

1011 Victorian Railways 'M' four-wheel cattle wagon.

Thank you for purchasing one of my many kits and I hope you get many hours of enjoyment from it. Chris Pearce (Spirit Design)



Typical M wagons. Photo courtesy of Mel Skinner

Basic history notes:

The wagon kit represented here is the 1897 version M van (no 491 was the first) released in December of that year. This departure from just wooden construction to both wood and steel would prove to be very durable and would serve the Victorian Railways system for the next 90 years. This basic construction continued spasmodically until 1922 when some 620 wagons had been built to this design or others converted to this design. Numbers in the range were 1-318 and 419-719. For such a large class there were very few variations. The main one was that the later M's (Version 2 of the wagons 780 - 879) had different ends and GY style handbrakes. The 'M' wagons were seen over the entire VR system either in block trains or as small sets in mixed trains. Three were converted to elephant wagons by having their roofs raised.

The Kit.

The laser-etched/cut kit consists of a number of parts. These will be identified during construction (**P1 etc**) to aid in assembling the kit. The slight *smokey* smell from the kit is part of the laser process and will disappear in time or when the unit receives its paint and weathering. This kit can be put together in under 2 hours over a couple of days. Only minimal tools and basic/intermediate skills are all that is required to build a very accurate model of this wagon seen throughout the Victorian Railways system. It is suggested that you read the instructions first to become familiar with the components and the essence of construction. If there are, any steps that require close attention they will highlighted in ***bold and italics!***

Assembly

Suggested glues are quick-drying PVA's. You can use a toothpick to apply glue to the model to minimise glue overuse, wastage and to accurately apply it where you want to use a SpiritDesign Fine Line Glue applicator available separately.

Note: When needed gently cut each item from the laser etch by cutting through the holding tab with a sharp knife. It is easier to view the holding tab by turning the sheets over so only the outlines are showing (no surface details present). Clean up all support tabs from etched/cut pieces with a small file before gluing and assembly.

1. Glue (**P1**) and (**P2**) onto (**P10**) left hand and right-hand sides using diagram 1 below as a guide.
2. Repeat process for (**P3**) and (**P4**) to (**P12**)
3. Glue (**P5**) and (**P6**) to (**P9**) using the diagram1 as a guide
4. Repeat for parts (**P7**), (**P8**) to (**P11**)

5. On each of the braces (**P1-8**) file, the last 1.5mm down at an angle to the underlying part (**P10**) or (**P12**) both at the top and bottom. Using photo 2 as a guide and the arrows point to the items referred to
6. Glue completed assembly (**P9**) to (**P10**) making sure that (**P9**) is on the inside edge of (**P10**)
7. Glue (**P11**) to (**P9**) and (**P10**) again making sure (**P11**) is on the inside edge of (**P10**)
8. Glue (**P12**) to above assembly making sure all four sides are square to each other by using an engineer's square to check accuracy.
9. Glue (**P14**) centrally inside the completed wagon adjusting it so that it is at the same height as the end wall curves.
10. Sand the styrene roof gently to remove the laser burrs
11. Gently roll and hold the styrene roof around an 8mm diameter bolt or Exacto knife for 15 seconds and then let it spring back out. This will form a nice gentle radius that should match the curve of the end walls. The scribed lines on the roof should be facing up to you when you secure the roof with a water-based Kwik Grip. Use elastic bands to hold the roof whilst the glue dries
12. Glue the 3 rib pieces of styrene onto the roof section where the scribed lines are.
13. Since the wagon will end up quite light in weight it is suggested that you glue some lead sheeting or 2 small nuts onto the floor using **Selleys 'Kwik Grip', Araldite or Silicone** as these glues stay flexible and won't let go of the weights. Glue the floor (**P13**) into the wagon about 1.5mm from the lowest point of the wagon bracing. The floor is being hidden from view by the sides. Make sure the floor is square and level all around as the underframe rests on this and any lopsidedness will show up in the final model



Completed Model using older style Peco underframes.



Completed kit sitting on the new 3D printed underframe awaiting painting, couplers and weathering.

The 3D printed underframe

Insert old MicroTrains wheels into the axle boxes when painting the underframe to avoid clogging the axle box holes with paint. Before inserting the supplied wheels, Graphite power should be twizzled into each of the axle box holes to provide lubrication. DO NOT use any other lubricant, as this is the best and will not harm the 3D printed material. On one side of the underframe, there are small 'V-shaped notches that will allow the remaining wheel on the axle to be inserted into the axle box last. The non-notched side axle box should be inserted first.

