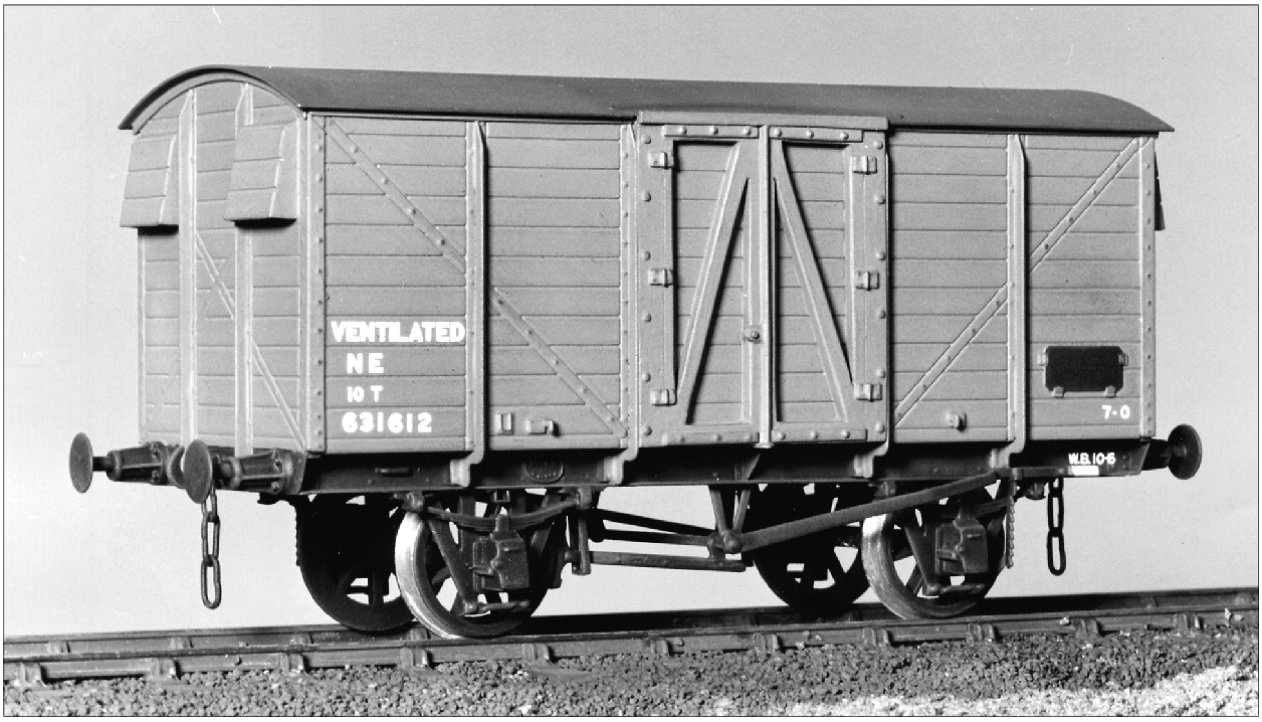
CONNOISSEUR MODELS

- 0 Gauge -

Great Eastern Railway

10 Ton Ventilated Van



Prototype. Large numbers of these vans were built by the Great Eastern Railway basically to the same design, but with detail differences. This Kit represents a 19 foot over the headstocks, unfitted version .These vans lasted well into BR days .

KIT. Construction is very straightforward. There is a lot of push out rivet detail and a number of small detail parts. A pre-formed brass roof is included.

Wheels, 3'1", (7121) are required to complete, Available from Slater's Plastikard, Old Road, Darley Dale, Matlock, Derbyshire, DE4 3PG, Telephone 01629 734053.

Connoisseur Models, 1 Newton Cottages, Nr Weobley, Herefordshire, HR4 8QX, Telephone 01544 318263

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 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 fiber 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.

