

COOPER CRAFT SLATER'S KITS.

Ref 4043 – NER/LNER Diagram V1 'Birdcage' Brake Van.

Parts required to complete: Couplings of your choice. 2 axles 3'6" 10 spoke wheels.

Historical Notes. The North Eastern Railway had a liking for "birdcage" lookouts on its brake vans, both passenger and freight. Indeed, until the advent of the well-known V4 10 tonner of 1908 with two verandas and side duckets, the birdcage V1 was the "standard" NER brake van, although normally designated "Goods" or "Mineral" van rather than brake. The V1's were built mainly between 1897 and 1902, though it is not possible to be specific about dates. It is probable that prior to about 1900 they were built with horizontal planking, whereas after this the planking was vertical as in the kit. About 1907 they started to receive side duckets, though less than half were so fitted, and some later had the birdcages removed, though it is not known how many; the NER Wagon Register does not show which vans did or did not have duckets and the only evidence is photographic. Commencing in 1905, some vans were fitted with vacuum or Westinghouse pipes and/or brakes for working fitted freight trains. In 1906 there were 27 fitted with Westinghouse pipes, 4 with Westinghouse brakes, 3 with vacuum brakes and 22 with vacuum pipes. Vans so fitted also received screw couplings in place of the normal 3-link variety.

The V1's were used widely on the NER and later LNER. In the 1920's and 30's, they were withdrawn in ever increasing numbers, though 10 of them, including 3 vacuum braked examples, were still in service at least until 1938. There is a preserved one at the Beamish Museum, though some details of both fittings and livery are believed to be incorrect.

Livery Notes. Basically, there were 5 livery variations, although within each category there were inevitably exceptions and detail differences. We have provided transfers suitable for each period and Figure 3 shows typical positioning for the transfers. Note that the figures are only a guide as to positioning of transfers and are only approximate with regard to lettering size and style.

NER to 1904: During this period the van bodies were painted chocolate or Vandyke brown, the ends were vermilion and the roofs lead grey. The solebars, and all ironwork below the solebars, were black, as were the buffers and possibly the handrails. It is possible that early in the period the wheel tyres were white. The interior was white and lettering yellow. The vehicles were designated as either "Mineral" or "Goods" vans and the district allocation, northern (N.D), central (C.D) or Southern (S.D.), together with the van's home station, appeared below this. It is impossible to list here every van, but we offer some examples of designation, district and home station to assist the modeller. Figure 3a illustrates the lettering layout of a typical V1 of this period.

No.	Designation	District	Home Station	No.	Designation	District	Home Station
5	Goods	SD	York	91	Mineral	ND	Percy main
6	Mineral	ND	Hartlepool	4790	Goods	SD	Hull
7	Goods	SD	Castleford	4872	Goods	-	Middlesborough
11	Mineral	CD	Stockton	10356	Ballast	CD	Middlesborough
14	Mineral	CD	Shildon	14932	Mineral	SD	York
17	Goods	SD	Selby	04980	Mess+Tool	-	Percy main Loco
25	Mineral	ND	Tyne Dock	16604	Goods	ND	Newcastle
30	Goods	SD	York	17075	Mineral	SD	Leeds
32	Mineral	SD	York	20100	Goods (Pass)	-	Pickering
33	Mineral	ND	W. Hartlepool	21297	Mineral	CD	Darlington
39	Mineral	CD	Middlesborough	21313	Mineral	SD	Hull
48	Goods	SD	Hull	25005	Goods	SD	Leeds
49	Mineral	CD	West Auckland	44815	Mineral	CD	Shildon
56	Goods	CD	Darlington	44838	Goods	ND	Washington
58	Mineral	CD	Haverton Hill	97878	Mineral	ND	Seaham
64	Mineral	ND	Gateshead	97883	Goods	ND	Seaham

NER to 1922 From about 1904 to the end of the NER as an independent company the colour of the van body was changed to red oxide and the lettering was white. Up to about 1911 the lettering layout was as shown in Figure 3b. The lettering sizes were:

NER 7½" Numbers 6" Designation 4" Home station 4" initial followed by 3" Letters.

