Hesketh Scale Models

Orenstein and Koppel MD2, 4wDM 26HP Diesel Locomotive

1:35 Scale 16.5mm Gauge, Closed Cab Version

Orenstein and Koppel's MD series of locomotives were introduced in 1934 with the MD1 (single cylinder engine), the MD2 (two cylinder engine) was introduced shortly after in 1935. The last MD2 was built in 1955 when it was replaced by the MV series

The closed cab version of this model is an accurate representation of the Orenstein and Koppel MD2 4wDM 26hp 6 ton diesel locomotive currently preserved at the Leighton Buzzard Light Railway in Bedfordshire. This is the only surviving example left in the UK although numerous examples survive throughout Germany and the rest of Europe.
In 1965 the Locomotive was supplied by O&K's UK dealer, William Jones of London, to the Woodham Brick Co in Buckinghamshire. It later saw service at several other locations before finally arriving at Leighton Buzzard in 1970. Whilst at Leighton Buzzard, the loco has been known by the names Pam and Falcon. It still carries its original running number plate of 8986.

This kit has been designed from dimensions and photo's taken from the locomotive at Leighton Buzzard as well as numerous other photo's taken from examples throughout Europe. Various alternative name plates and running numbers have been included to give the builder options to construct slightly different examples as required.
The model is designed to run on 16.5mm gauge track (i.e. OO/HO gauge), which is a near accurate representation of the 2 foot (610mm) gauge of the Leighton Buzzard Light Railway.
Please note that this model is not a toy, it contains small parts and is not suitable for children.

The kit is designed for soldered construction and good soldering skills are required. Solder is a matter of personal choice, however Carrs 179 Deg C. No Clean Solder Cream is particularly recommended. White metal and small etched parts should be glued in position with either a two part epoxy resin such as Araldite or Cyanocrocate adhesive (super glue).
A rivet punch is required and it is recommended that rivets are punched prior to parts being folded into shape. It is important to study the instructions carefully and care should be taken not to lose any small parts.
Construction of the chassis is recommended prior to commencing work on the locomotive. It will then be possible to check the fit of pickups and wiring throughout construction of the model.
Please contact us if any parts are found to be missing or damaged and they will be replaced. Parts lost/damaged during construction can be replaced at cost by contacting us via email or post.
Construction is detailed by a series of photographs but please contact us if unsure as further advice can be given if required.

Tools Required,

The following tools are recommended for use during the construction of this kit,

A set of bending bars for folding etched brass components, soldering iron, rivet punch, a pin vice and various small drills, broaches/needle files for opening up holes and cleaning up parts etc, a small engineer's square, small hobby knife/scalpel.

Parts List.

Etched components

1, Etched sheet 1, part 1,
2, Etched sheet 2, parts 2 - 4A
3, Etched sheet 3, parts 6/7/8A/27
4, Etched sheet 4, parts 5/8-26/28-32
5, Etched sheet 5, chassis, brakes
6, Etched sheet 6, control handles
7, Etched sheets 7 and 8, name plates

White metal parts

1, Gear box, bottom x 1
2, Gear box, top x 1
3, Axle boxes x 4
4, Chassis weights x 4
5, Buffer plates x 2
6, Coupler pockets x 2
7, Filler caps x 2
8, Various fittings x 3

Chassis

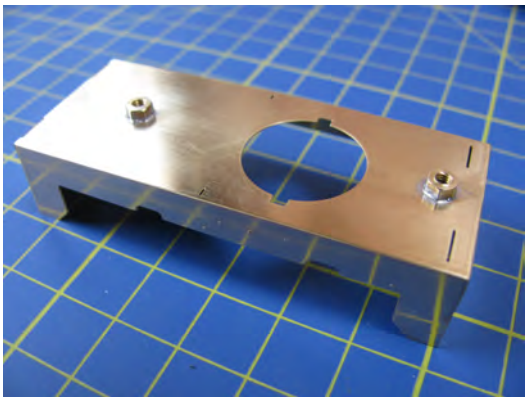
1, Wheels x 4
2, Axles x 2
3, Motor
4, Gear wheel x1
5, Worm x 1
6, Bearings x 4
7, PCB strip for pickups,
8, Wire,
9, Pulley x 2,
10, O rings x 2
11, Washers x 2

