



TB5 Tender Body Pack LMS Fowler Flush Riveted Sides

Components required to turn this body pack into a complete tender:
TC1 6'6" x 6'6" tender chassis
TF4 Tender frame kit
3 axles 4' tender wheels (WH34)

This body pack is intended for use with our tender frame kit TF4, but can also be used for scratchbuilding or to improve an RTR tender.

This was the first LMS standard tender design to appear and clearly owed much to the final Midland tender. Initially they were built without either coal doors or coal rails, with the tank vents in the coal space. Coal doors first appeared in 1927 on those tenders built for the Royal Scots, allowing easy access to the coal space. Coal rails started to be added circa 1930, increasing the capacity from 5½ tons to 7 tons, but it was another year or so before they were incorporated as standard features for new construction.

To complicate matters many tenders were subsequently modified. Firstly coal doors were fitted retrospectively to many of the early tenders. Secondly on those tenders with coal rails the air vents were often re-sited outside the coal bunker on both sides of the dome. The result of this was that by the late 1930s there were six possible combinations of features. It is also worth noting that although of flush appearance, these tenders were of riveted construction using countersunk rivets. The final version had prominent snap head rivets.

Parts list - Etchings

- | | |
|---------------------------|--------------------------------|
| 1. Front bulkhead | 10. Rear bulkhead inlay |
| 2. Front bulkhead overlay | 11. Rear bulkhead supports (2) |
| 3. Front bulkhead overlay | 12. Centre brace front |
| 4. Tank rear | 13. Centre brace rear |
| 5. Tank rear overlay | 14. Front platform |
| 6. Sides (2) | 15. Tank rear inlay |
| 7. Side inlays (2) | 16. Lifting rings (2) |
| 8. Tank top | 17. Lifting ring bases (2) |
| 9. Rear bulkhead | |

Parts list - Castings etc.

- | | | |
|---------------------|-------------|--------------------|
| Tender front | Tool box | Tank vents (2) |
| Water gauge | Dome | Handrail knobs (4) |
| Brake standards (2) | Tank filler | Handrail wire (2) |

Assembly Sequence

Note: Make all folds with the half-etch to the inside of the fold unless stated otherwise. The instructions assume that the body will be built onto the tender base from our frame kit TF4, which should be completed up to step (7) in those instructions. It is advisable to add whitmetal castings to both the frames and superstructure only when all hard

soldering of etched parts has been completed. If you do not wish to portray the coal rails they can be simply trimmed off, but in addition you will also need to shorten the fire iron supports.

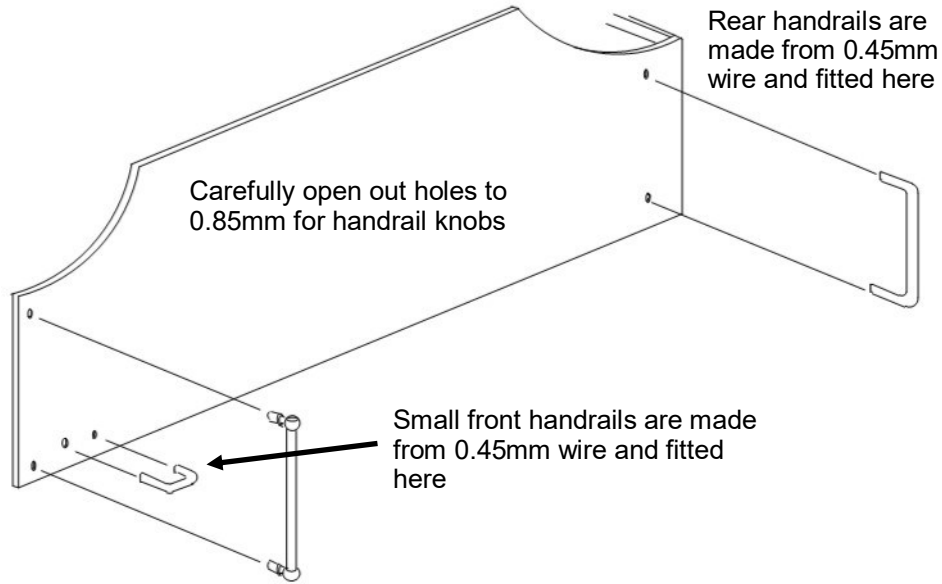
1. Fold up the front bulkhead etch (1) as per sketch 1. Carefully solder in place your choice of the front bulkhead overlays (2 or 3), ensuring that it aligns with the bulkhead at the top and sides. Solder this assembly to the tender base, locating it by the tabs on its lower edge. Check that it is square to the frame in all directions.
2. Fold up and solder the tank rear (4), again locating to the tender base by the tabs on its lower edge. Tack solder to the base at the sides only and check for squareness. When satisfied solder on the tank rear overlay (5), ensuring that this is located centrally over the tank rear.
3. Solder the tender sides (6) to the tender side inlays (7), taking care that they are aligned accurately at the top and side, but do not solder the tabs to the coal rails at this stage. Remove any stray solder from the sides before locating the tabs along the bottom edges of the sides into the slots in the tender base and solder in position, ensuring that the rear edges of the sides are flush with the tank rear.
4. Before fitting the tank top (8) (sketch 2) decide if the tank vents are to go in the coal space or next to the dome and drill out the appropriate half-etched holes. The tank top can now be soldered in place.
5. Solder the rear bulkhead (9) to the rear bulkhead inlay (10), taking care that they are aligned at the top and sides. Fold up the long tabs of the rear bulkhead to 90° and solder the bulkhead to the tank top, locating by the tabs on its bottom edge. The bulkhead supports can now be soldered in place, locating by the tabs on their vertical edges. They should locate hard against the inner edge of the long tabs to give a representation of 'L' angle.
6. Bend out the coal rails on the tender sides until they match the angle of those on the ends and solder together. The small piece of etch supporting the rear ends of the coal rails can now be clipped off using cutters and filed flush.
7. Solder the front and rear halves of the centre brace (12 & 13) together, taking care that they are in alignment. Solder in place in the slot approximately half way along the bunker as per sketch 2.

