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**Stockists of 7mm Modern Image Kits**

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## **Building Instructions**



### **7mm/0Gauge BRF – 004 BDA 52' Bogie Bolster**

**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. 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 Isoxon 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.

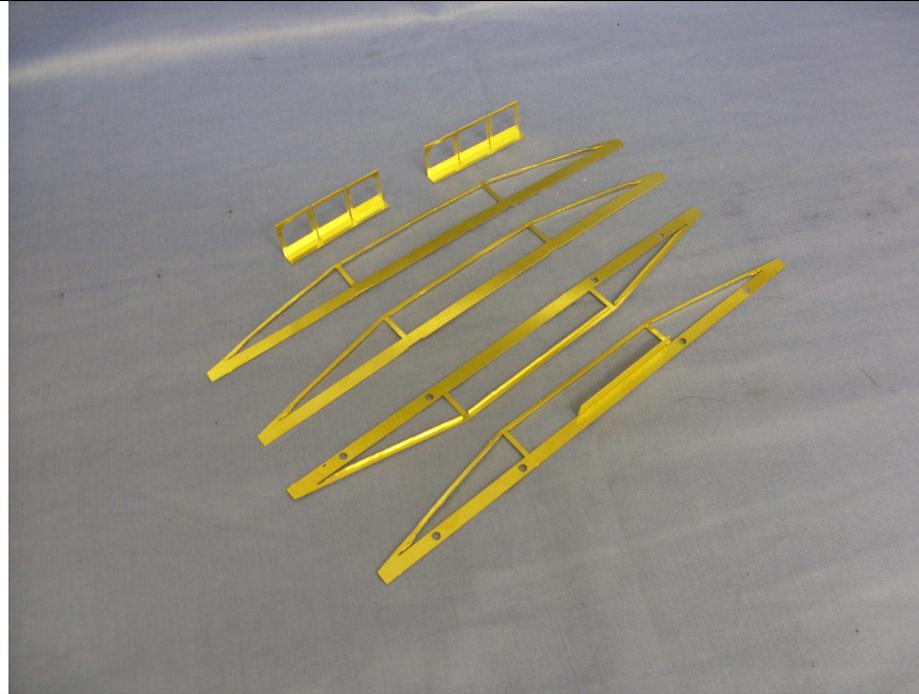
## **Keeping the body square**

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**

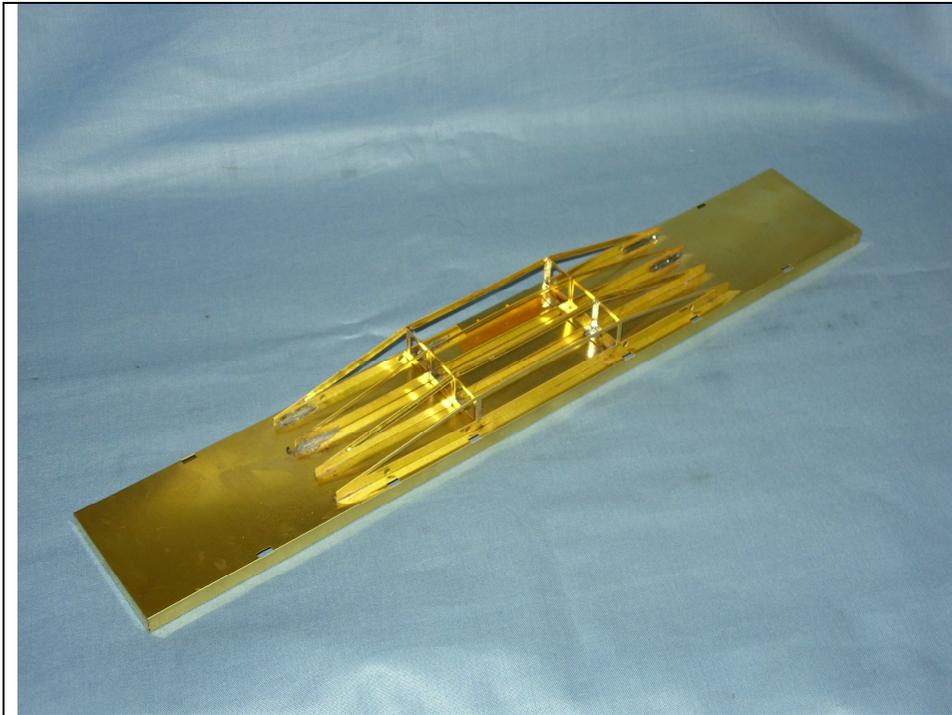
- A soldering iron with range of bits from large to very fine, for example a Weller temperature controlled iron (60 watt)
- Multi core solder, Carrs "Green Label" flux aids the running of the solder#18-24"
- Steel rule
- Folding bars such as those sold by M&M Models
- Range of Swiss files
- Medium cut 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!!!!!!!!!!**

