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## **7mm/0Gauge BRF – 025 ZUV SHARK Plough Brake**

### **Building Instructions**



**SCALE MODEL PRODUCT FOR ADULT MODELLERS ONLY.  
WHITE METAL CONTAINS LEAD WASH HANDS AFTER USE.  
MAY CONTAIN SMALL PARTS. ETCHED BRASS HAS FUNCTIONAL SHARP EDGES - HANDLE WITH EXTREME CARE**

**Thank you for purchasing this kit.**

**This instruction pack should provide a guide for building this model, given some experience of soldering and the basics of etched kit construction.**

**Please read all the pack before starting to build.**

**Drawings and photos are essential for builders to acquaint themselves with the prototype they wish to model. I find that there are various website that provide excellent pictures of the real thing to help you complete the kit.**

**[www.wagons.wordpress.com](http://www.wagons.wordpress.com)**

**[www.ukrailrollingstock.fotopic.net](http://www.ukrailrollingstock.fotopic.net)**

**For builders of modern image in 7mm, consider joining MIGO+1, the Modern Image Gauge 0 & 1 Organisation. For more details check out the website [www.migo.org.uk](http://www.migo.org.uk)**

**Transfers are available from Fox Transfers**

## **Suggestion of tools that maybe required and general kit assembly**

### **Preparation**

Before any parts are cut from the etched frets, push through any rivet holes from the back of the fret. These are represented by half etched holes on the rear of the fret. The same also applies to pre-formed loco.

### **Forming the Etched Parts**

When forming the etches, unless otherwise instructed, the fold lines are on the inside. A pair of bending bars are ideal for this job or a vice, (without serrated jaws), would suffice.

### **Soldering**

The key word for a successfully soldered joint is cleanliness. If the parts to be joined together are clean metal surfaces and are well coated in a good flux and providing the soldering iron tip has sufficient heat, a perfect joint which is also very strong will result.

A good strong joint can be achieved with glues but it is not easy to rework. A soldered joint can be easily undone, altered, corrected etc. by just re-applying some flux and heat from the soldering iron. The flux transfers the heat from the tip to the metal surfaces to be joined and stops oxidization at the joint. I allow the multi-core solder to stay molten on the joint and, when the iron is taken away, will cool to form a solid metal joint.

When undertaking any kind of soldering always hold the parts to be joined together securely and comfortably. You will learn with experience how long to hold the iron on and in turn how much pain your fingers can endure. The use of small clamps such as hair clips, mini G clamps, (not rubber bands!), a small vice, various pliers etc. will make life easier. A simple jig soldered together out of scrap metal or made from wood may also help for holding parts you find awkward to hold.

You can use the various temperature range solders to your advantage during building. Multi-core for larger pieces will give you the main structure. A solder called Carrs 145 or 177 solder is used to apply the finer etches and laminates. Finally white metal solder, Carrs 70 Red Label, is used to fix the castings on.

Remember to take care not to apply too much heat near laminates or casting you have already joined as you may disturb them.

### **Cleaning Up**

When assembly is finished, all excess solder should be cleaned from the model. Files, small wire brushes, fibre pens and Wet & Dry paper are all useful aids when performing this task.

On your model there are joints between etches and castings that may require some filling. Car body fillers such as Isopon are ideal, (avoid flexible/elastic fillers). When any solder or filler has been cleaned up the body should be washed in warm soapy water to remove any grease or flux that would prevent paint from adhering. Some washing up liquids leave a film on models, so it is recommended that Cillit Bang is used as a second wash. This removes all films, grease etc.

Plastic window boxes sold in the big DIY stores make an ideal size container for washing your models.

Rinse the model in clean water and leave to dry naturally over night.

### **Keeping the body square**

Always build on a level surface. The last you thing you want is for your model to derail or wobble. Use a piece of 7mm Glass the squarest material you can get. This will ensure that you stand every chance of building a square model.