The etched assembly should now be washed to remove flux residues.

8. Fettle the tender front casting (18) and check for fit against the front bulkhead. It should slide into position between the front edges of the tender sides. We suggest it is best fixed with adhesive, since you might find it difficult to make a hidden or neat solder joint. If you are modelling the early version without coal doors cut off the top part of the casting (sketch 4) and file off any remaining door detail. Ensure the new top datum is filed flush before fixing the modified tender front in place, then fix the separate tool box casting centrally to it. Fit the water gauge (18) to the top of the tender front. Note that this was usually placed on the right hand side as you look at the tender front but they were also placed to the left. Check with a photograph of your chosen loco (if you can see the tender front in sufficient detail).

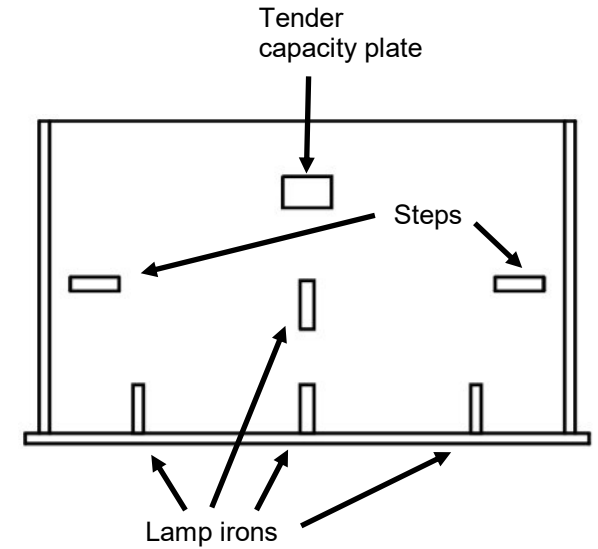
9. Fold up the front platform (14) and fix in position between the front edges of the tender sides with the overhang to the front. Note that the height of this platform varied to suit the loco with which it was paired, so you might need to file some metal off the bottom edges to match it to your particular loco.

The remaining detail can now be added in any order as per sketch 3.



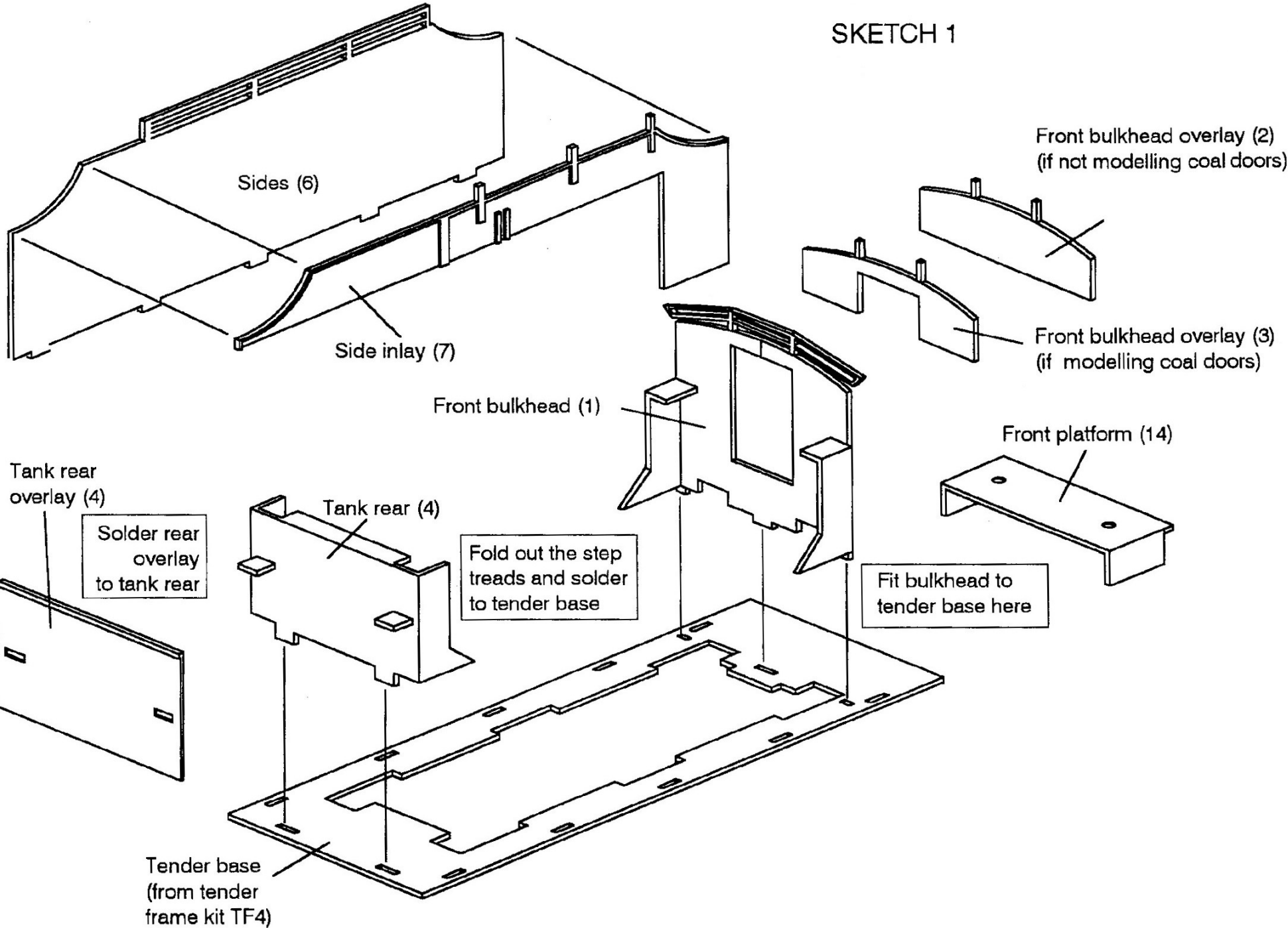
Front handrails are made from 0.45mm wire and short handrail knobs

