Rumney Models 42T Strip Coil Wagon Instructions

Second Impression – December 2013

These instructions cover kits C.01 and C.02

Prototype Notes

The 42T Strip coil wagons were built in two batches and had quite a convoluted history, at least initially.

1/401 lot 2209	Swindon	1950 B949000-949034
1/403 lot 3014	Head Wrightson	1957 B949035-949049
1/407 converted from	1/401	1955 B949000-949020 & B949022-949034

The initial batch of 35 wagons was built by Swindon in 1950 under lot 2209 to what became diagram 1/401. These were unfitted, had GWR heavy duty bogies and 1'6" GWR self contained, heavy duty buffers. They were built with wood lined sides and floor and worked from Abbey Works at Port Talbot in South Wales. These wagons are covered by kit C.02.

In 1955 the coil support arrangement was changed which resulted in a new diagram being issued for these vehicles: 1/407. The wood lining was not a great idea and was also removed at this time.

Also in 1955 B949021 was converted to diagram 1/406. This was quite a substantial conversion and what emerged was the forerunner to the cradle fitted wagons such as the Coil V, E and G. In his book 'British Railway Wagons – the first half million' Don Rowland states that this was later converted to 1/407 along with the other 1/401s but given the nature of the conversion I'm not sure if this actually happened. There is a picture of this wagon in 'An Illustrated History of BR Wagons Volume 1' by Bartlett, Larkin, Mann, Silsbury and Ward.

The 1/407 vehicles were followed by 15 very similar wagons in 1957 to diagram 1/403 under lot 3014. These were built by Head Wrightson, were vacuum braked and had BR plate bogies. Externally they were virtually identical to the 1/407s except for the fitting of vacuum brake gear and modifications to the GWR self contained buffers which were extended using wooden plates to 1'8½". The internal dimensions were slightly larger (this probably had something to do with the fact that the sides weren't designed to be wood lined) but these can be measured in fractions of an inch and so for the purposes of the kit can be ignored

In 1958 the 34 diagram 1/407 vehicles were given vacuum brakes as per the 1/403 vehicles. The fleet remained largely unaltered from this point onwards. Kit C.01 covers both the unfitted and fitted 1/407 and the 1/403 vehicles.

Usage in Traffic

It seems that at least initially these wagons were used for conveying steel coils from Abbey Works at Port Talbot to various tinplate works around South Wales including Velindre, Tostre and Ebbw Vale. They seemed to have generally operated in rakes initially on their own and later with the diagram 1/411 45T Slab coil wagons. Withdrawals began in the late 1970s but some could still be seen working to Shotton in the early eighties supplying the galvanising works there.

Acknowledgements

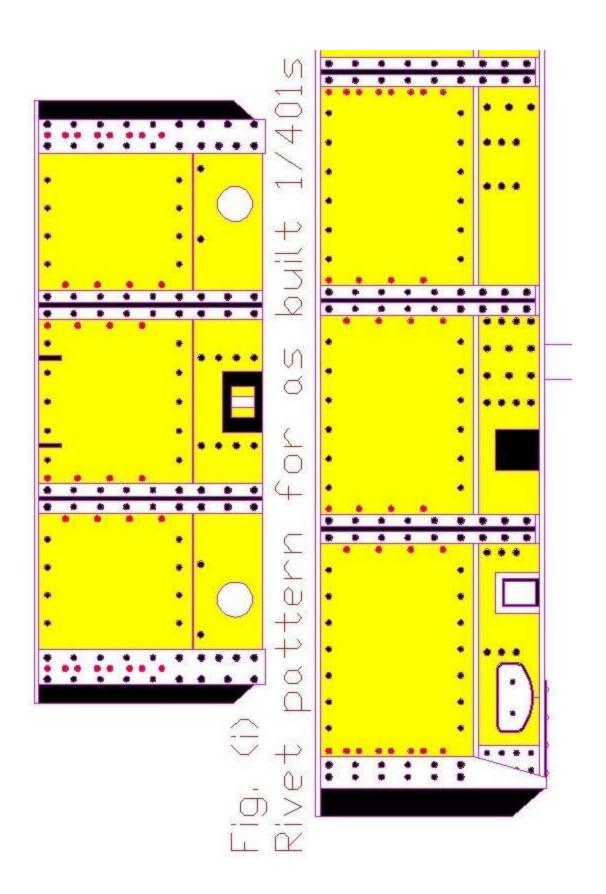
A big thank you must go to Paul Bartlett for his help in the preparation this kit. If you haven't come across the wonderful resource for BR wagon photos that is Paul Bartlett's website then I would thoroughly recommend a visit to: http://paulbartlett.zenfolio.com/

In its pages you will find some photos of the Strip Coils including photos of the coil supports.



Notes on diagrams 1/401 and 1/407

The 1/401 vehicles, as built, had extra rivet detail when compared to the 1/407 and 1/403 types. This was connected with the wood lining that they were fitted with. When the wood lining was removed the rivets were also removed. The holes for the rivets remained though and can just about be seen on some photographs of 1/407 examples. They were very small though and would have been somewhere between 3/8" and 1/2" in diameter. This scales out at 0.125-0.175mm or 0.005-0.007" which is why I didn't attempt to etch them. Also they weren't there on the 1/403s. However if you really wanted a challenge you could use a rivet press to give the impression of them. Fig. (i) shows where they were located. The arrangement was consistent throughout the body except for the extra holes at the corners.



Construction Notes

The construction of kits C.01 and C.02 is basically the same. Any differences will be noted as we go along.

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. Note that not all the photos are from chassis covered by this set of instructions but they will suitably illustrate the point in question.

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 on virtually everything 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

Bogies for the 1/403 vehicles are fairly straightforward. They had BR plate bogies with oil axle boxes. I used Cambrian sideframes with Masokits compensated bogies for mine. I prefer springs to compensation but the Masokits freight bogies work very well. The straight Cambrian kit (C68) could be used or Bachmann make an RTR version if you don't mind rigid bogies. Nuts and bolts may be required for the bogies but what sort will depend on the bogie. Masokits and Cambrian kits come complete with them.