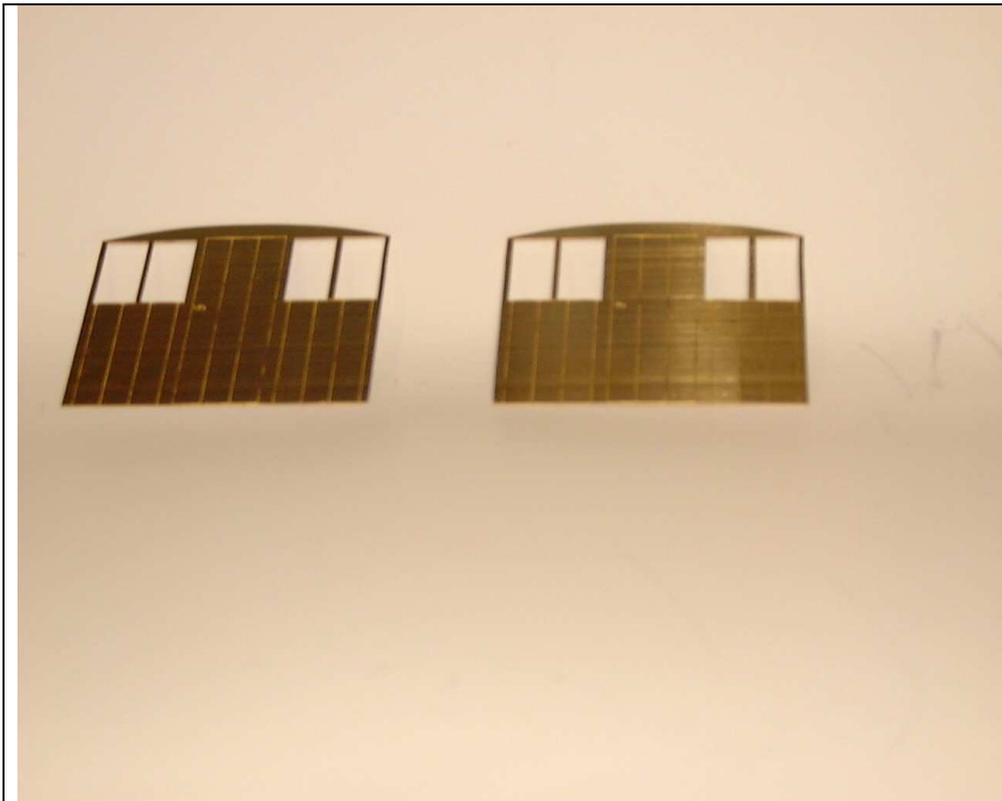
## **Tools**

- A soldering iron with range of bits from large to very fine, for example a Weller temperature controlled iron (60 watt)
- Multi core solder, Carrs "Green Label" flux aids the running of the solder#18-24"
- Steel rule
- Folding bars such as those sold by M&M Models
- Range of Swiss files
- Medium cut bench knife such as Stanley Knife or short bladed scissors for cutting out etches.
- Evo Stick/Super Glue and Epoxy
- Good quality side cutters
- Fine pliers and duck billed pliers
- Mini drill and a good range of drills

