Rumney Models Bachmann Cradle Mounted Tank Wagon Detailing Instructions

Prototype and Model Notes

In 1927 the RCH updated their specification for 14T tank wagon underframes. During this process the underframes got slightly shorter (they shrunk form 18' to 17'6"), the stanchions at the ends went from straight to cranked and the tanks lost their distinctive big bulbous filler manholes. The tanks that went on top of these underframes were designed for a variety of loads and the class A tanks in particular added a splash of colour, especially post nationalisation. Some could be seen in service into the 1970s.

This detailing kit is specifically for the Bachmann cradle mounted model without the big filler manhole which represents post 1927 tanks. This comes with or without walkways and the tank is illustrated below.

Construction Notes

This set of instructions covers the detailing kit B.113. This is designed to provide additional detailing for the Bachmann 14T cradle mounted tank wagon. Additional ladders along with valve wheels, tie bars (if required), brake levers and guards are provided along with vees and outside solebar crosshead stay brackets. There are sufficient parts for two wagons.

Two types of ladder are included depending on whether you have walkways fitted to the tank top or not.

Read through the instructions first and familiarise yourself with the components. Drawings and photographs taken during the construction of the test etches are included to attempt to make my waffle clearer.

All fold lines are through 90° with the fold line on the inside unless stated otherwise.

Everyone has their own soldering methods. I now use a temperature controlled soldering iron with predominantly 145° solder and La-Co paste flux. For a long time I used an Antex 18W soldering iron for detailing parts with few problems.

Check all holes before removing parts from the fret. The drawing process for etching if you use a CAD program, as I do, is extremely accurate but the actual etching process itself not an exact science. If the fret is slightly over etched then there is no problem but if they are under etched the holes will need enlarging. I find that this is easiest to do before removing parts from the fret. The hole sizes will be noted at the appropriate points.

Materials list

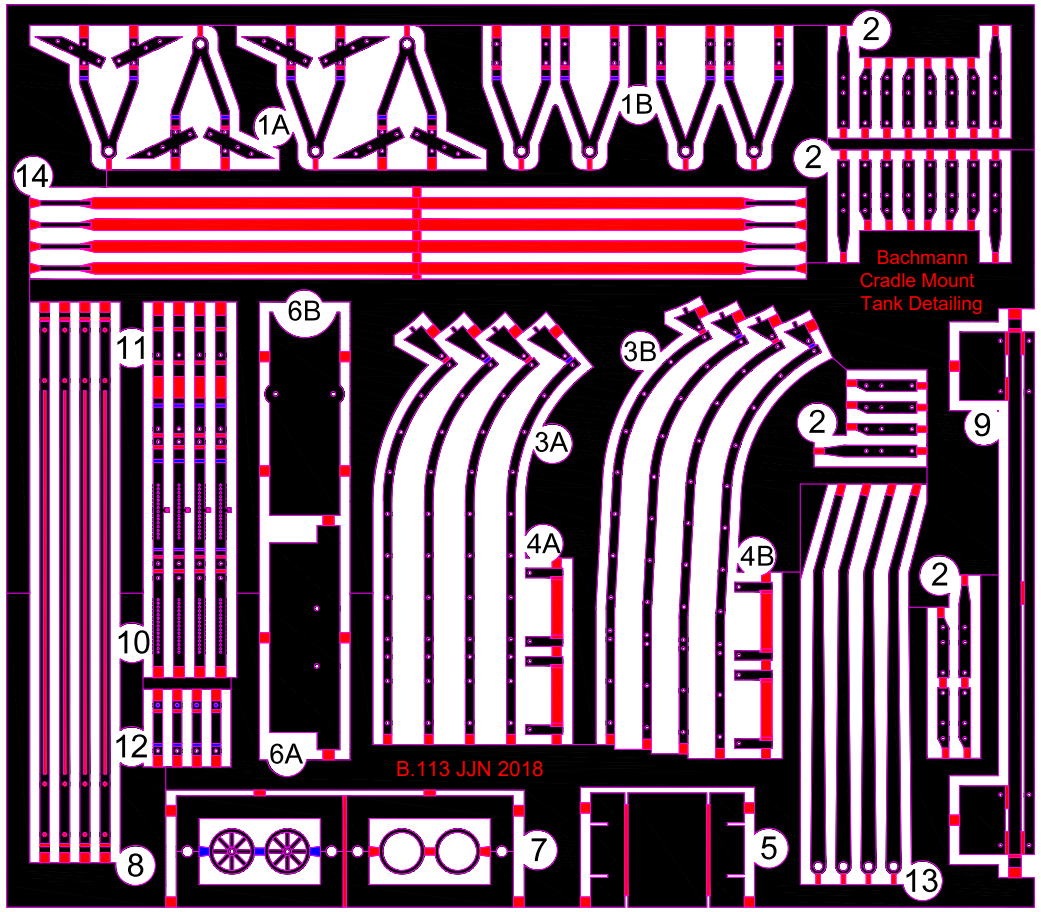
A good quantity of 0.31mm wire will be required for this etch. Eileen's Emporium are good source for this. Their contact details are listed below. 0.8mm wire may also be required if you wish to replace the brake shafts when adding the brake levers and also 0.4mm wire for pinning the valve wheels in place.

