CONNOISSEUR MODELS

GWR TOAD Diagram AA7
Short Wheelbase Brake Van

Prototype. Twelve of these short wheelbase vans were built in 1898 originally for working in the London area and stationed at Acton. They were 9 foot wheelbase and 16 foot over headstocks. It can only be assumed that space for headshunts and sidings was at such a premium in the Metropolis that such a short brake van was required to fit into them. A situation that is familiar to many of us on are own layouts. These vans lasted into British Railways days.

Kit. Construction is very straightforward, but there is a lot of push-out rivet detail, which can take some time to form. A pre-rolled brass roof is provided, as is straight brass wire for handrails. The fit of all parts is very good.

Wheels, 3'1", 8 Spoke (7121) are required to complete, Available from Slater's, Temple Road, Matlock Bath, Derbyshire, DE4 3PG, Telephone 01629 583993.

Connoisseur Models, 33 Grampian Road, Penfields, Stourbridge, DY8 4UE, Telephone 01384 371418

GENERAL INSTRUCTIONS

Please read this section carefully, especially if this is your first etched brass kit. Many modellers fight shy of working in this medium, but the basic skills are relatively easy to acquire. Once you've learned how to form and solder brass, you'll find all kinds of modelling possibilities will open up for you.

Assembling an etched kit involves exactly the same skills that a scratchbuilder uses – the only difference is that the cutting out of the parts is already done for you. Some filing and trimming will, however, be necessary from time to time. Where this is the case, I have highlighted it in the instructions.

The main skill to master is soldering and I would recommend a Weller 40 Watt soldering iron. This has a 6mm diameter, removable copper bit. The bit is shaped like a screwdriver and has a bright coating of solder (tinned). This combination of iron and bit shape is ideal for running fillet joints and has a good reserve of heat, that is necessary for soldering small parts on to large components. Note the shape and condition of a new bit, as this won't last long and will need restoring back to this condition.

It is important to keep the bit clean and in good condition as you work. Get a soldering iron stand containing a damp sponge; old oxidized solder is wiped off on this before picking up fresh solder for each joint. If you haven't made a joint for some time you may find that a hard black crust has formed on the bit. Remove this with a brass wire brush (suede brush) and then feed some multicore solder onto each side of the bit to restore a bright surface (referred to as wetting or tinning the bit). After about 8 hours use you will find the bit is in poor condition, with holes and a ragged edge. File the bit back to its original shape using a hand bastard file and then polish the surfaces on emery cloth. Coat the bit with Fluxite Soldering Paste (traditionally used by plumbers) and this will prevent the bare copper oxidizing as the iron heats up. Then feed multicore solder onto the bit to form a generous coating and leave to bubble away for a couple of minutes before wiping excess off to give a bit almost as good as new.

A smaller Antex 25 Watt iron with a 3.2mm screwdriver bit is very useful for small assemblies and detail work such as handrails, but will have insufficient heat reserve for main assembly work. The Antex has a plated iron bit, after a little use with 145° solder a grey oxide appears on the bit that will prevent you from picking up the solder. Touch the bit to some multicore solder and it will flash over the bit, wetting it so that you can continue picking up 145° solder. I have found no problems with mixing the two solders in this way.

I use 145° solder for virtually all assembly work. I prefer it in wire form, available from Branchlines, but it is also produced in stick form by Carrs. I find that its lower working temperature helps to give a quick clean joint. Limiting the build up of heat in components, which may cause distortion. I find that I can hold parts together with my finger ends and make a joint before heat reaches my fingers or other etched parts drop off.

I use 60/40, tin/lead, fluxed multicore electrical solder (melting point about 190°) mainly to keep the iron bits in good condition. As it gives a slightly stronger joint than 145° I sometimes use it for small spot joints on handrail wire, lamp brackets etc, but still use extra liquid flux.

For all brass and nickel silver work I use Carrs green label liquid flux. You will soon get the feel for how much to use but more problems are caused by too little flux than too much.

Before soldering components together, thoroughly clean both surfaces along the join line with a glass fibre burnishing brush. Using your tweezers or a knife blade etc, hold the parts together in the correct position and, with an old paintbrush, run some flux along the area to be joined. Still keeping the parts correctly aligned, pick up a small quantity of solder on the tip of your iron and carry it to the joint (unlike electrical soldering, when you feed solder into the joint). Hold the iron against the joint just long enough for the solder to flash between the parts. Don't let go of the parts until the solder has cooled – this takes from five to ten seconds. To run a fillet of solder along a joint, wait until the solder flashes between the parts and then pull the molten solder along

the joint with the iron tip. Don't load the iron tip with a lot of extra solder, but work the joint in 1" lengths, bringing in small quantities of solder. Brass is a very forgiving material and if you get something out of alignment, use heat from the iron to desolder the joint before starting again. For complicated assemblies, it is a good idea to only tack solder parts together. You can then make adjustments by desoldering until you are happy with the location of parts and then solder solid.

When you need to laminate two or more layers of brass together, align the parts and carefully clamp them together, either in the vice or by holding them with miniature crocodile clips. Run flux around the edges, and then go around with the soldering iron. Clean up thoroughly afterwards.

To fit small parts and overlays on to a larger assembly, such as strapping to a wagon side, when you need to prevent finely detailed areas such as planking becoming clogged up with solder. Tin the back of the small component first, then hold in place on the model and apply flux. Carefully wipe the tip of your iron on a sponge to remove any solder from it (dry iron), and then touch it against the parts to be joined. After a few seconds you'll see molten solder bubbling from the edges. Remove the iron, still holding the parts in place, and allow the joint to cool. An alternative is to use solder paint (I would recommend Carrs 188 solder paste). As the name suggests, this is a flux and solder in one. Simply apply a thin coat of solder paint to the back of the component instead of tinning. Still apply a small amount of liquid flux before you solder the part into place.

Any surplus solder should be removed using a craft knife, I find No 10 curved scalpel blades ideal, then burnish clean with a glass fibre brush. With practice, you'll learn how to use the minimum amount of solder to do the job. Flux is corrosive so, after each soldering session, give your model a good scrub with washing up liquid or Jif. After a day or two, any remaining flux residues will show as a green film, which should be washed away.

To cut parts from the fret, use a sharp Stanley knife on a piece of hardboard or a pointed scalpel blade on a block of softwood. Remove tags and burrs with a fine file.

Three-dimensional parts are formed by folding. On an etched brass kit, the fold lines are normally half-etched on the inside of the fold. You'll be able to fold most parts using smooth-jawed pliers. For longer parts folding bars are desirable.

Other useful tools include a bench vice, a good pair of tweezers, a set of Swiss files (get a full set of cheap ones and then buy quality replacements for the three that you use the most), a pin vice with a selection of drills from 0.5mm to 2.1mm plus a few larger sizes that you use regularly (2.6mm for axle bearings etc), some square-nosed pliers and some very pointed-nosed ones, preferably with smooth jaws. Buy cheap tools first and duplicate the most used ones with quality.

Try to complete all high-temperature soldering before attaching any of the cast whitemetal parts. These can be attached with two-part epoxy resin such as Devcon or Araldite Rapid. Ensure the surfaces to be glued are clean and free of grease.