The bogies for the 1/401-1/407 vehicles are a bit more problematic. They had heavy duty bogies with scallop shell oil axleboxes and no holes. No one, as far as I am aware, does this type. I have measurements and photographs for the correct type bogie and will try and do some castings at some point.

Wheels were $3'1\frac{1}{2}$ " 3-hole disc.

Buffers on all the Strip Coils were GWR 6 rib self contained, heavy duty types with 16" heads. The fitted vehicles had a wooden plate sandwiched between the back of the buffer and headstock to extend them to 1'8½". Lanarkshire Model Supplies do the correct type (B023) which is available pre-drilled if fitting sprung heads. I would definitely recommend the pre-drilled option on any of their self contained buffers as drilling them out for 2.5mm buffer shanks really requires some specialist equipment. In terms of quality they are the best around. For using on fitted vehicles I extended the buffers by gluing 0.030" plasticard to the back of the buffer and filling to shape once dry.

You will also require couplings to complete and vacuum pipes if building a fitted vehicle. Lanarkshire model supplies do the correct swan neck type which is very nice. For couplings I use Masokits coupling hooks and either Exactoscale 3 links or Masokits screw couplings. The Exactoscale products are available through C&L.

Vacuum cylinders will be needed if constructing a fitted 1/407 or 1/403. I use ABS castings with the recess in the bottom of them filled in. There is a gap in the market for decent cast vacuum cylinders though.

A couple of different sizes of wire are needed to build the chassis. Eileen's Emporium are good source for these and they do a mixed sizes pack if you don't want to buy large quantities of each. They also do nuts and bolts if required for the bogies.

- 0.31mm Brakegear, axle guards
- 0.7mm Brakegear and alignment pins

You will need plastic section to construct the coil supports on 1/403 and 1/407 vehicles. This will be covered in detail later in the instructions.

Contact details for the above suppliers can be found at the end of these instructions.

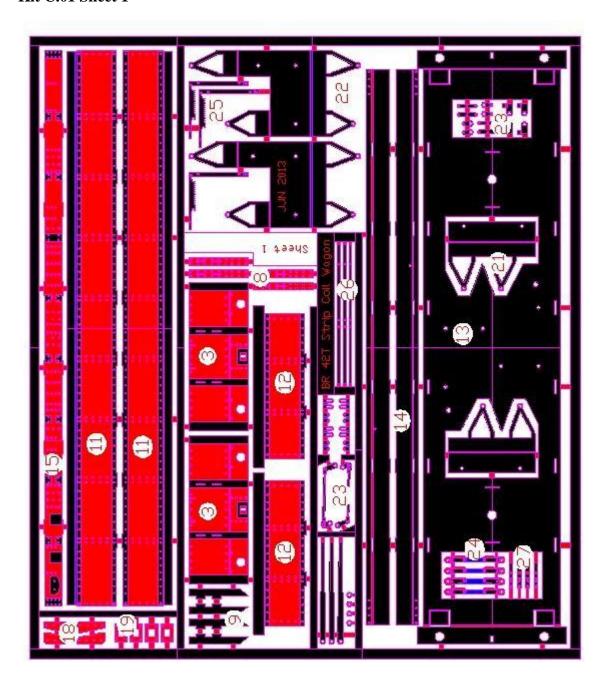
Component list

Note that not all components are on both kits.

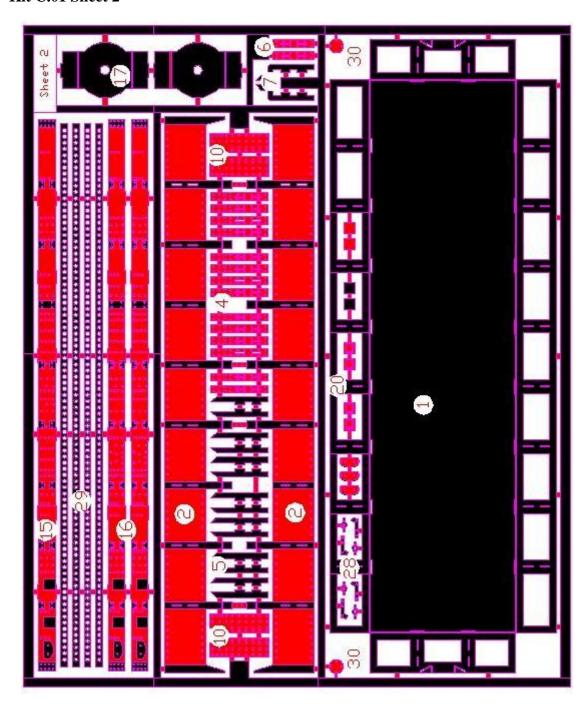
- 1 Body base
- 2 Outer side overlays
- 3 Outer end overlays
- 4 Side stanchion overlays
- 5 Side stanchion angle pieces
- 6 Side stanchion overlays (for stanchion above brake lever)
- 7 Side stanchion angle pieces (for stanchion above brake lever)
- 8 End stanchion overlays
- 9 End stanchion angle pieces
- 10 Corner overlays
- 11 Inner side overlays
- 12 Inner end overlays
- 13 Chassis base
- 14 Solebars
- 15 Solebar overlays (unfitted wagons)
- 16 Solebar overlays (fitted wagons)
- 17 Bogie pivot plates

- 18 Corner plates
- 19 Coupling pockets
- 20 Kit C.01 solebar detailing (see list A and Fig. (ii))
- 21 Unfitted brake vees
- 22 Fitted brake vees
- 23 Kit C.01 brake gear fittings and levers (see list B and Fig. (iii))
- 24 Vacuum cylinder actuators
- 25 Brake lever guards
- 26 Safety loops
- 27 Lamp Irons
- 28 BR swan neck vacuum pipe brackets
- 29 Detailing strips for floor
- 30 Manhole
- 31 Kit C.02 Detailing parts (see list C and Fig. (iv))
- 32 Kit C.02 Brake levers and washers
- List A See Fig. (ii)
- A1 Builders plates
- A2 Label Clips
- A3 Wooden blocks
- List B See Fig. (iii)
- B1 Bogie linkage crank
- B2 Bogie linkage bracket
- B3 Fitted brakegear linkage
- B4 Overlays for fitted brakegear linkage
- B5 Brake lever actuators
- B6 Brake levers
- B7 Brake lever washers
- List C See Fig (iv)
- C1 Builders plates
- C2 Label Clips
- C3 Wooden blocks
- C4 Bogie linkage crank
- C5 Bogie linkage bracket
- C6 Brake lever actuators

