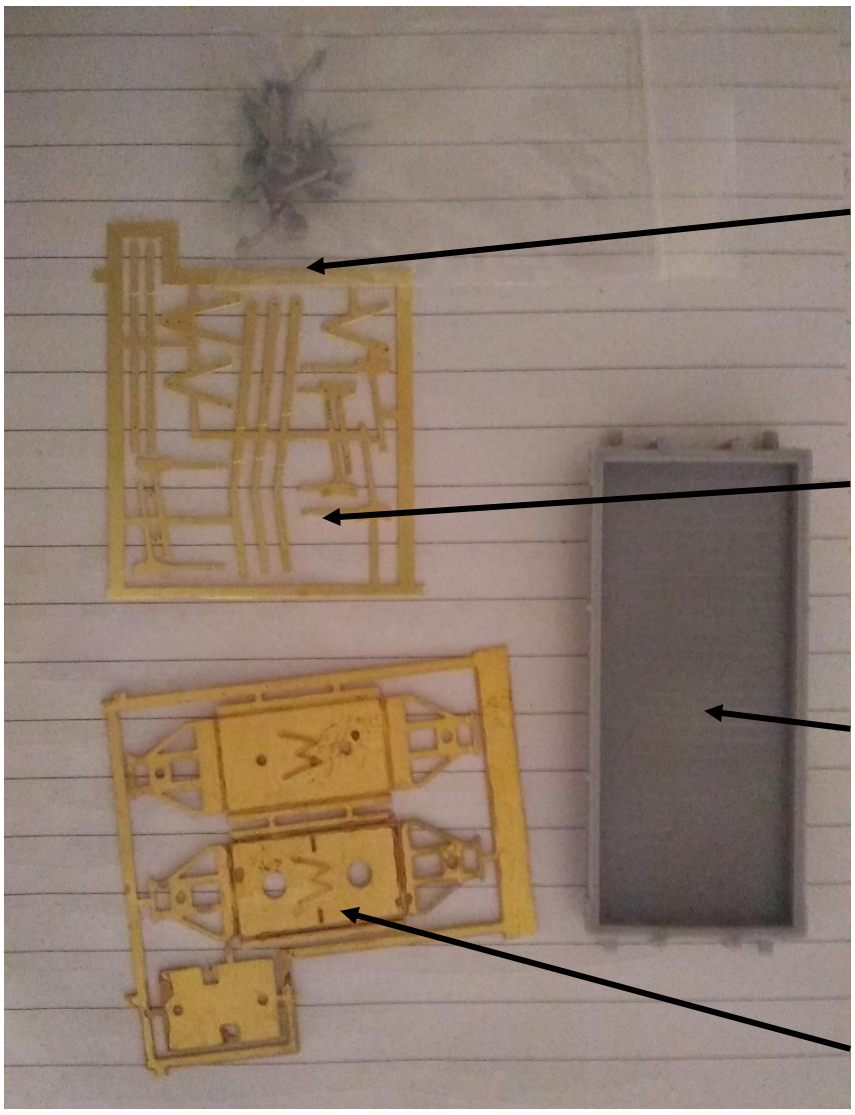
Pre-Grouping Railways

3D Printed Vehicle Instructions

Please read through the whole of the instructions before starting you build. Painting your wagon/van can be done either before full assembly or at the completion of the build. I personally mask and paint some sub-assemblies before final assembly but others like to paint last the choice is yours. For livery detail please see separate PDF file on vehicle history.



What's in the box!

