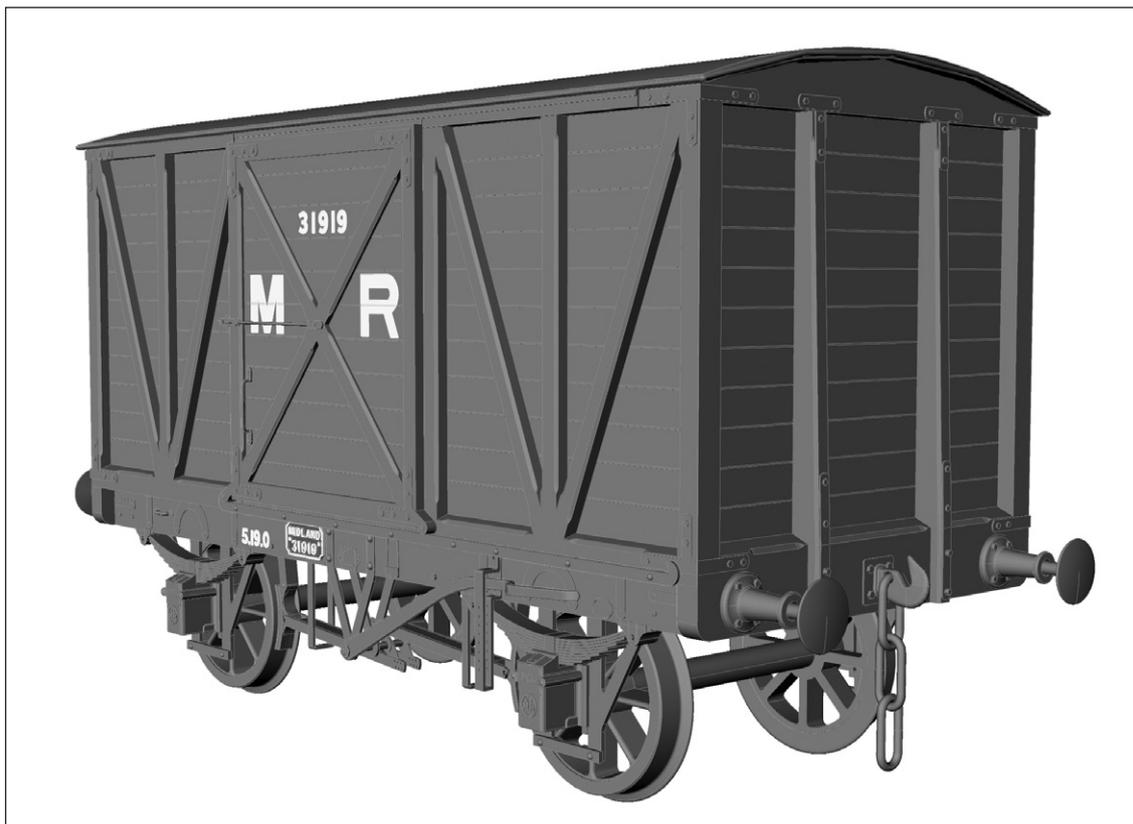


Ref. G3W024 - Gauge 3 Midland Railway 10 Ton Covered Goods Van



INTRODUCTION

Prototype Information

The M.R. 10T covered goods wagon and their ventilated cousins, cover a range of over 7866 vehicles plus a further 250 vehicles with end windows classed as tariff vans.

As the permutations are considerable, modellers are recommended to consult **Midland Wagons Vols. 1 & 2** by R J Essery, published by O.P.C. We are grateful for additional assistance that R. J. Essery and R. Betts have provided in the manufacture of these kits.

The basic variations are listed as follows. NOTE: that early batches built with grease boxes and brakes one side only would be rebuilt later in their lives with oil boxes and brakes both sides if still in service when this became mandatory. Also the reference to some vehicles being fitted with automatic vacuum through pipes was a method whereby the vehicle could be marshalled in a complete train fitted with A.V.B. without the actual vehicle being so fitted, the through pipe carrying the actual vacuum to vehicles marshalled behind the unfitted vehicle, from the locomotive.

Diagram 362. Original batch first built 1893 fitted with grease axle boxes, 3'-2" dia. 8 spoke wheels. Brake gear one side only. Rated as 8 tons.

Tare: Standard vehicle 5-12-0

A.V.B.through pipe 5-14-0

A.V.B. + Westinghouse through pipe 5-15-0

Diagram 363. First built 1902 oil boxes 3' 2" dia wheels. Brake gear one side only when new. To carry 10 Tons.

