

MILL LANE SIDINGS

MLS059 GWR Diagram O5/O6 Six Wheel Siphon

The Prototype

The Great Western Railway used the telegraph code siphon for all of its milk carrying wagons. Before the days of refrigeration (even using ice rather than mechanical refrigeration) the easiest way to keep the contents cool was to use slatted sides that would allow cooler air to flow through the body.

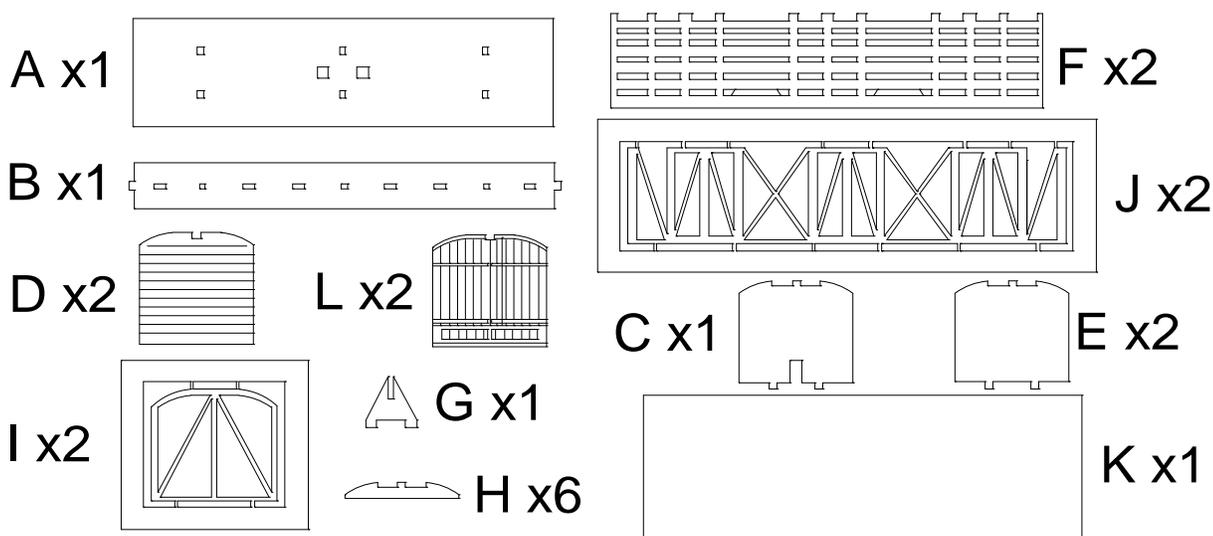
Despite the larger and all enclosed siphons that came later, the six wheel slatted side design lasted from the late nineteenth century to nationalisation (most were then scrapped, but some were sold out of stock, or retained as wagons for carrying engine parts).

Diagram O5 (not five and zero five) and O6 came later through the evolution of the design, and were basically a slightly taller version (7ft 6in) of Diagram O4. The latter was already tall enough to stack two milk churns so it may be that the intention was to use the increased height for stacking fish crates or barrels (the lot numbers indicate fish vans not milk vans). The only difference between the two diagrams was the ends, with Diagram O6 having opening end doors.

Comprehensive details can be found in *GW Siphons* by JN Slinn and BK Clarke, published by the Historical Model Railway Society.

Parts

Note that the instructions show how to build diagram O5 with framed ends, thus using parts D and I. If building diagram O6 with end doors, replace part D with part L in step 5 and omit the use of part I (step 7). Use a sharp knife to remove a sliver of card from the outer ends of part J (equivalent to the amount that would overhang part I).



General Notes On Construction

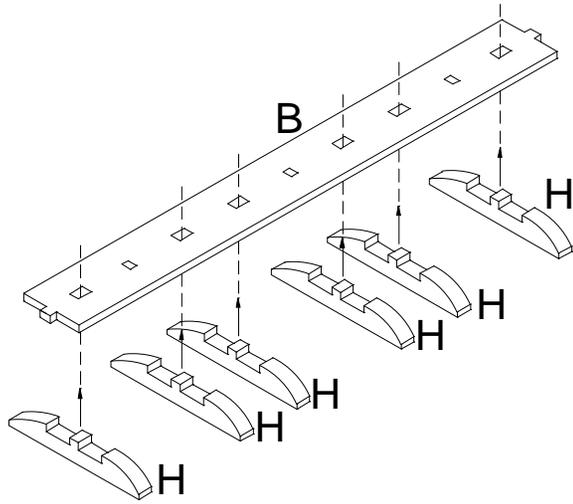
Suggested tools required are . a sharp craft knife, wet and dry sandpaper, fine paint brush (OO), tweezers, razor saw and mitre block.