From 1911 to 1922, there were two different styles of lettering. The exact distribution and chronology of the two variations is not clear. Variation 1 is illustrated by Figure 3c, the lettering sizes being;

Designation 6" Numbers 6" N.E. 12" Home Station 4"

Variation 2 is illustrated by Figure 3d. Note that the number was above the E on each side. Lettering sizes were:

Numbers 5½" N.E. 12" Home Station 4" Initials followed by 3" letters.

LNER post 1923 The LNER painted the entire van dark grey with white lettering as shown in Figure 3e. The lettering sizes were:
N.E. 18" Numbers 5" 10 tons 4"

The exceptions to the above were vans fitted with automatic brakes or pipes, which were authorised on 31.10.24 to be painted red oxide with white lettering. The LNER dispensed with the home station indication except for the following:

Blaydon Mineral Kirkby Stephen Blyth Ferryhill Middlesborough Percy Main Bishop Auckland Consett Hartlepool Mineral
Monkwearmouth Shildon South Dock Washington West Hartlepool Mineral Tyne Dock Mineral Wear Valley Juct. Tyne Dock Goods West
Auckland Port Clarence Rosedale Gateshead (Mineral) Waskerley Haverton Hill South Dock (Goods) South Dock (Mineral) Gateshead
(Mineral) was deleted on 14.2.27. Armfield Plain Barnard Castle and Newcastle Quay were added to the list on 30.10.30. West Auckland was
deleted from the list on 23.3.31 as the marshalling yard there had closed.

Throughout their lives the vans appear to have had their tare weight painted in white above the left hand axleboxes on the solebars, and cast number plates painted black with white lettering on the right.

Assembly Notes. Before commencing assembly read the instructions carefully and familiarise yourself with all the parts. The following general notes are offered to help you construct an accurate and attractive model:

Always cut parts from sprues with a SHARP knife; do not be tempted to break parts from sprues as the risk of damage is high. Clean off small pips with a knife or fine file.

Do not remove parts from sprues until the instructions call for it; this will help identification of parts and minimise chances of loss.

Painting is rarely best left until construction is complete. The latest stage at which it is advisable to paint a model is before small detail, glazing etc is applied. The suggested order of assembly is designed for this.

A small piece of plate glass is an ideal surface on which to assemble your model and ensure squareness and accuracy.

Use a liquid, not tube, cement. C+L's Butanone or Plastic Weld is ideal and will provide a clean and easy to use adhesive medium.

1. Take the two side mouldings and open out the handrail holes with a No.76 drill (.020"/.508mm). See Figure 2 for handrail layout. Take the four end stanchions and drill a No.76 hole laterally through each one 17.5mm from the bottom (wide) end - see figure 2. These holes will be for rails 13 and E. In two of the stanchions drill a further hole, to half depth only, 24.5mm from the bottom end in the outside face see Figure 2. These holes are for rails D. In the same two stanchions drill a No.76 hole centrally in the front face of the stanchion 32mm from the bottom for rail C — see Figure 2. Take the tall end moulding which includes the "birdcage" section and drill out No.76 the holes for rails D at the points marked — see figure 2.

2. With a fine file, gently chamfer the small corner strapping overhangs on the sides and ends so that they are flush with the main chamfer as per Figure 1. Take one side and one end and glue together so that the lower edge of the side sits on top of the non—chamfered portion of the headstock - see Figure 1. Repeat with the other side and end— ensure that the two sub-assemblies are at 90° and leave to set. When thoroughly dry, glue the two sub—assemblies together to form the basic body shell.

3. Invert the body shell and drop in the floor so that it rests on the longitudinal ribs moulded on the inside faces of the sides. Ensure that the mouldings on the floor are to the outside and glue into place.

4. Glue in place the small birdcage end.

5. Take the two end stanchions in which you have drilled only one hole each and glue them in place on the non—birdcage end. Glue the other two stanchions in place on the birdcage end ensuring that the holes drilled for rails D are to the outside.