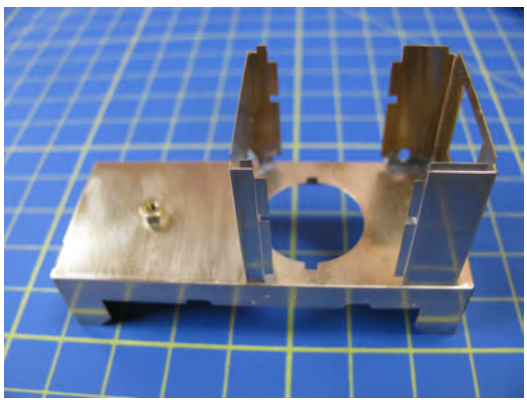
Other parts

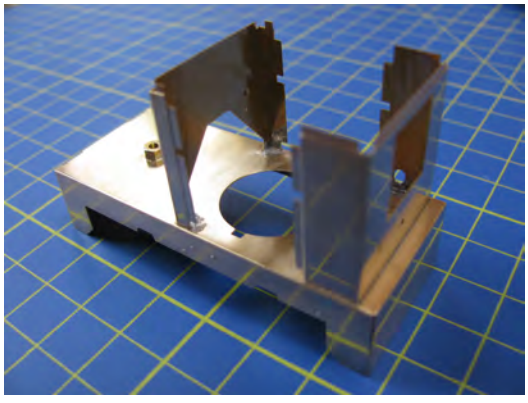
1, 0.33mm brass rod
2, 0.45mm brass rod
3, 0.9mm brass rod
4, 1.5mm brass rod
5, 1.0mm brass L section
6, 1.5mm brass L section
7, 8BA screws x 2, 8BA nuts x 2
8, T Handles x 4

Construction,

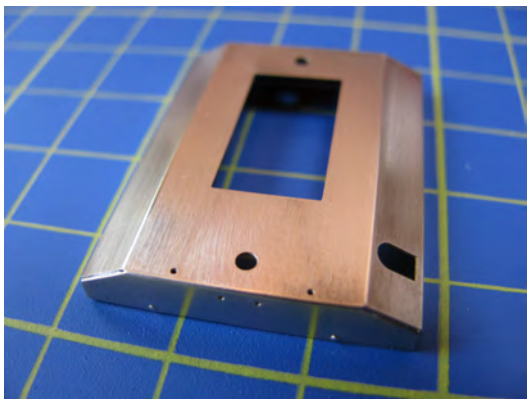
1, Punch the 8 half etched rivets on part 1, fold to shape ensuring all is square and solder. Solder the 2 8BA nuts in place (required to hold chassis in place). Fold parts 2 (bonnet front) and 3 (bonnet rear) as shown and open up the location slots on part 1 (if required). Once happy all is square and a good fit is obtained, solder parts 2 and 3 into the location slots on part 1.

