

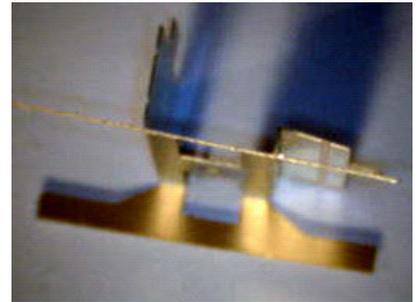
Assembly instructions for DHR Bogies



Contents of Kit:

- Etched sheet containing 4 parts to make up 2 bogies
- 2 M2 bolts and nuts
- 4 No. 2mm washers
- 4 No. cast axleboxes DHR pattern
- 2 No cast side springs
- 4 No. brass wheel bearings
- 2 No. axles with 14mm dia wheels (16.5mm gauge)

1. **Parts 1 and 2** are removed from the sheet, and the remains of the tabs are cleaned of with a file, or emery board. (This applies to all parts, but in this case the tabs to the inner rectangles in Part 1 must be removed to allow the spring backplate to fold through them.)



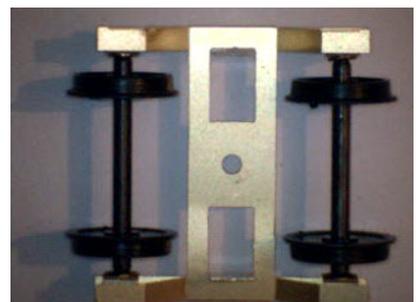
2. **Part 1** is the upper part and needs careful folding. The end view in the photo shows the lower plate folded by about 90°, it has to fold through 180°, while that in the foreground is edge on. The sides are then folded through 90°, as on the left, and the next fold up is folded back in the reverse direction. The next stage is to finish the first fold by gently squeezing the metal with square ended pincers so as to make it the full 180° to represent the lower flange of the channel section. Now fold the upper flange 90° in the outward direction and finally the 2 short flanges down by 90°, although they will be turned over to lock the lower plate in due course. It only remains to complete the fold of the side members so that they lie flat across the top.



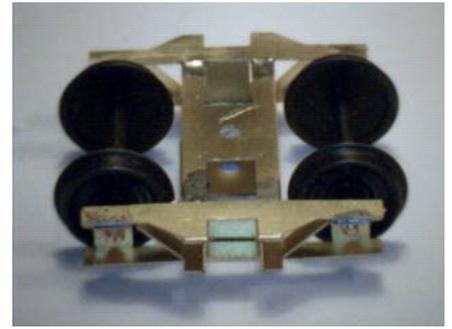
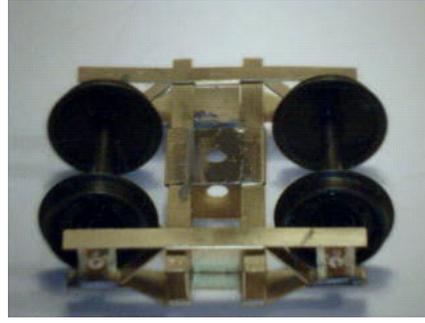
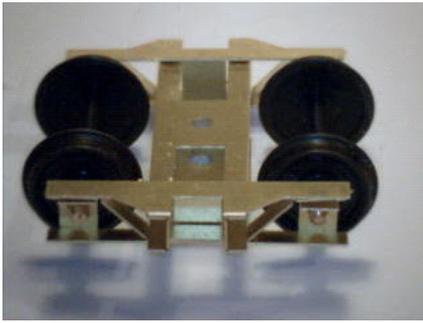
3. **Part 2**, the lower part has the outer edge folded back on itself by 180°, and the four axle bearing plates folded up on the inside, together with the spring backplate, which goes through the rectangular hole. The diagonals (as seen from the side) are folded up and the axle bearing plates have their top flange bent over a further 90° and the diagonals bent to seat onto them. Now comes the four handed tricky bit, insertion of the wheels. If you don't do this now then you will not be able to get these in later on. So to minimise what has to be held, I suggest that you glue the bearings in with super glue smeared onto the back of the flanges – you could solder them in with a touch of solder paste. With these in place twist the frame slightly so that you can insert the axles. At this point you should fit the short bogie pivot bolt, with a washer under the head, into the upper plate and run the nut onto it with the second washer under it.