Eileen's Emporium
Unit 19.12 Highnam Business Centre
Newent Road, Gloucester
GL2 8DN
www.eileensemporium.com

Parts List

1A - Vees (Outside solebar crosshead stay brackets)
1B - Vees (Inside solebar crosshead stay brackets)
2 - Outside solebar crosshead stay brackets
3A - Ladders (Tanks with walkways)
3B - Ladders (Tanks with without walkways)
4A - Ladder solebar brackets (Tanks with walkways)
4B - Ladder solebar brackets (Tanks with without walkways)
5 - Ladder assembly jig
6A - Ladder drilling jig (Tanks with with walkways)
6B - Ladder drilling jig (Tanks with without walkways)
7 - Valve wheels
8 - Tie bars
9 - Tie bar drilling jig
10 - Lever guards
11 - Lever guard brackets
12 - Lever guard stays
13 - Brake levers
14 - Tank Straps

Parts Diagram

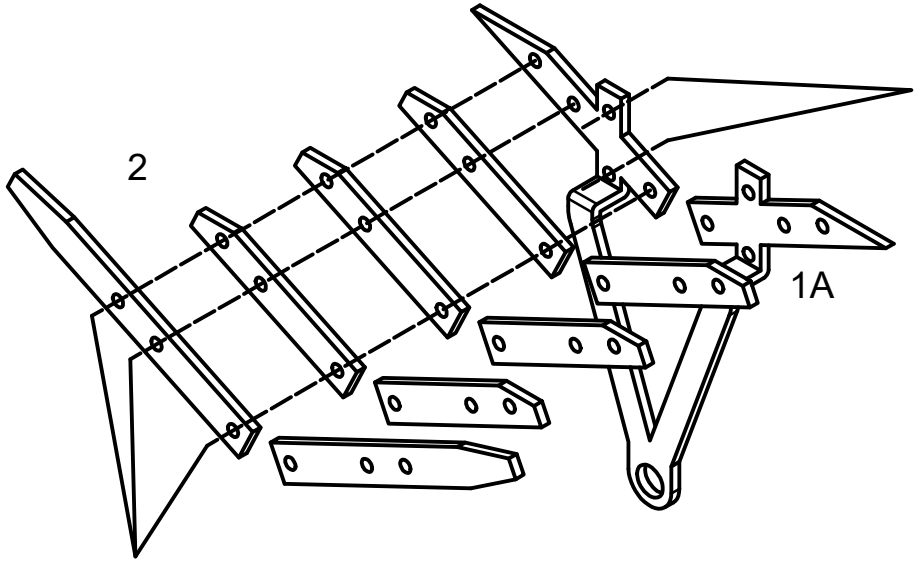


Vess & Crosshead Stay Brackets

Two different types of vee are included if you wish to use them. The first type is for crosshead stay brackets (the crosshead stay is the rod linking the baulk at the tank end (crosshead) to the solebar) that are mounted outside the solebar (1A). The associated brackets for this vee (2) will need to be added. The second type is for crosshead stay brackets that are mounted on the inside of the solebar (1B).