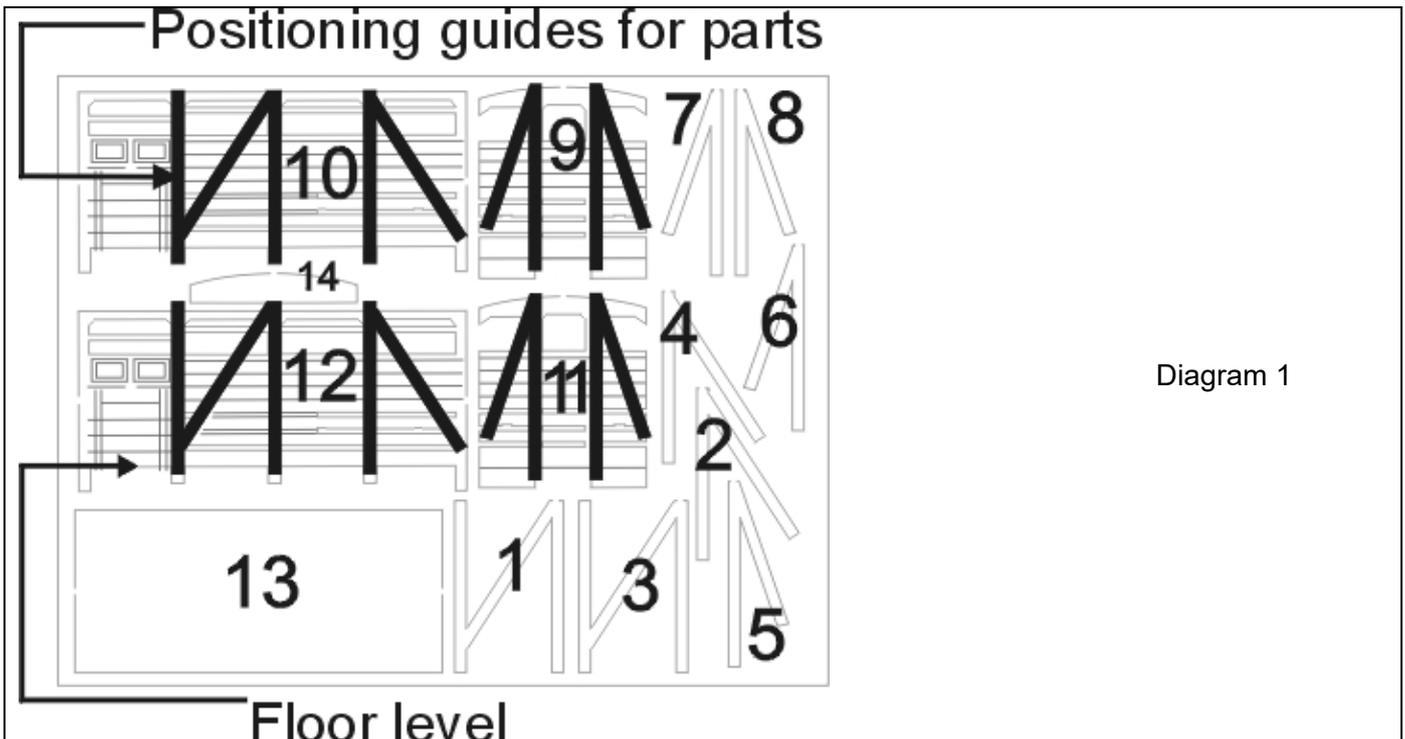
Special Note: the 3D printed underframe is delicate and does not give like normal plastic.

Painting and Decaling.

Paint the complete wagon and underframe with Steam Era gloss wagon red or equivalent both inside. You have been supplied with numerous numbers for the model and these are just cut from the sheet of paper using a very sharp knife. If you fray the edge just touch the affected area with the side of a black Texta to add black along the edges where you just cut the decal free. The easiest way to adhere to the decal is to use Microscale flat finish or

equivalent, which is what you will finish the gloss coat off with. You can overcoat the decal with this as well. Position the decal as per M358 above.

Weather the wagon with paint washes, sprays and other grunge material, as they did get fairly dirty quickly from the animal excrement.



Close up shot of the handbrake end. Photo Mel Skinner.

Photo 3

Note the angle iron shape near the underframe. There is also a similar angle near the roofline.



A typical M wagon M652 Dandenong yards showing non-handbrake side.

Photo Mel Skinner

Photo 4



M358. Note the white square on the RHS, which is the handbrake indicator. It is also on the adjacent side. I.E back RHS in this photo.

Photo courtesy of Mel Skinner.

Photo 5



M55 at Wodonga
02/04/1979. Photo
courtesy of Rob O'Regan



M151 Brooklyn
24/11/1977. Photo
courtesy of Rob O'Regan

For more information and photos see: www.spiritdesign.com.au, Rob O'Regan's website <http://www.robx1.net/> or Mark Bau's <http://www.victorianrailways.net/> or Peter Vincent's <http://www.piv101.net/indkex.htm>
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