

MILL LANE SIDINGS

MLS035 LMS Sand Wagon

Requires Peco NR-123 10ft WB Chassis (wood type solebars)

The Prototype

One hundred wagons numbered 403900 to 403999 were built at Derby in 1934 to carry 12 tons of sand, not, as might be assumed, for locomotive depots, but for the construction industry. The design was a basic wooden body open merchandise wagon but without any doors, and construction was to a high standard to prevent sand 'leaking' between the planks. They lasted into British Railways ownership, and although somewhat unpainted and unkempt, they were still labelled 'Return to Leighton Buzzard'. Details can be found in *An Illustrated History Of LMS Wagons (Volume 1)* by RJ Essery on page 155.

General Notes On Construction

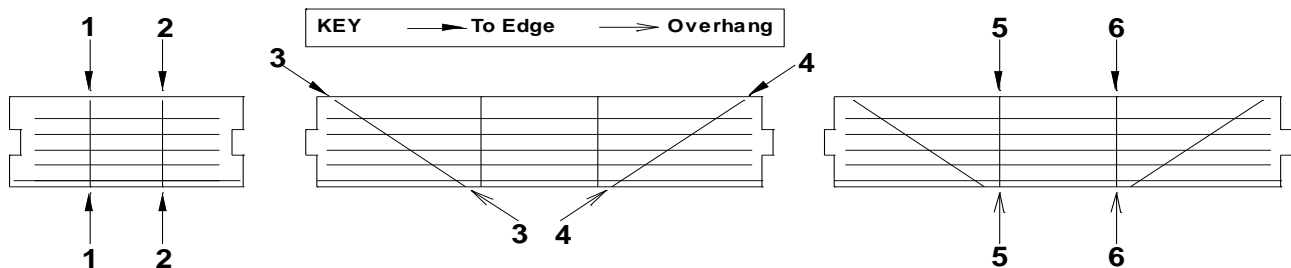
Only a few basic tools are required – a sharp craft knife, wet 'n' dry sandpaper, fine paint brush (OO) and tweezers.

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.

Part Number	Quantity	Description
A	1	Floor
B	2	Side
C	2	End
D	1	Corner Plates (Fret)
E	1	0.5mm plastic rod
F	1	Full side transfers

Strapping And Framing

The laser manufacturing process can cut parts out and etch lines onto them, but it cannot provide relief such as for strapping and framing. The sides and ends have been etched with guide lines to which the 0.5mm plastic rod is glued. Refer to the following diagram as a guide for the order in which to add the rod (follow the numbers).



As per the key, *To Edge* arrows indicate that the end of the rod goes all the way to the edge of a part; it is best to cut a length of rod longer than required so that it overhangs and then trim it flush with the edge once the glue has dried. The *Overhang* arrows indicate that the rod extends over the edge.

Lines 3 and 4 extend over the bottom edge approximately 2mm and should be trimmed so that they will be flush with lines 5 and 6 when they are fitted. Lines 5 and 6 extend over the bottom edge by 1.5mm. To fit the rod:

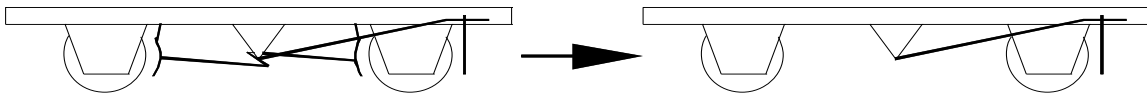
- Cut a piece to the required length (allowing for any overhang).
- Place the main part flat, and then put the rod on top parallel to the etch line where it will be located.
- Using tweezers (or the back of a knife blade), carefully roll the rod into the etch line – you will hear and feel a 'click' when it is in place.

- Keep the tweezers in the middle of the rod and gently hold it in place.
- Use a small paint brush to apply a small amount of liquid poly glue to the top and bottom of the rod. Capillary action will take the glue down the rod.
- Remove the tweezers and do not touch the rod until the glue has set, as the glue can soften the rod, and touching it may squash and damage it.
- When the glue has set (about one minute), apply a light wash of glue down the rod if you feel it is necessary.
- Keep fingers and tools well away from the parts as the capillary action can draw the glue down other etch lines and under fingers, which will then leave your fingerprint on the model!
- When the glue has set, trim the rod as necessary and then attach the next piece.

Once all the rod has been attached to each part and the glue has set, put a piece of wet 'n' dry sandpaper flat on your work surface, put the part on top with the rod face down on the sandpaper, and carefully rub from side to side – only the barest amount is needed, about an inch one way then back again. This will take off the rounded top of the rod and leave a flatter appearance more akin to the strapping and framing it represents. Repeat the process if you think that it needs it but take care – it is very easy to rub off completely!

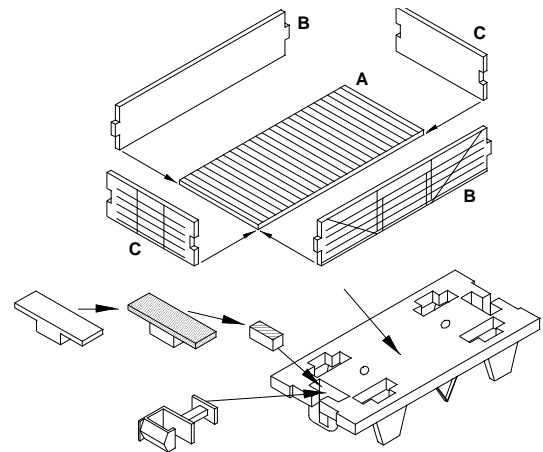
Constructing The Wagon

Brakes were only fitted to one side so remove the brake shoes and rods from *one side only* of the Peco chassis as shown in the following diagram.



With the Sides and Ends finished, the body can be assembled around the Floor as shown in the adjacent diagram. Note that the Sides (Part B) are the same length as the Floor (Part A) so attach these first. Try to glue Floor, Sides and Ends together at the same time as it is easier to ensure that all is square while joints are a little soft before the glue sets. This completes the construction of the body.

Remove the round lugs on top of the Peco chassis. Put the couplings into the coupling pockets. 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.



There are 4 Corner Plates on a fret (Part D) which are pre-scored down the middle. Cut the Corner Plates from the fret, making sure that all of the tab is removed. They have a self adhesive backing. Use the tip of a knife to lift one edge, then remove the backing with tweezers and fold around the wagon corners. Finally, attach the body to the chassis making sure that it sits squarely on top of the chassis.

Transfers And Painting

The transfers are full body side transfers and are designed to fit directly to the unpainted wagon side. The transfers are printed on to clear transfer film, so that the white of the plastic shows through where the white lettering is. Soak the transfers in warm water for 30 seconds and then use a cocktail stick to carefully pull them off the backing paper onto the wagon. Use a cloth to gently dab off any excess water. Use a transfer setting solution such as Micro Sol so that the wagon body detail really shows through the transfer.

Paint the wagon body with matt varnish to seal in the transfers and remove the gloss finish. The rest of the wagon should be painted grey apart from black for the W-irons and a 'wood' colour inside.