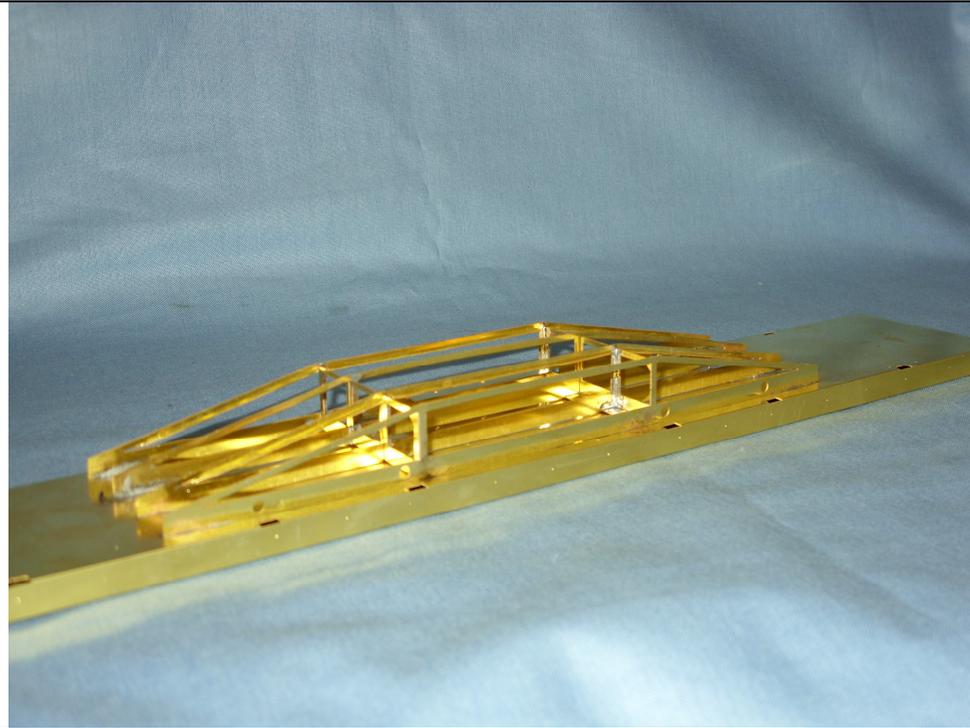


### MAIN BODY CONSTRUCTION

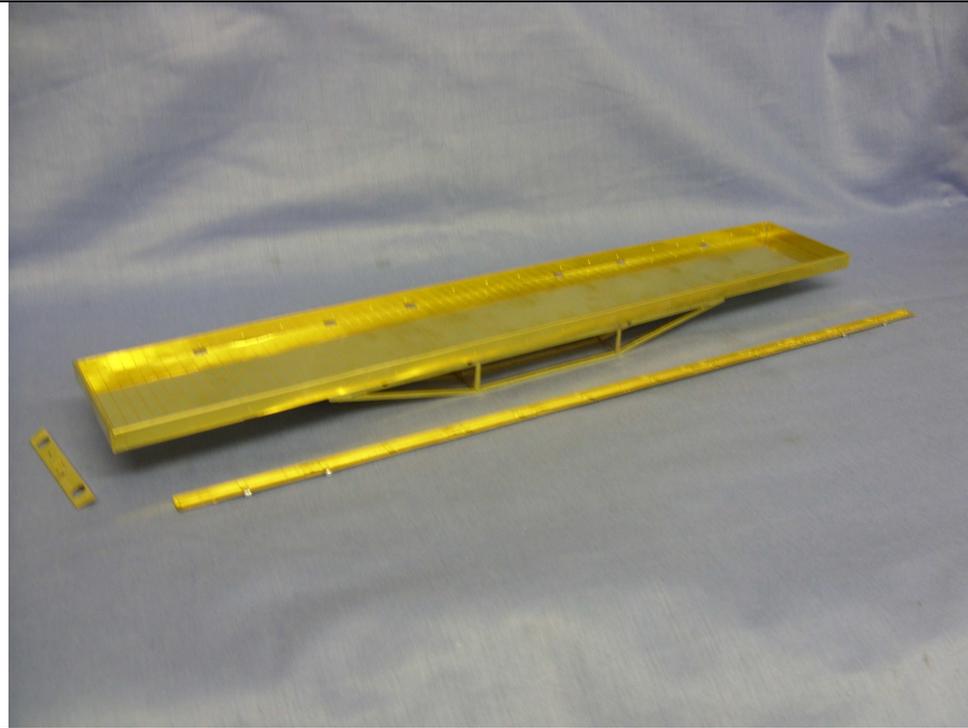
1. Cut the four main Truss Rods and fold as shown to make an 'L' shape. Note that the two inner Truss rods angle faces outwards. The two outer Truss rods have holes etched in them to clear the load tensioners. Finally note that one of the outer Truss Rods has a flap with three holes in it. Fold this down as it will act as the mounting plate for the Air Tank and Distributor Valve later.
2. Fold up the two truss rod mounting units as shown