Tare: wagons without through pipes 5-17-2

wagons fitted with AVB through pipes 5-19-0

wagons fitted with AVB and Westinghouse through pipe 6-0-0

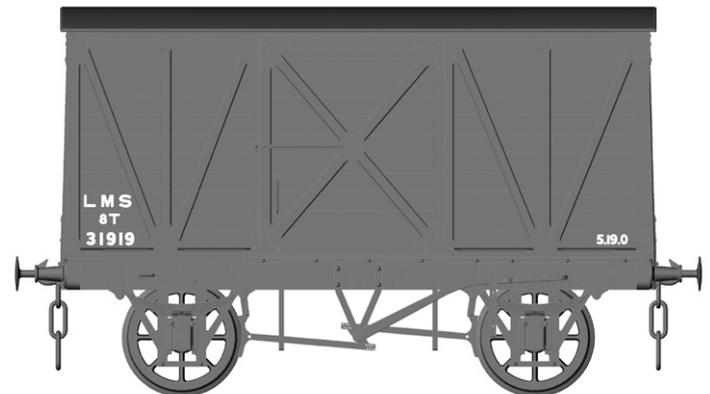
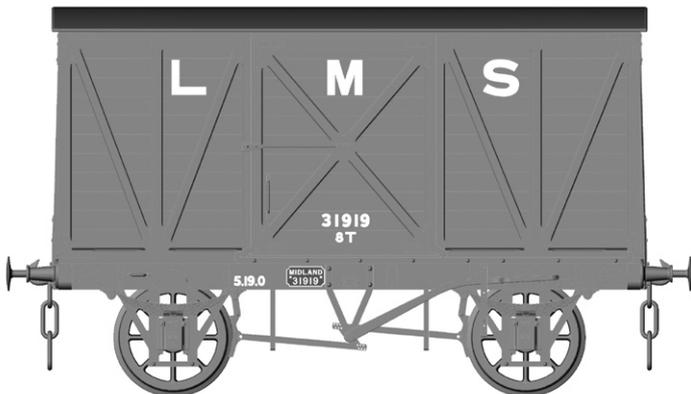
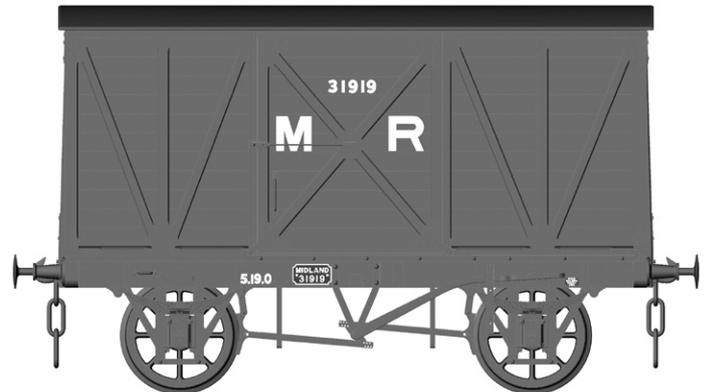
Painting Details

As built, these vans were painted in the standard Midland Railway mid-grey colour, with all "ironwork" below floor level picked out in black. Those which survived to LMS days would have been repainted into LMS darker grey, and later into LMS bauxite. All these colours are available from Precision Paints.

Lettering Details

Prior to the mid-1890s, any of these built would have carried no lettering apart from the cast iron numberplate fitted to the solebars. After this date, the lettering style would have been:

Early (grey livery) and later (bauxite livery) lettering styles are shown below:



MODEL INFORMATION

This kit will enable you to build an accurate replica of a Midland Railway 10 Ton Covered Van, fitted with either Ellis Patent grease lubricated axleboxes or later oil axleboxes, together with hand-brakes on either one side or both. It has been designed to be as simple, and therefore as quick, as possible to assemble. The main body is formed from one precision made urethane casting, with a separate urethane roof, etched brass axle guards and brake linkage, injection moulded polystyrene axleboxes (but with CNC machined brass 'slides') and (dummy) leaf springs, turned buffers, and cast coupling hooks. The buffers and couplings are sprung, and the axleboxes can be sprung or solid. The model has steel tyred, glass-filled nylon centred wheels (being impervious to most oils and other chemicals encountered on indoor or outdoor model railways). The wheels are to standard Gauge 3 profile.

Tools Needed

The following tools are needed, most of which will already be in the toolkit of the average modeller.

Piercing Saw or Nippers

"Stanley" type knife

Assortment of small files

Cyanoacrylate (Loctite Superglue or similar)

for removing lost wax castings from their sprues

for removing etched parts or polystyrene mouldings from the frets or mouldings.

for finishing removal of pips, tabs, and general cleaning up

for quick fixing of parts where maximum strength is less important

2-part Epoxy Glue (Araldite or similar) for fixing polystyrene to brass. The 5 minute setting variety is OK for most of this work, but the 24 hour setting version is better if you have the patience to wait for each bit to set!

Glass Fibre Pencil **OR** Abrasive Rubber Block for cleaning all materials (but particularly etched brass parts) prior to glueing and prior to painting.

Resin Body

Carefully check over the body for moulding pips or flash, and if necessary remove these with a sharp knife or by filing. Be very careful not to breath any of the resulting dust. The body may still have traces of the mould parting agent, so before assembly, wash in warm (not hot) soapy water. Once assembled, a more thorough wash will be needed prior to painting - see below.

Etched Components

Remove components from the sheets only when you need them. This is done by cutting through the small tabs with a Stanley-type knife, or a small chisel blade, whilst resting on a fairly hard surface like a piece of MDF. In many places it is possible to cut the tabs with scissors or nippers, but however you do it, do it carefully to avoid distorting the part you are removing and any adjoining parts. Usually it is best to cut the tab at the end away from the part and then remove the remains with fine nippers, finishing off with a fine file.