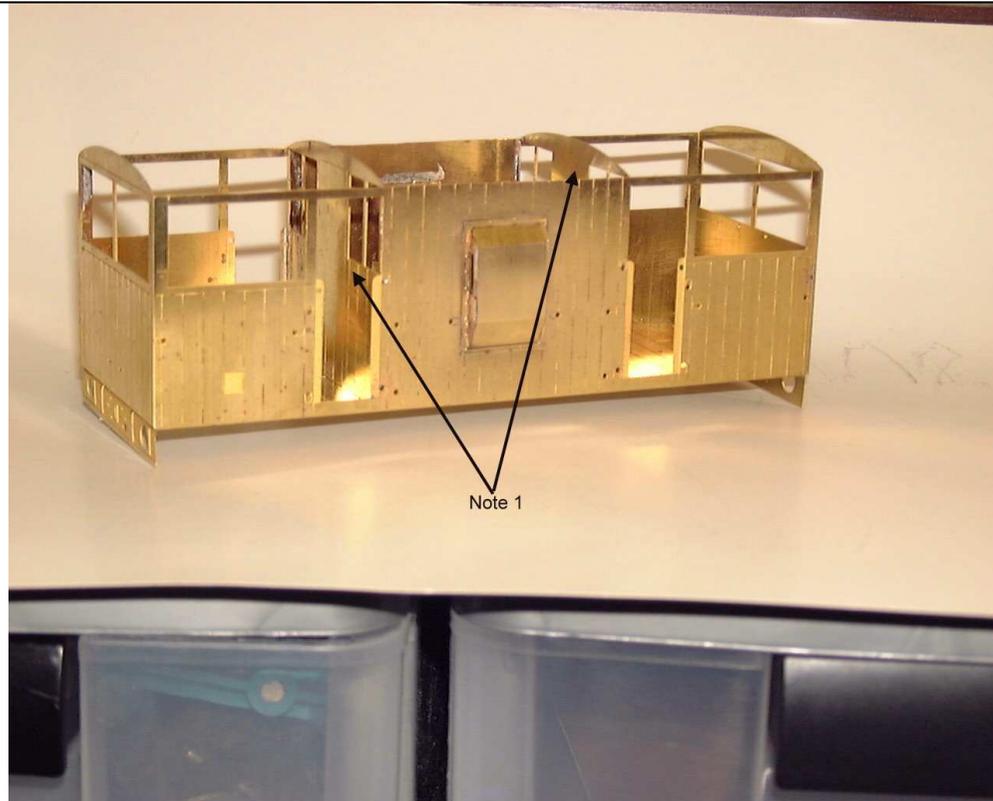
**Right lets get started!!!!!!!!!!**



**Fold the main body etch to form the basic body shape as shown and solder on the inside at each join line. It is also advisable to solder behind the buffer beam fold for added strength.**

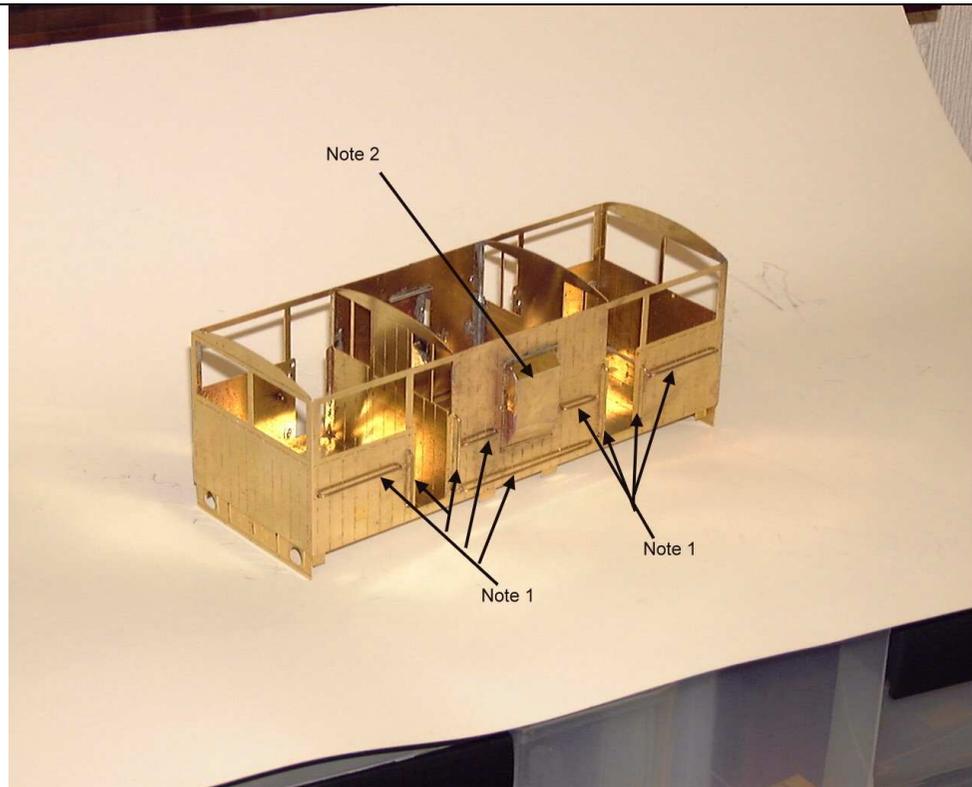


**Take the two partition walls, noting that they only have detail on one side. Proceed to solder these in placed as indicated on the next picture.**