A better alternative is to solder your white metal castings using Carrs 70 degree low melt solder and Carrs red label white metal flux. The iron should be run at a much lower heat so that you do not melt the castings. I have a domestic light dimmer switch and plug socket fixed to a piece of wood, wired up with a lead and 3 amp mains plug to the input side of the dimmer switch and the output of the dimmer switch into the plug socket (remember to continue the earth). Plug your 40 Watt iron (25 Watt iron won't work) with a clean and freshly tinned bit into this and experiment with adjusting the switch until you find the range of temperature at which the solder melts, but a scrap casting does not. **Note** as the iron is running at a lower voltage it will take longer to heat up, so when you think the adjustment is correct do check a few minutes later on another scrap casting to see that it doesn't melt. Then scribe a mark on the switch knob to indicate this position.

When attaching white metal fittings to brass the surface of the brass must be tinned with 145° solder, to allow the solder to grip. The surface of the casting at the joint should be burnished bright. The casting can then be soldered into place with 70° solder and fillets of solder run into any gaps with no risk of melting the casting.

GREAT WESTERN RAILWAY
TOAD BRAKE VAN Diagram AA7

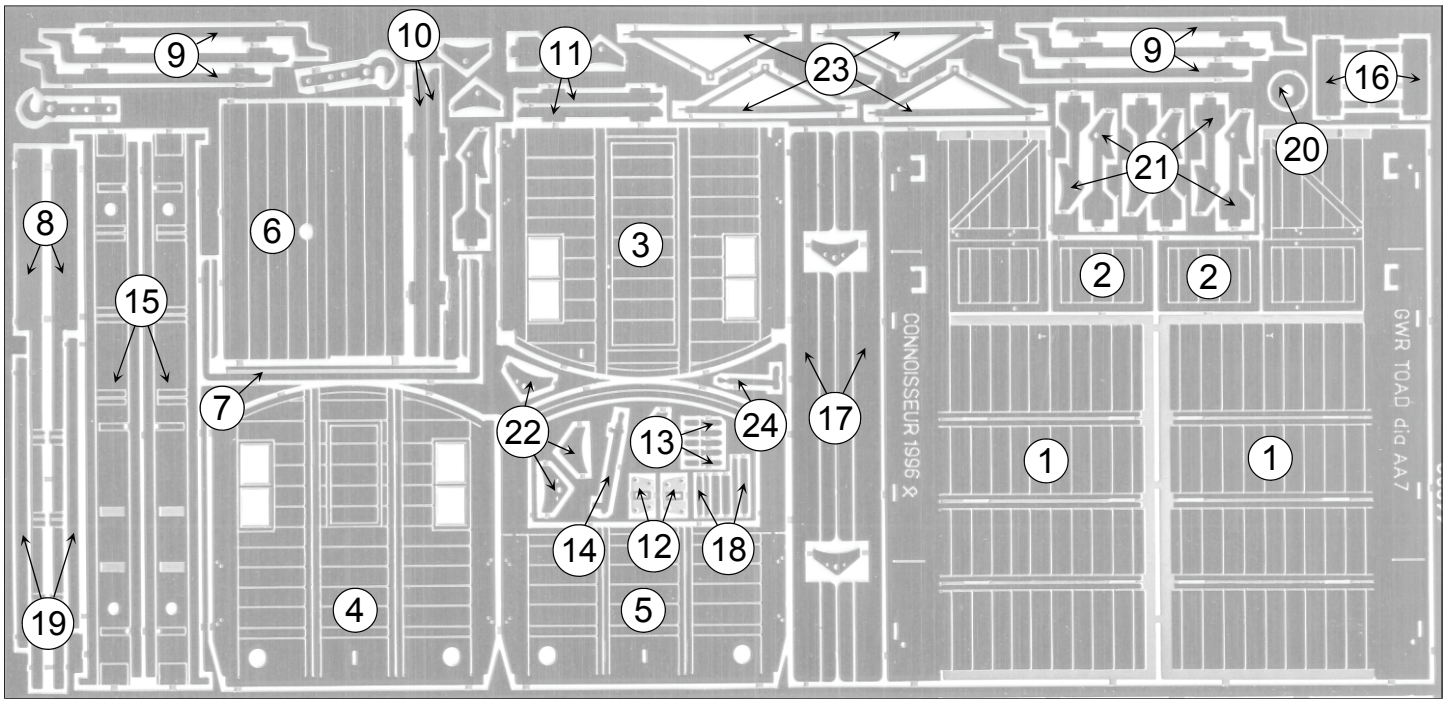
I have tried to reproduce these photographs to scale size so that they will aid positioning of components and the lettering.

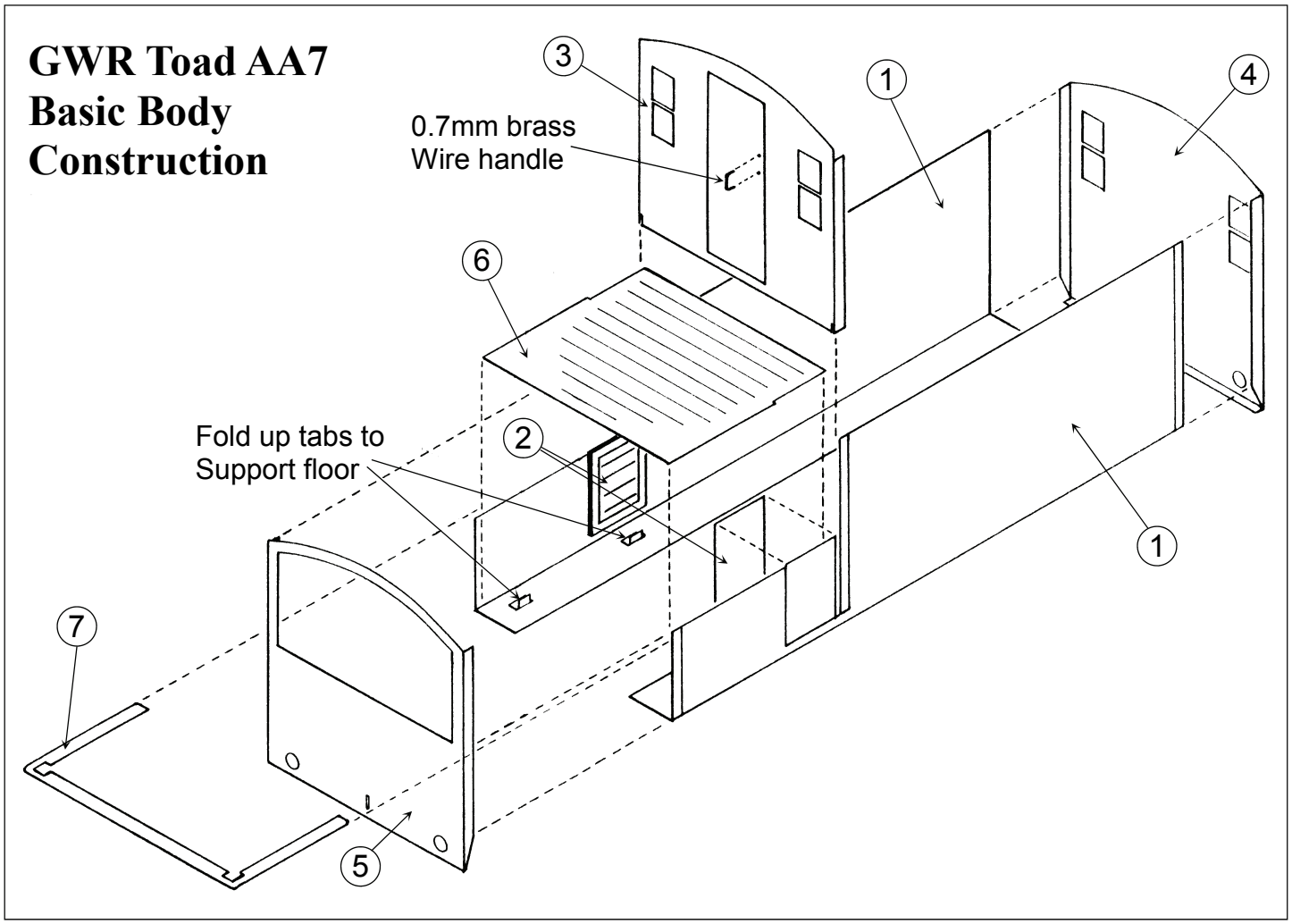
GWR Livery, All over GWR wagon grey (Railmatch enamel spray No1604). Planked floor, dirty wood (Humbrol enamel No 110 with small amounts of a light grey No 64 and gunmetal No 53 or matt black No 33 streaked and blended in to represent the direction of the wood grain). White ends to brake standard handles and sandbox operating levers. White lettering. White through to dirty grey roof.