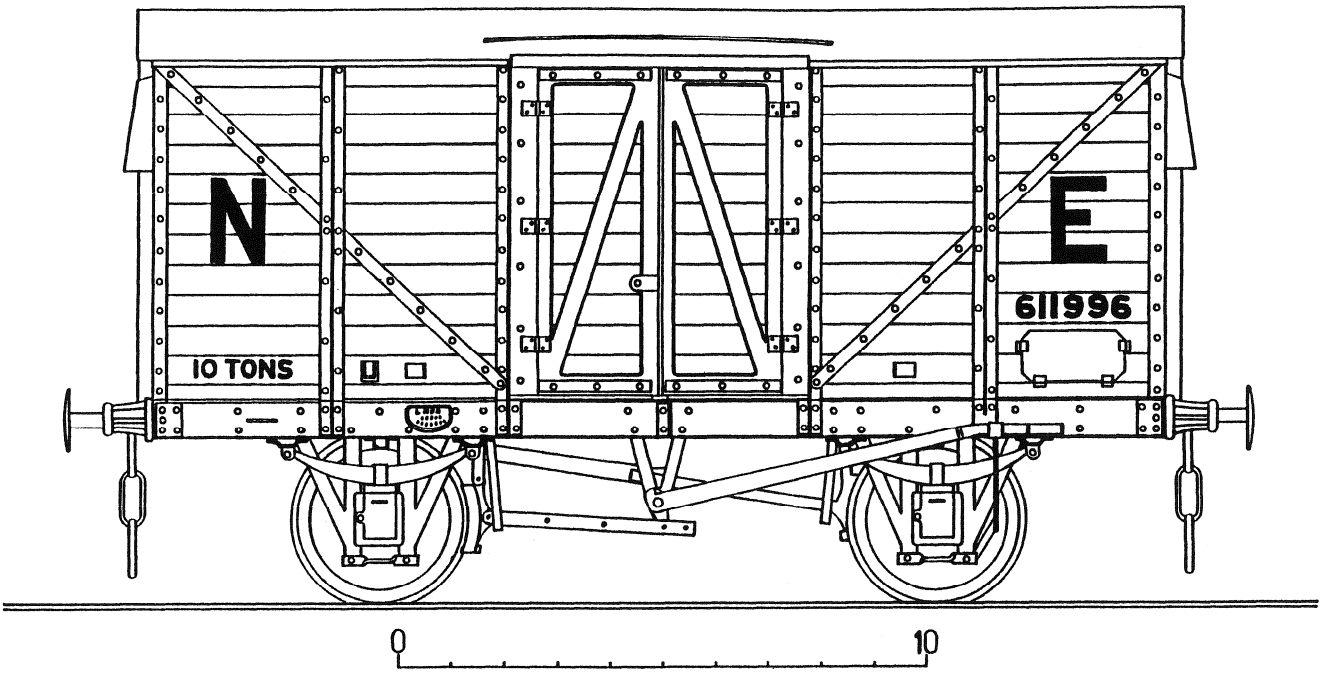
Three-dimensional parts are formed by folding. On an etched brass kit, the fold lines are normally half-etched on the inside of the fold. You'll be able to fold most parts using smooth-jawed pliers. For longer parts folding bars are desirable.

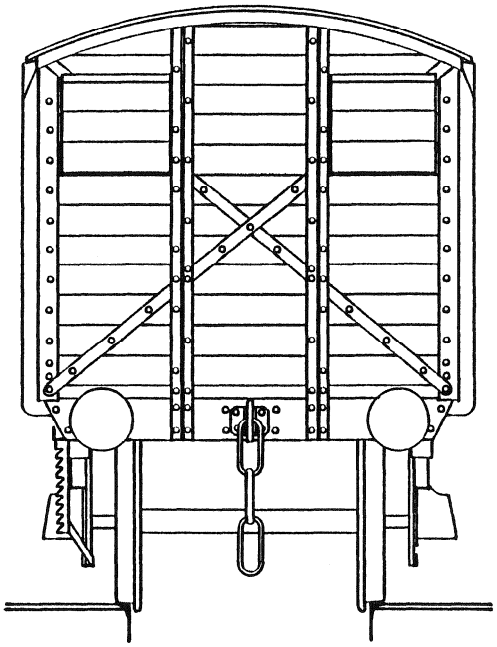
Other useful tools include a bench vice, a good pair of tweezers, a set of Swiss files (get a full set of cheap ones and then buy quality replacements for the three that you use the most), a pin vice with a selection of drills from 0.5mm to 2.1mm plus a few larger sizes that you use regularly (2.6mm 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 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.