Many of the etched components require folding, and as a general rule, where components form a right angle, the fold line is on the inside, but where it folds back on itself (i.e. to 180°), the line is on the outside.

Before you do any folding or assembly work, clean any edges or surfaces with the glass fibre brush or abrasive rubber prior to glueing. This is done by running some superglue into the joints after assembly or smear some epoxy (Araldite) on the faces and joints during assembly.

Removing plastic parts from the Sprues

Cut through the joining tabs with a sharp knife or nippers, away from item required, removing the remains of the tab afterwards with the knife and finishing with a file. Do not try to break or snap the tabs, as this usually results in breaking away part of the item you need!

Cleaning up Lost Wax Castings

Remove pieces from the sprue with a piercing saw or nippers and finish off with a fine file. Remove any blemishes with a file and finish with a quick polish with a glass fibre brush.

Painting and Finishing

The secret of good painting is preparation. Make sure that all parts are thoroughly clean, dry and free of any grease. Metal parts should be cleaned with the glass fibre brush as the slight scratching helps the paint to key. Everything should be washed with a mildly abrasive kitchen cream cleaner, such as Cif (ex Jif), or even better, if you can get it, a product called Shiny Sinks, which is intended for stainless steel sinks, but cleans brass beautifully. Use an old toothbrush to work into the corners and crevices. You may need to repeat if the foam goes grey the first time. When it is clean, rinse in clean water. Once thoroughly clean and dry do not handle the model except with surgical gloves or tissue paper/kitchen roll. Leave to dry, at least overnight, before applying the primer. Cover with a clean cardboard box or similar to prevent dust settling.

To prime the body, it only needs a light mist coat from a car aerosol spray, but brass should be primed more thoroughly. In fact, an etching primer is best; this is available from good model suppliers. Read the manufacturer's recommendations on the minimum drying time. If you are going to follow a car aerosol spray primer with the same maker's top coat, ten minutes may be sufficient. However, with many paints you will find that at least 24 hours should elapse before the top coat is finally applied. The transfers for this kit are of the waterslide type, which are best sealed after thorough drying with a coat of suitable matt varnish.

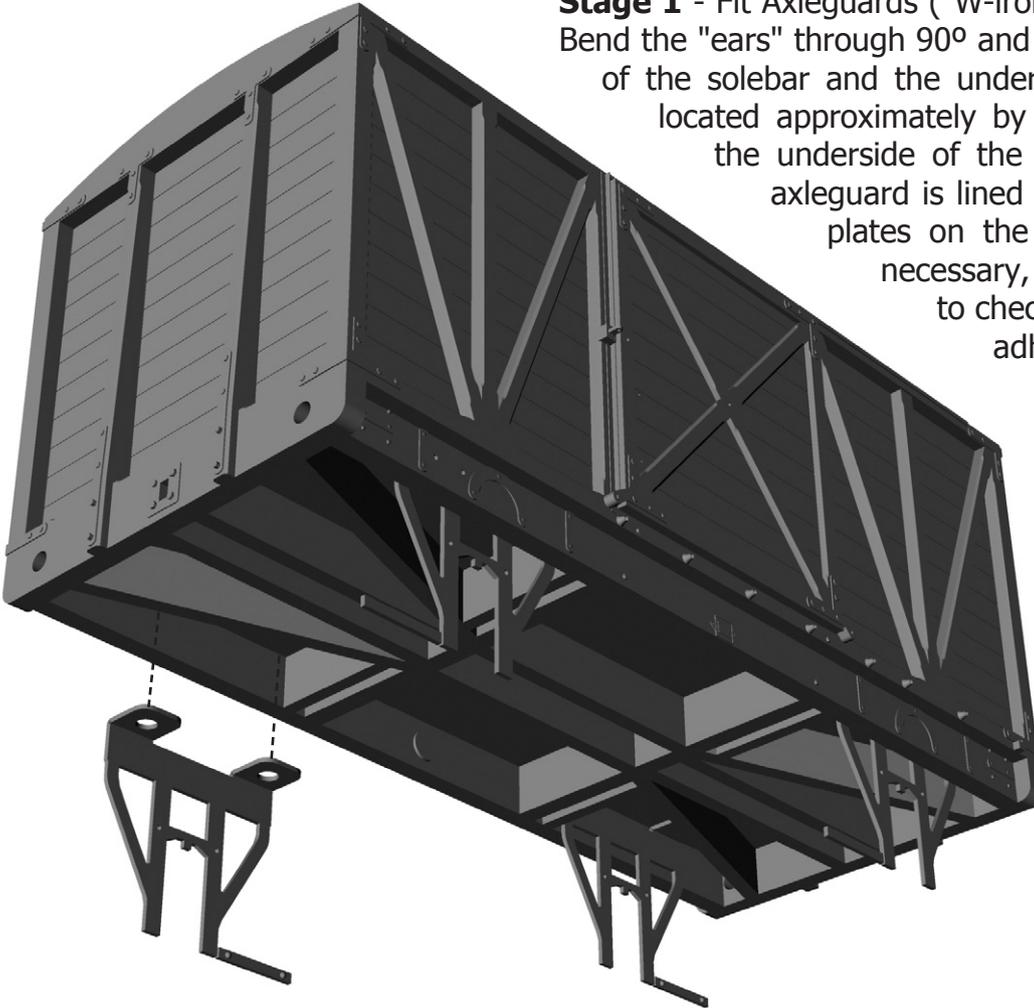
The final job is to give everything a coat of rust, dust, dirt and grime!