**Note 1.**

**The ends fit flush just behind the body side doors, with the detailed side facing outwards.**

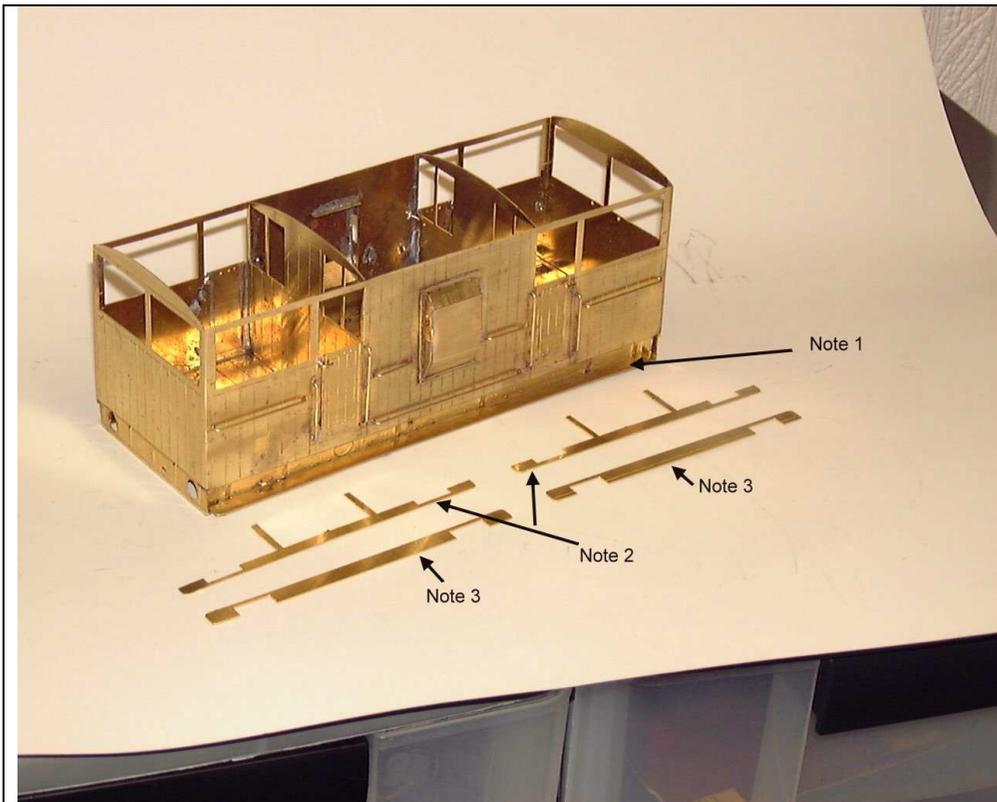


**Note 1.**

**Fold and fit all of the body side hand rails as indicated and repeat on the other side.**

**Note 2.**

**Fold and fit the guard look out and repeat on the opposite side**



**Note 1.**

**Fold and fit the under side of the sole bar, which doubles up as a step.**

**Note 2.**

**Fold up the brackets on the lower steps, noting that the cut outs are where the axle boxes fit.**

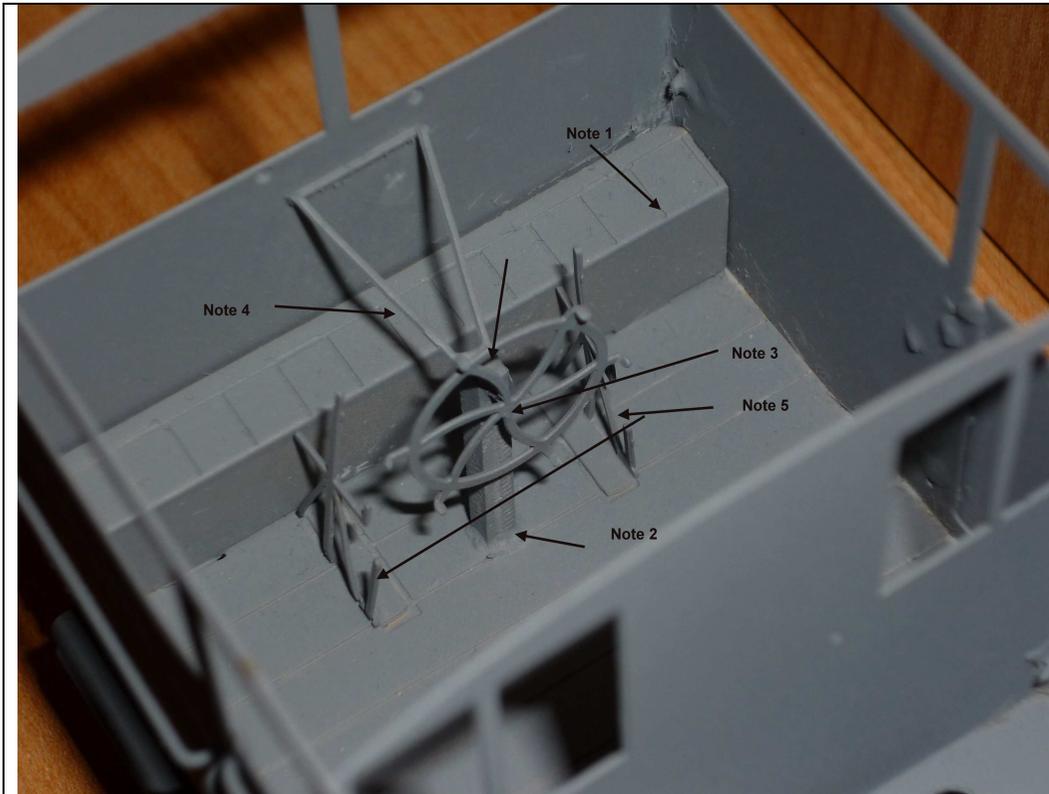
**Note 3.**

**Fold up the top of the step and solder to the top of the main step unit, noting that the small lip points upwards and goes at the back of the step unit. These will be fitted later.**



**Roll the roof and fit the small cast chimney. Do not fit this yet as you will need to fit some internal detail first. Fit the lamp brackets as shown and repeat. Note there two each end.**