Livery

GER ,dark grey bodywork with white lettering ,black below the sole bar and running gear .

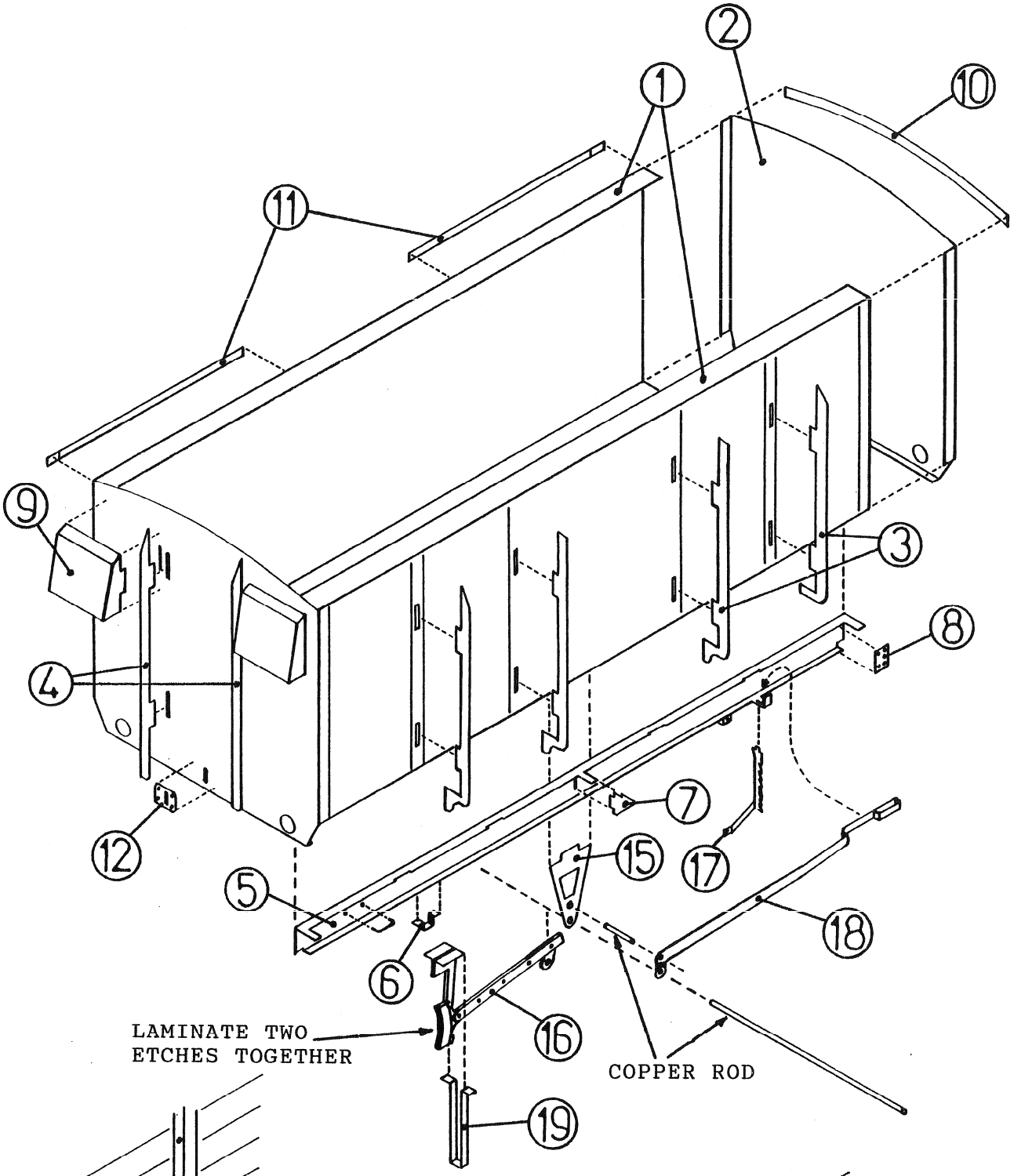
LNER grey bodywork with white lettering . black sole bar and running gear . White lead or dark grey roof .