ASSEMBLY INSTRUCTIONS

To avoid tedious repetition, it will be assumed in each sub-section that the parts have been removed from the etched fret, moulding or casting sprue, etc., that tabs, moulding pips, etc., have been removed, rivets formed, and preliminary cleaning done ready for glueing.

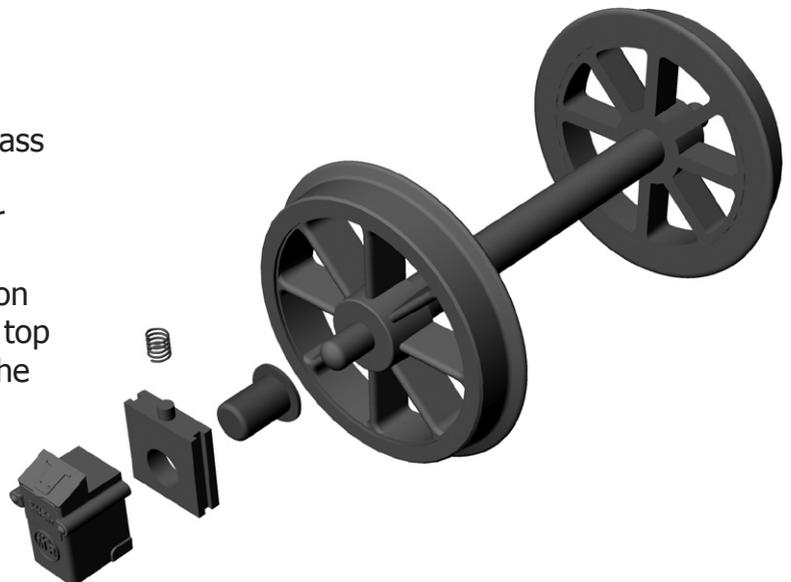
Stage 1 - Fit Axleguards ("W-irons")

Bend the "ears" through 90° and then fit tightly to the inside of the solebar and the underside of the floor. they are located approximately by the circular protrutions on the underside of the floor, but check that each axleguard is lined up with the U shaped flitch plates on the outside of the solebar. If necessary, use an engineer's square to check the positioning. Whatever adhesive you use, make sure that the parts cannot move until dry. A method we have used with success is to lightly stick the axleguard with a tiny drop of superglue (so it can be broken again if necessary), then when satisfied that all is OK to run in a bit more superglue by capillary action and when that is dry to finish off with fillet of 24hr epoxy to make sure it will never part company!



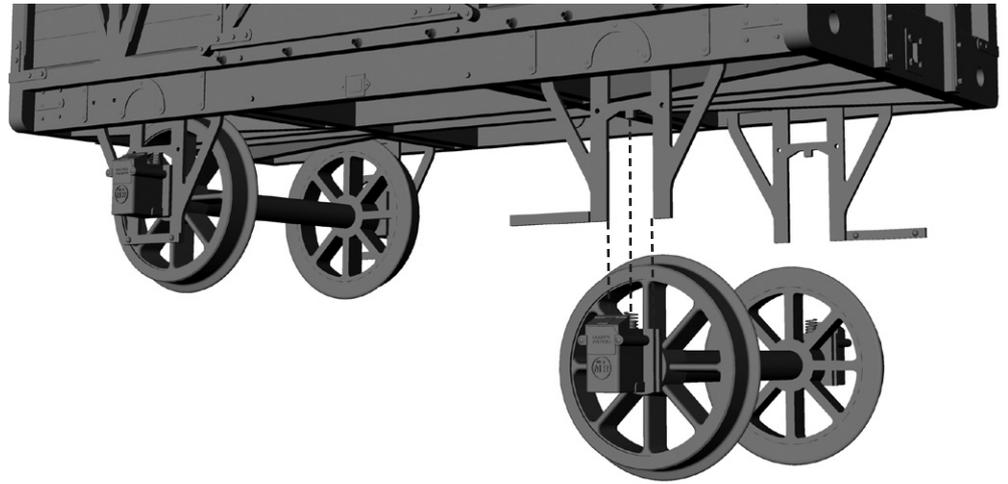
Stage 2 - Assemble Axleboxes.

Place the "top hat" brass bearing into the brass axlebox slide, noting that the flange on the bearing goes in the recess on the slide. Your choice of plastic axlebox then pushes on to the protruding bearing. Make sure that it is on straight (i.e. that the top is parallel with the top of the brass slide), then glue the plastic to the brass with superglue or epoxy.



Stage 3 - Insert Axleboxes into axleguards.