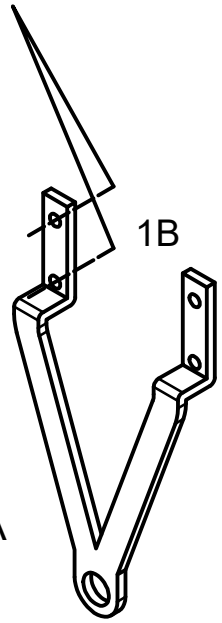
In both cases they will need pinning in place using 0.31mm wire using the four holes for the vee itself.

Make sure that all the holes are opened out to accept 0.31mm wire before removing from the fret.



0.31mm wire to align brackets with vees. Solder together and then file the wire flush on the back and slightly proud on the front to represent bolt heads

0.31mm wire to pin vees to solebar. Leave enough on back to pin into the solebar and slightly proud on the front to represent bolt heads



Vees

Fold up vees as per diagram. Brackets for the 1A type vees need to be added before fitting to the wagon.

Fitting

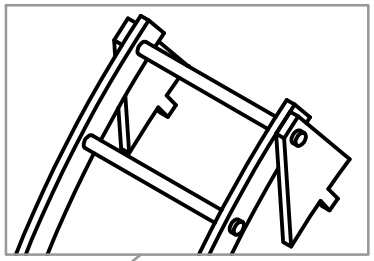
An unwanted set of vees can be used as a drilling jig to drill locating holes into the solebar. The vee you are adding can then be pinned and glued in place. Use 0.8mm as a replacement brake shaft. These wagons generally had independent brakes so the brakeshaft shouldn't go all the way across the wagons.

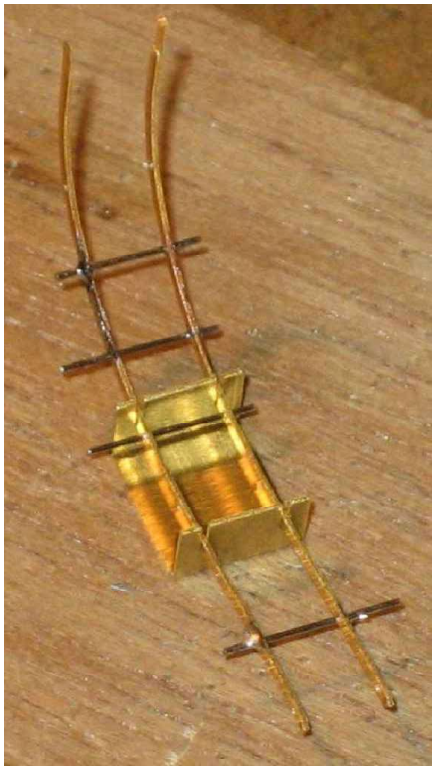
Ladders

Provision has been made for two slightly different types of ladder. The differences are down down to whether the wagon body is fitted with a walkway or not.

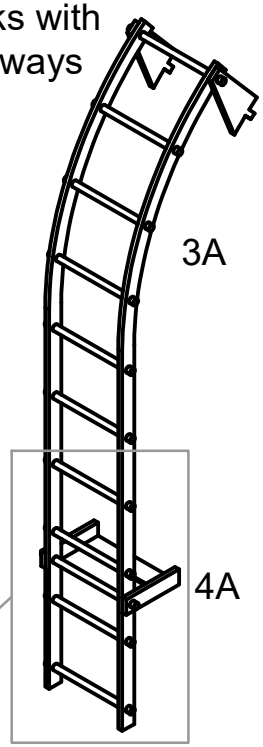
In both cases make sure that the ladders (3A or 3B) and appropriate brackets (4A or 4B) can accept 0.31mm wire and then remove the jig. Fold up the ladder assembly jig (5). Fold up the brackets and the tops of the ladders then assemble using the jig and 0.31mm wire for the rungs and bracket bolts. Once soldered together clean up the wire rungs/bolts.