**Also fit the doors and door handles using brass wire**



**Note 1.**

**Fold and fit the bench seat**

**Note 2.**

**Fit the plough hand wheel post**

**Note 3.**

**Add the the hand wheel**

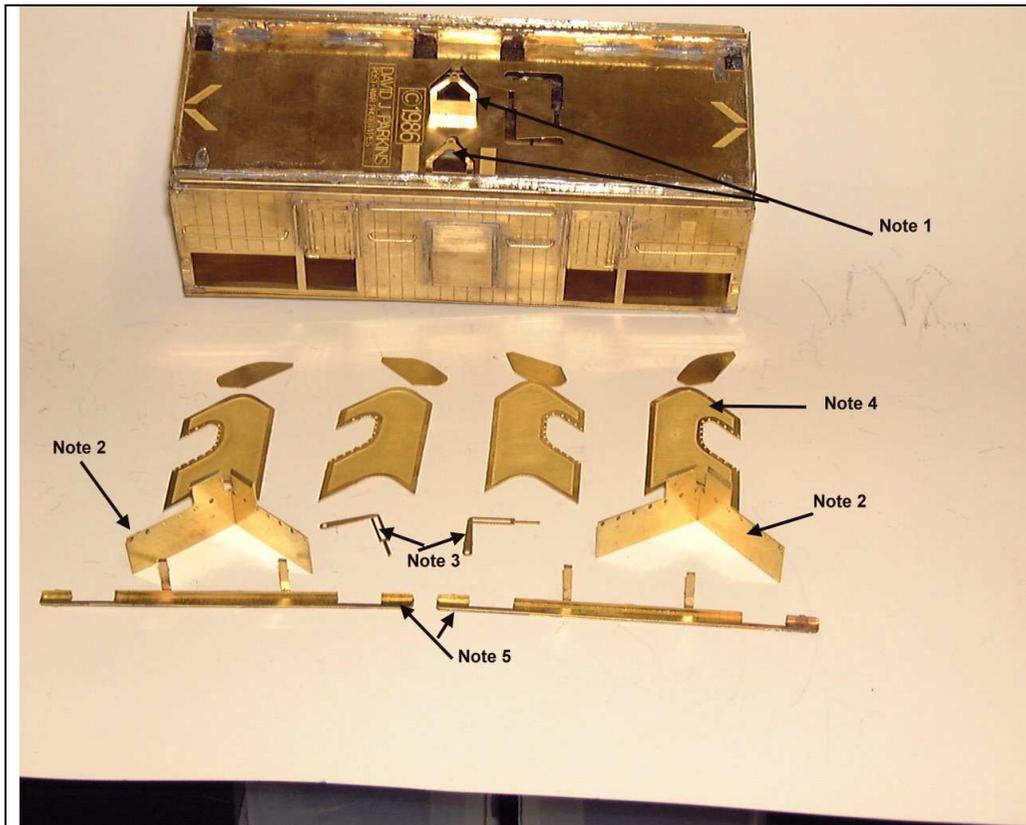
**Note 4.**

**Fit the post support bracket**

**Note 5.**

**Fit the two height adjustment handles.**

**Repeat steps 1 – 5 at the other end of the wagon.