Axle-box/springs and plastic buffers (4mm Plastic buffers can be replaced with Alan Gibson steel buffer heads)

Etched brass brakes Will change depending on the prototype (Standard 9ft WB brake shown)

3D printed Wagon/Van body/roof

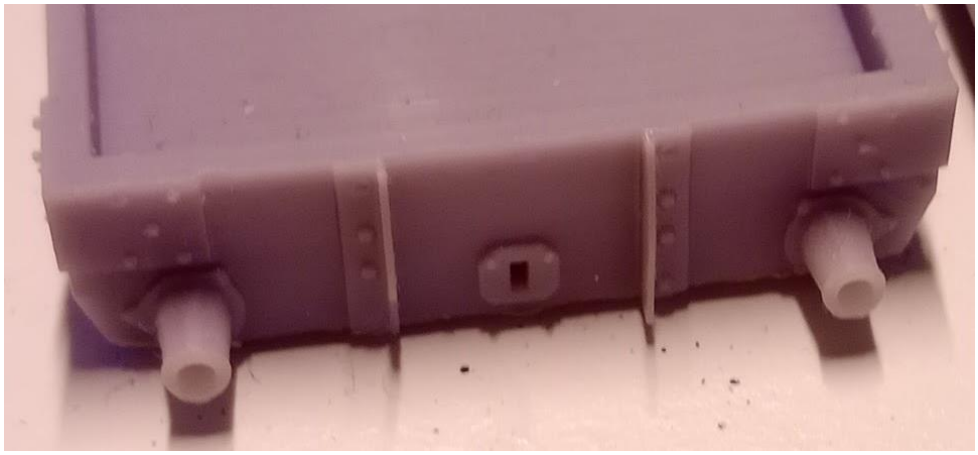
Etched brass 3point compensation unit

Build Instructions

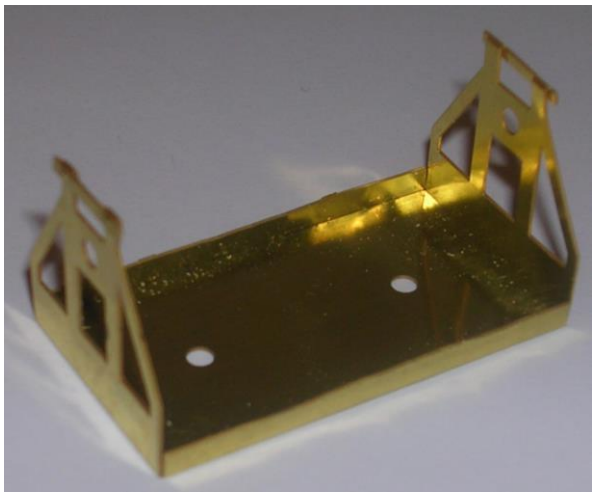
1. Check for any remaining supports and give the print a wash in warm soapy water

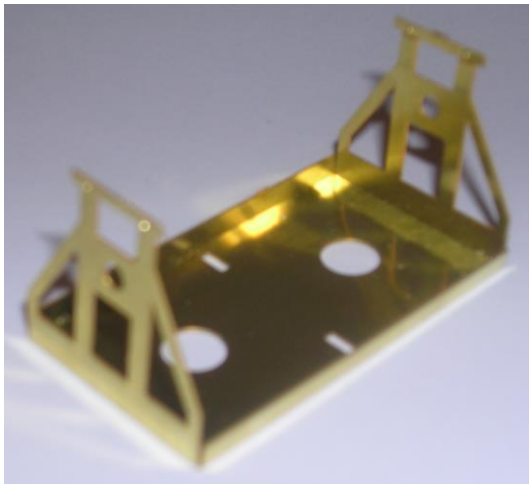
2. Make sure the wagon/van body is flat. If it isn't quite flat then submerge it in very hot water for about 3/5 minutes. Then take it out of the hot water and place it on a flat surface. You might want to put a light weight on top just to hold it down to the flat surface while it cools. Once cool continue with the build.

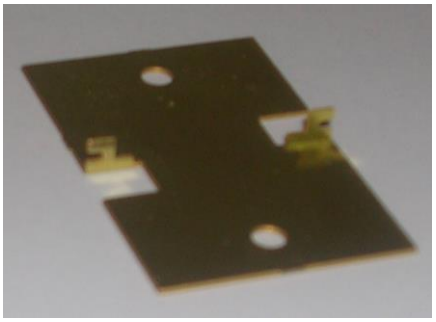
3. If the buffer guides are not part of the body then drill out the holes in the buffer beam to suit the base of the buffer guides. Once in place leave aside for the glue to go off.



