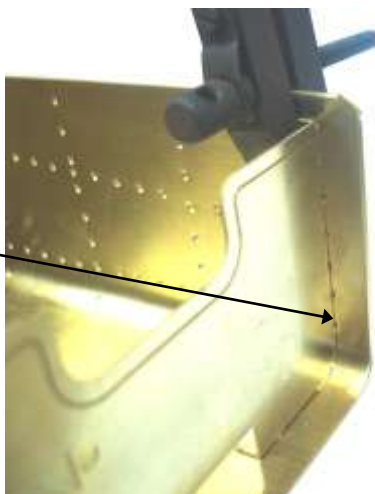
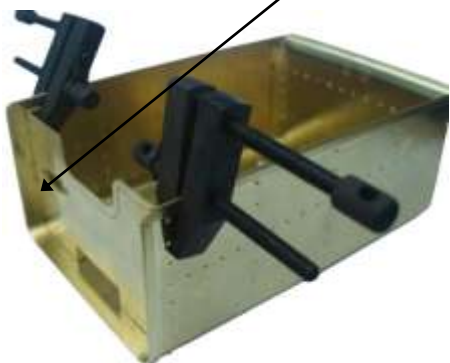


### Soldering the Brass Tender Bodywork

Using either toolmakers clamps, or pincer clamps, hold the rear of the tender against the sides. Using a small blowlamp or soldering iron, carefully soft solder the edges to the wall.



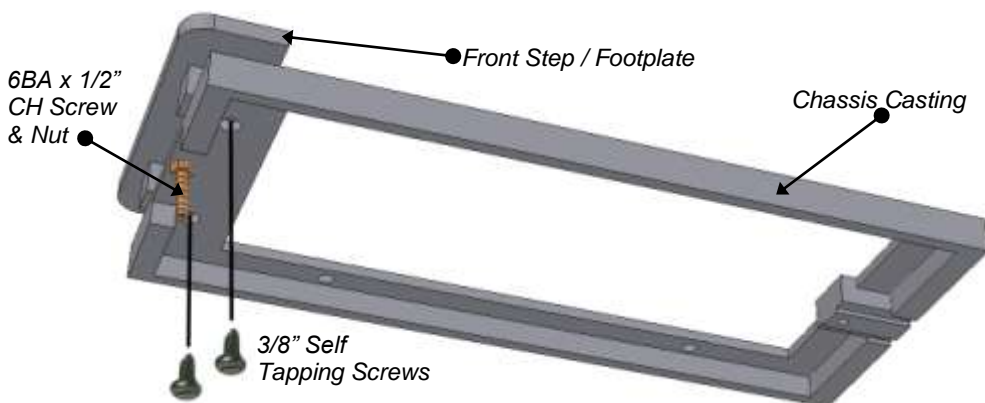
The tender front can now be soldered. Clamp the front into the tender body. Use the first vertical line of rivets on the tender to line up the front plate.



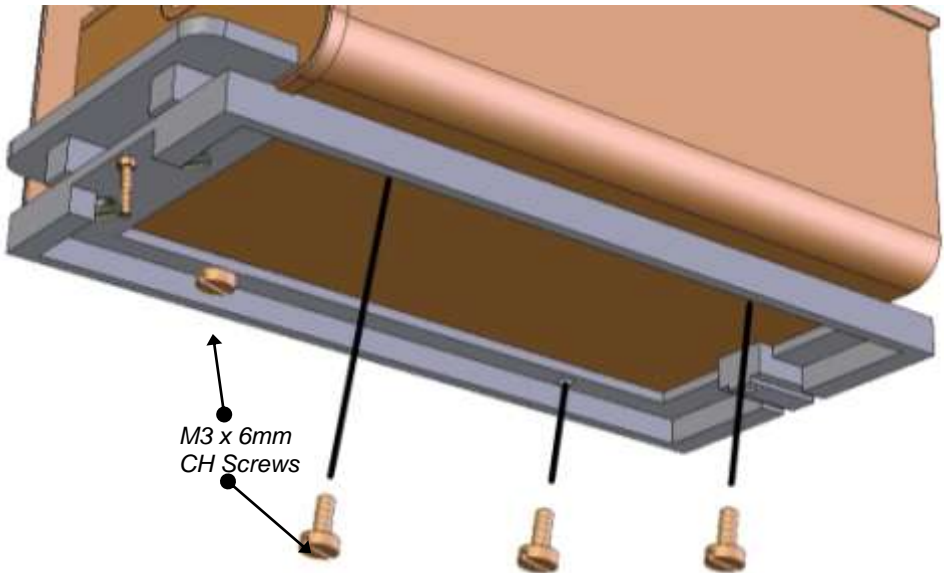
The lamp bracket can now be soldered to the rear of the tender. Line up the two prongs that have been folded and slightly curved with the two guides etched into the rear of the tender. Use a small clamp to hold the bracket whilst soldering it into place.



Take the chassis casting and first push the 6BA x 1/2" CH screw through the centre hole at the front and secure with the nut from underneath. Now we can fix the front step / footplate casting to it, using two of the 3/8" steel self tapping screws.