The main parts of this kit are made from Rowmark . this is a slightly harder plastic than most kits which enables it to go through a laser cutting process without melting. Normal liquid polystyrene does not always weld the parts, however, a stronger glue such as Plastic Weld (intended for ABS, Perspex, etc.,) will. The resulting joints may still, however, be a little brittle, so it is recommended that once dry, joints are reinforced on the inside with a thin brush of another adhesive such as PVA or superglue.

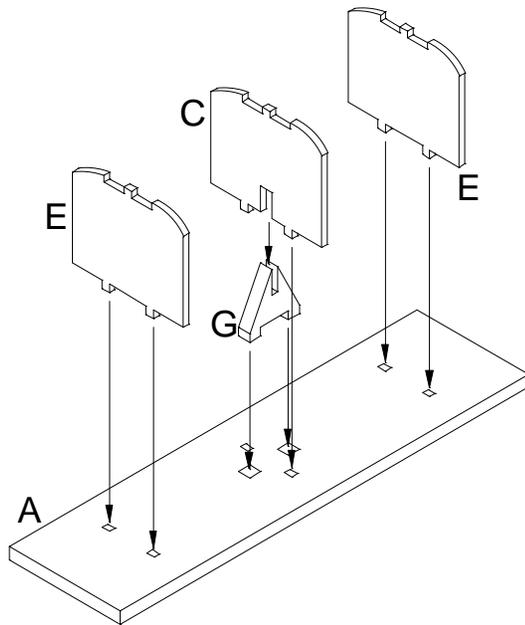
The overlays for the framing are cut from self-adhesive card. Carefully push out any waste between the lines of the shape that may be present but leave the part on the fret as this makes it easier to remove the self-adhesive backing and to position over the body. When removing the self-adhesive backing, start from one corner and draw it off very carefully to avoid damaging the part. The adhesive will stick almost instantly, so there is little room for adjustment. Place the part on at one corner, check that it is in the correct place, then slowly stick the rest of the part. Once the part is attached to the body, use a sharp knife to cut the tabs that separate the part from the fret and trim the tabs flush with the body.