Standard BR livery, grey body sides and ends. Buffer beams, solebars and below, black. White lettering on black patches and number preceded by W. Note that lettering position varied in BR days and also a number of vans had operating diagrams or restricted user information lettered onto the body side so check photos.

Transfers for lettering are available from the Historical Model Railway Society, 8 Gilpin Green, Harpenden, Herts, AL5 5NR. Also stocked by some specialist model shops. You will require sheet 11, GWR goods vehicle insignia or sheet 25 BR revenue wagons.

GWR Toad AA7 Etched Parts Identification and Suggested Assembly Order

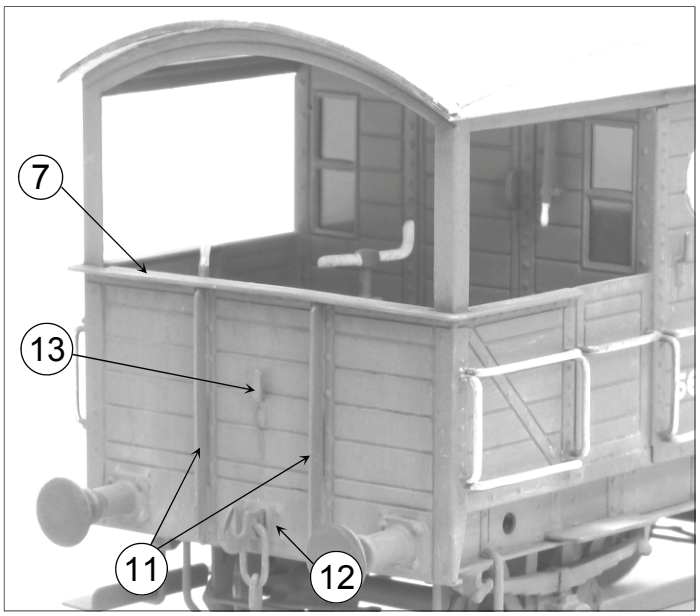


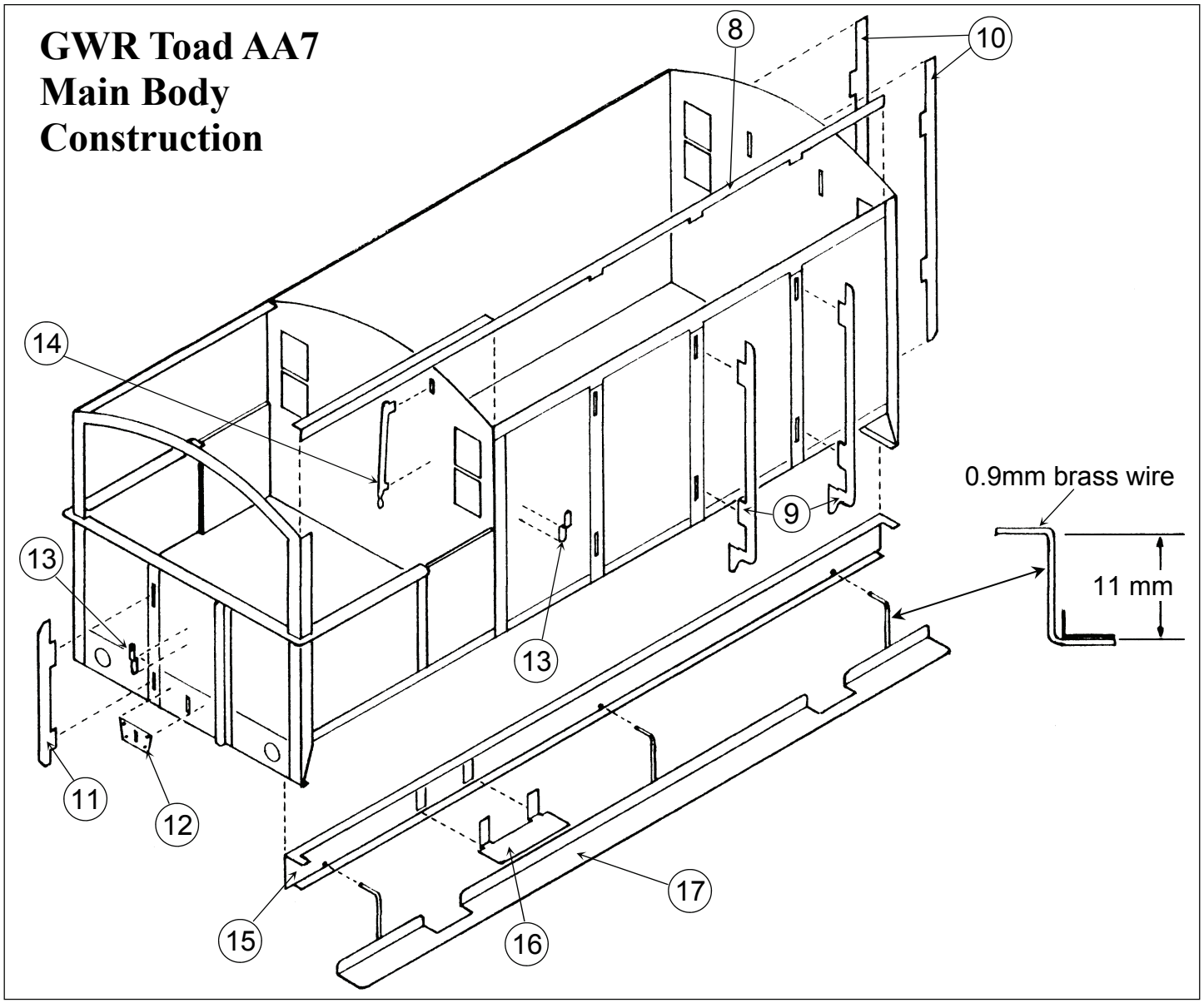


1. I prefer to emboss all the rivet detail of the main body components parts 1,3,4 and 5 before forming any bends. This is best achieved with a rivet forming tool. Alternatively you can use a scriber with the point rounded off slightly on an oil stone. Place the part face down onto a block of softwood and firmly press the point of the scriber down into the half etched hole. Work your way along the row of rivets. You may find that this distorts the parts. So gently correct this by bending back with finger and thumb pressure about every six rivets.