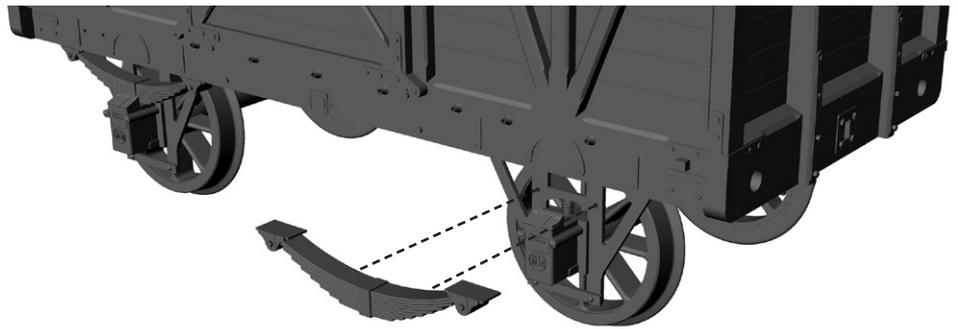
These slide carefully into place. The round protrusion on the axlebox (for taking the small coil spring) is intended to touch the equivalent protrusion on the axleguard. (The spring is there to assist the wheelsets down into dips.) Therefore insert both wheelset/axlebox assemblies and place



the model on a flat surface to see if it rocks at all. If it does, gently file a bit off the offending protrusion until the model does not rock. When satisfied, insert a small spring (as seen in the illustration at the bottom of the previous page) and then fold over the keeper plate to stop the axlebox dropping out (having first embossed the "rivets"). If you feel strongly that you will need to remove the axleboxes in the future, you can drill through (1mm Ø) the keeper plate and bottom of the axleguard and fit them with 14BA nuts and bolts, but these are not supplied.

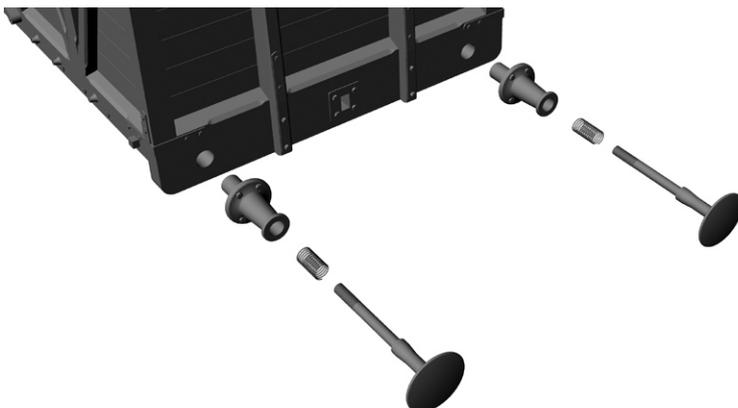
Stage 4 - Attach Dummy Springs

These are glued to the face of the axleguard and the underside of the solebar. there are two little pegs on the plastic spring which locate into holes in the axleguard.



Stage 5 - Assemble Buffers

As well as removing each cast brass buffer base from its sprue, the inside needs cleaning out, with a 2.3mm drill from the back and a 3.3mm drill from the front. The steel buffer ram should then slide in and out smoothly. Glue the buffer bases into the buffer beam, making sure that closer spaced dummy bolt heads are horizontal, and the wider spaced ones are vertical. Then thread springs as shown and put the rams into the bases, with an 8BA nut on the inside (tightened right up to the end of the thread) to secure them. Lightly oil this assembly after painting.

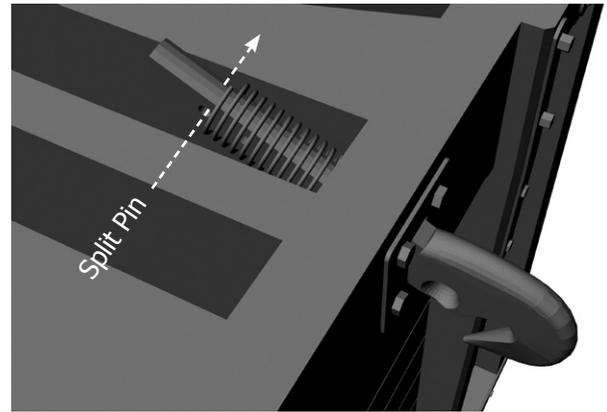


Stage 6 - Assemble Couplings

Using two pairs of pliers, twist open, as shown, four out of the six coupling links supplied. For each coupling, thread one opened link through the hole in the hook and twist closed. Thread another through that link and one of the un-opened links and twist that closed. the result should look like the second illustration.