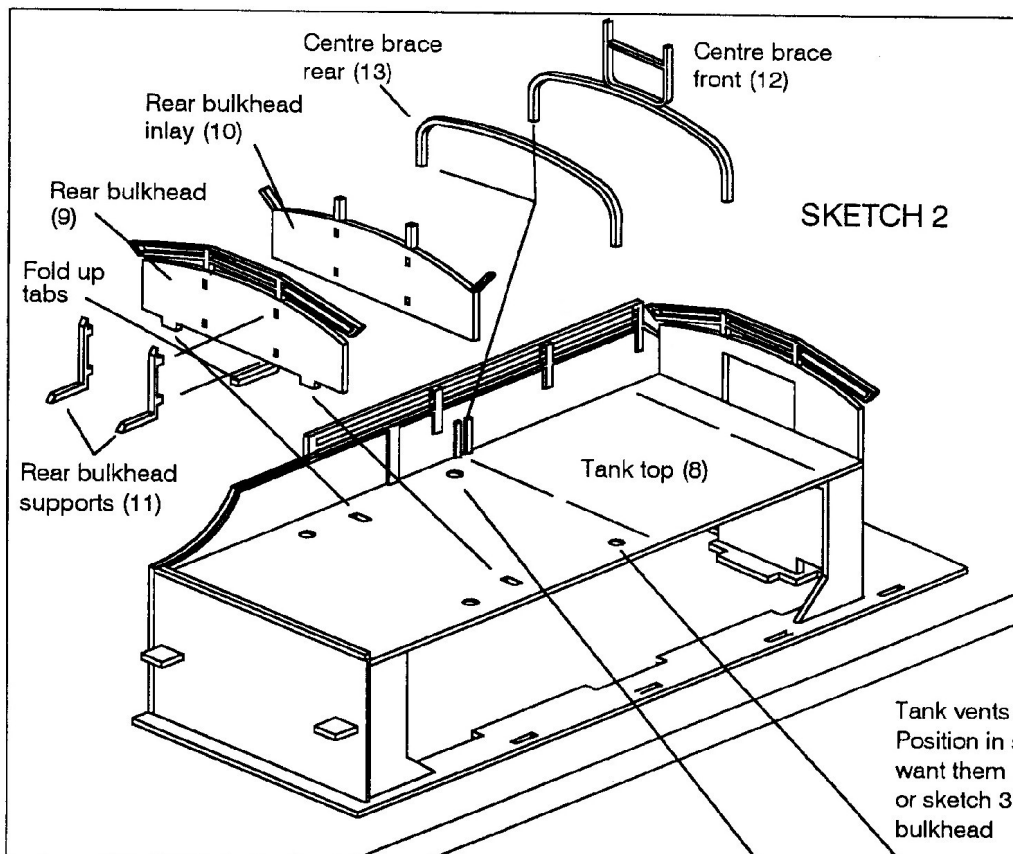
Please note that the lamp irons, works plate and capacity plate are not provided. We make the lamp irons from 'Bambi' staples cut in half. The works and capacity plates are available from other manufacturers.



Tender rear view

SKETCH 1





Tank vents (24)
Position in sketch 2 if you want them in the coal space or sketch 3 if to the rear of the bulkhead