Once all the rivets are formed the next problem is how to bend the parts without damaging the rivet detail. This is a particular problem with the corner plates folds on the ends. The way I overcame this was to line one jaw of my vice with three or four layers of masking tape. Then clamp the part in the vice jaws just below its fold line with the rivet detail pressing into the masking tape. As long as you only tighten the vice up until it holds the part firmly you can gently fold the part through 90 degrees without damaging the rivet heads. You may find that it helps to deepen the bend lines by running a sharp triangular file up them. This will reduce the amount of pressure required to make the fold.

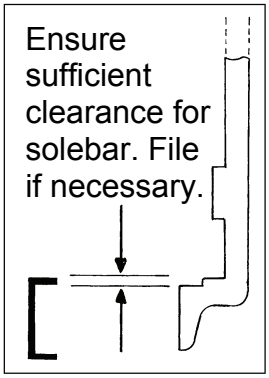
2. Fold through 90 degrees the bottom edge of the sides (parts 1) and then solder into place the inside detail of the veranda doors (parts 2). Fold through 90 degrees the corner plates on the cabin end (part 3) and the van ends (parts 4 and 5) also fold the bottom edges of the buffer beams. Fit a door handle made from 0.7mm brass wire and then solder the cabin end (part 3) so that the corner plates locate into the half etch on the sides. Repeat for the two van ends and then check with an engineers square that the body is square and not twisted. Then fit the veranda floor (part 6). This is supported by fold up tabs in the bottom strip of the sides. Fit the veranda sill (part 7) by gently springing over the van end.





3. Emboss rivet heads into top strips (parts 8) and then fold the end section to form a 90 degree angle. Then locate the strips into the etched rebates along the top of the sides with the end of the angle section fitting behind the corner plate of the veranda end. It may be necessary to file the end of the strip slightly to achieve a snug fit as you don't want the strip to push the top of the veranda end outwards.

Fit the side stanchions (parts 9) so that they locate into the etched groove down the centre of the riveted panels. Ensure that there will be sufficient clearance for the top of the solebar to slide into place later. I found that I had to dress off the etching cusp with a flat file to achieve this. Tack solder the two tabs from the inside of the body. Then run plenty of liquid flux down the etched groove and then again from the inside of the body re-solder the tack joints properly. The flux should pull the solder through the slots and flash it down the groove soldering the side stanchion solidly without flooding the rivet heads with solder as would be the case if you soldered the stanchions from the outside. Then fit the end stanchions (parts 10 and 11) in a similar way.

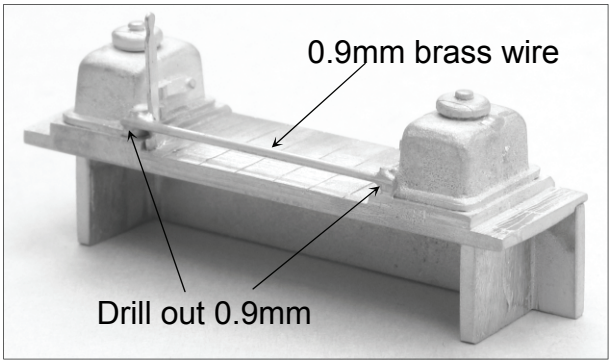


Fit the coupling plates (parts 12) so that the coupling slot in the plate and buffer beam correspond but ensure that the slot remains free of solder. Form up the lamp irons (parts 13) and reinforce the folds with 60/40 solder. Fit the lamp irons to the body sides and ends noting that there are etched marks to help with positioning. Fit the cabin sandbox operating lever (part 14) into the slot in the cabin end.

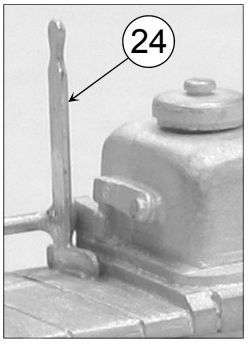
4. Emboss rivet heads on the solebars (parts 15) and then fold the edges through 90 degrees. Emboss rivet heads on the supports for the top footsteps (parts 16) and then fold the supports through 90 degrees. Solder the footsteps to the solebars locating the supports into the etched rebates. Then fit solebars to van by twisting into place and fitting hard up against the bottom of the side stanchions.

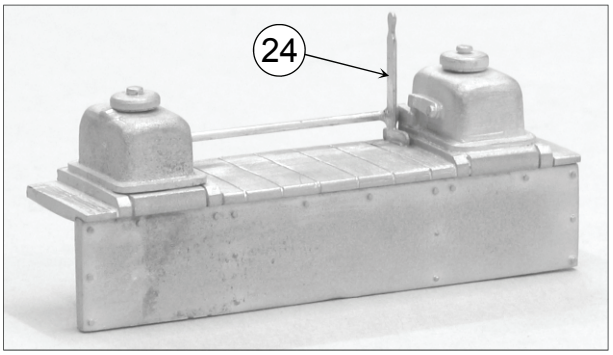
Drill out pilot holes and fit handrails made from 0.7mm brass wire. The cabin side horizontal handrails are spot soldered to the side stanchions. You may find it helpful to slip a piece of card between the body side and the handrails to help space them out at an even distance from the body side. Snip off the tails of the wire with side cutters so that they are flush with the inside of the veranda.

Fit together the two castings to form the Veranda combined locker and sandboxes. Drill out 0.9mm the ends of the sandbox operating cranks. If you use a sharp drill and support the end of the crank with your thumb nail you should be able to drill out the ends of the cranks without snapping them off as I did. Then fit a length of 0.9mm brass wire through the cranks to represent the linking rod.

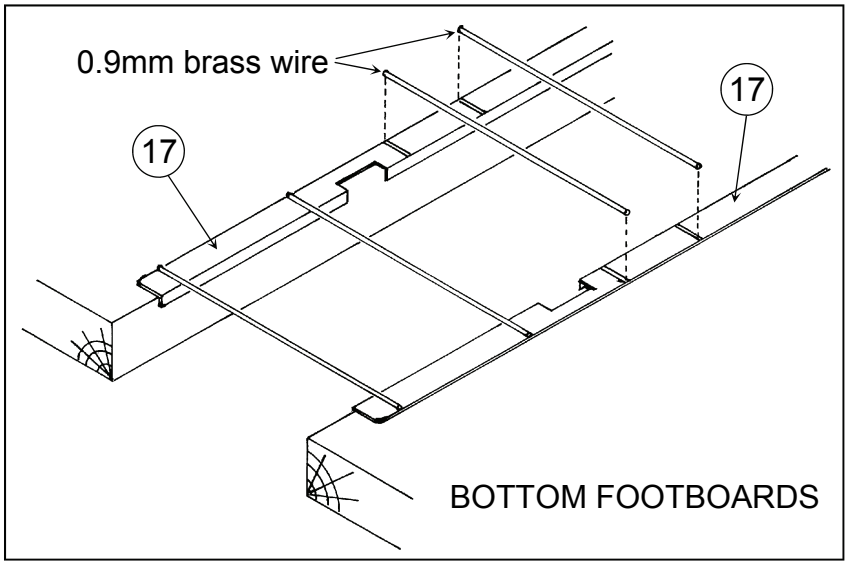


Fit the etched operating handle (part 24) hard up against the brass wire and right hand sandbox. Then fit the sandbox/locker casting into the veranda hard against the veranda end (you should be able to trim the tags of the end stanchions flush with side cutters) You may have to file the ends of the locker casting to achieve a snug fit.