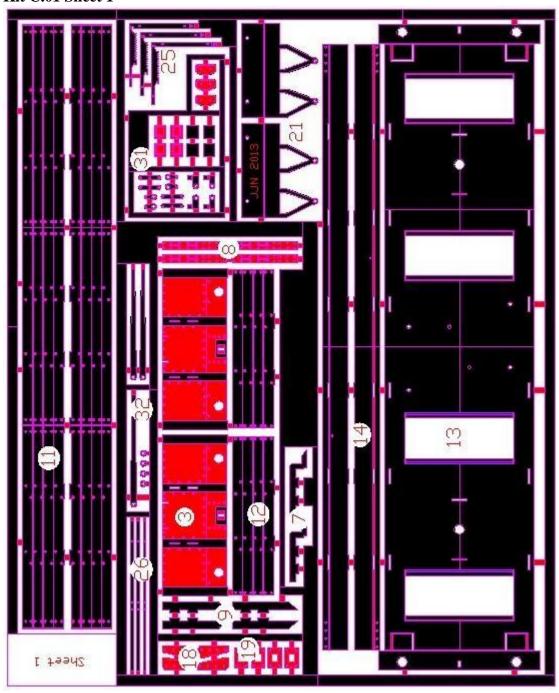
Kit C.01 Sheet 1



Kit C.01 Sheet 2



Kit C.01 Sheet 1



Kit C.01 Sheet 2

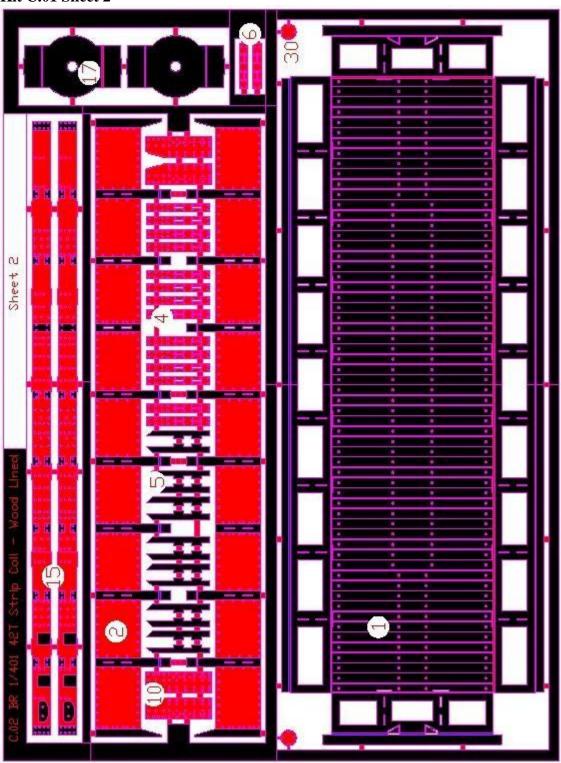
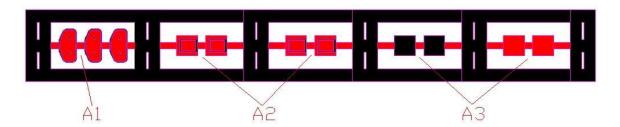
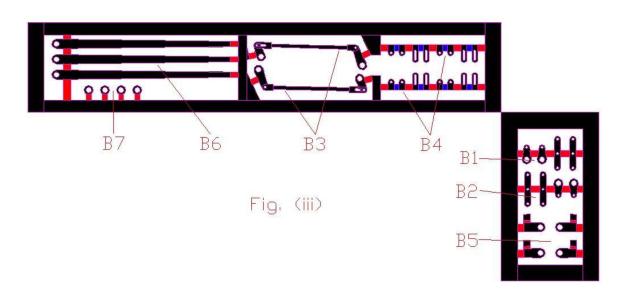
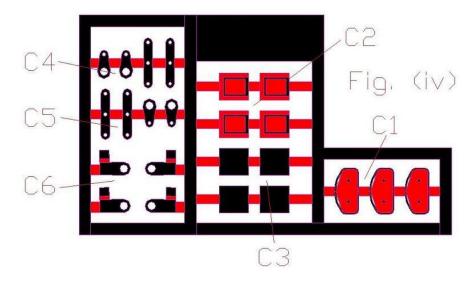
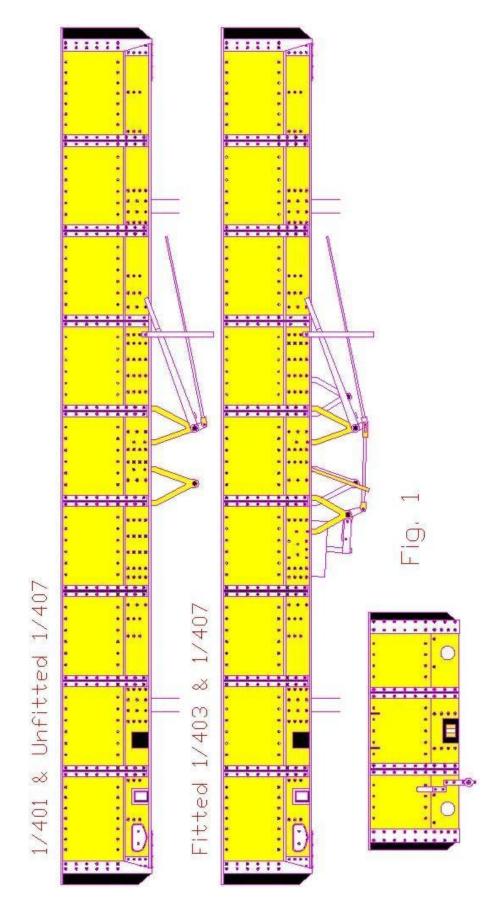


