

NONNEMINSTRE MODELS

INSTRUCTIONS FOR J. FOWLER & CO. 'RESILIENT' 4WDM LOCOMOTIVE 'PELDON'

PRELIMINARY: This kit is based on 'Peldon', an example the 40hp 'Resilient' 4w diesel mechanical locomotive built by John Fowler & Co., of Leeds. 'Peldon' was originally built as part of a batch of 'Resilient' type locomotives for a reservoir construction contract in Essex, and later passed to the Alpha Cement Co. at their Cliffe-at-Hoo works in Kent along with sister loco 'Layer'. Both locos, by now extensively rebuilt and increasingly derelict, were rescued for preservation by the former Brockham Museum in Surrey. 'Layer' later passed to the Leeds Industrial Museum, Armley Mills where it still resides as a kit of parts awaiting attention. Restoration of 'Peldon' to original condition commenced at Brockham and was later completed at Amberley Working Museum where it can be seen in regular use. For more details see Amberley's railway project website at www.amberleynarrowgauge.co.uk

Designed originally to use Graham Farish (pre-Bachmann) N gauge HST bogie unit, part no 8129 (alternatively Farish H gauge DMU bogie, part no 8109 which has slightly smaller wheels) which requires no major surgery. The Farish chassis is close to the scale wheelbase. However, these are now only available second hand, try eBay or at exhibitions. Alternatively, a scratch-built chassis can be used. Provision is made to accommodate different wheelbases by using separate axlebox/spring castings.



PARTS LIST:

1	Cab floor (1)	15	Air intake filter (1)
2	Cab front (1)	16	Water & fuel fillers (2)
3	Cab rear (1)	17	Axleboxes & springs (4)
4	Cab L/H side (1)	18	Sandboxes (4)
5	Cab R/H side (1)	19	Buffer blocks (4)
6	Cab roof (1)	20	Link & pin couplers (2)
7	Frame & Bonnet L/H side (1)	21	009 type couplers (2)
8	Frame & Bonnet R/H side (1)	22	'Peldon' nameplates (2)
9	Front buffer beam & bonnet (1)	-	1mm brass angle for rainstrips
10	Bonnet top (1)	-	0.70mmØ brass wire for sandpipes
11	Motor bogie mounting bracket (1)	-	0.50mmØ brass wire for handrails & handbrake
12	Bogie location frame (1)	-	8BA nut & bolt for motor bogie mounting
13	Handbrake column (1)		
14	Exhaust system (1)		

GENERAL ASSEMBLY

Before commencing construction, please read through the instructions and check through the parts. A dry run is perfectly feasible, but please follow the sequence of construction. Either low melt solder or twin-pack epoxy resin can be used – if soldering, certain parts will still be better fixed with adhesive. If any parts are damaged or missing, or if during assembly you damage any, then please contact us with an SAE or by email and we can sort things out.

PRE-BUILD DECISIONS: Which motor bogie? The specified units are identical (when cut down!) the only difference being that the HST version has slightly larger wheels than the DMU one. If possible, go for the HST one.

Which couplings? If intending to run with your usual 009 stock then it's probably best to use the 009 type couplers. The link and pin ones will look much better on little-used models and there is no reason why the 009 type couplers couldn't be modified to fit into the link and pin one with a pin and thus have the best of both worlds! In fact this loco is so long that 009 couplings swing rather far off the centre line on 6" radius track, so modifying them to swivel may be of use.

TOOLS REQUIRED: Normal modellers hand tools, such as pliers, small files, small drills and a pin chuck in which to hold them. Sizes of drills required are 2.0mmØ, 1.0mmØ, 0.70mmØ, and 0.50mmØ. A sheet of finely squared graph paper can be helpful on which to check squareness as construction proceeds.

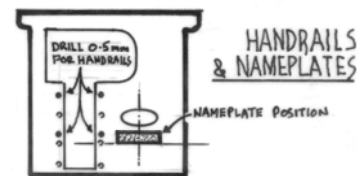
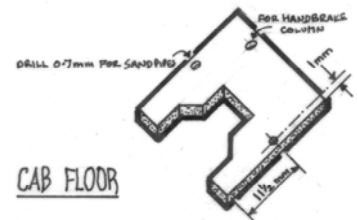
POST-BUILD CRISIS: If at any stage you suddenly decide something is askew, don't despair! If you have used epoxy resin adhesive or superglue then dunk the whole thing in stock paint stripper for a few hours and it will then fall apart. Wash well in clean water, clean up and start again. With care you can put paint stripper over a single glue seam, wait until it softens then pull apart. Wash and clean up, all without having to dismantle the whole kit. If you've used low-melt solder, place something non-metallic in the bottom of a small saucepan; add one kit plus water to cover well, slowly bring to the boil. It should then fall apart. Remove from heat, allow to cool, then clean up.