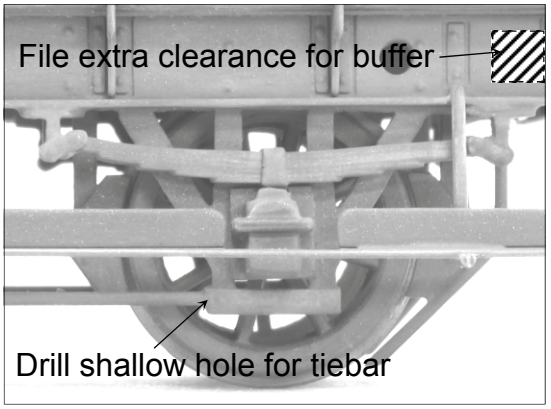
5. Take the bottom footboards (parts 17) and fold the back edge through 90 degrees. Then place along the edge of two off cuts of 2”X1” wood and fix in place with drawing pins. Place the two pieces of wood opposite each other, parallel and about 2” apart. Solder across lengths of 0.9mm brass wire located into the etched grooves on the footboards. As the footboards can be a little vulnerable to damage I would suggest using 60/40 solder for these joints. Then snip the wires down the centre to separate into two footboards with hangers.



Now clamping the footboard at the wire joints in the jaws of a vice and fold the wires through 90 degrees. Try to make this fold as tight as possible. Then make a second fold 11mm from the bottom of the footboard to form Z shaped brackets. Run a 1mm drill through the holes in the solebars to clear them and then fit the footboards. Solder the wires with a good solder joint (again I use 60/40 solder for strength) into the holes. The lengths of wire that project through the solebar will interfere with the fitting of the cast axle guards later in the construction so snip them off and dress back flush once you are happy with the position of the footboards. Now is also a good time to open up with a tapered reamer the holes in the buffer beam to accept the cast buffers.

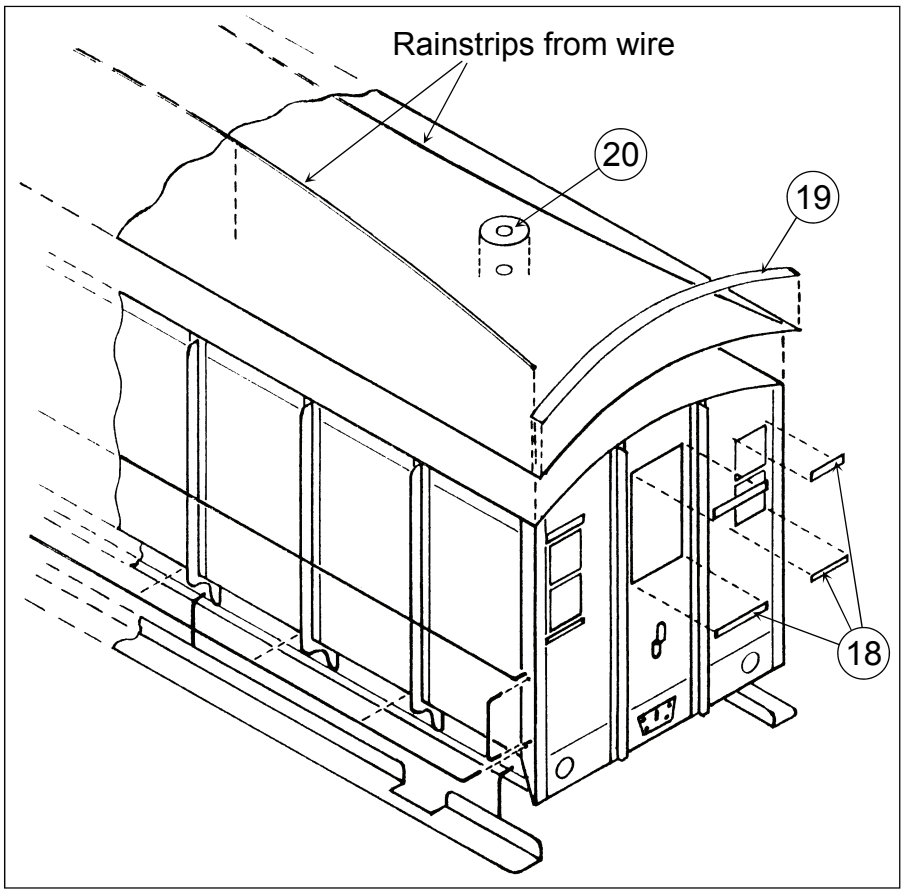
6. Fit axle guards and wheel sets. My casting technology is not very sophisticated and I never seem to be able to cast axle guards cleanly, so clean out any flash between the W irons with a sharp pointed scalpel blade. Drill out to 2.6mm diameter the hole to take the brass axle bearing (go carefully as you don’t want to drill through the front of the axle box). This hole is formed by a small rubber peg in the mould which tends to flex as metal flows into the mould cavity and you will probably find that the hole is not quite square to the back of the axle guard. To correct this use a drill held in a hand pin vice (chuck) and by applying a gentle sideways pressure as you drill out the hole, you will be able to square it up. Then fit the axle bearing into the slightly oversize hole in the axle guard with a blob of Evostick, (have a dry run first with axle guards and wheel sets to check that all will fit OK) as this takes a little time to set you can make adjustments to the axle guards and then leave the wagon on a flat surface for the glue to set.

It is also a good idea to file a notch about 3mm deep into the top plate that locates against the back of the solebar to give extra clearance for the buffer shank when it is fully depressed. This should prevent any tendency for the buffers to jamb when depressed. There is also a tiebar between the axle guards that is made from 0.9mm brass wire. This can be simply spot soldered into place after fitting brake gear but I prefer to drill shallow holes now that the wire can be sprung into to give extra strength.



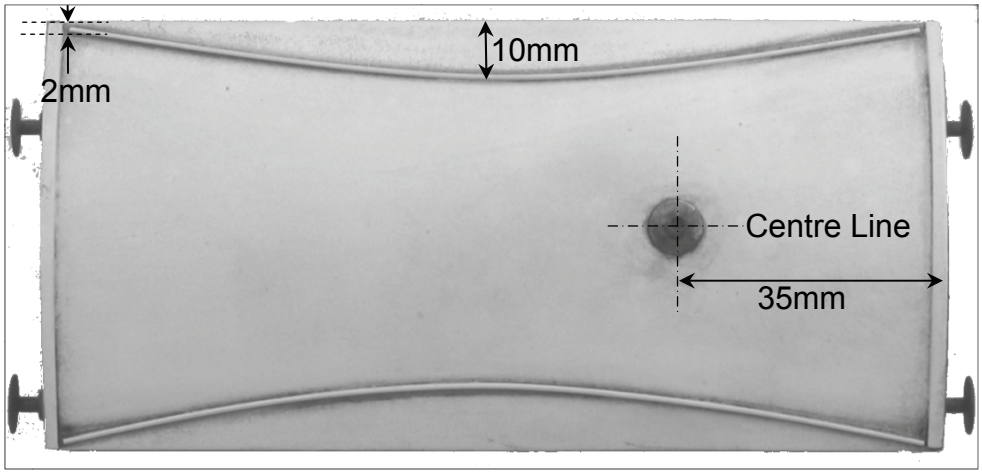
Slip wheel sets with the axle guards on between the solebars and tack solder each axle guard with low melt solder to the solebar (the cut-outs in the footboards will help with positioning). Check that the axles are parallel and the wheel centres are about 91mm apart. Place the van onto a flat surface and adjust if necessary by re-soldering each axle guard until the van sits without rocking, when happy solder solid. If necessary drill through the two horse hooking holes in the solebars to clear.