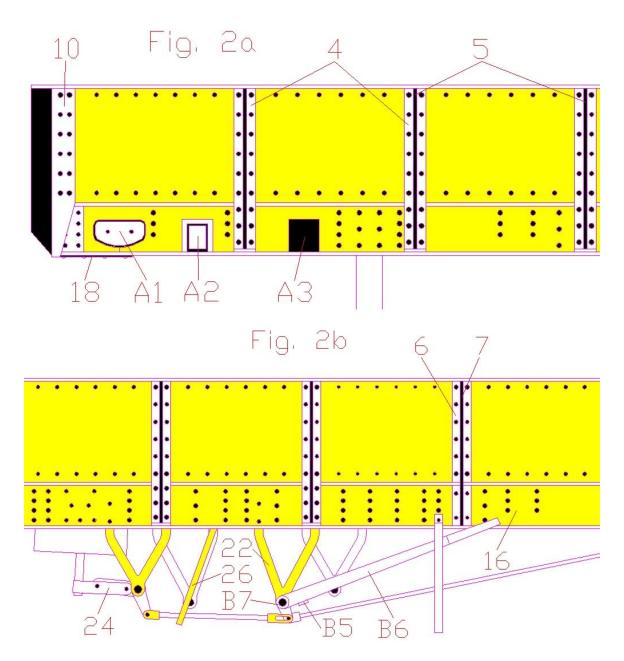
Fig. (ii)











Construction

Body

The body is constructed first. The basic idea is that the outer sides are soldered to the flat body base along with the rivet detail overlays and stanchions and then folded up. The same procedure is applied to the ends to complete the open box that it is. The inner overlays will then be added to complete.

If constructing C.01 remove the detailing parts (20) and (21) from the body base (1) making a note of what the parts are. Keep them safe for later.

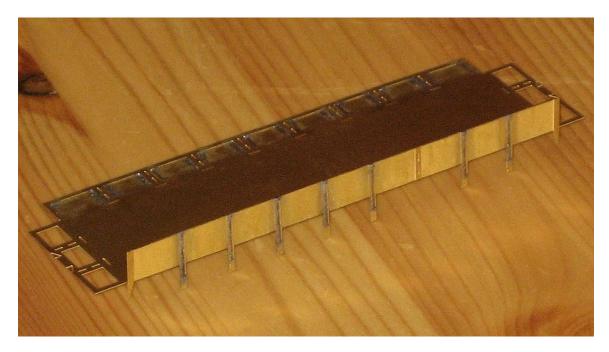
Remove the body base (1) from sheet 2.

When adding the outer detail it is important that it is soldered to the correct side of the body base. The overlays should be soldered to the side of the body base <u>without</u> the half etched fold lines on. I soldered everything to the wrong side when I initially built the test etch and had to take everything off again before redoing it all. The photographs show the overlays being soldered to the <u>wrong</u> side. I did end up with some very nice prototypical dents in the sides as a result of fixing this mistake but there are quicker ways to achieve this!

Remove the outer side overlays (2) from the fret along with the side stanchion overlays (4) and side stanchion angle pieces (5). Using the side stanchion angle pieces to aid alignment locate one of the outer side overlay to the body base making sure the overlay is on the correct side of the body base as outlined above. When happy with the alignment solder in place making use of the rectangular holes in the sides of the body base whilst making sure that the angle pieces aren't soldered in place. Repeat with the other side.

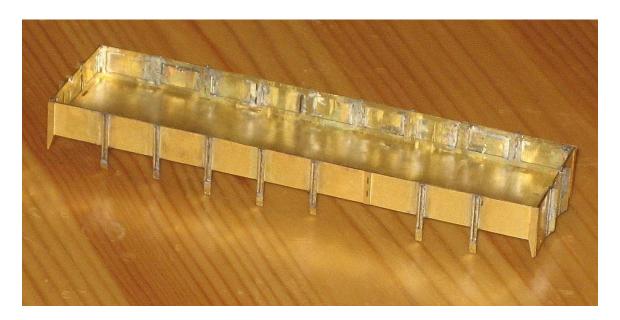
Remove the angle pieces and then use them to pin the side stanchion overlays over the outer side overlays/ body base. Don't do the side stanchion overlay that goes above the brake lever (6) at the moment. See photographs and Fig. 2b. Solder the side stanchion overlays and angle pieces in place as you go along.

Once all the side detail is complete fold the two sides through 90° . If constructing C.02 then the reinforcing pieces on the tops of the sides need folding at this point. On kit C.01 they are located on the inner side overlays.

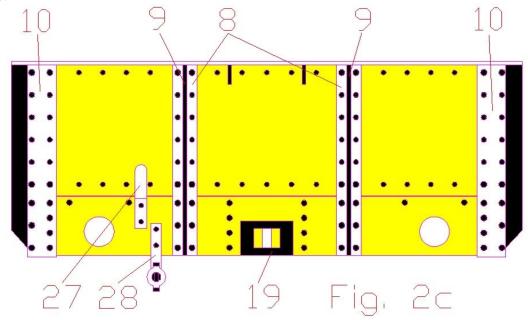


Repeat the procedure with the ends using the outer end overlays (3), end stanchion overlays (8) and end stanchion angle pieces (9). Note that there are two small supporting brackets at the top of the ends on the body base that need to be folded out. There are slots in the outer end overlays for these little brackets.

Fold the two ends through 90°. Again if constructing C.02 the tops of the sides need folding over. Once happy with the fit at the ends solder the sides to the ends from the inside of the box.



Next fit the corner overlays (10). Note that the side of the overlay that is angled at the bottom goes on the side. See Fig. 2a and 2c. I found the easiest way to do this was to solder the overlay to the end and then form the corner finally soldering the overlay to the side.



The inner side overlays (11) and inner end overlays (12) can be added. In the case of C.01 I have tried to half etch as many rivets as possible but I don't get on with sweating on long, thin strips of rivet details, particularly when there is no corner to butt them up against. Therefore there are lines of rivets at the top and bottom that need to be pressed out. I did this using a drop head rivet tool holding the pieces of brass against a green cutting mat. Once all the rivets have been pressed out the tops can be folded over.

For both kits fit the ends first using the slots and tabs at the bottom to locate the pieces. The inner end overlays only need to be soldered lightly to the top of the outer end overlays. Once the ends are done repeat with the two inner side overlays.