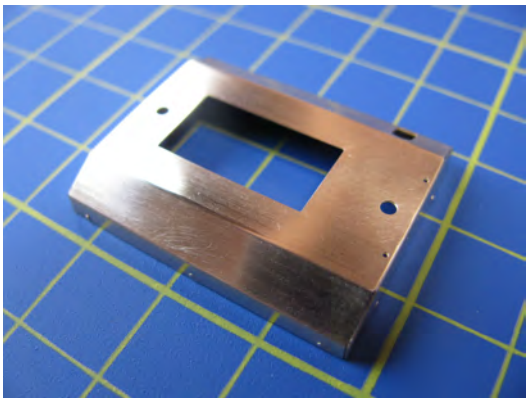


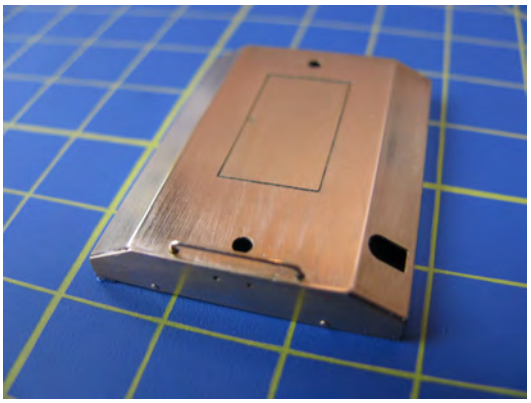




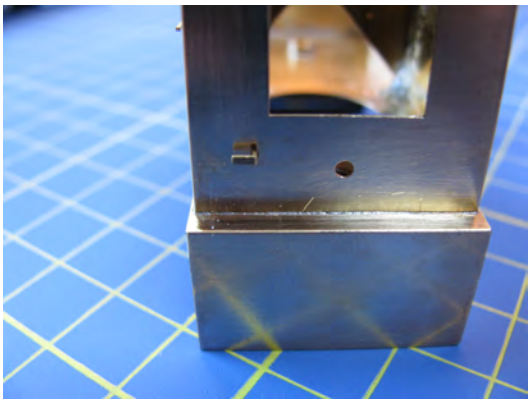
2, There are two alternate bonnet roofs (4 and 4A), one with an exhaust opening and one without. Choose which one is required and punch all 10 rivets prior to folding. Fold to shape as shown, taking great care to use a minimum of solder (a tight fit is required when placed onto parts 2 and 3). Solder or glue part 5 (engine access cover) in place and use .45mm brass rod to create the small handle situated at the front top of the bonnet.



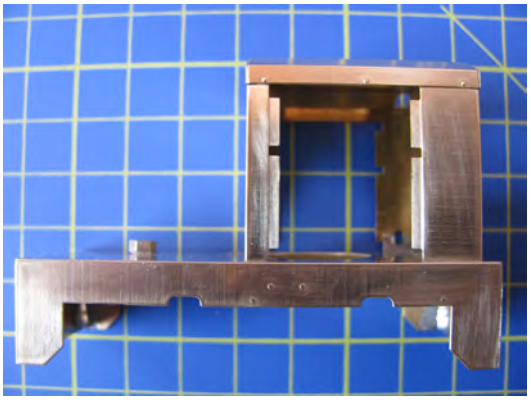




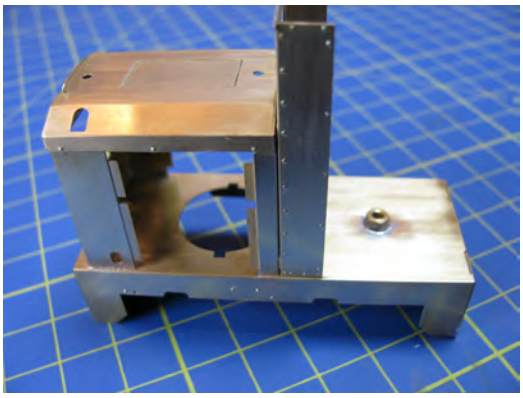
Part 2A (decompression lever) should be folded into a U shape and secured through the slot on part 2 as shown.