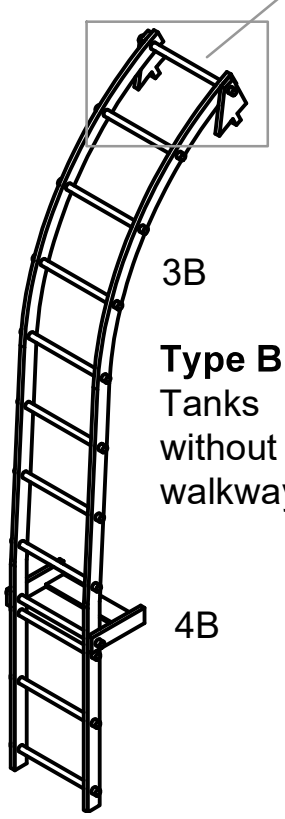
Fold up tops of ladder as per the diagram. Both ladders are the same. Tabs (2) will locate into holes in tank drilled using a jig (See page 5).



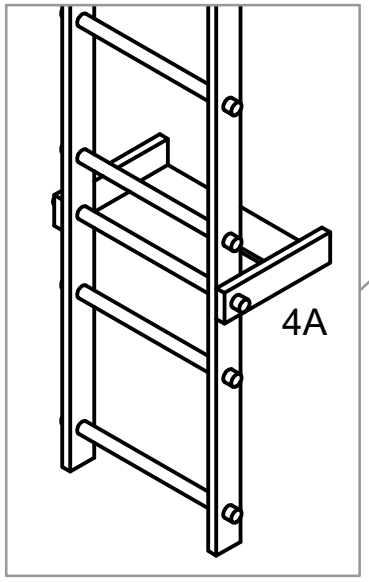


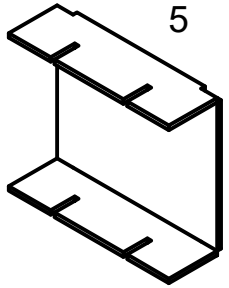
Type A
Tanks with walkways





Type B
Tanks without walkways





Fold up ladder assembly jig (5) and use to keep sides of ladder aligned.

Brackets

Both types of bracket (4A and 4B) locate on top of the solebar.

Fitting Ladders

Once the plastic ladders have been removed from the Bachmann body the holes that are left can be filled in. The new ladders are fitted in position using the etched pins attached to the ladders. These are located on the tanks via holes drilled using the appropriate ladder drilling jig, 6A (for tanks fitted with walkways) or 6B (for tanks without walkways).