Chassis

If constructing C.01 remove the detailing parts (21), (23), (24) and (27) from the chassis base (13) making a note of what the parts are. Keep them safe for later.

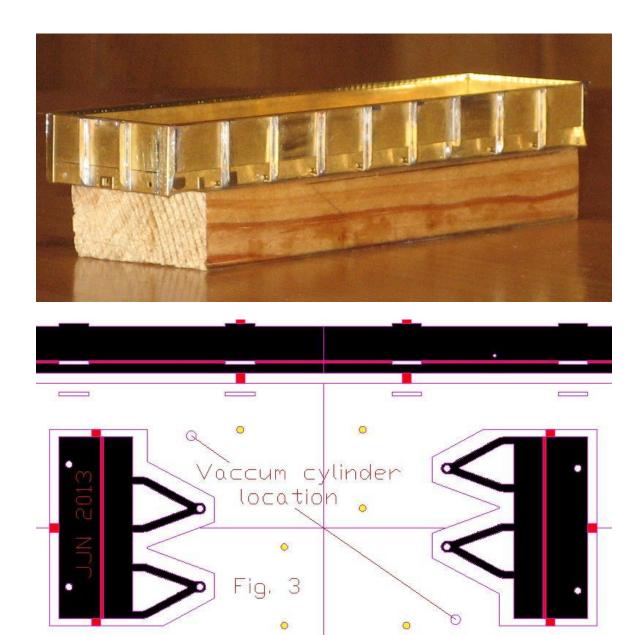
Remove the chassis base from the sheet 1. Make sure that the holes in the centre of the chassis base can accept 0.7mm wire. These are shown in yellow in Fig. 3.

Fold the ends through 90° and also the four solebar end soldering plates that are next to the ends. If constructing C.02 there are eight fold out tabs that help space the floor of the body at the correct height. These need folding through 90°. Locate the chassis base against the under side of the body and solder in place. It doesn't matter which way around it goes.

Next fold the ends of the side stanchions. These will very shortly go inside the solebars.

Remove the solebars (14) from sheet 2 along with the solebar overlays of your choice. There are two sorts to suit unfitted (15) and fitted vehicles (16). Fold the solebars into an L shape. Press out the rivets that are located on the back of the solebar overlays. There are eight at each end along with eight sets of four evenly spaced along the overlay. Locate the solebar overlays and the solebars together using the slots and tabs provided and tack solder in place. There is a correct way up for the solebar detailing. If you make sure that the solebar detailing (builders plates, label clips etc) is on the left then they will be the right way up. Locate the solebar assemblies with the chassis base using the slots and tabs and solder in place. The ends of the side stanchions that were folded up earlier can be soldered to the bottom of the solebar.

The two side stanchions that are above the brake lever which do currently not have detailing overlays in place can now be completed. As with the other side stanchions use the side stanchion angle pieces (7) to allocate the side stanchion overlays (6) and solder in place. Note that the bottom of the angle pieces go against the solebar.

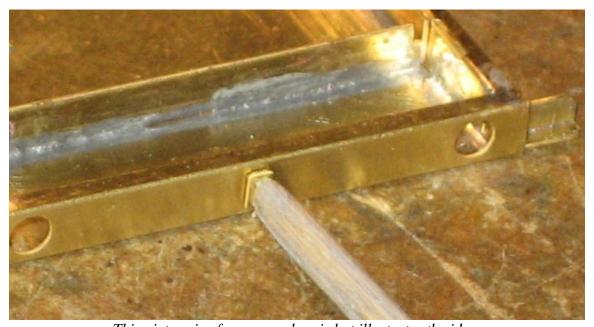


Detailing

Now is a good time to add the detailing parts to the sides and ends.

Turn the wagon upside down and solder the four corner plates (18) in place on the bottom of the solebars up against the headstocks. The solebar and headstock detailing can now be added. Builders plates (A1 or C1), Label Clips (A2 or C2) and the wooden blocks (A3 or C3) can be soldered onto the solebar using the outlines on the solebar as a guide. See Fig. 2a.

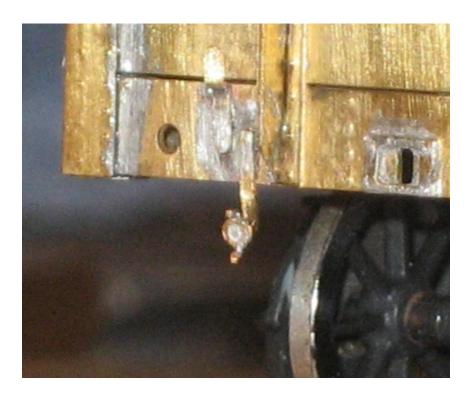
The coupling pockets (19) can also be added. The easiest way of aligning these is to file the end of a cocktail stick into a rectangle to fit into the slot for the coupling. This can be used to hold the coupling pocket in place whilst soldering to the end.



This picture is of a wagon chassis but illustrates the idea.

Lamp Irons (27) can be added to the ends if constructing a fitted vehicle. Press out the rivets, remove from the fret then fold to shape and solder to the ends. Use Fig. 2c as a guide.

The BR swan neck vacuum pipe brackets (28) can also be added onto ends of the fitted vehicles. These are quite distinctive and come in two parts. There is a bracket which attaches to the solebar and a round head that has 'tails' that fold up. Press out the rivets on the bracket and remove from the fret. Twist the base of the bracket through 90° so that the interface with the head faces away from the rivets. This bracket can then be soldered to the back of the head (the side with no half etched areas). It is easiest to do this while the head is still attached to the fret. There is a small slot to help provide a positive location. Once soldered in place the assembly can be removed from the fret and the 'tails' on the head folded out. If you're brave these fold lines can be reinforced by the use of a very small quantity of solder and a very quick soldering iron. Some step soldering might be a good idea but I haven't encountered many issues with just using 145° solder. These can then be soldered in place on the headstock using Fig. 2c as a locating guide.