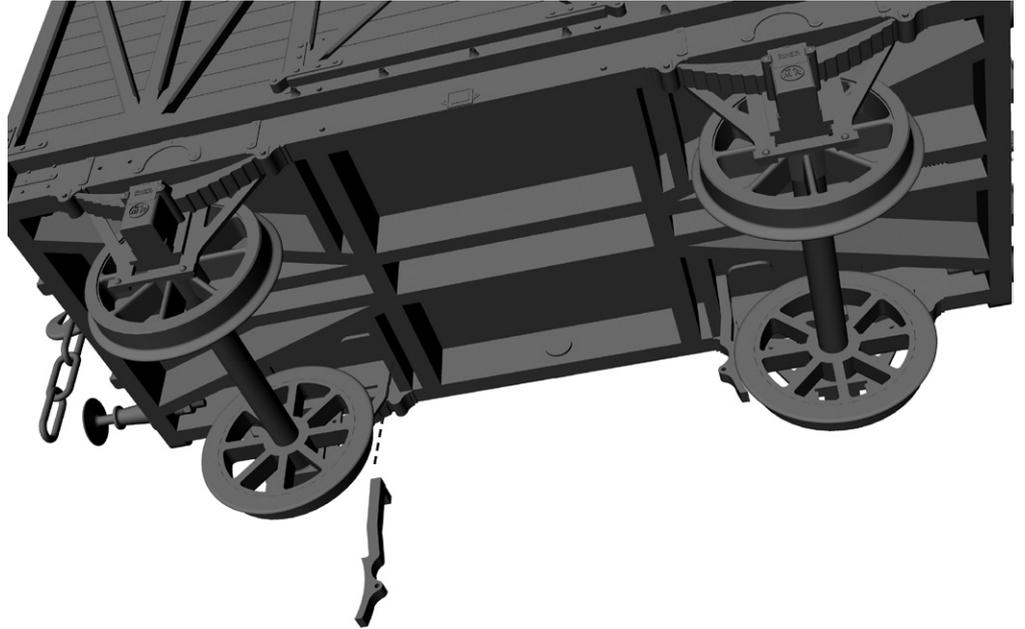
Stage 7 - Assemble Coupling Hook to body
Place the coupling hook through the slot in the buffer beam, slide on one of the larger springs, then tilt the coupling hook as shown to insert a split pin to retain the spring. Bend the split pin arms so that they fit between the frame members. The coupling hook can then return to horizontal, and must be able to slide freely in and out of the buffer beam slot.



Coupling Links not shown
for clarity

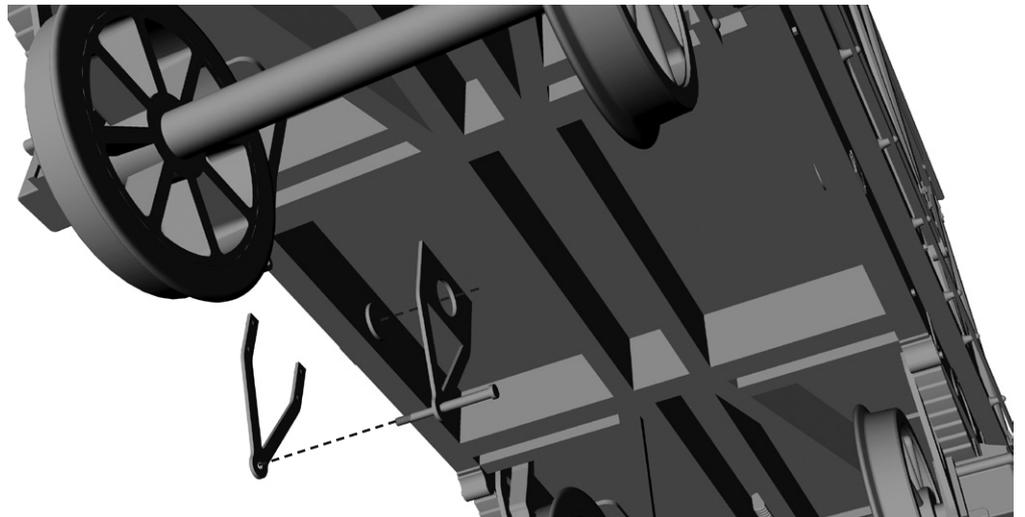
Stage 8 - Assemble Brake Blocks and Hangers.

These attach to the cross-member as shown, spaced out from the solebar by the moulded arm. It may be necessary to trim some material from the hanger where it fits against the cross-member to ensure a good fit of the brake blocks close to the wheels. Before the glue sets, try the brake pull rod etching (see picture in Stage 10) to ensure the correct spacing.



Stage 9 - Assemble Brake 'V' Hangers.

The inside one fits over the raised dimple inside the solebar. Use the long 10BA screw to help locate the outer V hanger.

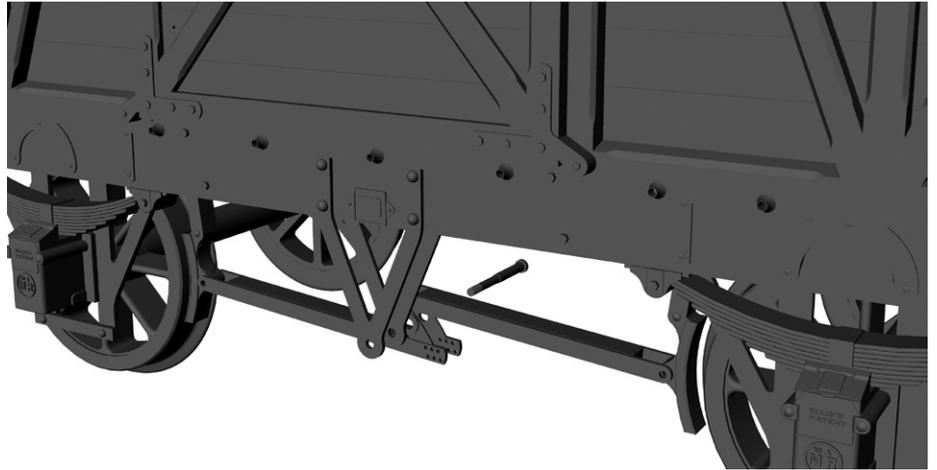


Stage 10 - Assemble Brake Pull Rods.