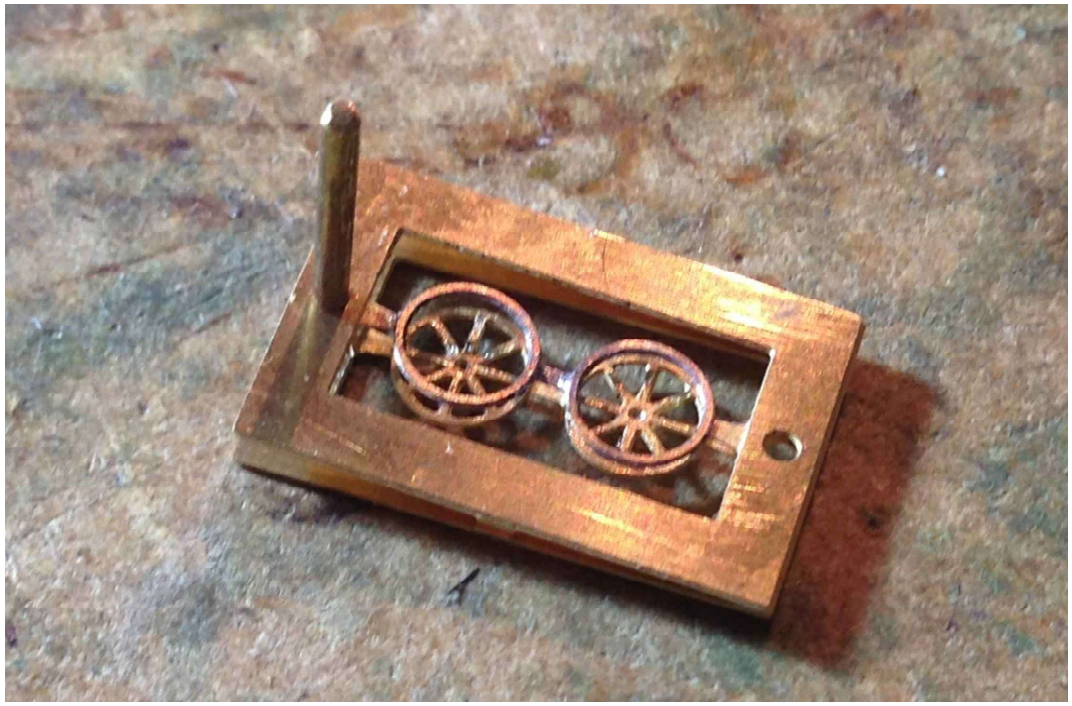
Remove the ladder drilling jig of your choice (6A or 6B) from the fret and then insert into one of the walkways on the top of the tank or around the manhole depending on whether you have walkways fitted or not. Hold the jig down so that the part of the jig with the holes in is against the tank and drill two 0.4mm holes. Repeat for the other side.

The ladders can be located in place using the holes and glued to the solebar via the bracket. To make life easier this can be done once the ladders have been painted.

Valve Wheels

Replacement valve wheels (7) have been provided. There are two parts to these a rim and a spoked wheel. There are designed to be folded double whilst attached to the fret and then soldered together. If you are worried about alignment then 1mm wire pins can be used though the holes in the fret to locate the two halves together. Solder a length of 0.4mm wire though the hole in the centre of the valve wheel so that the wheel can be pinned in place. Once everything is soldered together remove form the fret and tidy up.

Remove the solid Bachmann valve wheel on top of the tank. To do this make a cut though the shaft immediately below the valve wheel. Carefully drill a 0.4mm hole into the shaft to locate the replacement valve wheel.



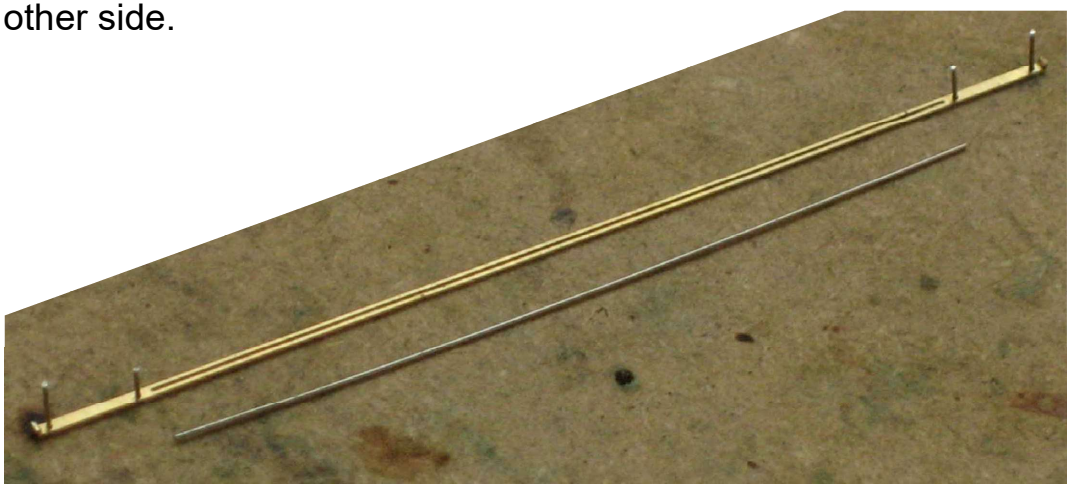
Tie bars

Replacement tie bars (8) are included on the fret. A lot of 14T saddle and cradle mounted tanks had individual keep on each axleguard and so these parts are not necessary in these cases but a a lot were fitted with tie bars.