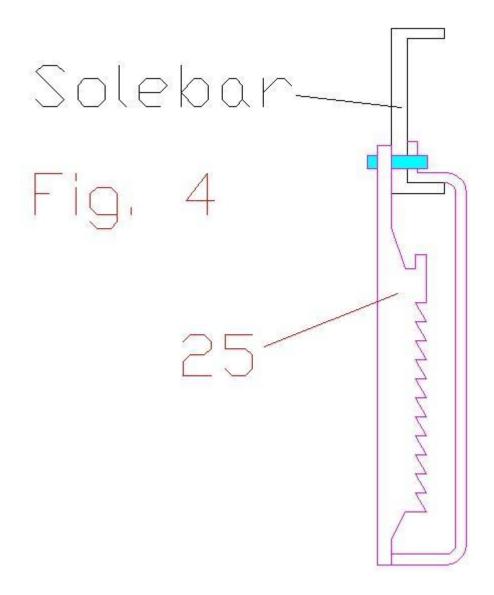


Next fit the bogie pivot plates (17) to the chassis. These fold into a long channel shape and use tabs to locate into slots on the chassis base. You will need to solder bolts onto pivot plate before fitting using the holes provided. I have etched these holes to 2mm diameter so they may need opening out to suit your bolts. Once the bolts are in place and the plate folded up solder in place on the chassis base.

Vees and Brakegear

The last major area that needs to be tackled is the brakegear. There are two types depending on whether the vehicle is fitted or not. Take the vees of your choice, either unfitted (21) or fitted (22) and make sure all the holes can accept 0.7mm wire then fold up. There is two of each type, one for each side of the wagon. There are holes etched in both the chassis base and vees in order to aid location. Use 0.7mm wire to help locate the vees and the chassis base together and solder in place. See Fig. 3 for details.

The brake lever guards (25) need to be folded up and fitted. Make sure that the small hole can accept 0.31mm before removing from the fret. Fold up using Fig. 4 as a guide. There are two bends on the front of the guard. I have half etched small rectangles on the guard to help making and locating these two bends. There is a small hole in the each of the solebars which will be used to locate the guard. Make sure it can accept 0.31mm wire. Locate the front of the lever guard against the solebar and the back behind the solebar. Use a short length of 0.31mm wire to pin the guard to the solebar and solder in place at the front and back making sure that it is reasonably square to the chassis.



Linkages to the bogies were the same on all the Strip Coils whether fitted or not. There are bogie linkage cranks (B1 or C4) and bogie linkage brackets (B2 or C5) which are designed to be used with 0.31mm wire. You don't need to use the bracket which needs folding and pinning to the crank if you don't want to. If you don't use it you can just put a bend in the end of a piece of 0.31mm wire and feed this into the crank. See Fig.5 for details.

Check that the holes in the bogie linkage cranks and brackets (if using) can accept 0.7mm and 0.31mm wire and remove from the fret. Fold the bracket about the centre making sure that the two ends line up and a length of 0.31mm wire can be threaded through the centre hole. Make a small 90° bend in the end of a piece of 0.31mm wire and feed this through the centre hole in the bracket. Solder in place. Use a length of 0.31mm wire to pin the bracket to the crank. Bend the wire slightly each side of the bracket to stop the wire from falling out and then trim. You will need two assemblies, one for each bogie. If you are making an unfitted chassis you can skip the next three paragraphs.

The brakegear on the fitted Strip Coils basically consisted of two separate sets, one for each bogie. Each set of brakegear had two shafts, one connected to the vacuum cylinder and the other to the brake lever and linkages to the bogie. A further linkage connected the two shafts. The arrangement was then repeated on the opposite side for the other bogie. Fig. 5 shows the linkage between the two shafts on the fitted wagons.

Make sure the holes in the fitted brakegear linkages (B3) can accept 0.7mm and 0.31mm wire through the appropriate holes and also the overlays for the fitted brakegear linkages (B4) can accept 0.31mm wire. The overlays can be wrapped around the linkages at the appropriate ends and using short lengths of 0.31mm wire to help align solder everything in place. The wire can then be trimmed to represent the bolts used to connect the bits. See Fig. 5.

If making a fitted vehicle check that the vacuum cylinder actuators (24) can accept 0.7mm wire. The actuators need to have their half etched rivets pressed out and then folded over. They are designed for the ends to wrap around a 0.6mm piece of wire extending from the vacuum cylinder.

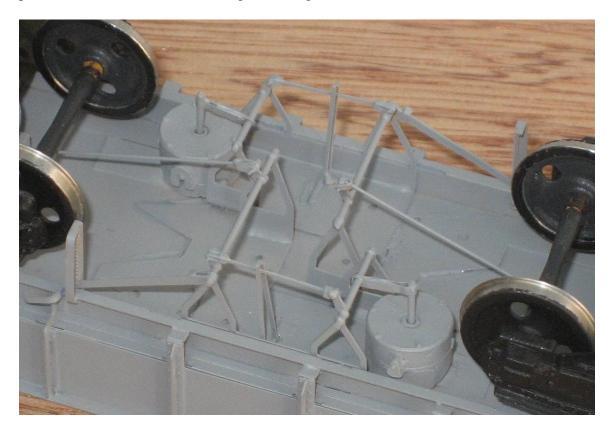
Make sure that the brake lever actuators (B5 or C6) can accept 0.7mm wire and remove from the fret. There is a small tab that will go under the brake lever which needs to be folded through 90°.