**



**Note 1**

**Fold down the brake system brackets from inside the body**

**Note 2.**

**Fold the plough mounting bracket as indicated**

**Note 3.**

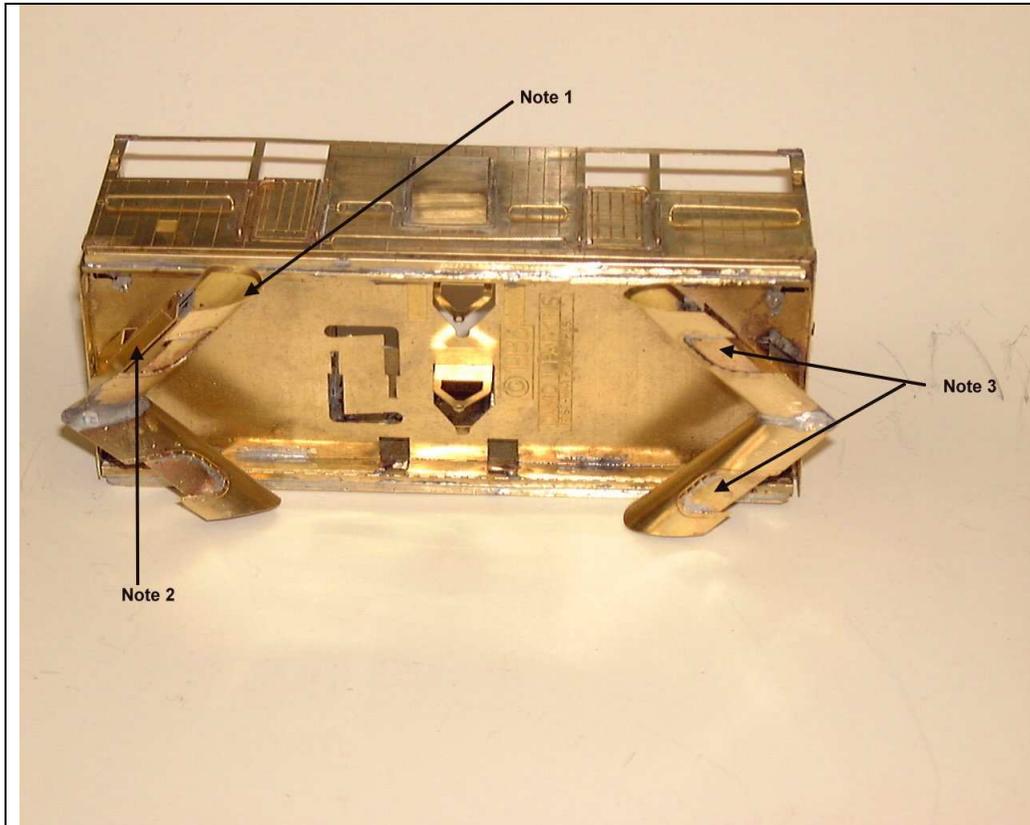
**Laminated the two brake actuators**

**Note 4.**

**Roll the ploughs as shown in the next picture.**

**Note 5**

**These shows the completed lower steps**



**Note 1.**

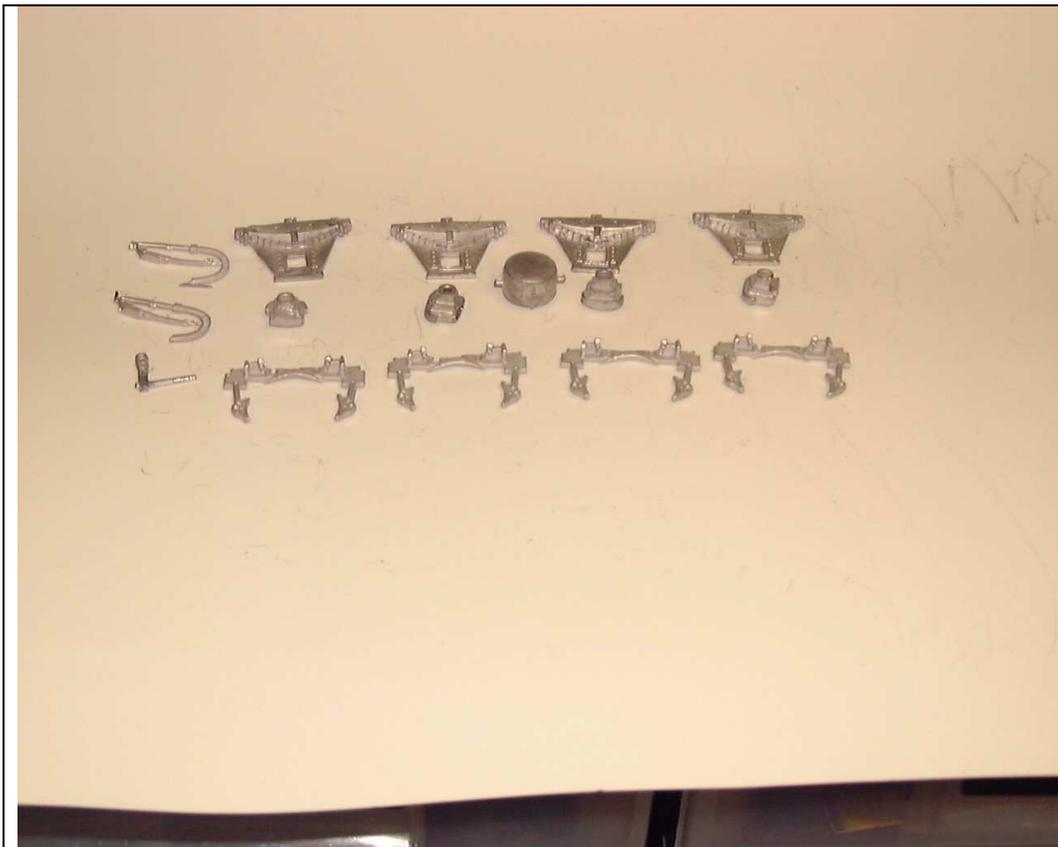