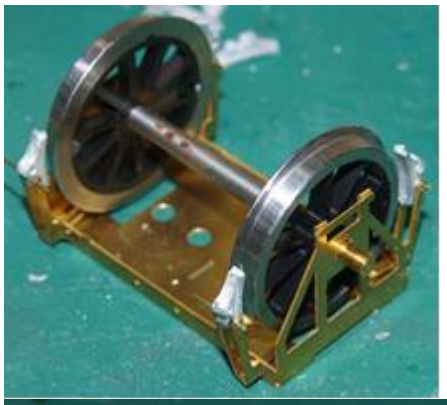
4. Now take the brass sub-frame etch and fold up as shown. Slot the tags on the rocking plate through the slots on the w-iron/axle guard that has the large circles in its base and the twist round to secure.

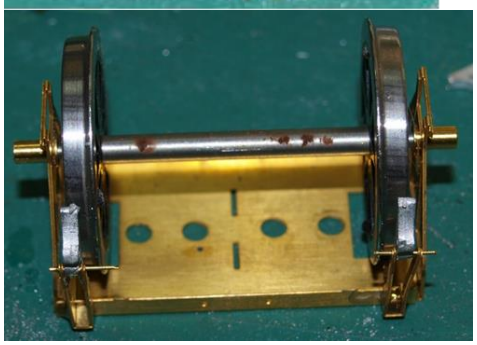


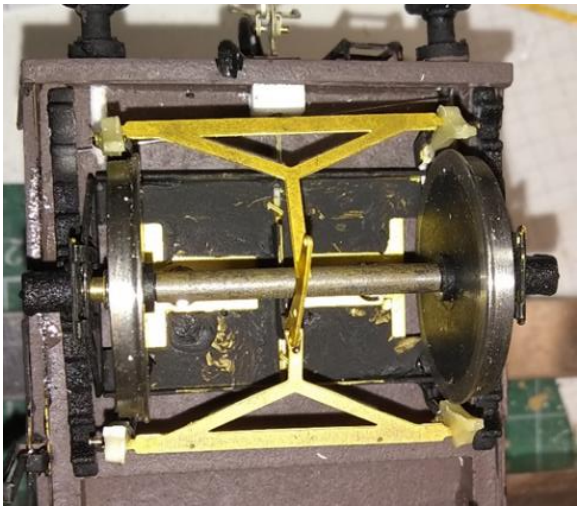




5. For fitted wagon and vans you will need to add the brake blocks at this point. You will find the brake drop arms and pull rods on the sub-frame etch and the printed brake blocks in the parts bag. To assemble these first solder/glue the pivots in place. Then fold up the drop arms and solder them to the sub-frame. Now thread the brake blocks on to the drop arms with the wire provided. And then glue in place. Once the glue has gone off attach the pull rods to the blocks and the pivot arms.

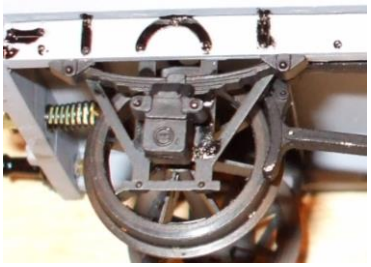




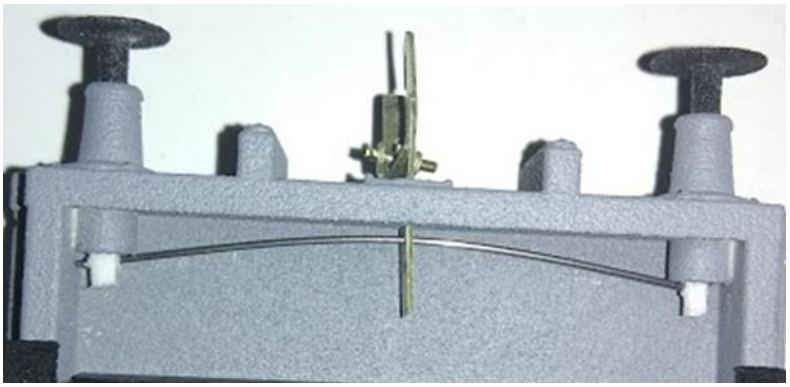


6. Now fit your chosen wheels into the sub-frame assemblies. In 4mm these will fit OO/ME/P4 wheels without any modification. In 7mm Fine Scale and S7 wheels will also fit without any modification however if you are fitting 7mm Course scale wheels there maybe modification required.