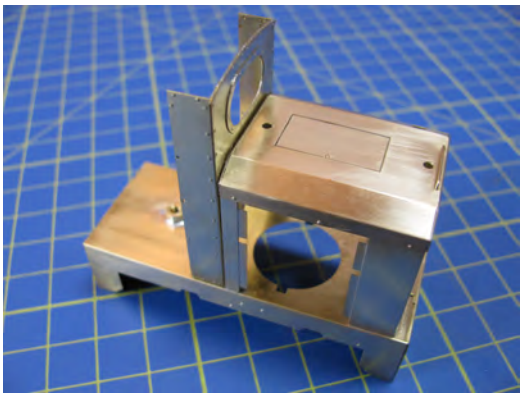


The bonnet roof should now slide over the half etched tabs on parts 2 and 3, once happy all is square it can either be fixed in place or left loose to allow access. The front and sides should overlap slightly (by half the thickness of the brass sheet) as per the prototype.

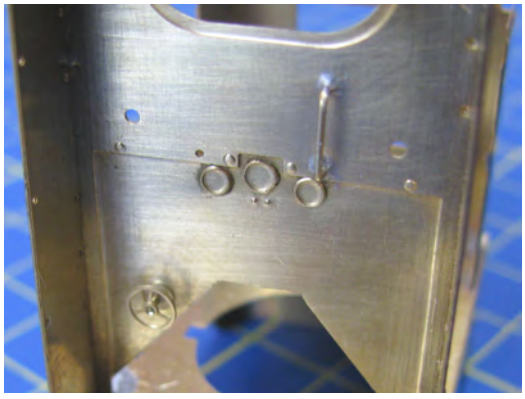


3, Punch all half etched rivet detail on parts 6 (cab front) taking note there are rivets on both sides of the part, then fold to shape. If soldering, parts 26 (window detail) and 27 (roof bracket) can be added at this stage. Test fit part 6 by placing back to back with part 3 ensuring both sit flat back to back with each other, vertical to part 1 and all holes correspond. Once happy, both parts can be fixed together. If solder or glue is kept away from part 4 the bonnet roof will still be removable allowing access.

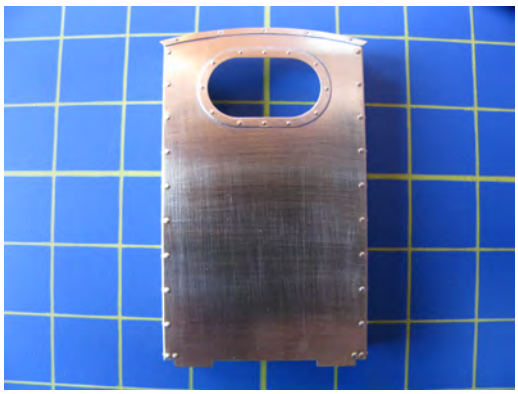




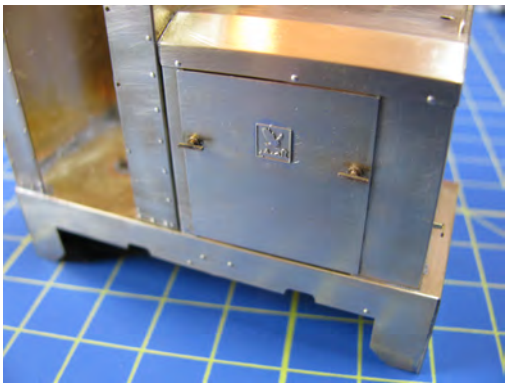
4, Parts 6A (control dials) and part 12 (small hand wheel) should now be positioned as shown as this will be quite difficult once the cab rear is in situe. The hand wheel should be positioned using a small length of .45mm brass rod in the hole provided. A length of .45mm brass rod can be used to represent the handle shown in the cab. Use the photo as a guide for positioning the fuel/control gauges.

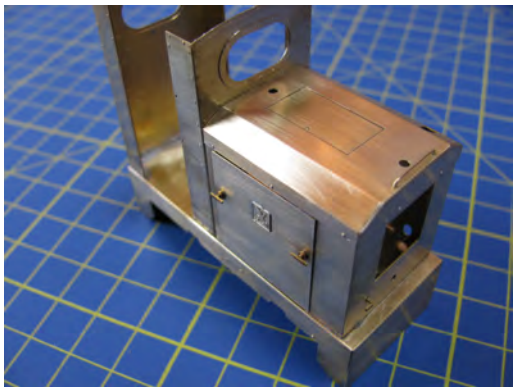


5, Punch the half etch rivets on part 7 (cab rear) and fold as shown (again parts 26 and 27 can be added at this stage). Open up the location tabs at the rear of part one and once happy all is square solder part 7 into place.