1. **Fold up the main body as shown (Note the body is face down in the picture)**
2. **Solder the completed Truss Road section centrally on the underside of the body, noting that the etch cutouts should line up with the load tensioner cutouts on the body.**



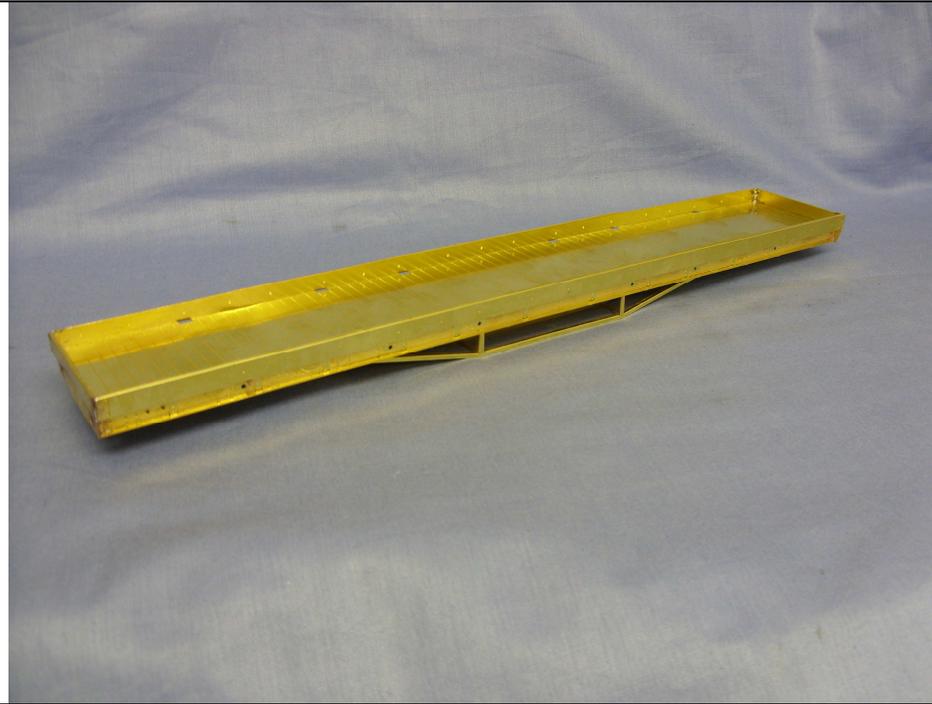
Alternative Picture for reference



1. **Cut out the Solebars and bend into an 'L' shape noting that the bottom flange folds outwards.**
2. **Cut out the buffer beam and fold**



1. **Fold back the four tabs on the Solebars and use these to attach to the underside of the body.**
2. **Fit the Buffer beams by soldering the folded back tab to the main body.**
3. **Make sure the assembly is square**