7. Fit end window rainstrips (parts 18) wide ones to the top and narrow to bottom.

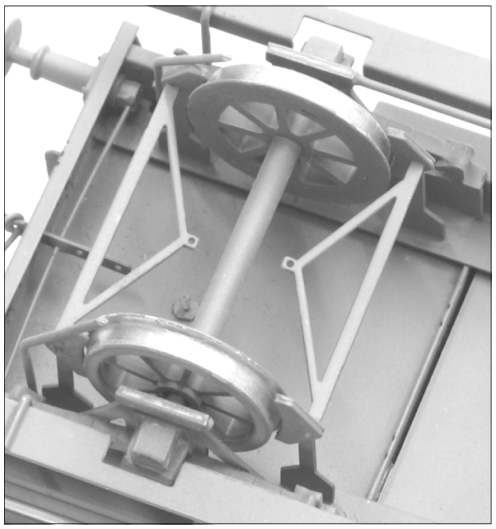


I have passed the roof through rolling bars but it will probably require a little hand forming to get the final shape. Work it with fingers and thumbs over a off cut of water pipe. Then fit the end strips (parts 19) flush with the ends of the roof. Mark centre and end points of the rainstrips on the roof and fit 0.7mm wire to represent this. I would recommend spot soldering a straight length of wire that is parallel to the roof edge at the centre point first and then moving each end of the wire to the end point. Then holding into place with a knife point spot solder the ends. The wire should have naturally formed an even curve. Then using plenty of flux and holding with the knife point solder the entire length of wire to the roof. Start at the end points and working short sections from alternative ends with the iron bit on the inside of the curve work to the centre point. In this way you will reduce the tendency for the wire to expand with the heat and by working on the inside of the curve any expansion should still maintain an even curve. Then blend into the roof with a fibreglass brush.

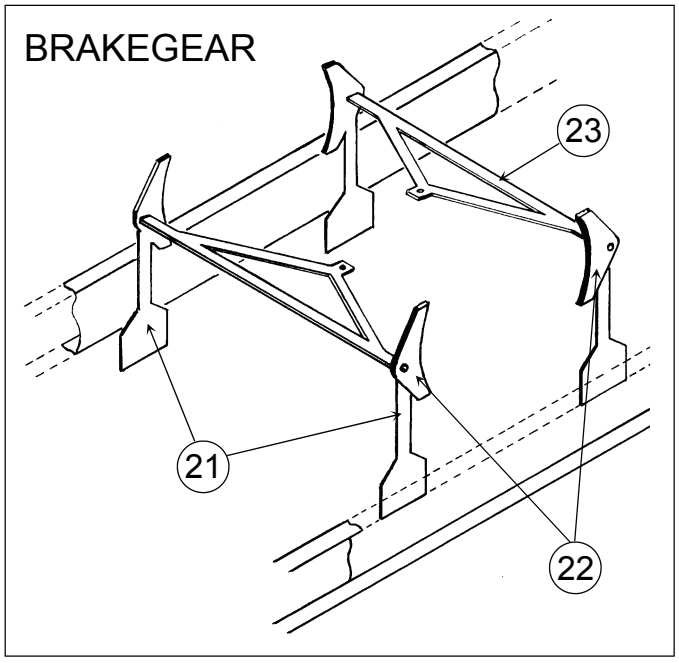
Drill hole in roof for cast chimney and fit (part 20) over hole. Then fit cast chimney from underside. If you don't want to glue the roof into place using Evostick after painting (this glue joint can be split with a knife blade if you ever need to get inside the van). You may wish to fit some strips made from scrap etch to the underside of the roof so that it fits into the body like an English snuff box lid.

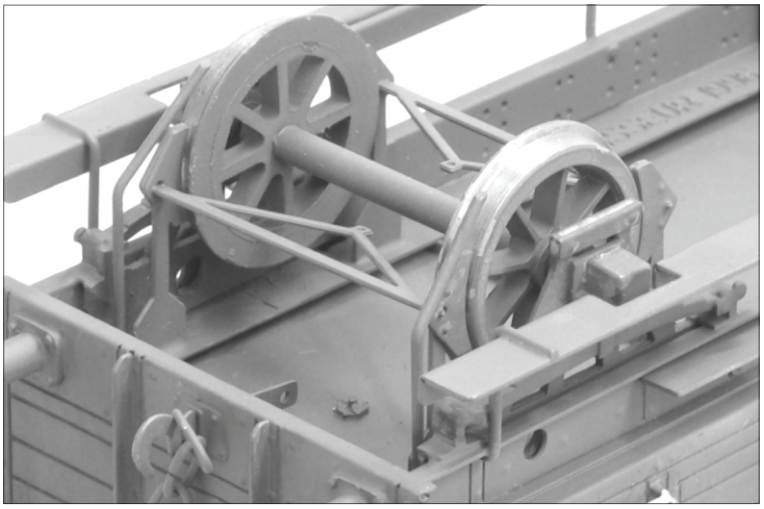


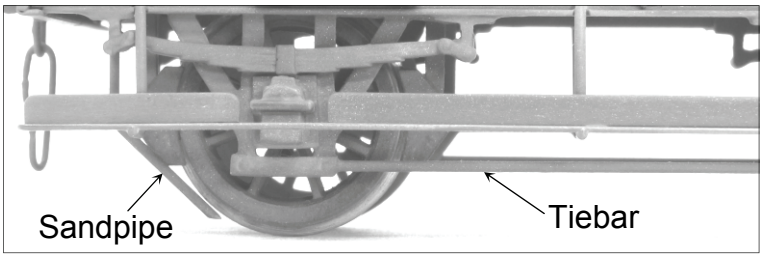
8. Emboss the two bolt heads and then laminate the brake blocks (parts 22) to the brake hangers/blocks (parts 21) making up four left hand and four right hand ones. Solder the base of these into the slots in the underside of the body so that they line up with the wheels and sit just clear of the wheel treads. I find it helpful to hold the brake block with a miniature electrical crocodile clip.



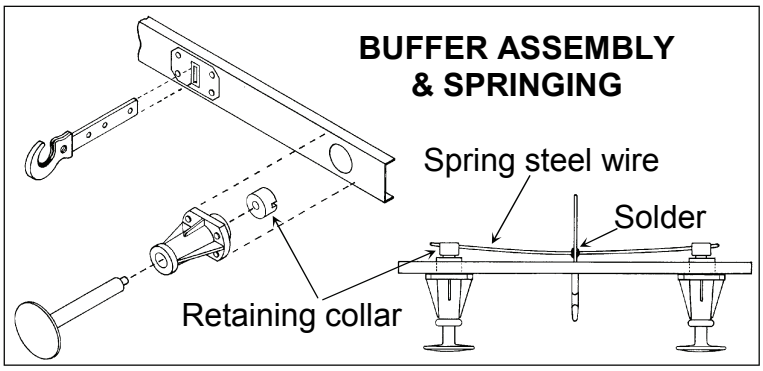
Spring brake yokes (parts 23) between brake hangers and solder so that they run towards the axle. The rest of the prototype brake linkage is not really visible from normal viewing angles so I don't bother modelling it. Make sand pipes from 0.9mm brass wire. The top ends are mounted into etched holes on the underside of the body and the bottom it trimmed at an angle to be just clear of the rail. Fit axle guard tiebars made from 0.9mm brass wire.