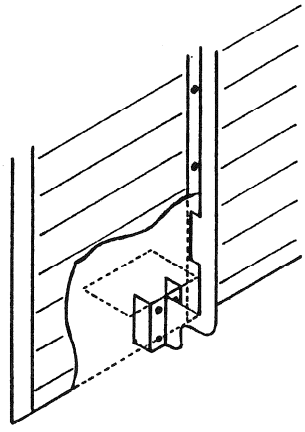
BR light grey bodywork with white lettering on black patches .black sole bar and running gear . Dark grey roof.

Sample running numbers, 632795, 612841, 612630, 630616. In GE days the 6 would be dropped , 32795. In BR days E would be added , E632795.

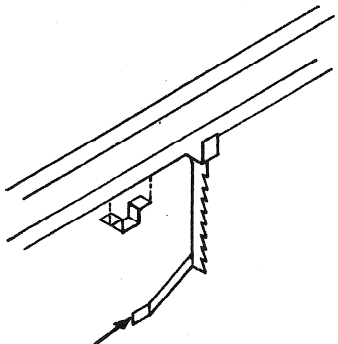
References pictorial record of LNER wagons, Peter Tatlow ,OPC,ISBN 0-92888-92-7.The 4mm wagon ,part 2,Geoff Kent ,Wild Swan, ISBN 1-874103-24-0.

HRMS Transfers ,Brian Webb (volunteer sales officer) ,8 Gilpin Green ,Harpenden ,Herts.AL5 5NR.
Sheet 12 ,LNER Goods Vehicle Insignia. Send SAE for order form .