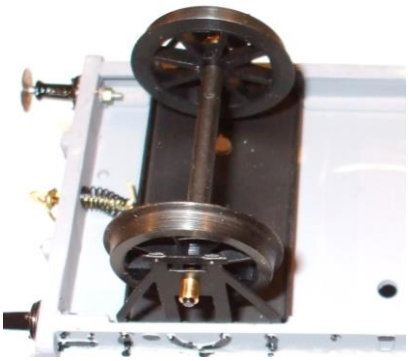
7. Once your wheels are fitted squeeze the axle guards together to minimise side play.
8. Next fit the cosmetic axle boxes/springs over the wheel bearing. The hole in the back of the casting my need to be opened up slightly to allow the wheel bearing to fit in the back. Please do the carefully as it can cause cracking in the print.



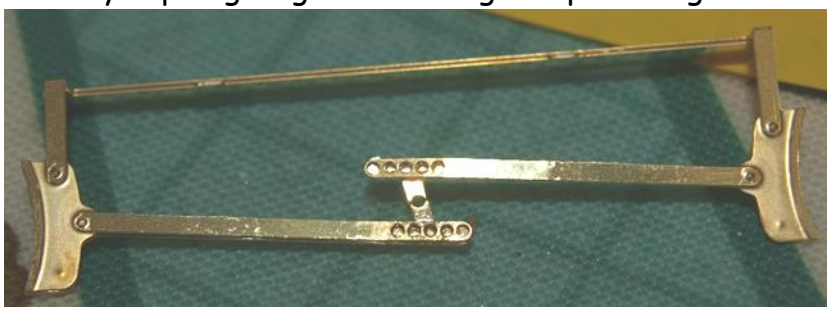
9. Now fit the couplings and buffer heads. 3 link couplings are provided in the 7mm kits but not in other scales. Plastic buffer heads are provided in all kits and bodies. However it is recommended that you replace them in HO/4mm/S as they are quite fragile. 4mm steel heads are available from Alan Gibson. Slide the hook assembly through the hole in the buffer beam. Drill a 0.8mm hole in the end of each of the buffer heads (part 11). Now slide the buffers through the holes in the guides. Next take a piece of spring wire (part12) and trim to length. Now push the wire through the hole in the coupling hook that is closest to the buffer beam then through one of the holes drilled in one of the buffer heads. Then push the wire back and in to the hole in the other buffer head. Repeat for the other end of the wagon.



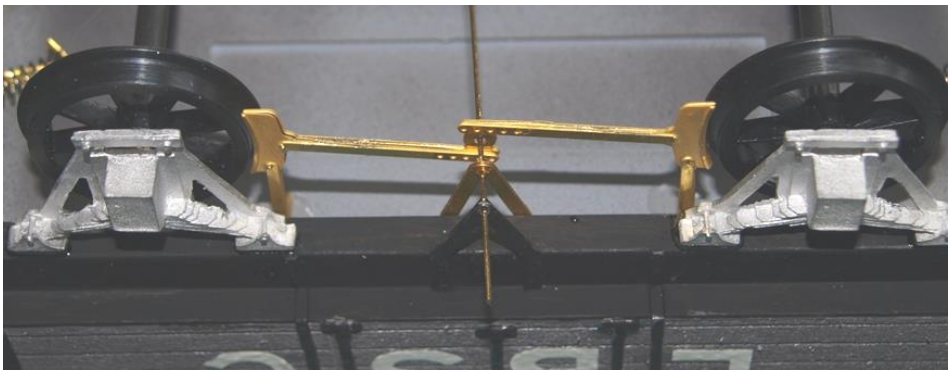
10. Next fit the wheel/axle guards sub assembly to the bottom of the body assembly making sure the axle boxes/springs line up with the crown plates/bolt heads on the sole bar.