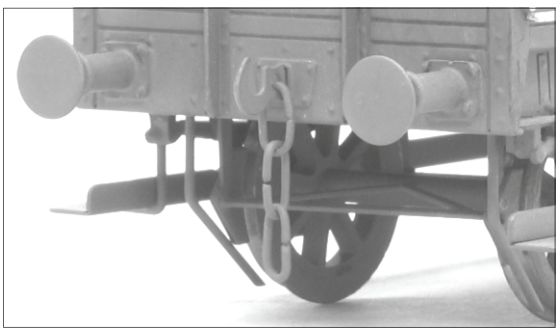




9. Drill out 2.1mm the buffer bodies to take the cast head/shank. I hold the drill bit in a pin vice (chuck) and grip the buffer body between finger and thumb. Drill through the body from each end so that the hole breaks through in the middle. Use a little spot of spit on the end of the drill (some more technical people have a block of furniture polisher's bees wax that they smear on the drill end). This will prevent the drill wandering in the white metal and breaking through the side of the buffer (a little lubrication on the drill will make drilling holes in any white metal casting more accurate). Then fit the shanks through the buffer body, snip off some of the narrow end of the shank to leave just over 1mm from the step and solder a retaining collar onto the shank.



Close up the coupling links by holding the curved end in the jaws of a pair of round-nosed pliers in one hand and squeeze the flat parts of the link parallel with long-nosed pliers held in the other hand. Once you have six even-shaped closed links, you can open each one slightly and thread three together.



The last link passes through the hole in the coupling hook. I reinforce the joint of each link with a spot of 60/40 solder.

Pass the coupling hook through the buffer beam slot and retain it with a length of spring wire. Polish the centre of this wire with emery cloth first so that you can solder it to the coupling hook shank once you are happy that the buffers spring freely.

Now fit the cast brake standard locating into the hole in the veranda floor. When I had the pattern made for this I asked the pattern maker to over emphasise the handles to help them cast and give them strength. This he did and it cast beautifully. So much so that I took a casting and reduced the handles and placed it in the next mould. So you should have two brake standard castings and you can use which one you wish. Personally I still prefer to fit the slightly over scale one.

10. Painting is a vast subject that cannot be covered fully here. The important thing with a metal model is to get a good base coat of primer. Hopefully you have been cleaning up and washing the model at the end of each modelling session but it will still need thoroughly cleaning before painting. I give my models a good scrub with a stiff-bristled paint brush in a sink full of hot water, as hot as your hands can bear, and cheap washing up liquid (the expensive stuff that's kind to your hands has an oil in it that will stop the paint keying to the metal). If you know somebody who works in catering and can scrounge you some industrial-strength liquid this is better still. Then rinse the model a couple of times in clean warm water and place in a dust-free box to dry. I use car aerosol primer and Halfords grey primer is one of the best. For the best results you want to spray at room temperature (25°C) on a dry day, avoid cold, damp or humid days. I find it helps to warm the model to about 30°C (put it in the airing cupboard overnight) and I warm up the paint tin by putting it onto a radiator (about 40°C, but use your common sense as I don't want anybody blowing themselves up). I find it best to prime the model in two light coats, about 15 minutes apart and then leave for 48 hours to harden off (in the airing cupboard in a dust-free box).

I brush-paint my models with Humbrol enamel. For years I just stirred it up and painted straight from the tin but I was never completely happy with the results. Recently two things have transformed my painting. The first was a copy of Martyn Welch's book, The Art of Weathering, Wild Swan Publications, ISBN 1 874103 11 9. Martyn's basic techniques are very useful and almost foolproof. Martyn's method of mixing coarse talcum powder into the paint to give a textured roof is particularly effective. The second thing is to mix the paint in the tin and then transfer it to a palette (a sheet of clean plasticard) with blobs of lighter and darker shades of paint surrounding the main colour. Then work the paint with the brush on the palette, slightly varying the tones of the paint. This seems to totally change the texture of the paint and the way it goes on and covers on the model.

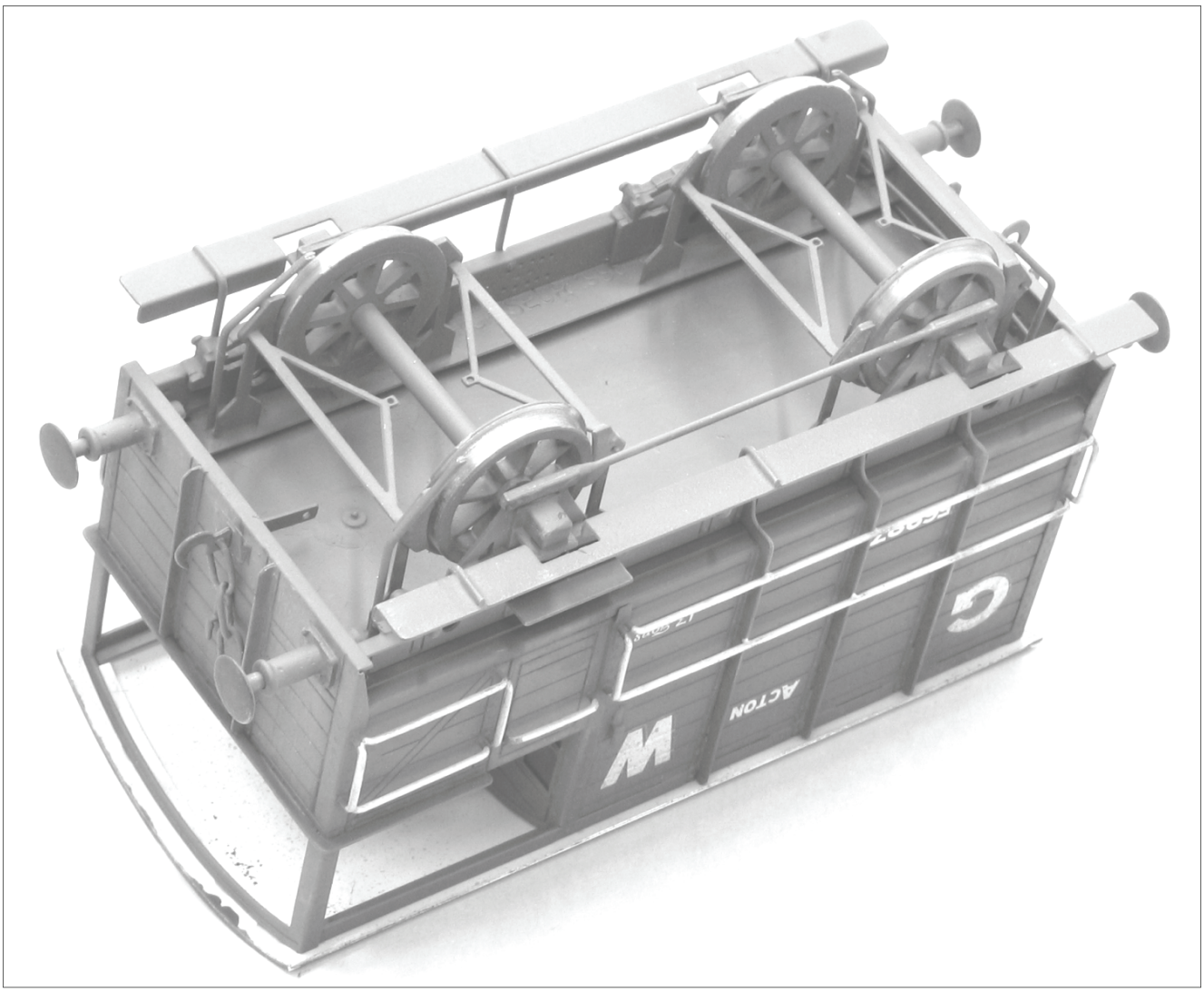
Make a floor from the quality card that the etch was packed onto and glue inside the cabin with Evostick. I prefer a card floor as this helps to deaden the rattling empty box noise that you can get when the wagon is running on a layout. For glazing the end windows, you can use clear plasticard, but I prefer to cut flat sheets from the clear blister packs that many items are packaged in nowadays. This has a textured surface probably caused by the moulding process, which gives it a slightly opaque quality that I think represents dirty windows just right.