Construction

1. Glue the six Part H to Part B, making sure that they are positioned at a right angle to Part B.

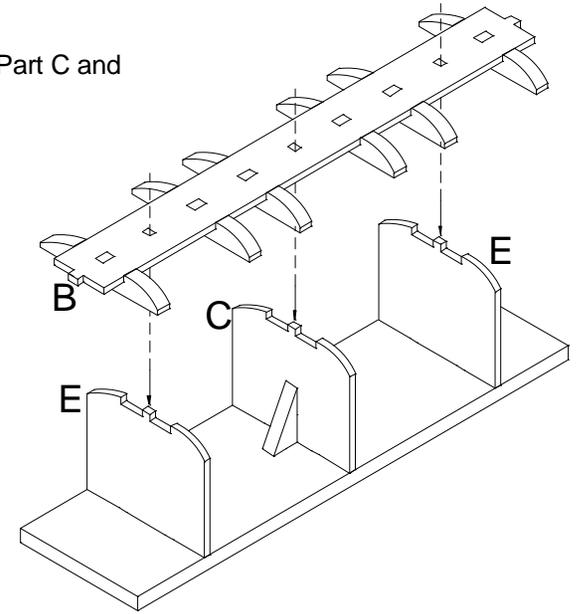


2. Glue Part G to Part A, then glue Part C into the slot in Part G and to Part A.

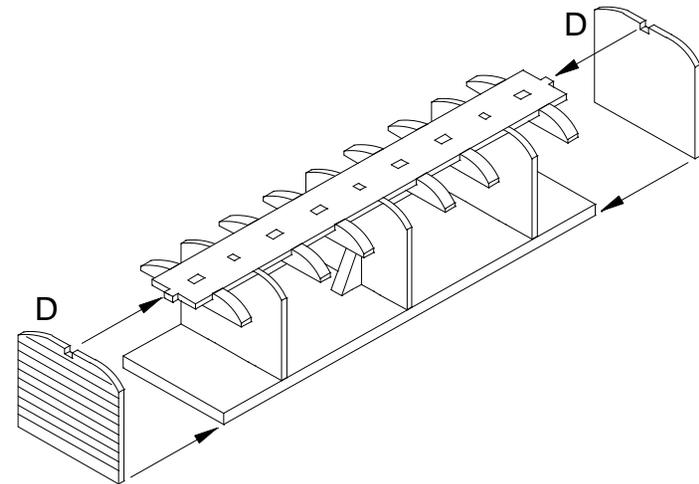


3. Glue both Part E to Part A, making sure that they join at right angles.

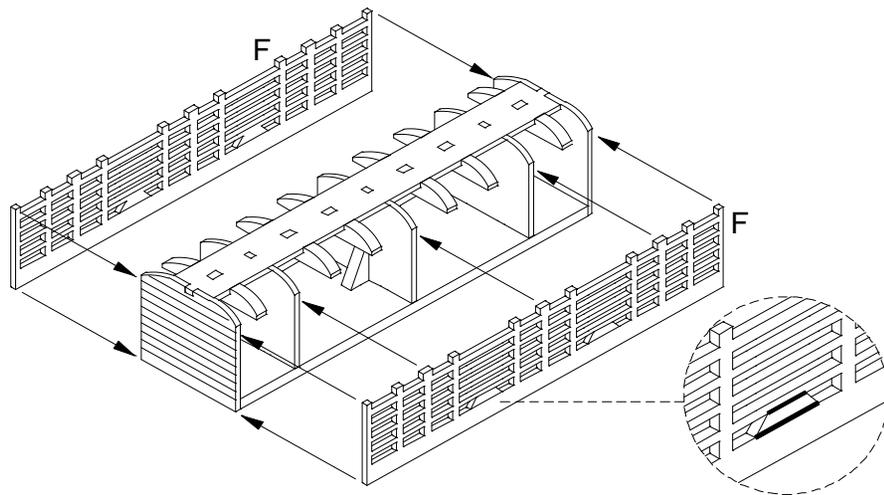
4. Glue the Part B to Part C and both Part E.



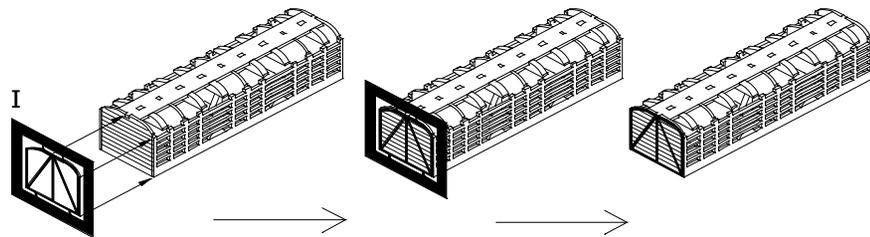
5. Glue Part D to the ends. Note that a slot in Part D locates into a tab in Part B. Make sure that the bottom of Part D is flush with the bottom of Part A.



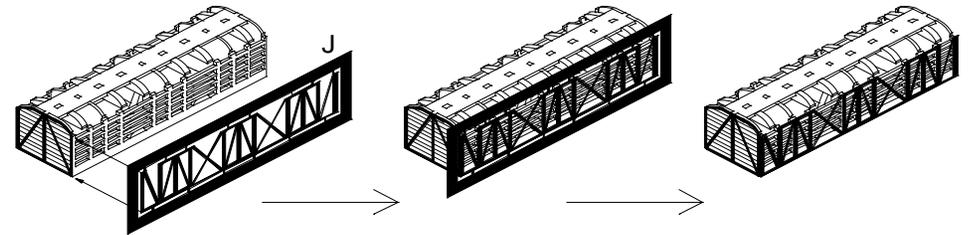
- 6 Glue the sides onto the body - apply glue to the edges of Parts A, C, D and E. Note that there is an outer face to the sides denoted by etch lines on the trapezoid shapes that sit on the wide bottom plank.



- 7 Attach Part I to the ends . this goes flush with the bottom and edges of the end.

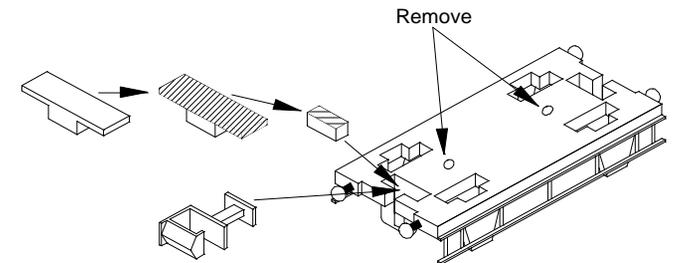


- 8 Attach Part J to each side . this goes flush with the bottom of the side and flush with the end.



- 9 Pre-shape the roof (Part K) to the three centre shape. Use a round tube like a pen to roll the side edges into arcs. Keep checking the roof against the body until the profile matches the ends. It's best to slightly over-curl the profile of the roof if it is slightly under curled, then there is a tendency for the roof to peel away. When you are happy with the shape, peel off the backing (from side to side, not end to end) and carefully apply the roof to the body. Apply a little pressure down the centre and at the ends (but not too much!).