CONSTRUCTION

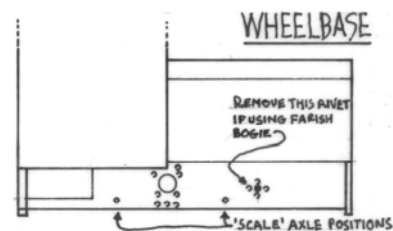
1. Modifications to the motor bogie. Cut away the sideframes ensuring that nothing projects beyond the width of the wheels. The sideframes are moulded as part of the keeper plate which simply clips on.

2. Clean castings using a fibreglass brush gently all over and file away any flash or remains of casting sprues. Check castings are flat and square as distortion sometimes occurs in either casting or transit. Sometimes a bit of tweaking is required during construction.

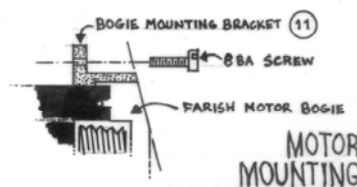
3. On the underside of the cab floor (1) are two dimples – ignore these! Drill two holes as per sketch for sandpipes 0.70mmØ. Drill the two handrail holes each side of the cab entrance in the cab sides (4 & 5) 0.50mmØ. Make the four handrails from 0.50mmØ wire so that they stand off about ½mm from the side and put away to fit later. Place the cab floor (1) on a firm flat surface. Assemble to it the cab front (2), sides (4 & 5) and finally the back (3), noting that all these have 45° edges. A small gap will be found between the rear of the floor and the cab backsheet even though the sides meet ok – this will not be visible when the roof is on. The front of the floor has the opening for the motor and the hole for the handbrake to the right rear of the driver. Make sure it is square in all directions as this forms the datum from which the rest of the body proceeds (Note: when looking from above you may think the cab is twisted where the roof curve ends – don't worry, as this gets corrected when the roof is fitted later).



4. Now fit the frame and bonnet sides (7 & 8) to the cab assembly but not the radiator front. Put the bonnet top in place when doing this but don't fix it permanently. It may be necessary to put some thin packing between the frame/bonnet sides and the locating blocks on the cab backsheet and front – use the bonnet top as a guide to the correct width. If using low-melt solder this is easy to tack and adjust before running the joints. Fit the front buffer beam/bonnet (9) noting that it does not fit flush with the bonnet sides or top. This is the worst part of the whole job so make extra sure all is square. The unsightly gap will be filled, smoothed and the edge gently rounded later. Remove the bonnet top, double check the assembly so far for squareness.



5. On the bottom of the frames are two dimples which are the **SCALE** position of the axles on the prototype – using the Farish motor bogie takes the front one forward. Push the bogie into the body with the overhanging motor end to the front and the rear axle of the bogie lining up with the true position on the frame.



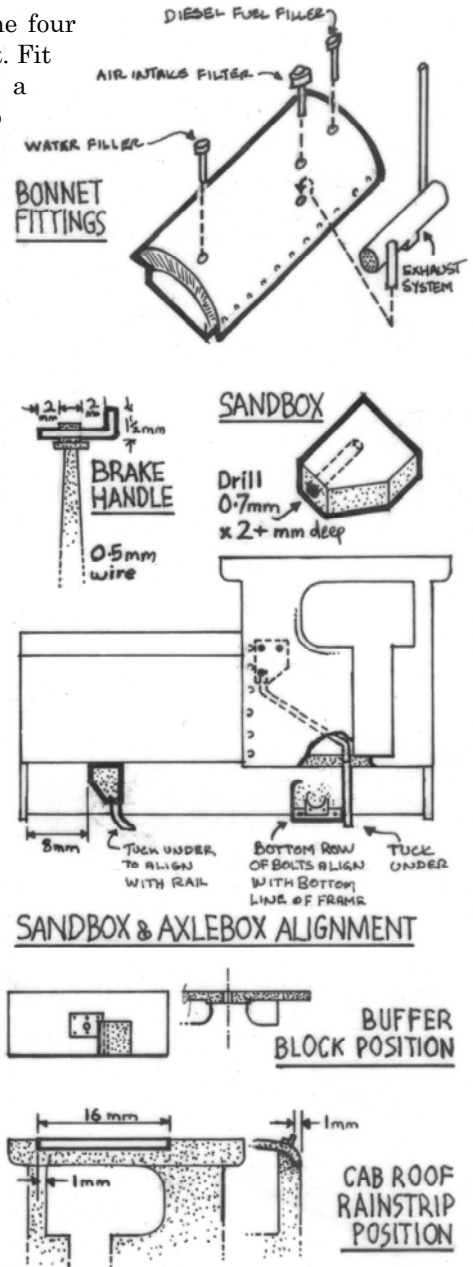
Now mark with a scratch where the magnet of the motor lines up with the inside of the cab front. Glue the motor mounting bracket (11) to it (the rear slope on the brackets should align with the slope on the bogie). Drill out the horizontal hole to clear the 8BA screw. Now refit the bogie and while wedging in with bits of blu-tak or plasticine, set it so that the outside of the wheel bosses are just in line with the bottom edge of the frames. Get all nice and square and then mark through the mounting bracket to the cab front. Now fix the front bogie frame (12) by sliding over the front of the motor in front of the brushes – one side has a shorter locating strip to miss the pick-up wire. Fix the frame to the bonnet sides.