For more information and photographs of the prototype brake van I would recommend GWR Goods Wagons, Atkins Beard & Tourret, Tourret Publishing, ISBN 0-905878-07-8. Get it from your local library via their book order system.

Alternatively if you can get a copy of Model Railway Constructor May 1976, or the original reference book, is A Pictorial Record of Great Western Wagons, J.H.Russell, Oxford Publishing Co, ISBN 902888 01 3.

12 vans were built to lot number 206 in 1898 and given running numbers 56985-56996. Originally the vans were 13 tons but later many of these vans had extra ballast added to bring them up to 16 tons so check photos of the period that you are modelling.


G
ACTON
W
56987
13 Tons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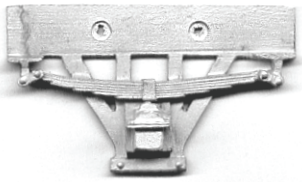
13 Tons

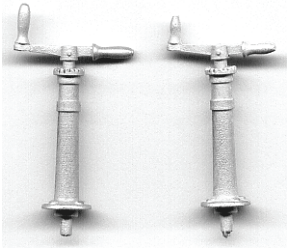
Casting Identification and Parts Check List

3 X 10” length of 0.9mm brass wire. 5 X 10” length of 0.7mm brass wire. 1 X 6” of spring steel Wire.

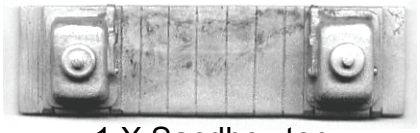


4 X Axleguards

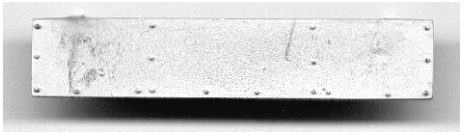
6 X Coupling links



1 X Brake standard
Two types



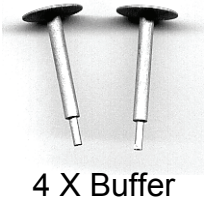
1 X Sandbox top



1 X sandbox front

4 X Buffers

4 X Buffer
Retaining
Collars

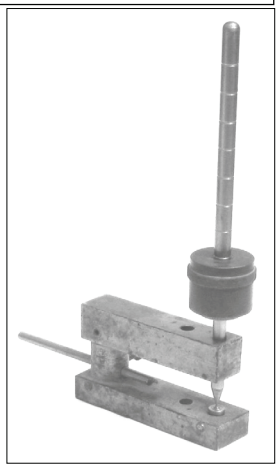


4 X Buffer
Heads/Shanks

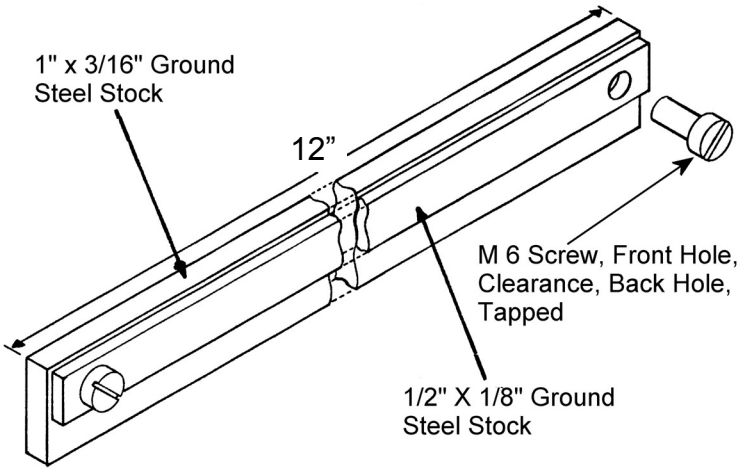
1 X Chimney

I try to include extra castings when I make the moulds for a kit to cover failures so hopefully you will have some spare castings.

Bolt Head and Rivet Forming Tool



Although a very reasonable job can be done with a scriber point, a rivet forming tool is very desirable if you are going to do a lot of kit building. These are produced by a number of different people but I use and would recommend the one produced by Dick Ganderton, Graskop, Dewlands Road, Verwood, Dorset, BH31 6PN, Tel 01202 822701. It is available with a number of different sized punches and anvils but if you were only going to get one size then I would recommend the 7mm scale 1½” diameter. I have got ten years hard use out of mine so far so this is an ideal tool to put onto your Christmas present list.



Folding Bars

You will find a set of these very useful and here are details of the set that I have made for myself, in fact I have made three sets of different sizes. The dimensions or materials are not critical so make yourself a set to suit the materials you can get hold of. The important thing is that you can clamp the part along its entire length, with the etched fold line just above the front bar. Then clamp the bars in the jaws of your vice, a couple of 1” G clamps are also useful for long folds, and laying a steel rule at the back of the part to help transfer the pressure from your fingers evenly, pull forward to make the fold. Once the fold is close to 90° you can finish by pressing down on it with a block of wood and moving the block along the fold with a stroking action or by giving gentle taps with a small hammer on the wood block. Occasionally it is necessary to emboss bolt heads onto a part before folding, by lining the face of one of the bars with two or three layers of masking tape, you can still clamp the part without crushing the bolt heads but you wont get such a tight fold, so deepen the fold line with a triangular file.

Can You Help Me?

If you have enjoyed building this kit and have been satisfied with the quality, I would be most grateful if you could recommend it to your friends and fellow modellers. Although my kits are not perfect, I try to put a lot of time and effort into producing them. If I can get extra sales of a kit through customer’s personal recommendation and I find that word of mouth is the best form of advertising. This will help me to put extra time and money into developing the next kit. Hopefully this will give me more satisfied customer to recommend my kits to their friends.

If you are not happy with this kit then please tell me. Hopefully I will then be able to help and sort out any problem.

Best Regards And Happy Modelling

Jim McGeown