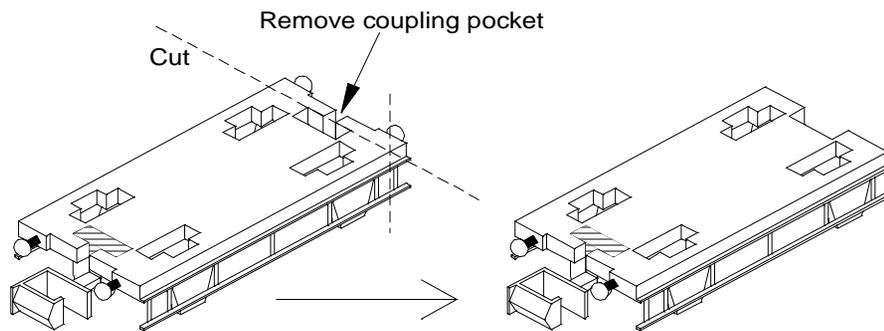
- 10 The six wheel chassis is made from one Peco brake van chassis joined to two thirds of a second Peco brake van chassis. *We are very grateful to Peco for allowing us to use their chassis in this kit.*



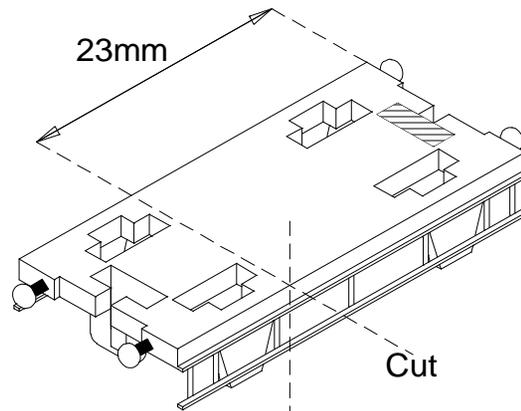
- 11 Remove the circular locating points and the moulding feed in the middle on top of *both* chassis until the tops are perfectly flat. Put the couplings into the coupling pockets at *one end only* of each chassis. Cut the tops off the Peco coupling retainers, then put them into the coupling pockets. Make sure that the couplings sit level and

then apply a small amount of glue to the top of the coupling retainers. When dry, make sure that the retainers are flush with the top of the chassis and trim flat with a knife if not.

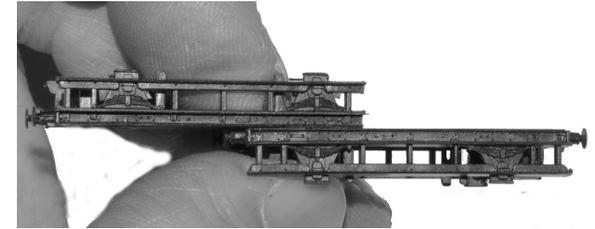
- 12 On one chassis only, remove the coupling pocket at the end that has not had a coupling fitted; cut it off so that it is level with the underside of the chassis. Then at the same end, cut off the headstock flush with the inner face of the coupling pocket. Cut through the footboards as well but be careful not to snap them. The cut is most accurately achieved by using a razor saw in a mitre block.



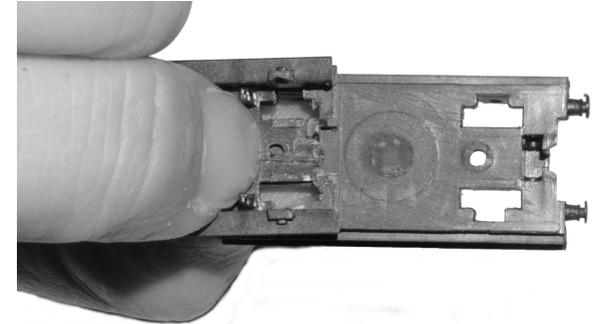
- 13 On the other chassis, measure 23mm from the headstock of the end that has the coupling and mark a line across the chassis.



- 15 To check that the line is in the correct place, hold both chassis together top face to top face so that the W-irons are in line with each other.



- 16 Turn the chassis towards you and you should see that the edge of the top chassis meets the line scribed on the bottom chassis.



- 17 If the line is in the correct place, cut the chassis (using a razor saw in a mitre block). Place the two chassis together on a flat surface and then glue them together using a liquid solvent glue. Make sure that both pieces are square to each other and level.

- 18 Carefully insert the wheel sets into the chassis and check for running. The chassis will cope with 12in radius curves, but you may find that you need to alter the middle axle for tighter curves. It is possible to open out the bearing cups on the chassis using a 1.2mm drill ϕ this creates an amount of \pm slop ϕ for the centre axle that will help going round tight curves. Alternatively, remove the flanges on the wheels on the centre axle.

- 19 Once the chassis is running, paint it black. Paint the body GWR coach brown and the roof white, then glue the chassis to the body.