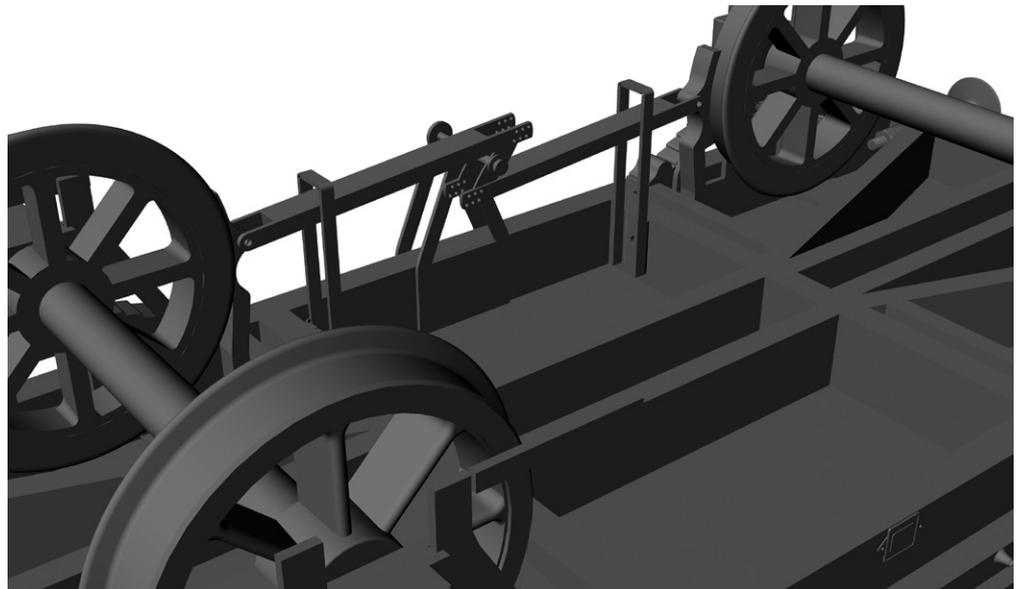
These fold up to form a pair, with the plastic spacers from the brake block moulding. (For clarity, the picture shows one of the pull rod sections separated)



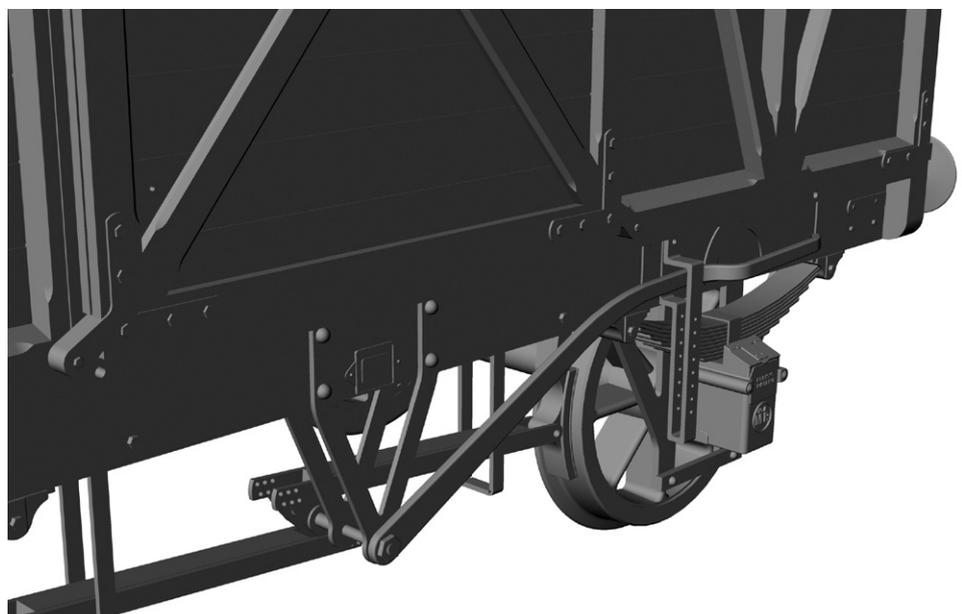
Stage 11 - Assemble Brake Gear.
The pull rods go as shown (note the correct orientation), secured with the long 10BA brass screw into the V hangers, and a 1/32" rivet into each brake block.