**This is how things should look**



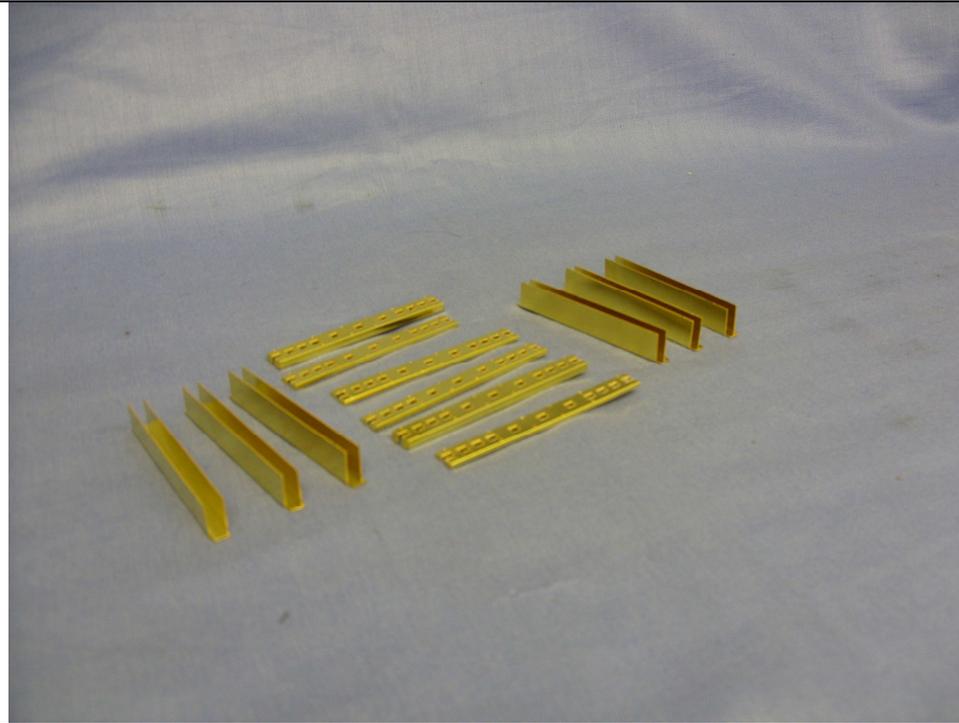
### **Bogie Construction**

- 1. Fold the bogie etch bogie stretcher**
- 2. Drill and secure the top hat bearings into the bogie sides**