**Solder the ploughs to the back of the plough fixing bracket. Remember to push through the rivet detail. All the angles of the plough mounting brackets will be achieved only if the ploughs are bent properly. Make sure this is the case before fixing.**

**Note 2.**

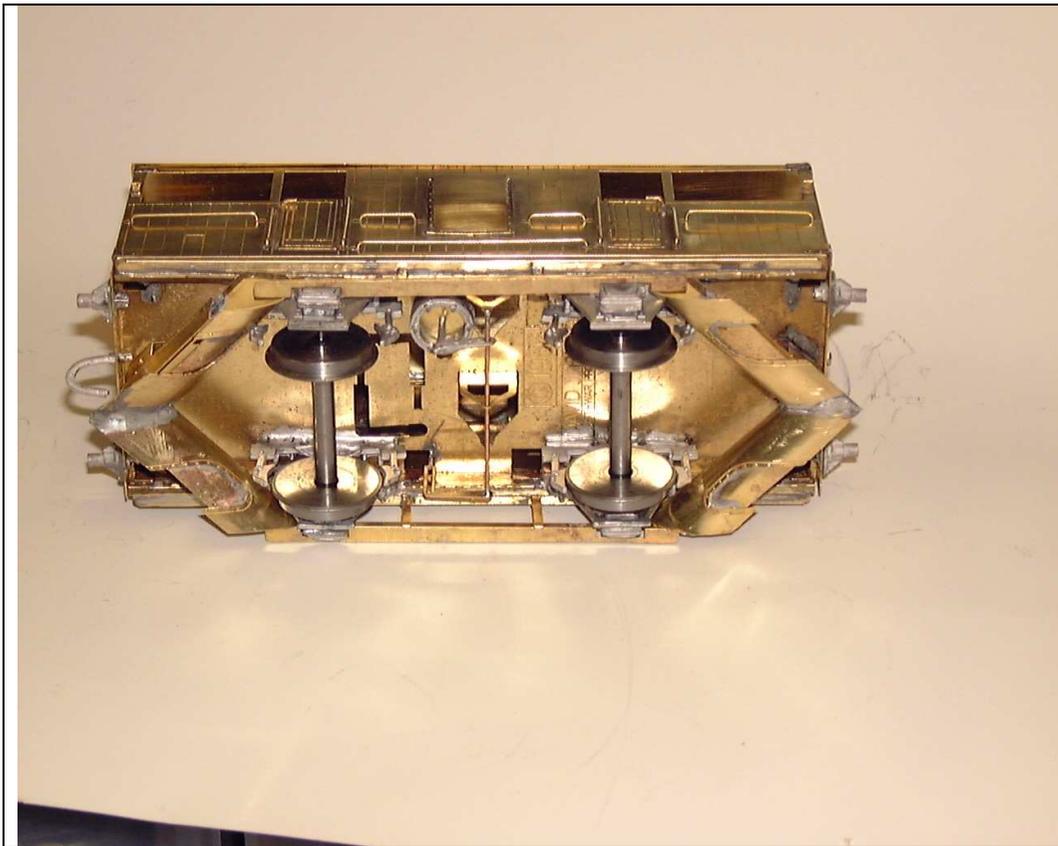
**Fit the plough mounting bracket to the under side of the body in the half etch recess as indicated.**