6. Glue one solebar in place between the headstocks with the inside face against the lateral ribs under the floor and the end lugs against the lower edges of the headstocks.

7. Put wheelsets and bearings in Position with the other solebar and, when satisfied everything is true, glue it in place. Whilst the glue is still drying, stand the model on a sheet of glass and ensure all four wheels are touching it.

8. Slide one of the small annular mouldings onto each butter head, insert into buffer housing and glue in place.

9. Glue the footstep mouldings in place. The recesses in the lower footboards glue onto the lower edges of the axleboxes for strength.

10. Paint the model and apply your chosen transfers. The transfers are of the Pressfix type and should be applied as follows: Carefully cut around the required lettering and peel it away from the thick backing sheet; position on the model and apply firm finger pressure to fix in place; ensure that the lettering is formed into planking, details etc by pressing in the carrier film with a ball point pen or similar then soak the carrier film with water for about 30 seconds then peel it off. Once all the transfers are applied, we recommend that the model be given a coat of matt varnish.

11. Cut pieces of plastiglaze about 1mm larger all round than the window openings and fix in place with adhesive, carefully placed around the edges.

12. Glue in place the main and birdcage roofs. Note that the chimney base is closer to the birdcage than to the end of the van. Cut a piece of plastic rod 7 mm long and fix into the chimney mounting on the roof.

13. Slide the brake shoe mouldings under the axles and glue into place so that they line up to the wheel treads.

14. Glue the longitudinal limbers between the lower end stanchion extensions. Note that "00" modellers will have to take care that they are clear of the inside wheel faces.

15. Referring to figure 2, make the handrails from .020" brass wire and fit as follows:

Cut two pieces 13mm long for rails B and slide them through the transverse holes in the end stanchions. Secure with superglue or similar. Bend rail C to the dimensions shown and fit. Cut two pieces 11mm long, make a 90° bend 3.5mm from one end of each and fit as rails D. Cut four pieces 35.5mm long and make a 90° bend 11mm from one end of each. These pieces form rails E.

Make a 90° bend 3mm from the end of the remaining wire and lay it in the bending jig on one of the side and end sprues. Pull the wire round the "open" end of the jig and cut 3mm from this bend. Repeat seven more times to form rails A

Solder two rails A to each rail E as shown. One recommended method is to coat each rail with solder cream at the required points, grip the bent end of each in a sprung wooden clothes peg and lay on a flat wooden surface (not the kitchen tablet). Adjust the position of each until they are all mutually in the correct relationship (some pencil lines on the wood will help) and solder the joints. Fit the composite rails as shown in the diagram.

Paint the handrails. From photographic evidence it appears that the handrails were variously painted black or to match the body colour