You can press out the four half etched rivets on each tie bar to represent the fixing bolts if you wish however I dislike replying on glued joints between plastic and metal components especially with something as vulnerable as a tie bar. I would recommend drilling out the half etched holes and using 0.31mm wire soldered in place to act as pins which can locate into holes drilled in the plastic axleguards using the tie bar drilling jig (9).

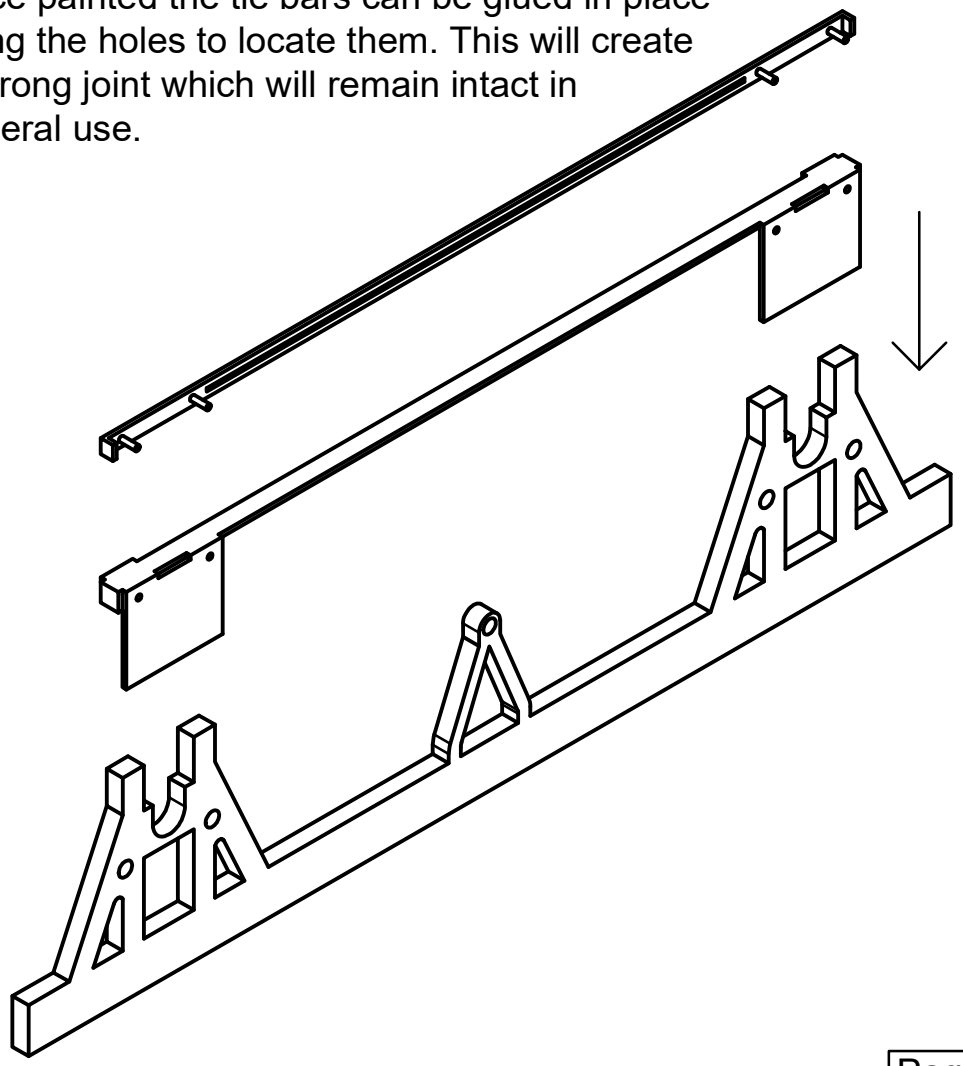
Tie bars are also fragile things so I have included a half etched slot on them into which a length of 0.31mm wire can be soldered. This makes them much stronger and wire is virtually invisible.