**Note 3**

**Fold and fit the track clearance gussets x 4**



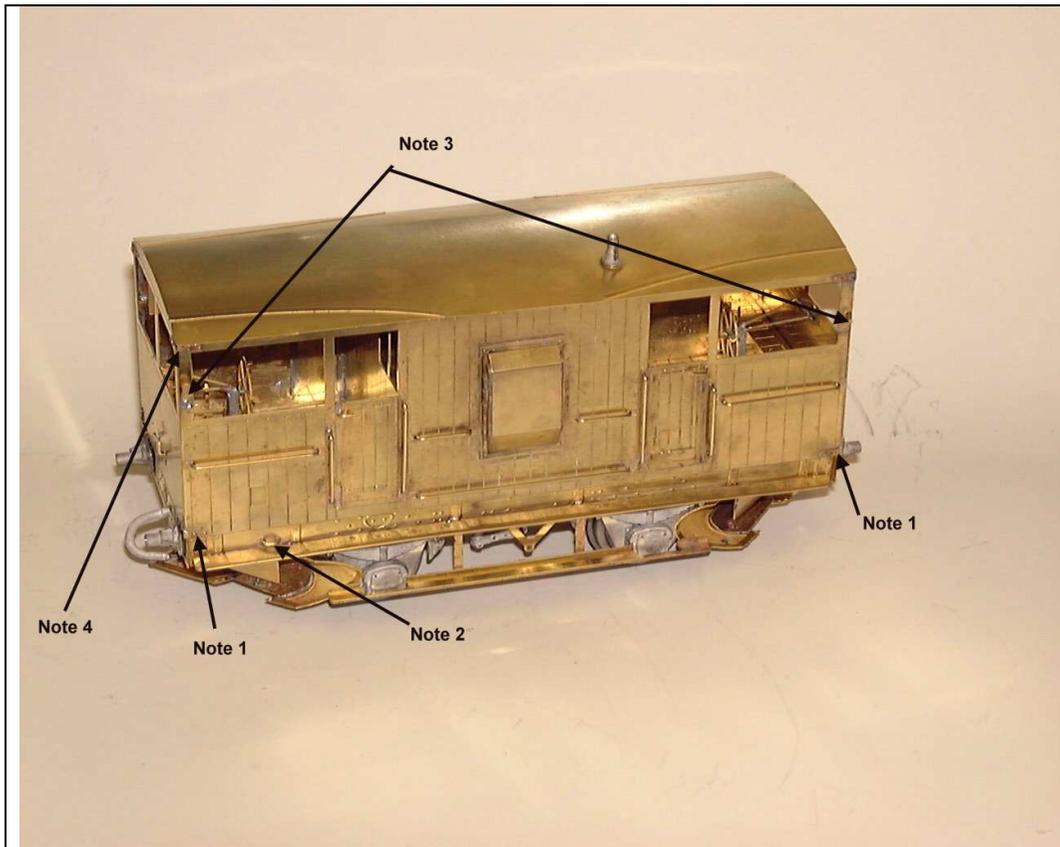
**Clean the under frame castings. Drill out the bearings and fit top hat bearing.**



Complete the underside in the following order.

- Fit bottom step
- Add 'W' irons
- Fit bearings and wheels
- Fit Vac Cylinder to under side of body and add small round circle inside
- Fit actuating assembly using etch parts, cast parts and brass rod
- Fit brake shoe assemblies and add yokes between these
- Fit Buffer shanks and Vac pipes

There are many variations of end pipework on the shark fleet that this kit does not cover. Look at the picture you are modeling and scratch build accordingly.



Note 1

Fit the lower body side strapping on all four corners

Note 2

Fit the solebar hand rail to both sides

Note 3

Fit the body side lamp brackets

Note 4

Fit the upper body side strapping to all four corners

Add couplings before or after painting

The roof is yet to be fitted. It is up to when you fit it although I would suggest that this is done after painting and glazing has been completed. This can either be stuck or you may want to leave a small sections of the inner body unpainted so you can solder the roof later and touch up with a brush.