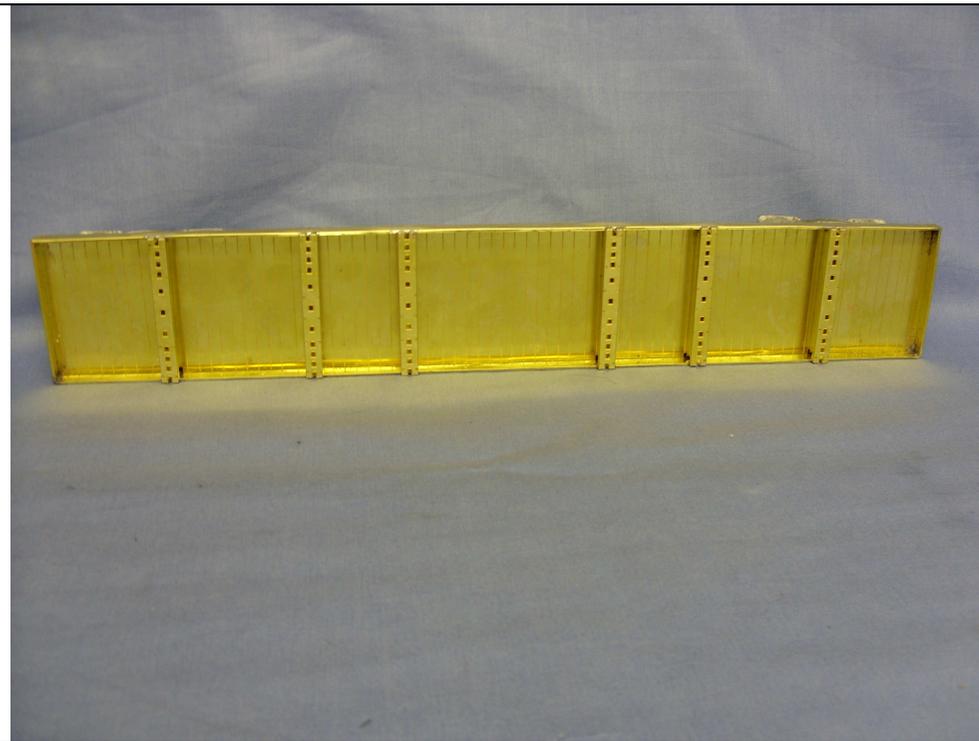


**Bogie Construction Cont'd**

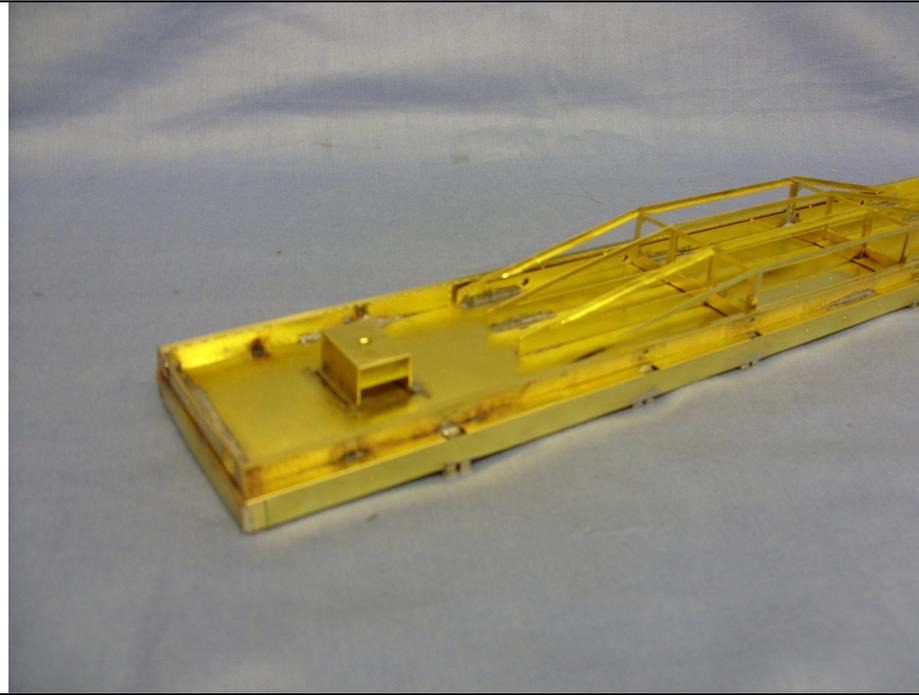
- 1. Solder up the two bogie units as show. Make sure that they are square**



1. **Fold up the six Bolsters**
2. **Fold up the six 'U' shaped Bolster supports**



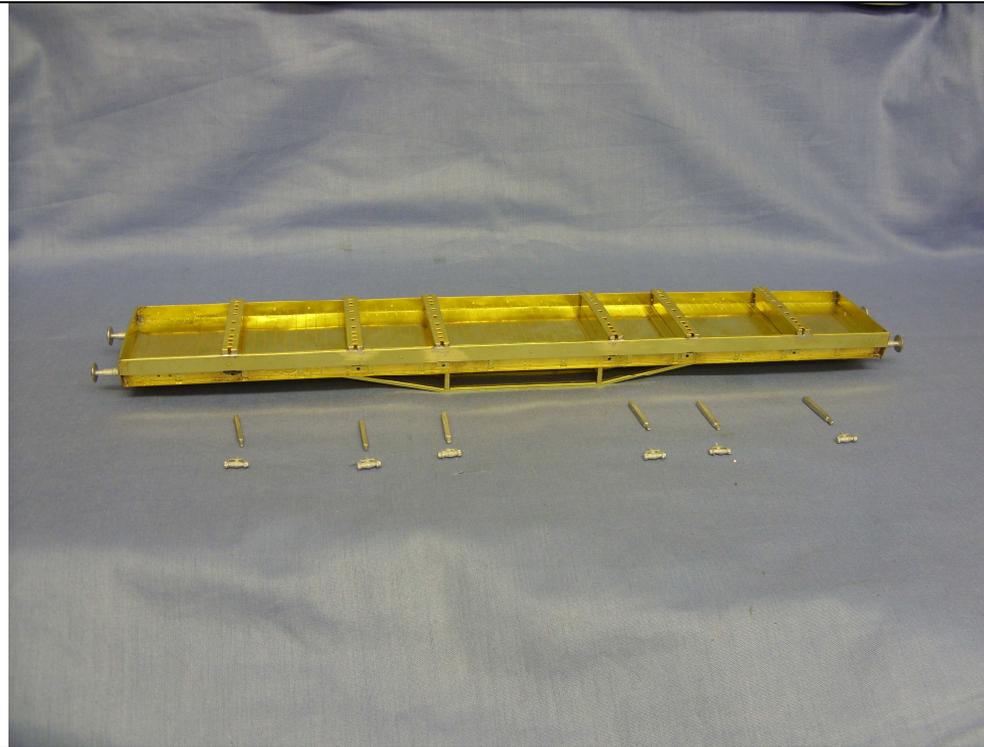
1. Solder the 'U' Shaped support to the main body, where indicated, note that these will correspond with the load tensioner cut outs on the body
2. Solder the Bolsters on top.