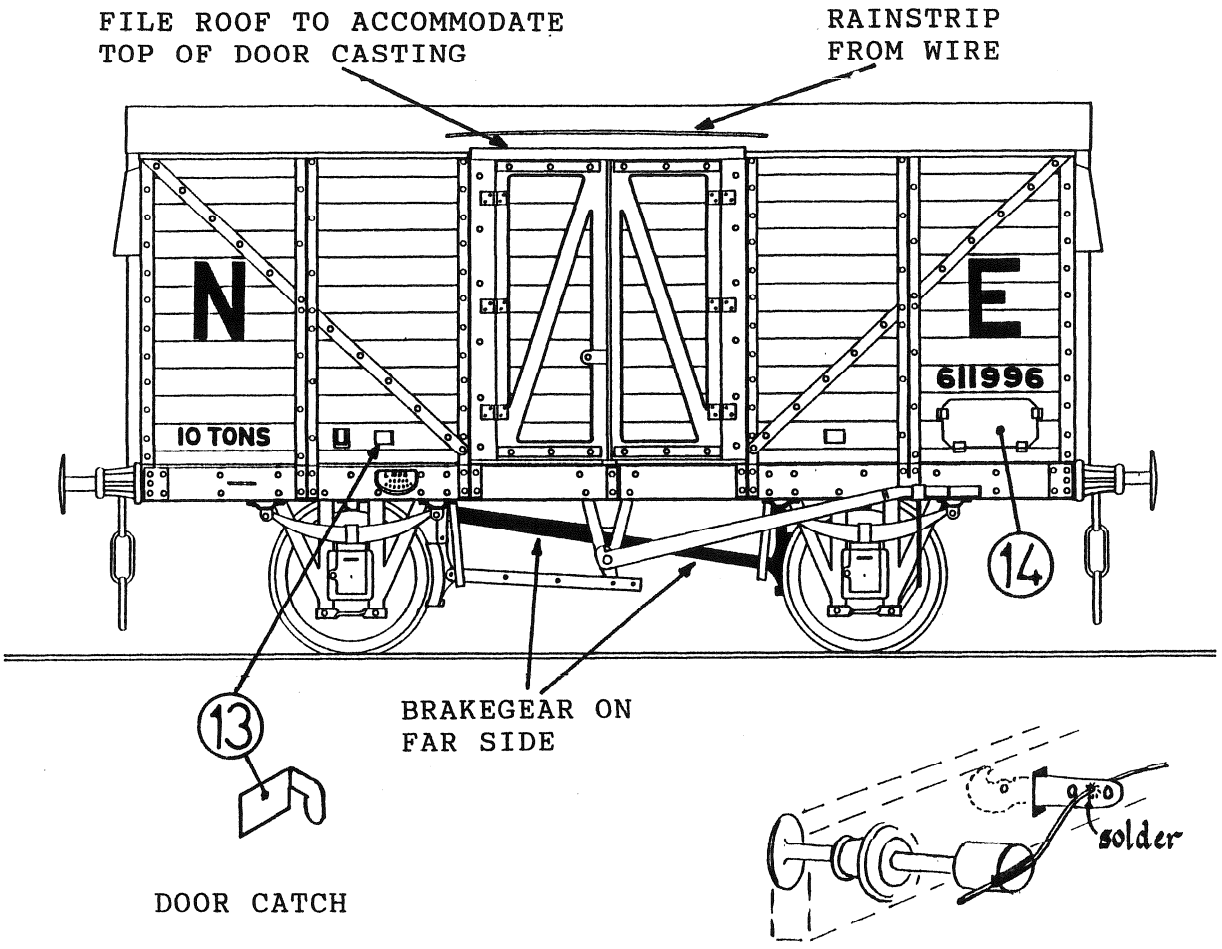


SIDE STANCHION DETAIL



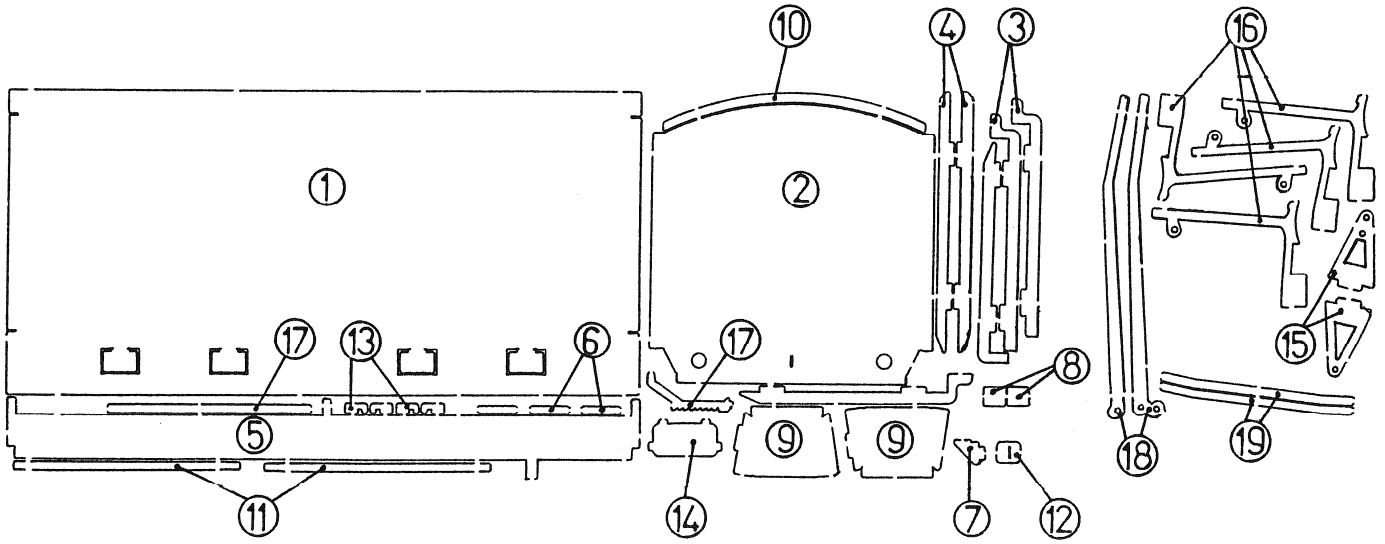
SOLDER BEHIND AXLEGUARD

ALTERNATIVE BRAKE GUIDE



DOOR CATCH

BUFFER AND COUPLING
SPRINGING



Suggested assembly order

1, Push out all the rivet detail ,with the parts unformed .This is best achieved with a rivet forming tool .Alternatively , you can use a scriber with the point rounded off slightly ,on a oil stone .