Remove blu-tak, drill cab front hole 2mm to tap 8BA then refit with nut and bolt. The bolt will cut a thread in the cab front which is what is required – later it will be made deeper when the bonnet top is permanently fitted, but use the nut for now as security. Test run at this stage and double check squareness and level which can be adjusted by filing or packing as necessary. The bonnet top will not now fit as the nut is in the way, which is why it had to be fitted but not fixed before.

6. If happy with bogie and bonnet top fits, remove the bogie and drill the four dimpled holes on the bonnet top 1.0mmØ. Remove the motor screw and nut. Fit the bonnet top now for keeps then drill the mounting hole deeper with a 2.0mmØ drill – run the screw in to cut the thread all the way. Try the cab roof in place – the hole for the exhaust pipe goes to the front. Don't worry about a sloppy and visually unsquare fit at this stage. Drill the dimpled hole through the top of the brake column 0.45mmØ and make a handle as per the sketch from 0.45mmØ brass wire. Secure column to floor. Drill the bottom where dimpled of each of the four sandboxes 0.7mmØ about 2mm or so. Fit the two boxes inside the cab as per sketch, then make pipes from 0.7mmØ brass wire so that it **JUST** enters the holes on the top of the floor, and don't fill the hole with glue – the rest is to locate the part of the pipes from the floor to the wheels. Make the pipes now but leave the final fitting to later. Mount the two sandboxes which go on the frame sides as per sketch, again make the pipes but fit permanently later. Fit the axlebox/springs now – the bottom row of bolts on the faces line up with the bottom edge of the frame so that a little of the casting projects below. Fit the rear ones first, noting that the springs require trimming to clear the cab floor. Now the front ones, but note you will have to remove the rearward of the four bolts grouped at 90° round a small hole – the perils of a commercial chassis.

7. Fit the couplings of your choice after drilling the dimpled hole in the buffer beam 1mmØ. If using the link and pin ones, drill through the coupling using the dimple as a guide and then make pins/chains/coupling bars as desired. Fit the buffer blocks if desired as per sketch to slightly overlap the coupling strengthening plate. Attach the cab roof and fill and smooth down the joins. There are no rivets on the roof so you can get this done without fear of removing details. This should, when painted, remove any ideas of a twisted roof which seemed to exist when the cab was first built. Cut two strips of 1mm brass angle 16mm long for rainstrips and fit as per sketch. Fix water and fuel oil filler caps to bonnet top and also air intake filter. Fit the exhaust assembly making sure it is level to the bonnet, parallel to the bonnet, and vertical to the cab front! Open out the hole in the roof if needed. Trim the top of the exhaust pipe to 1mm above the roof.

8. Give a good clean up (we use 'Shiny Sinks' – never use an ultrasonic cleaning tank on whitemetal as it causes surface eruptions if air is trapped inside the metal) and paint to choice! You can add a little weight under the front of the bonnet if the model shows a tendency to be rear-heavy but don't overdo it.



Overleaf are some illustrations of the prototype as preserved at Amberley Working Museum. Livery (as preserved): Buffer beams – red; Buffer blocks and couplers – black; Frames – black; Bodywork – mid Brunswick green; Cab roof down to joint line – black but beading is green; Cab interior – cream down to top handrail hole, then black below; Gearbox (i.e. rear of motor bogie) – green. Sandboxes – black; Lining – yellow.



NONNEMINSTRE MODELS, 46 HIDE GARDENS, RUSTINGTON, WEST SUSSEX. BN16 3NP

enquiries@nonneminstre.co.uk