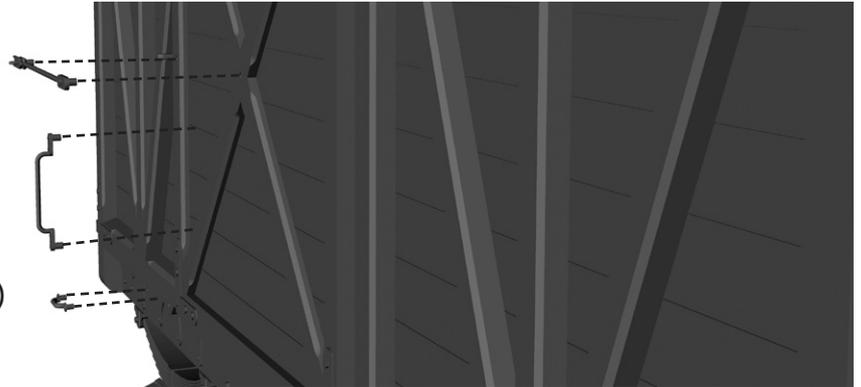
Stage 12 - Fold up and fit the Brake Safety Loops (two per set of brakes).



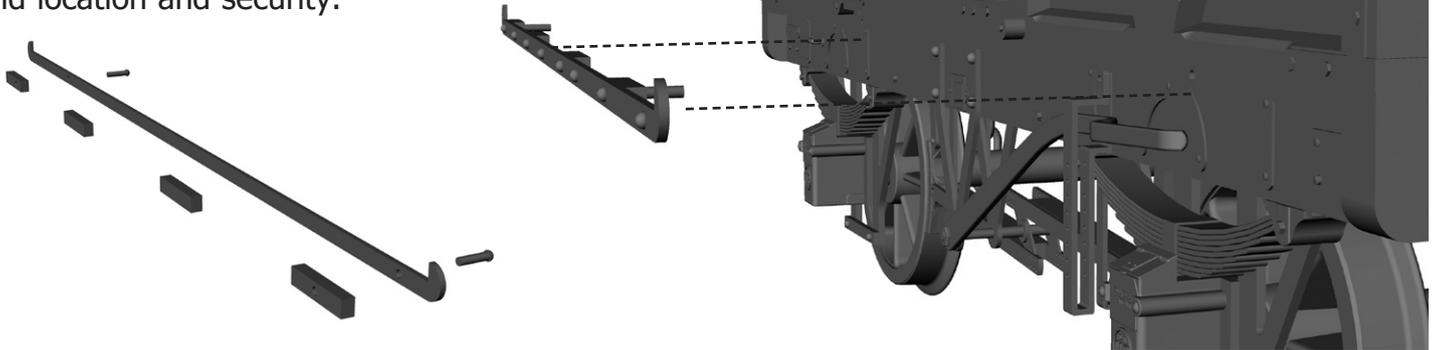
Stage 13 - Fold up and fit the Brakeguard (one per set of brakes) and Brake Lever.
The brakeguard goes where there is part drilled hole; drill the hole deeper (1/32" or 0.8mm Ø) and secure the unit with one of the 1/32" rivets. Bend up the brake lever as shown (using the location of the brakeguard to get the first bend in the right place) and secure in place with the 10BA nut on the screw which passes through V hangers and pull rods.



Stage 14 - Fit Door Handles and Horse Hook



Stage 15 - Fit Door slides (etched brass)
 Emboss the rivet heads, except for the two shown, which should be drilled through 1/32" or 0.8mm Ø. Cut the Microstrip supplied into pieces about 8mm long and glue as shown. Fit to location shown using two 1/32" rivets to aid location and security.



Parts List

Item	Part No.	Description	No Per Kit
Resin Mouldings	X13W02401	Main Body	1
	X13W02402	Roof	1
Plastic Mouldings	X13W02410	Axleboxes (2 types) (8 items on sprue)	1
	X13W02411	Brake Block/Hanger and Pull-Rod Spacer (8 items on sprue).....	1
Brass Etchings	X13W02412	Springs (4 items on sprue)	1
	X13W02420	Numberplates (pairs of 6 different numbers)	1
	X13W02421	Brake Gear (16 items on sheet)	1
	X13W02422	"W" Irons (4 items on sheet) (28thou)	1
Brass Castings	X13W02424	Door Handles and Horse Hooks (6 items on sprue)	1
	X13W02425	Buffer Base (4 items on sprue)	1
Brass Turnings	XG3155	Coupling Hooks (2 on sprue)	1
	X13W02426	Axlebox slides	4
Steel Turnings	X13W02430	Buffer Heads	4
Wheels	G3121	3ft-1½in straight spoke	2 (wheelsets)
	XG640154	Gauge 3 Brass Axle Bearings	4
Transfers	130146	2 sheets in pack	1
	-	6BA Brass Nut	4
Nuts and Screws	-	8BA Steel Nut.....	4
	-	10BA Brass Screw (1" long).....	2
Springs	-	10BA Brass Nut	4
	-	Gauge 1 Coupling Spring.....	2
Other Parts	-	"Saint" Buffer Spring.....	4
	-	Gauge 1 Suspension Spring	4
	X13W02440	G3 Coupling Links.....	6
	-	Steel Split Pin	2
Instructions	-	1/32" Brass Rivet.....	10
	-	60 x 90 thou Microstrip (5" long)	1