Place the part down onto a block of soft wood .firmly press 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 ends .

The way I overcame this was to line one jaw of the 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 to 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 and the top edge of the sides ,**parts 1** ,fold through 90 degrees ,the corner strapping and buffer beam ,on the ends, **parts 2**. Also fold up the sole bars ,**parts 5** .

Solder ends to sides ,to form up the body of the box. Tack solder joints first and offer up the sole bars , just to check to check that they will fit. Make sure that every thing is square before soldering corner joints solid .

Now fold down from the bottom of the sides the side stanchions bottom blocks . On the prototype , the bottom of the stanchion was spaced off the sole bar by wood blocks .

Now fit side stanchions ,**parts 3** ,note 3 different types and end stanchions ,**parts 4** .

3, Fold up the spring stops **parts 6** and fit into etched rebates on the sole bars .

Then fit the triangular bracing plates ,**parts 7** ,filing the tab flush with the back of the sole bar .

Fit the sole bars ,these can be twisted into place between the buffer beams .fit hard against the side stanchion blocks .

Then fit the riveted plates ,**parts 8**,at the joints between sole bar and buffer beam. These should also hide any gaps. Fit the horse hook tether made from 0.7 brass wire .

4, Fold up and fit the end ventilators, **parts 9**. Fit end /roof batten ,**part 10** and side/roof battens ,**parts 11,** trim at corner joints.

Fit coupling plates **parts 12** ,and door catches ,**parts 13** .fit black/ notice board ,**part 14**, the position varied ,so check against your photos .

Now fit the cast door framing .the casting will have distorted slightly , so a little filing will be needed to get it to fit between the side stanchions .

The strip at the top of the cast door goes slightly above the roof ,to represent a rain strip .Offer the roof to the body and you should find that you will have to file the roof slightly to fit it between the tops of the castings.

5, Fit vee hangers ,**parts 15 .**Laminate the two parts of the brake gear together ,**parts 16**, to make up a single brake block and rod for each side of the wagon .

Use the main drawing to work out which rod is for each side of the wagon .Fit the copper rod through the vee hangers and cranks on the brake push rods . Tack solder the brake gear in place .The fitting of the wheels is made a lot easier by using the brake gear as a guide . The brake gear can then be adjusted to match the wheels .

Drill out a hole in the axle guards ,to take the wheel bearings .There are some etched washers to space out the wheel bearings from the axle guard to reduce slop in the axle .

Tack solder two axle guards to one sole bar ,fit the wheels then second set of axle guards to the other sole bar (check axles are parallel) place on a flat surface and adjust until wagon sits without rocking .when you are happy with results solder solid .

Now fit brake lever ratchet guide ,**part 17** . An alternative pin guide is provided and some photos show vans fitted with this type (a later LNER replacement ?) .Fold up and fit the brake levers ,**parts 18** .Then the safety loops **part 19**.

6, Fit buffers and couplings. drill out buffers to accept spindle .Fit collar to end of spindle , then fit into slot in buffer beam and then fit spring wire .

Fit the roof ,this can be soldered into place . Fit rain strips ,made from wire .fit etched label clip and number plate .

Additional notes

After building and correcting the test etchings ,I wrote the instructions then I thought it would we a good idea to build a production kit to make sure I had covered everything .There where a couple of things that I missed .

The tops of the centre side stanchions need to be filed to match the curve of the roof , before the door castings are fitted . Try the roof in place and you will see what I mean .

The backs of the sole bars just foul the buffer location holes in the buffer beam .File a flat onto the buffer casting .also the retaining collar if this binds on the back of the sole bar .

The hole in the cast axlegaurd into which the brass bearing fits is formed by a small rubber peg in the mould .This tends to flex as the 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 .

Use a 2.7mm drill in a hand held pin chuck 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 oversized hole with a blob of evostick .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 until the glue has set.

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