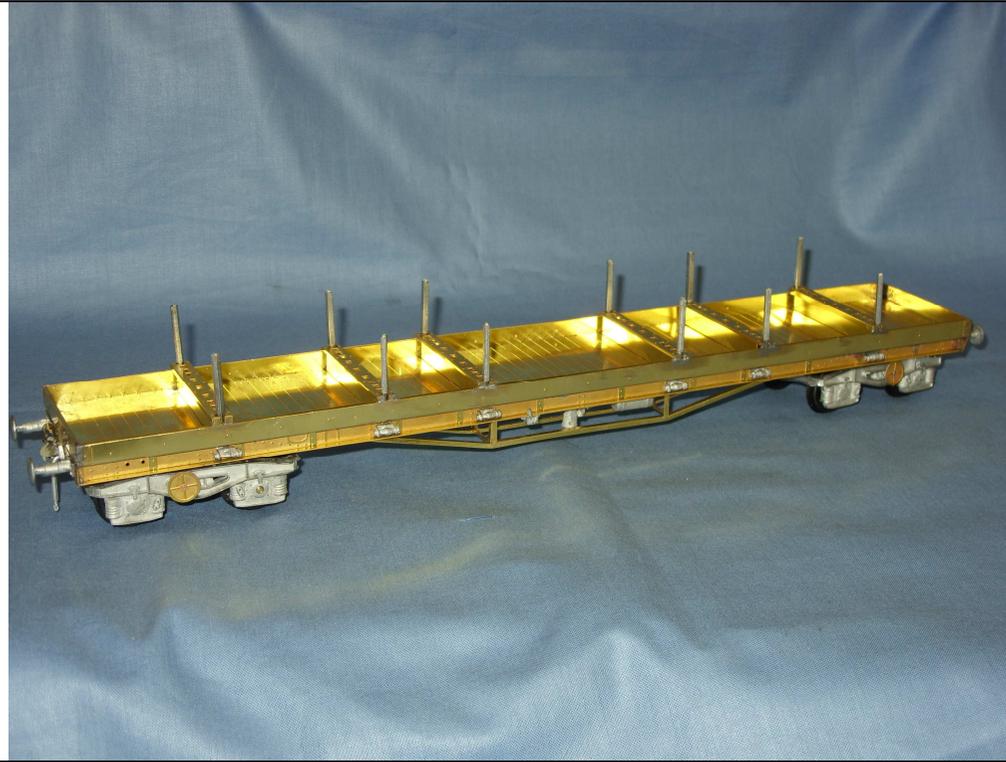
1. **Fold up the bogie Pivot box. Solder the 6ba nut on the inside and fit to the body**



1. **Fit the bogies and had the etched Hand Brake wheels. See later pictures.**



1. Fit the buffers, air pipes, lamp bracket and couplings to the buffer beams.
2. Fit the 12 load tensioners to the solebar in the holes provided and the load stations in the holes on the bolster. Note that in real life, these are not always uniform and definitely not straight!!



1. Add the Air Distributor (You will need to cut the pipes off of this casting. See the final line diagram for reference) and Air Tank as mentioned previously.
2. Finish by adding the two brake force change over levers to the solbar. These fit 159mm from the left hand buffer beam and have the air tanks to the right. Connect with a piece of brass (not supplied)

## The finished article



# Type BDA, bogie bolster

## Parts List

Etchings  
2 Screws/nuts.

## Castings

4 Bogie Sides/Ends.  
4 Buffers.  
Air Tank.  
Distributor Valve.  
2 Sets Air Pipes.  
2 Brake Force Change Over Levers.  
12 Load Stanchions.  
12 Load Tensioners.

