Meon Valley Models' Gloucester RC&W wagon bodies

Required components

In addition to the Gloucester body kit, you will require the following:

- Brassmasters Gloucester 1905 subframe – including the wire etc. listed in those instructions
    - This is also appropriate for earlier build dates when used with our Gloucester bodies
- Sanding block (a flat file can also be used with care)
- Scalpel or flush cutters
- Cyanoacrylate glue ('superglue')
- Your choice of wheels and couplings
- Paint, transfers etc, to complete

Brassmasters underframe

Meon Valley Models' Gloucester wagon body kits are designed to use the subframe available from Brassmasters (ref. R042). This etched brass component enables a fully sprung underframe to be built with a choice of either one or either side (independent) brakes.

Preparation

Having unpacked the kit you should have the following resin printed components:

- Body in your chosen style
- Floor – one side is planked, the other has four raised locators that engage with the Brassmasters subframe
- Detailing pack
    - A set of four spring and axlebox assemblies attached to a carrier
    - A set of buffers, five with printed heads and five bored for use with your own metal or sprung heads (not supplied in the kit) also attached to a carrier

Tip: It is important to familiarize yourself with the two sides of the wagon: the solebars are different on each side (one has holes near the centre) and the correct side will need to be matched to the subframe.

Minimal cleaning up should be required but the body may benefit from a quick pass of the base of the body over a sanding block. This will remove any residual printing artefacts from the base of the solebars. Also check the long sides of the floor for similar artefacts ensuring – but do not make it any smaller! At this stage, leave the two component carriers to one side.

As with any sanding operation, take appropriate precautions to avoid breathing any dust.

Tip: A gentle curvature of the floor is not a problem (it is designed to be slightly flexible) but placing it under gentle pressure and leaving overnight it in a warm place such as an airing cupboard should address anything more.

Starting construction

The first step is to build the Brassmasters subframe following their instructions up to the point where you are about to fit the outside V hangers. Before fitting these you need to prepare the resin printed body.

Tip: You may wish to read the tip in the section below on fitting the axleboxes and springs that deals with filing the back of the bearings before you fit them to the spring carriers.

Fitting the wagon floor

The floor now needs to be fitted to the body before we can join it to the brass subframe.

Take the floor component, **ensuring that planking is uppermost** (and the four locators for the subframe are facing down) and slide it at a 45-degree angle so that one long side locates under the two raised vertical 'posts' either side of the door. These raised areas are the door 'knees' – the railway term for the L shaped supports that hold the sides in place.

Now push the floor gently into place across the wagon whilst gently bowing outwards the other side so that the edge of the floor can pass the knee and rest on the solebar. The knees should hold the floor in place.

Turn the body over and check that the floor can rest on the solebars and headstocks when held with gentle pressure. Check also that the subframe will engage with the location pins and fit between the solebars.

If the floor will not fully seat, then first check that it is correctly under both knees. If so, then some very light sanding of one edge or another may be required.

Once all is well, working from the underside, apply a small amount of superglue to both solebars and headstocks. Retain gentle pressure until the glue sets.

Attaching the body to the subframe

Tip: When building a wagon with brakes on one side only (the most common arrangement when built), make sure that the side of the brass subframe that has the central brake hanger is on the side of the body that has the small holes in the centre of the solebar.

Firstly, check the upper surface of the brass subframe and file down any excessively high spots where the brake hangers and safety loops were soldered to the subframe. The floor makes an allowance of around half a millimetre for the joint and solder.

The four large holes in the subframe simply sit on the four locators on the underside of the floor. However, make sure that it fully seats so that it is flat against the wagon floor. Repeat any filing of the soldered areas if it isn't fitting flush.

There is a small allowance for manufacturing tolerances in both etching and printing so ensure that the brass axleguards correctly align with the printed crown plates on the solebar then apply superglue to all four locator edges and both ends near the headstocks. Retain gentle pressure until the glue sets.

Fitting the horse hooks

In common with other wagons of the era, the Gloucester private owner wagons had horse hooks fitted. These were located towards the left-hand end of each solebar.

The ends of both horse hook are printed on the solebar but the actual hook is omitted and left for the modeller to fit. There are two options:

Using wire

Small holes are provided on both solebars and the hook can be represented with a piece of fine wire (e.g. 0.3mm) bent to resemble a staple. The legs of this can then be passed through the holes (which may need clearing with a fine drill) and glued into place. The separation between the wire and the solebar surface should be around half a millimetre.

Simplified approach

It is difficult to see the horse hook at normal viewing distances, so it does not need necessarily need to sit proud of the solebar. An easier option is simply to place a piece of fine wire or styrene strip between the printed pads and glue it to the solebar directly, by applying glue using a pin or similar fine dropper.