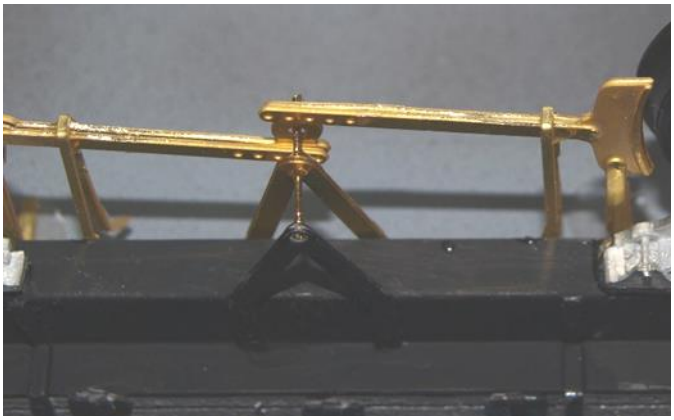
11. The next 2 steps are for wagons/vans without clasp brakes so if you wagon/van is fitted with clasp brakes you can skip them and move to section 14. Take the brake etch the brake etch, this will differ depending on the wagon van being built. Punch out any detail bolt-heads etc. and then laminate the front and back sections together. This can be done by super-gluing or soldering the parts together.



12. Thread a piece of wire through the 'V' hangers and then through the brakes then fit the brake sub-assembly to the bottom of the wagon/van assembly making sure that they don't interfere with the free running of the wheels. Some prototypes have two sets of brakes, from the time they were built, if this is the case an extra set of brakes will be supplied with the kit.

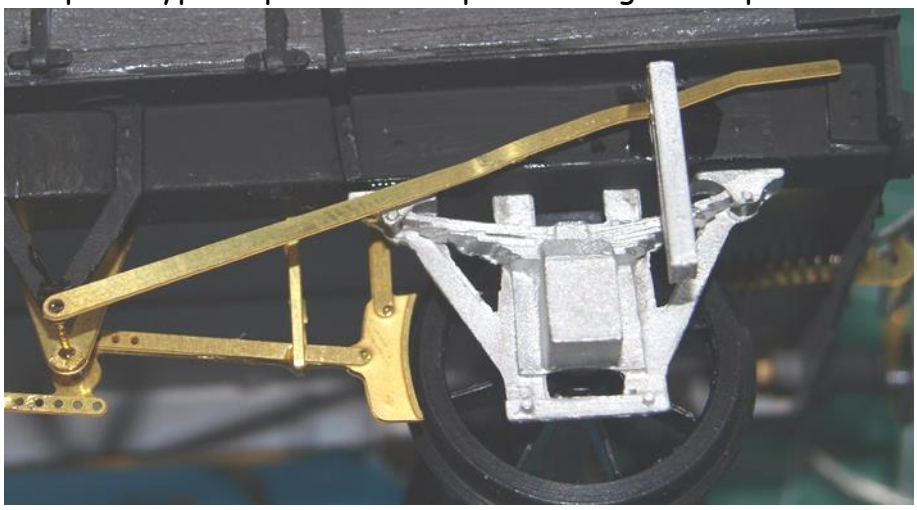


13. Now fit the safety bars



14. For prototypes with clasp brakes you will now need to fit the cross shaft. In-line with the prototype. This is usually on the centre-line but in some cases there may be more than one cross shaft. Please check a photo/drawing of your chosen prototype.

15. Next fit the brake lever and rack to the body. Again this changes with the prototype so please check positions against a photo/drawing.



16. For fitted/Piped vehicles you now need to fit the Vacuum/Westinghouse pipes. Please check position against a photo/drawing.

17. Finally for vans now is the time to fit the roof.