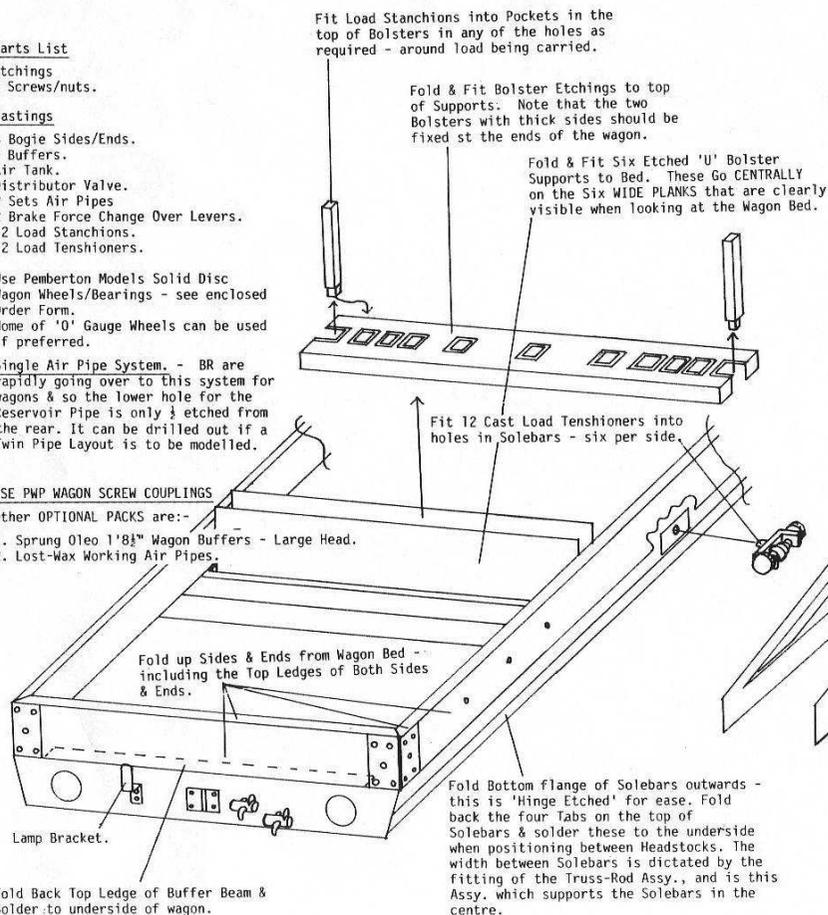
Use Pemberton Models Solid Disc Wagon Wheels/Bearings - see enclosed Order Form.  
Home of '0' Gauge Wheels can be used if preferred.

Single Air Pipe System. - BR are rapidly going over to this system for wagons & so the lower hole for the Reservoir Pipe is only  $\frac{1}{2}$  etched from the rear. It can be drilled out if a Twin Pipe Layout is to be modelled.

## USE PWP WAGON SCREW COUPLINGS

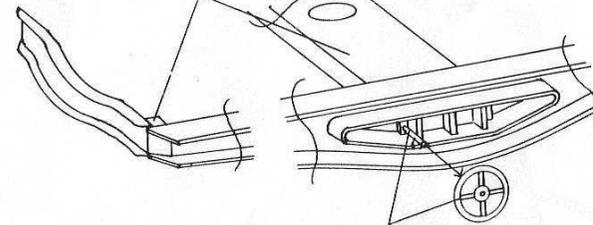
Other OPTIONAL PACKS are:-

1. Sprung Oleo 1'8 $\frac{1}{2}$ " Wagon Buffers - Large Head.
2. Lost-Wax Working Air Pipes.



Fold up Bogie Pivot Box & solder nut to inside. Each Box should be soldered centrally to wagon to give bogie centres of 40' (280mm).

Fold & Solder Stretchers to lugs on rear of bogie sides. Fit Cast Bogie Ends to lugs as shown.



Drill out hole here & solder wire spigot on which to mount Handbrake Wheel. The wheels are off-centre on the bogie (as shown) - facing outwards when bogie are mounted on wagon.

Solder Cast Brake Force Change Over Levers to bottom of Solebars as shown, & run wire between them. On the BDA the levers are 159mm in from the left hand Headstock - with the Air Tank & Distributor Valve to the right.