Fitting the outer brake hanger

The outer brake hanger (in characteristic full V shape) is included on the Brassmasters etch and should be prepared by following their instructions. As noted in those instructions, it can be glued or glued and pinned in place. Either approach can be used with resin printed body.

Holes are provided in the solebar to take 0.4mm wire pins and, aside from any required clearance, will not need to be marked and drilled If you decide to follow that approach Whichever you choose, the outer brake hanger can simply be located over the brake shaft, aligned with drilled holes, pins inserted (if using) and a small amount of glue used to hold it in place. Apply gentle pressure until the glue sets.

If your chosen prototype has brakes on both sides, then the additional holes will need to be marked and drilled as described in the Brassmasters instructions.

Fitting the brake lever and lever guide

A range of brake levers and two styles of brake lever guides are provided on the Brassmasters etch. Select the versions you require and prepare them according to their instructions.

Tip: When removing the brake lever guide from the etch, make sure not to mistake the location pin on the lever guide for an attachment tab on the etch! For safety, you may want to cut close to the fret and remove any excess from the lever guide later.

A hole is provided in the solebar to accept the location pin on the brake guide so there is no need to use the jig to mark this position. However, it may need opening out slightly to accept the wire pin.

Assemble the brake lever and lever guide according to the Brassmasters instructions and locate the pin on the brake lever guide in the hole in the solebar. Fix in place with glue.

Fitting the axleboxes and springs

When separating the axlebox and spring assemblies from the carrier, it is important that the cuts are made in the correct order. The instructions for doing this are here.

Tip: Always remove the axlebox and spring assembly from the carrier first, by cutting close to the carrier (so the residual sprue retains attached to the assembly). Then remove the residual sprue from the assembly by making two light cuts, one from either edge of the sprue. Do not try and cut through the sprue with a single heavy cut.

The axlebox and spring assemblies are fairly delicate until attached to the wagon so some care should be taken. However, they are supplied with the slot already formed to allow the bearing to move within the axlebox in response to the demands of the suspension so do not need any further work.

Tip: It is important that the wheel bearing is free to move up and down within the axlebox. To aid this, the axlebox and spring carrier has a hole in one corner that may be used to hold a bearing whilst you gently file the rear surface flat. The thickness of the carrier at this point is the same as the depth of the slot in the axlebox.

Working with each wheel in turn, fit the axlebox and spring assembly over the protruding wheel bearing with the spring shoes in contact with the underside of the solebar. Check that the wheel is free to move up and down and

attach the axlebox assembly to the body with a very small amount of glue. Once this has set and taking care not to glue the bearing to the axlebox, a very small amount of glue (best applied using a pin or similar) should be used to glue the axlebox and spring to the points where they meet the brass axleguard.

Once all four wheels are completed, you should have a wagon that is substantially complete, and which runs well.

Fitting buffers

The buffer carrier includes two sets of buffers: one with printed 12" heads and the other printed with a bore to take metal or sprung buffers (not supplied in the kit). One spare is supplied in each set to make it less traumatic if one is lost to the 'carpet monster' or other misfortune.

Tip: The bolts on the base of the buffers are unequally spaced and the buffer should be aligned so that the bolts are at approximately 1, 5, 7 and 11 o'clock. Make sure that you appropriately rotate the buffers BEFORE you eventually glue them in place!

Using the buffers without heads

These have been designed with a 1mm bore for a short distance at the top of the buffer and a deeper 0.5mm hole to match commonly available metal buffer designs. Limitations of the printing process make it difficult to print a completely clear 0.5mm bore. These holes should be carefully cleared using a 0.5mm drill bit. This is best done whilst the buffers are still on the carrier. The cross shaft is provided to help with the printing process and is not significant.

Now follow the steps below for using complete buffers. Once completed, follow whatever additional steps are required to fit your selected metal buffer heads.

Using the complete buffers

Carefully separate the buffers from the carrier leaving a stub attached to locate them in the headstock. This is best done using either a scalpel, razor saw or fine pair of flush cutters.

Check that the edges of the base of the location stub are smooth an test fit them into the holes in the headstock. A 2mm drill or a reamer can be used on the hole to ease the fit as required. They can be glued into place (from the rear) once they have been rotated to the correct orientation.

Finishing off

The last section in the Brassmasters instructions covers this area but a few notes are in order:

- Door bangs – these should be fitted as described in the instructions if your chosen prototype requires them
- Coupling hooks – these should be fitted as described in the instructions except that the coupling hook faceplates are not required as the correct version is included in the printed body
- Buffer housing nose rings – these are not required as the supplied buffers are to the correct pattern
- Weighting – add weight as required.

This completes the assembly of the underframe and body.