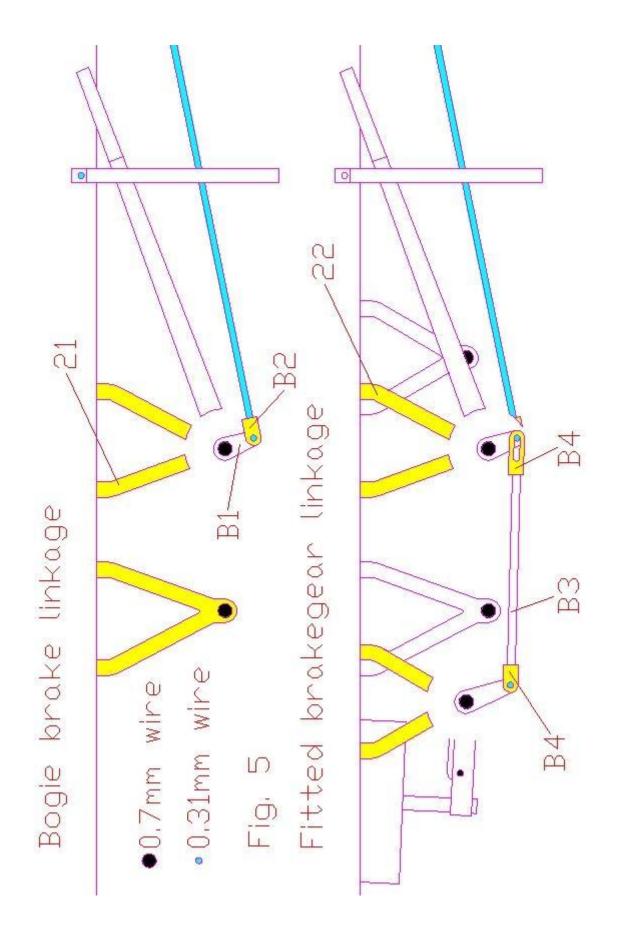
You need to cut lengths of 0.7mm wire to form the brake shafts. The brake shafts for unfitted vehicles and the outer ones on the fitted vehicles need to be long enough to project far enough beyond the vee to fit the brake lever and a washer to. The inner shafts on the fitted brake gear simply go between the two vees. Feed the brake shafts through the vees attaching the bogie linkage crank/bracket/wire assemblies along with the fitted brake gear linkages (if required), vacuum cylinder actuators (if required) and brake lever actuators at the same time. Note that the brake lever actuators go on the shaft that attaches to the brake lever and behind the vee. Make sure they are arranged so that the tab goes under the brake lever. Solder the shafts to the vee and then solder the bogie linkage assemblies in place. This should be done so that they are in the centre of the wagon and the wire makes the angle shown in Fig. 5. This wire goes above the bogies. Note the crank faces downwards. Solder the fitted brakegear linkages in place if using. Do not solder the brake lever actuator yet.

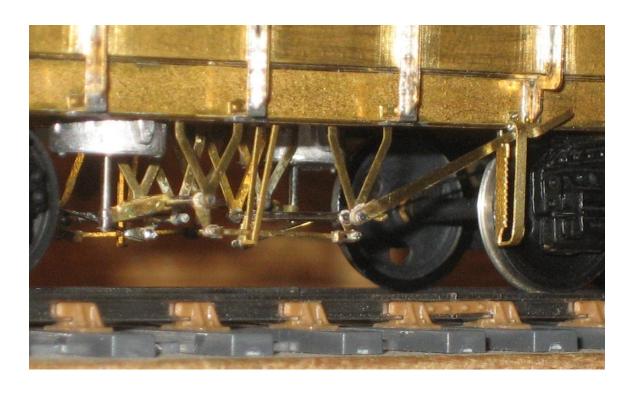
If using the vacuum cylinder actuators these can be soldered in place when the vacuum cylinders are fitted.

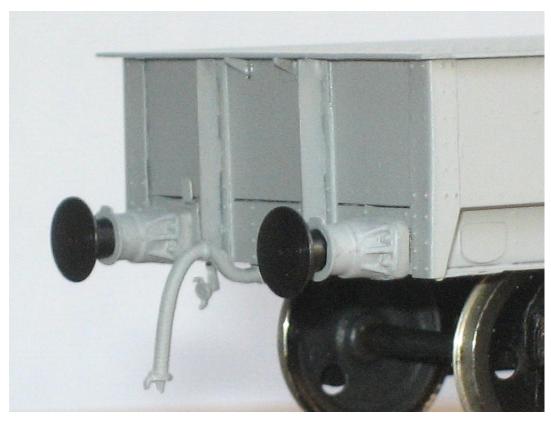
Make sure that the brake levers (B6 or 32) can accept 0.7mm wire and remove from the fret. You will need to bend them to shape. They are cranked just beyond the brake lever guard in order to clear the solebar. See photographs. Check on the model and adjust until happy then solder in place along with a brake lever washer (B7 or 32) on the outside of the lever. The brake lever actuator can then be solder in place up against the vee so that the tab is up against the bottom of the brake lever.

If constructing a fitted wagon then the safety loops (26) can be folded up and soldered to the underside of the wagon. These go around the fitted brakegear linkages. Solder them in place and then bend them to an angle. See Fig. 2b.









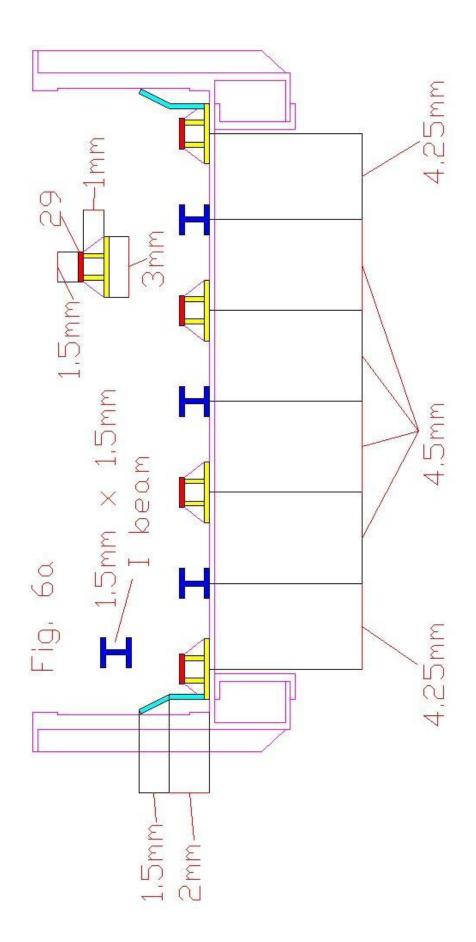
The wagon body should be more or less complete now apart form the coil supports if constructing C.01 which I'll come to in a minute. I have included manholes (30) with C.02 but I doubt they were ever fitted with them. They aren't there on the drawing I have and given the fact that the floor was constructed from wooden planks shouldn't have been necessary.