FIG. 1

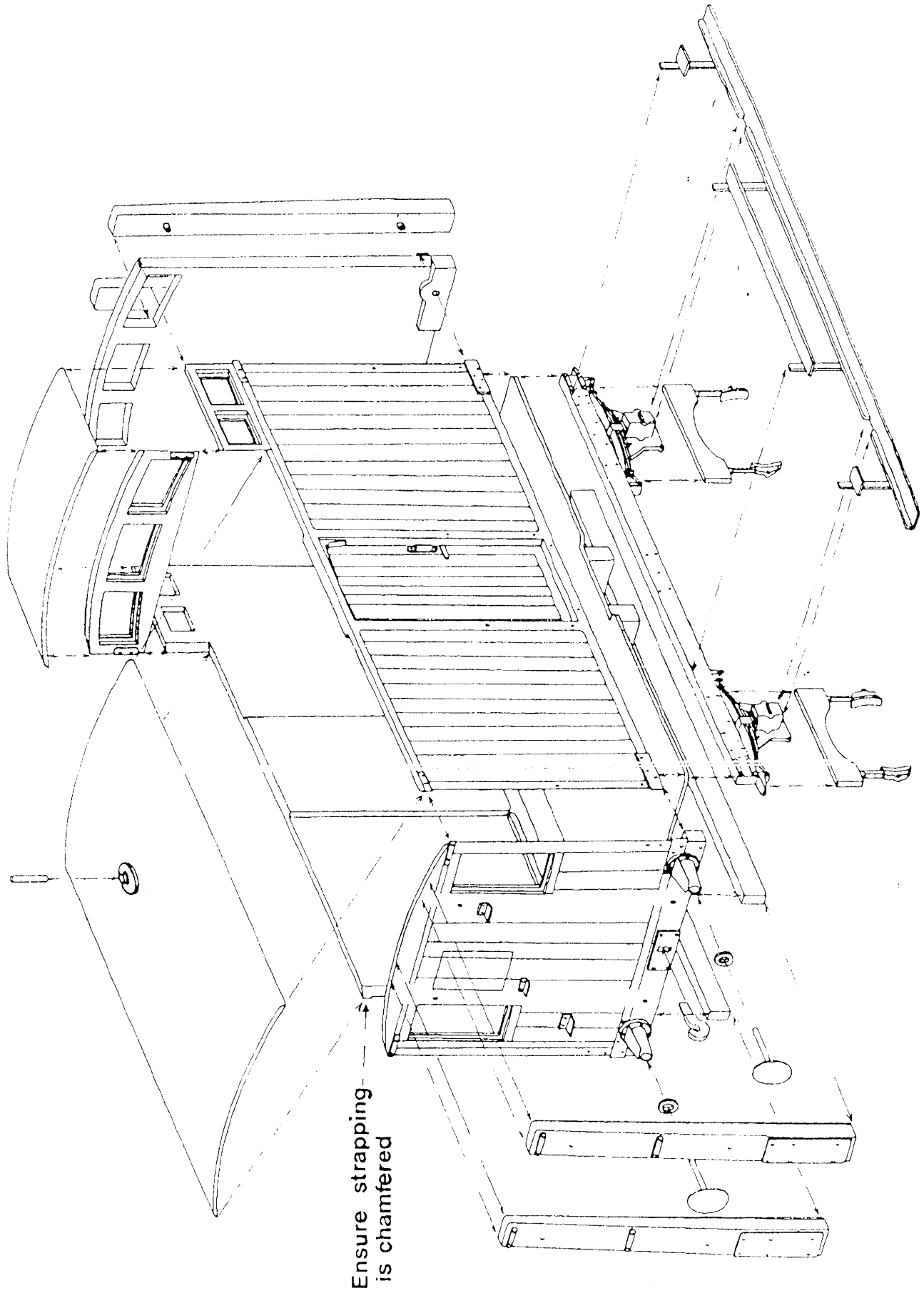


FIG.2

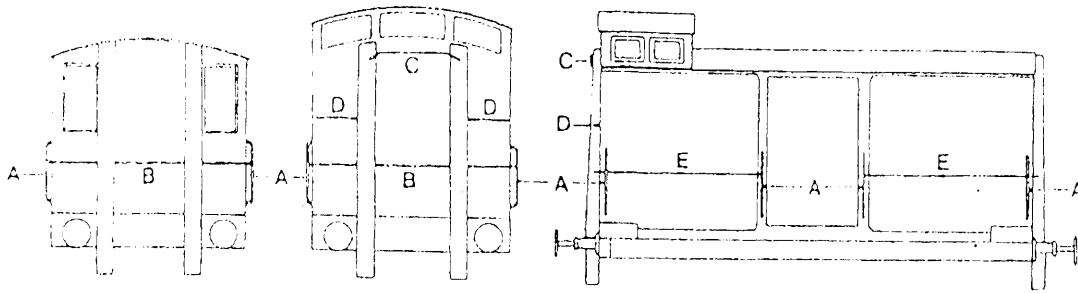
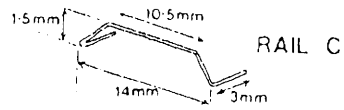