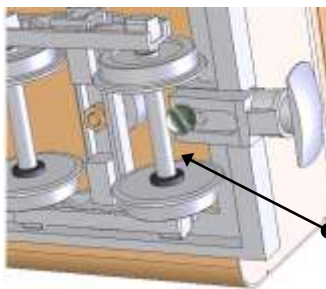
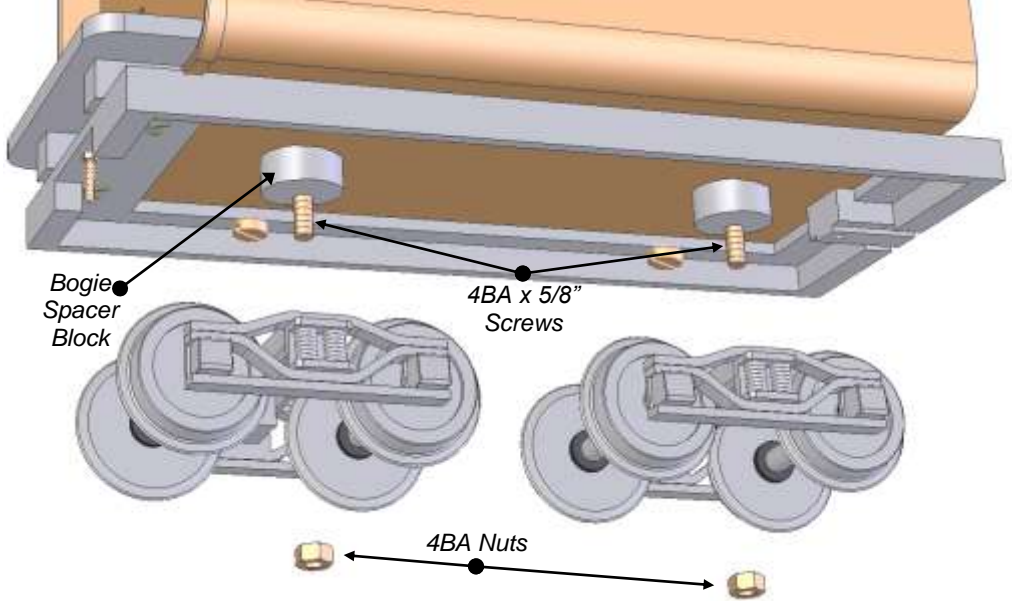


We will now fix the chassis casting to the bottom of the tender body. Turn the body upside down and place the chassis casting onto the bottom of the tender as shown in the drawing on the next page. Make sure that the casting is on correctly. The front step / footplate casting should be to the front of the tender. Take the four M3 x 6mm brass cheese head (CH) screws and push them through the holes in the casting, through the bottom of the tender and screw them into the brass coal support posts. Before tightening the support post up, make sure that the chassis casting is positioned squarely and that the front step / footplate casting is pushed up to the front of the tender. Tighten up the screws to hold everything firmly in place.



We can now fit the Arch Bar Frame Bogies to the tender. Included with the tender kit are a pair of either 32mm or 45mm gauge bogies. Fitting to the tender is the same for either gauge.

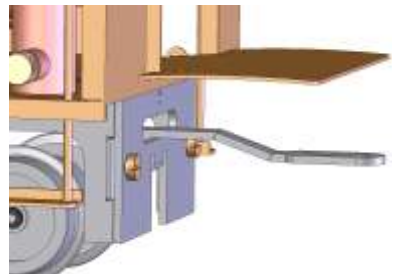
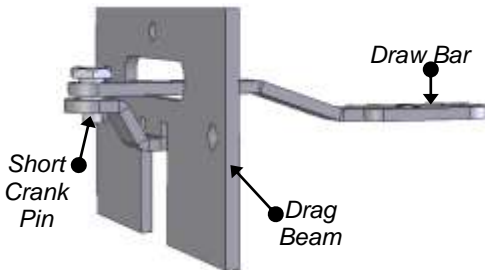
First, assemble the bogies as per the instructions included with the bogie kit. Push a 4BA x 5/8" brass screw through one of the holes in the floor of the tender so the screw protrudes underneath the tender. Fit a Bogie Spacer Block over the screw and then slide the bogie over the screw and then secure with a 4BA nut. Tighten the screw up and then back off a little so that the bogie is free to rotate. Use either a spot of red Loctite or a small dab of superglue on the end of the screw and nut, to stop it loosening when in use.



The only things left to do now are to fit the centre buffer, the drawbar and drag beam to the rear of the locomotive and the dummy coal load into the top of the tender.

**Use the remaining 3/8" Self Tapping Screw to fix the centre buffer to the rear of the tender frame.**

Fix the Draw Bar to the Drag Beam using the short crank pin. Remove the rear buffer beam and centre buffer (if fitted) from the rear of the locomotive. Using the same screws and nuts, fit the assembled Draw Bar to the Drag Beam to the locomotive. The Draw Bar we provide is straight. It may need to be bent as shown below so that it is at the right height for the Tender to connect correctly.



The dummy coal load simply sits in the tender on the 4 posts. It may need sanding or filing slightly on the edges to fit - if so you must wear appropriate protective equipment when filing or sanding, such as dust mask, gloves and eye protection, and do this outside.

This concludes the instructions.

# HBK9 Fowler Tender Kit

## CHECKLIST

### Separate Parts

Tender Main Body - *brass etching, folded & Riveted.*

Tender Front Plate - *brass etching.*

Chassis - *metal casting*

Dummy Coal Load - *resin casting*

### Sealed Pack

Front Step/Footplate - *metal casting.*

Centre Buffer - *metal casting.*

4 x Coal Support Posts - *Brass.*

2 x Bogie Spacer Blocks - *metal casting.*

1 x Draw Bar, Drag Beam and Short Crank Pin.

4 x M3 x 6mm Brass Cheese Head (CH) Screws.

**3 x 3/8" Self Tapping Screws.**

**1 x 6BA x 1/2" Steel Screw and Nut.**

**2 x 4BA x 5/8" Brass Screws and Nuts.**

Rear Lamp Bracket - *Brass Etching.*

*Checked*