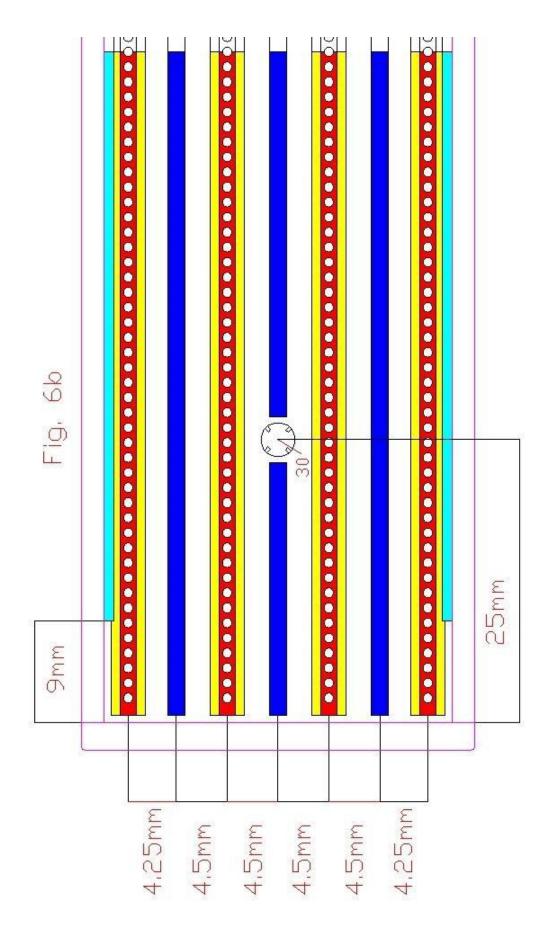
If you haven't done so and need to fit the vacuum cylinders and solder the vacuum cylinder actuators in place. Also fit the vacuum pipes. Buffers need to be added, opening out the holes if required. If constructing a fitted vehicle don't forget that these need to be packed out at the back. I used 0.030" pieces of plasticard with a hole drilled in to fit the tail of the buffer through. These were glued in place using epoxy resin to the back of the buffers and when dry the plasticard was filled to the shape of the buffers. These were glued in place on the model using epoxy resin.

Coil Supports

The coil supports consisted of I beams and section that had lots of holes into which large pins were located to stop the coils moving around. I shall go through my thoughts on how to go about it and that with the aid of the dimensioned drawings should give you some ideas.

Plastic sections, microstrip and sheet can be used to construct the supports and a sheet of 0.010" plasticard cut to the size of the wagon internal floor as a base onto which everything could be glued to make things easier. The beams don't present much of a problem as 1.5mm x 1.5mm I beams are available from Evergreen (0.060"). They just need to be cut into 117mm lengths apart from the centre length which needs to be cut into two 56mm lengths. There is a manhole (30) that goes in the centre of the wagon. The section with the holes in on the real thing seems to consist of two L section pieces with the strip full of holes in on top. A base for the etched floor detailing strips (29) to be attached to can be constructed from strips of 3mm wide 0.25mm (0.010") plasticard and 1mm x 0.25mm microstrip (0.040" x 0.010") This last item is available from Evergreen and I'm sure is available from other manufacturers. There were triangular strengthening pieces on each side at approximately 2' (8mm) intervals if your feel in the mood for a very repetitive job. An easy way of doing these pieces would be to slot the base every 8mm with a saw and glue more pieces of 1mm x 0.25mm strip cross ways then shape when dry. The metal detailing strips added to the top. Fig. 6a and Fig. 6b give details. There were also angled pieces of metal sheet attached to the sides to protect them from the coils. These can be constructed from strips of approximately 3mm wide 0.25mm (0.010") plastic strip scored approximately half way across and bent to a slight angle. These were shorter than the other sections and went up against the side walls of the wagon. The whole false floor complete with sections can be painted separately and then glued in. I'm not sure what colour everything was painted but I should think rust would probably be most appropriate.





Painting

I now use Halfords grey primer in a tin through an airbrush with cellulose thinners to prime just about everything, including plastic bodies. The primer is synthetic and has no adverse effects on the types of plastics used on RTR railway models and kits. The cellulose thinners used evaporate so quickly that they don't have time to attack the plastic. I would recommend it to anyone who has an airbrush. The results are far superior to those got by using rattle cans. You can then put your choice of paint over the top including cellulose. Don't use the red oxide in a tin on plastic though as it won't adhere and the paint will just come off.

The painting of the prototypes varied. Grey was of course used for the unfitted vehicles and bauxite or freight brown for those that were fitted. How it was applied did seem to vary though. I have seen pictures of unfitted 1/401s painted completely grey including brakegear, solebars/headstocks and bogies and others where everything below the line where the body meets the chassis was painted black including those parts of the side and end stanchions below that line. Some fitted examples were painted similarly except of course with the body in bauxite rather than grey. Most of the fitted vehicles I have seen seem to have had the solebars, headstocks and brakegear painted black but the side and end stanchions below the body/chassis line painted bauxite like the body. Dirty and rusty also seemed to be a very popular scheme.

I don't know for sure if the wood used to line the insides of the 1/401 vehicles was painted or not but usual practise (if such a thing existed with BR) was for the wood to be unpainted.

That should just about cover everything. Hope you enjoy your model Strip Coil!

Justin Newitt 2013

Suppliers List

Eileen's Emporium

Unit 19.12 Highnam Business Centre

Newent Road

Gloucester

GL2 8DN

UK

www.eileensemporium.com

Lanarkshire Models and Supplies (buffers and vacuum pipes)

9 Nairn Avenue

Blantyre

G72 9NF

www.lanarkshiremodels.com

C&L Finescale (Exactoscale wheels, bearings and couplings)

Aran Lodge

Severn Road

Hallen

Bristol

BS10 7RZ

http://www.finescale.org.uk

Masokits (Coupling hooks, screw couplings and compensated freight bogies)

Michael Clark

c/o 27 Crotch Crescent

New Marston

Oxford

OX3 0JL

www.scalefour.org/masokits

ABS (vacuum cylinders)

39 Napier Road

Hamworthy

Poole

Dorset

BH15 4JX

Cambrian Models (BR plate bogies)

10 Long Road

Tydd Gate

Wisbech PE13 5RB www.cambrianmodels.co.uk