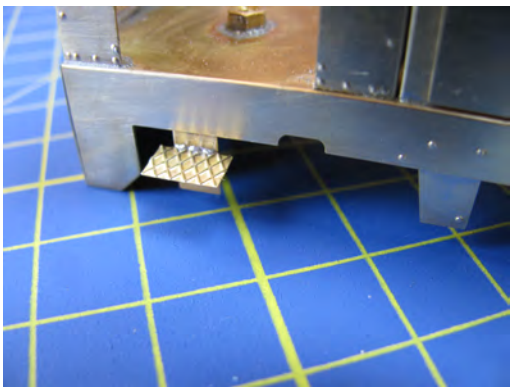


6, Select which engine access covers to use (either 8 or 8A) and fix T handles (x 4) in place. The access covers can then be soldered or glued into place spanning parts 2 and 3 (a small gap should be visible just above and below the covers when fixed).





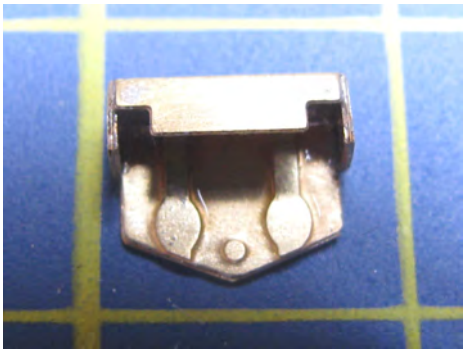
7, Part 9 (x2) should be soldered into place in the location slot provided on part 1 (sloping side to the rear of the locomotive). Open up the slots on part 10 (x 2) and solder the chequer plate steps (2 x part 11) into place. They can then be fixed into the half etched location slots again on part 1.



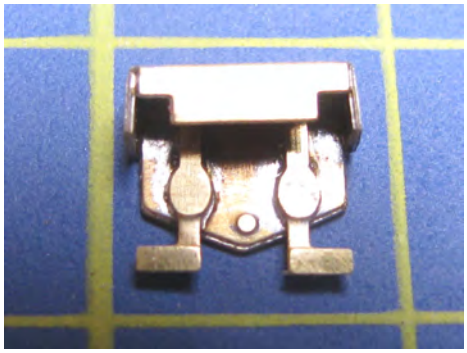
8, Punch the 3 half etch rivets on part 13 and fold to shape as per photo A. Part 14 should be fixed as shown in photo B with parts 15 and 16 overlaying (photo C). Parts 17 and 18 should overlay parts 15 and 16 (photo D). A small length of .45mm brass rod should be passed through the two holes on part 13 and part 21 (speed control hand wheel) fixed as shown.

A

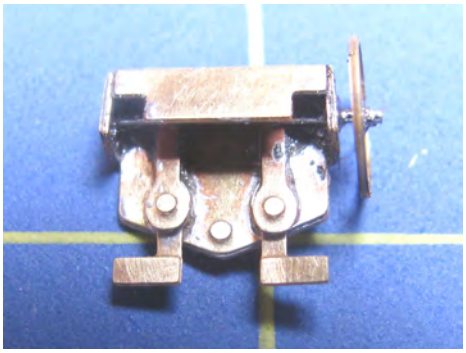
B



C



D



9, Take the two main white metal parts of the gearbox, clean off any flashing and fix together using adhesive as shown. Add handle (part 22), which should be secured in place by drilling a small hole and inserting a short length of .33mm rod. The small oval shaped access cover (seen just in front of the seat to the right) should be be fixed as shown.