Remove the plastic keeps from the Bachmann axleguards. Fold up the drilling jig and then fit onto the Bachmann underframe. Use a 0.31mm drill to drill four holes using the jig to locate them through the plastic axleguards. Repeat for the other side.



Drill two pairs of 0.3mm holes into a piece of scrap wood. Fold up the end of the tie bar and thread short lengths of 0.31mm wire through the tie bars locating into the holes in the wood. These can then be soldered in place and then filled back to represent bolt heads. You will need to make sure there is at least 0.75mm of wire projecting from the back of the tie bars to locate on the axleguards. Whilst you are at it solder a length of 0.31mm wire into the slot to reinforce the tie bar.

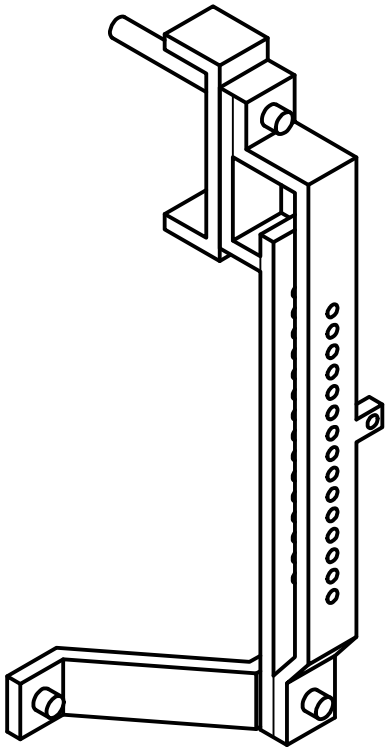
Once painted the tie bars can be glued in place using the holes to locate them. This will create a strong joint which will remain intact in general use.



Brake Lever Guards

The replacement brake lever guards come in three parts; the lever guards (10), lever guard brackets (11) and the lever guard stays (12). These need to be folded up and soldered together. The assembly can then be fitted in place on the Bachmann solebar using the hole left where the plastic one was located.

Make sure that the holes in the lever guard, bracket and stay can accept 0.31mm wire. Push out the half etched rivet on the stay and remove the three components from the fret. Separate the lever guard from the lever guard bracket. Fold the lever guard along with the lever guard bracket referring to diagram. Solder the lever guard and bracket together using 0.31mm wire to align them. Trim the wire on both the front to represent a bolt and leave about 3mm on the back to locate into the Bachmann solebar. Fold both ends of the lever guard stays through about 30°. The stay can then be pinned and soldered to the bottom of the lever guard using 0.31mm wire.



Once painted the whole assembly can then be located in the solebar and glued in place.

Brake Levers

Make sure that the holes in the brake levers (13) can accept 0.8mm wire and remove from the fret. Solder a piece of 0.8mm wire approximately 5mm long in place on the lever guard to represent the brake shaft if you haven't already fitted them to the wagon. The easiest way of doing this is to drill a hole in a piece of wood in which to locate the wire and then locate the brake lever on the wire and on top of the wood and solder together.

Remove the Bachmann brake levers and drill 0.8mm holes though the vees and the crank part of the brake push rods.

Bend up the brake lever as per the prototype clearing the springs and axlebox and then cranking them for the handle.

They can be glued in place once they've been painted.

Tank Straps

If you want too get creative and change the Bachmann tank from cradle to the much more common saddle mountings you might need to use the tank straps (14) provided. These can be used whole or just the ends which would save trying to remove all of the moulded plastic tank straps and preserve the RTR livery.

Justin Newitt - September 2018