FIG.3a-NER to 1904

YELLOW LETTERING

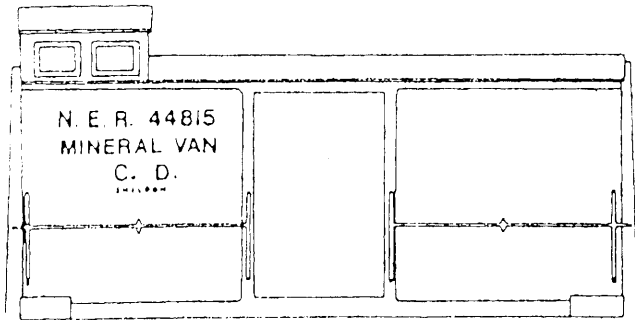


FIG.3b-NER to c.1911

WHITE LETTERING

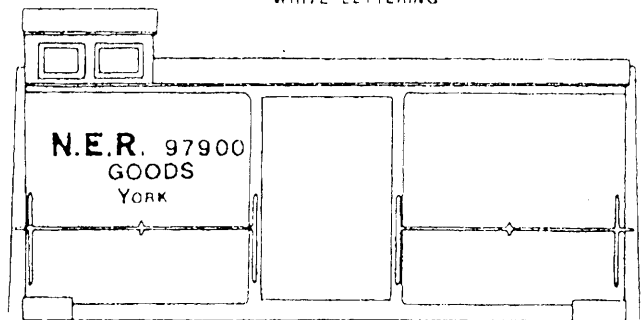


FIG.3c-NER to 1922 version I

WHITE LETTERING

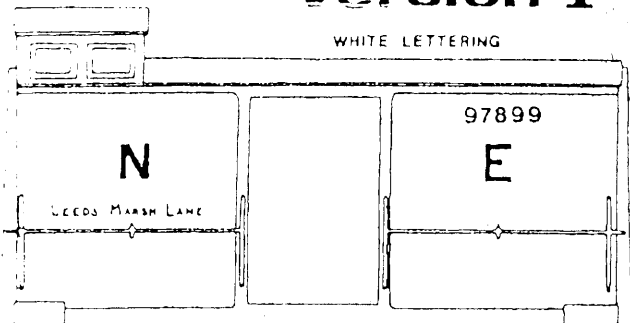


FIG.3d-NER to 1922 version II

WHITE LETTERING

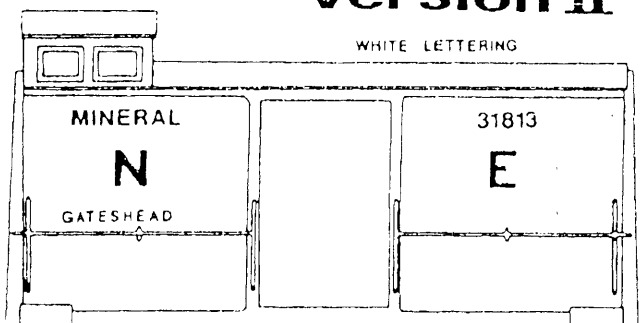
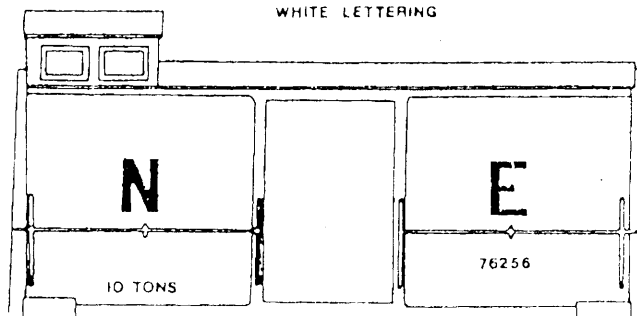


FIG.3e-LNER post 1923

WHITE LETTERING



NOTE: THIS FIGURE IS ONLY TO INDICATE TRANSFER POSITIONING. LETTERING STYLES AND SIZES ARE ONLY APPROXIMATE.