

## UM5 UNDERFRAME for 4- AND 6-WHEELED UE5 LMS/LNER COACHING STOCK

Study the diagram opposite: the letter references below relate to this. Since the underframe is designed to suit one of three different vehicles, E7 (LNER Thompson 6-wheel van), E20 (LNER Gresley 4-wheel van) and M59 (LMS Stove R), not all the parts are used for all the vehicles. The vehicle(s) to which each part belongs is indicated after the part letter. It can also be used with other 4 and 6 wheeled coaching stock running on 14mm diameter wheels using COMET W-irons code C7. An assembly sequence is suggested, but it may need to be adapted if scratchbuilding or using with other manufacturers' products.

- A. E7, E20 Underframe fixing bracket. (M59 has this part contained within the sides and ends pack, which should be used. The end angle supplied with E7 and E20 should be discarded).
- B. E7, E20, M59 Guard's steps. This goes on both sides under the door with the droplight on E7 and E20. M59 only has one door each side so put it under them.
- C. M59 Ascending step at the coach end. This fastens to the back of the solebar immediately adjacent to the headstock at the right hand end of the van (from the side you look at it, one each side).
- D. E7, E20, M59 Vehicle floor. The inner slots in the floor are used to position the solebars for M59; the outer ones for E7 and E20. The five holes on the centreline are the positions for the W-iron pivots (COMET MODELS pack C7).
- E. E7, E20, M59 Brake V-hangers. Position as indicated on the floor plan contained in the sides pack.
- F. M59 Solebar.
- G. E7, E20 Solebar.  
Whichever solebar is not required can be utilised to make the solebar stepboards.

### Assembly instructions

First decide if the sides, ends and roof are to be assembled as a unit, with the underframe detachable, in which case the building sequence in section A should be followed. This is the method we recommend. Should you wish to build the underframe as an integral unit with the sides and ends, with the roof added last, use section B.

#### Section A

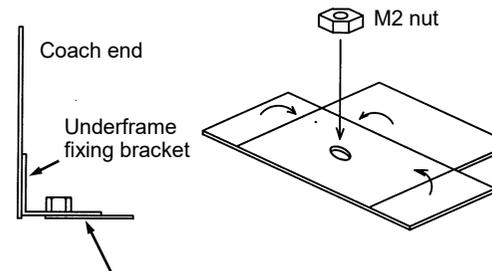
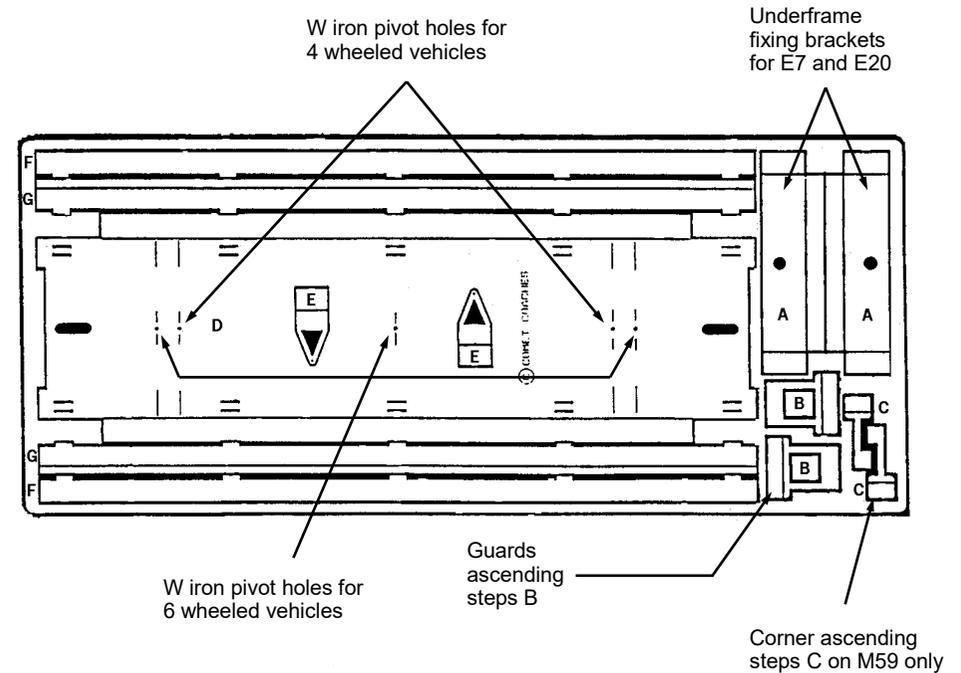
1. Remove the parts from the fret, including those, (E), that are etched within the floor area.
2. Select the appropriate W-iron positions and drill clearance holes for the pivots.
3. Bend up the edge of the floor and reinforce with a fillet of solder.
4. Bend up the underframe fixing bracket to 90° and solder an M2 nut (supplied if this pack is bought as a component in a complete coach kit) over the hole (see sketch opposite). When soldering the bracket in place onto the coach end rest it on a piece of 18 thou scrap from the underframe. This will ensure that the edges of the underframe are not visible when the body is fixed in place.
5. Offer up the underframe to the coach ends/sides/roof assembly and fettle the ends of the floor if necessary to achieve a drop-in fit.
6. Fold the bottom lip of the solebars (G), where these are being used, and reinforce with a fillet of solder applied from the rear. Fix the solebars to the floor by inserting the tabs through the slots, taking care to ensure they are vertical. Solebars for E7 and E20 are fixed into the **innermost** rows of slots, with those for M59 being fixed into the **outermost** slots.
7. The buffer beams, supplied in the ends/sides pack are next fitted to the ends of the solebars
8. The remaining underframe detailing can be carried out in any sequence. Drill the V-hanger cross-rod holes to 0.75mm then fold them up and fix in place. Stepboards may be fashioned from the outer frame

of the etch or from the discarded solebars. We suggest they are fixed by drilling through the solebar face and inserting 0.45mm wire to which the stepboard is then soldered. The position of the stepboards and other equipment is given on the underframe plan contained in the coach sides/ends pack.

#### Section B

1. As sections A1-4 above.
2. Fix one coach end to one end of the floor and one prepared side to this assembly, ensuring that the bottom of the coach side is level with the underside of the floor. Repeat for the second side and end.
3. Complete the assembly as in sections A6-8

Castings for dynamos, vacuum cylinders, battery boxes etc. are available in the COMET MODELS range.



Use 18 thou scrap from the underframe to set the bracket up slightly from the bottom of the end