4. Fit the two halves of the bogie, and bend the two central tags around the centre of the bottom plate so as to secure it. Now check that the top plate lines up with the bottom plate, and switch on your soldering iron. Flux the two tags you have just folded over to lock the plates together on the underside, and also the top plates which folded over on top on each side. A well tinned iron will lock these joints to produce a rigid cross beam. Now ensure the straightness of the three layers that come together at the top of a bearing, flux and apply solder. Make sure that you use the minimum amount so that the three plates remain distinct at the edges – no blobs! Repeat on the other corners, checking that the

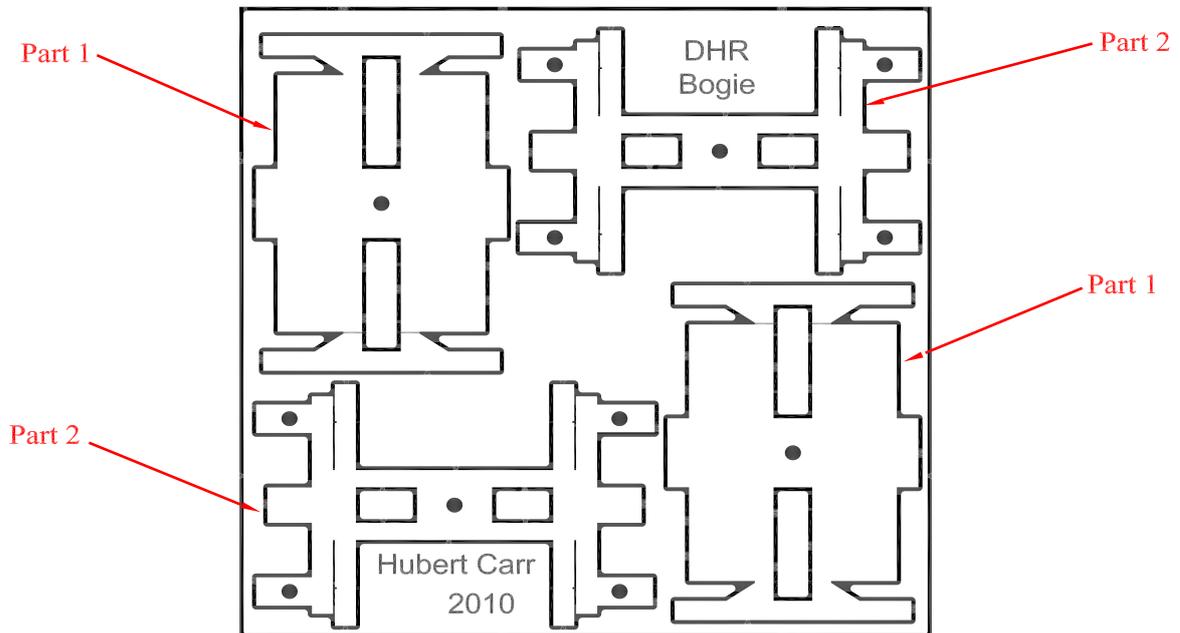
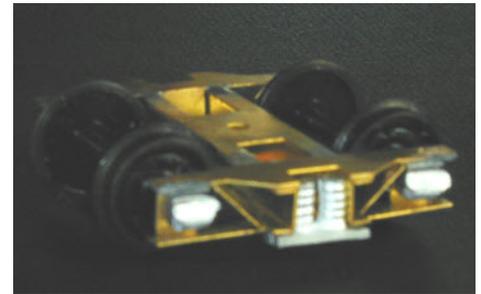


bogie sits on its four wheels on a level surface. This is not as difficult as it may sound – you must just take it carefully and keep checking the alignment of the parts.



Bogie assembled, and soldered underneath, on top and at the bearing plates.

5. Now repeat on the other bogie. Give each bogie a good rinse and a touch of micro-oil on the inside of the bearings. The four cast axleboxes may be cleaned up if necessary and super-glued over the bearings, and the spring castings glued in the centre of each side. These castings should be trimmed at the top to ensure that they are slightly below the top plate of the bogie, and will not interfere with the chassis above.



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