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## **ASSEMBLY INSTRUCTIONS FOR INSIDE FRAMED GWR 50' MONSTER & GIANT VANS.**

**UM/E 1224 (Diagram P 21-Lot 1498-M)**

**UM/E 1230 (Diagram P 23-Lot 1753-G)**

**UM/E 1231 (Diagram P 24-Lot 1769-M)**

**UM/E 1232 (Diagram P 18-Lot 1265-M)**

**UM/E 1233 (Diagram P 18-Lot 1223-M)**

### **IMPORTANT**

Before starting this kit it is strongly recommended that the instructions are read from start finish. Please familiarise yourself with the parts of the kit and relate them to the drawings included. Please note this kit produces a complete body shell with roof and underframe details only. **Wheels, couplings, paint, transfers (UM/T 2110 Brown Vehicles Insignia sheet available August 1997) and adhesives are required to complete this kit.**

### **SOLDER AND GLUE**

These instructions refer to the use of liquid solders (liquid is preferred as it is easier to apply and produces less excess solder) Types recommended are **CARL'S** 243 and 188 (high and medium temperatures). Use epoxy adhesives for gluing the white metal components e.g. **ARALDITE**. **N.B. Wash your hands after handling white metal components as there is a lead content in the castings.**

### **CONTENTS**

**1-off etched brass fret containing : Integral floor , sides & ends , 2 Solebars, 4 Foot boards, 2 Pivot Boxes, 2 Washers, 2 Tie Rod or Truss Frames & central V Hanger ,2 Buffer Beams, 10 window bolections with 2 spare(1332/33 only) , 2 Short brake levers, 2 Coupling Boxes, 2 Bogie Supports, 6 Door hinge straping with 2 spare( not 1232) , 4 Lamp brackets(not 1232/33 ,1 Electric regulator box(1224/30&31 only) .2-off 9' etched American Bogies with 8 top hat bearings. 1-off aluminium roof. 4-off turned brass buffers. 1-set white metal castings for the underframe. 2-off white metal scissor gangways (**GIANT only**) .1-set gas lamp tops (where applicable), 2-off 2 x 1/4 self tapping screws.100mm Nickel Silver wire 0.33mm. 100 x 10mm clear glazing strip.**

### **HISTORY/LIVERY NOTES**

The forerunner to the above designs were three vans built in 1911 to Diagram P.16 but with outside frames for use as scenery vans. The design was 50' long and 8'6" wide with a high elliptical roof profile and mounted on 9' American Bogies , a feature used on all the above listed diagrams with the exception of No.486. UM/E 1233 P.18 Lot 1223 built 1913 No's 483,484 & 485 [3] (folding end doors-gas lighting-tie rod underframe-window bolections. GWR Brown, BR Crimson & Maroon. Most condemned 1959-63) UM/E 1232 P.18 Lot 1265 built 1920 No's 581-2/584-92/594-5[13](corridor scissor gangways-gas lighting-angle truss frame-window bolections. Liveries and withdrawl same as Lot 1223 ) UM/E 1224 P.21 Lot 1498 built 1932 No's 489 & 486 [2] (Re-built from two Giants Lot 1191-1910. Twin folding end doors with vents-electric lighting-tie rod underframe & flush windows. 486 fitted with 7' bogies. Liveries and withdrawl same as Lot 1223) UM/E 1230 P.23 Lot 1753 built 1953 No's 493-498 [6] (folding end doors-electric lighting-angle truss frame-1/3 louvered side doors-flush windows. BR Crimson, Maroon and all Blue liveries. In use to late 70's ) UM/E 1231 P.24 Lot 1769 built 1954 No's 596-600 [5] (Twin folding end doors with vents-electric lighting-angle truss frame-1/3 louvered side doors-flush windows. Liveries and withdrawl same as P.23)

Huge numbers of pre BR built stock were condemned between 1959-63 but some of these vans passed into departmental use and thus survived a few more years. Diagrams P.23 & 24 survived until 1978/79 by which time a few were purchased for preservation.

## INSTRUCTIONS

## STAGE 1

## THE BODY SHELL

**1.1** This kit is based on the principle of an integral floor with fold up sides and ends. **Before** removing the etched parts from the frets, first check that the etched slots are cleanly formed and, if not, then open with a knife (100% cleanly etched slots cannot be guaranteed due to the sensitive nature of the chemical etching process). Now remove the main body section from the fret. (**do not** attempt to fold the body at this stage until the window bolections have been fitted as it is almost impossible to fit them at a later stage. This applies only to UM/E1232 & 1233. Remove the window bolections with care from the fret and clean the tab points with a fine swiss file. Two spares are included incase of accidents. The modeller can now either solder or glue these in place. Recesses are etched for each window to aid fitting). Soldering with liquid solder paste is recommended as this produces a stronger bond with a longer life that far outlasts glues. Clean any excess solder away with a fibre glass-pencil brush.

**1.2** The sides and ends can now be folded up with the aid of a 12" steel rule. Take care with ends on UM/E 1224/1230-31 that have half etched panels near the fold line. While it is possible to glue all parts in these kits together without soldering it is strongly recommended that the joins between the sides and ends are soldered from the inside to produce a strong box structure. The van's body is now taking shape. Check that the body is square on a flat surface and that all the details are correctly aligned & adjust if required.

## INSTRUCTIONS

## STAGE 2

## DETAILING THE BODY SHELL

**2.1** Turn the body over, preferably in a cradle, and solder the underframe details in place. Remove the 2 solebars, 4 foot steps, 2 buffer beams, and tierod/truss frames from the frets. Fit and solder (use 243 temperature solder) the brass buffers to the buffer beams. It is recommended that the buffer faces be flash soldered and then polished with wet and dry paper. The advantage of the solder is that, after painting, should any paint flake away the dull metal on the buffer head will represent a prototypical appearance. Now assemble the foot steps to the solebars (N.B. the relationship with each side and the tierod/truss framing). Check that the solebars fit and solder in place with 188 temperature solder. Now locate and solder with 188 the buffer beam assemblies. Fit the tierod/truss frames and the single-central V-hanger with 188 solder or glue (N.B. the clearance slots for the foot steps). Finally fit the external short brake levers on each side.

**2.2** Remove the bogie pivot boxes and fold up the sides. Cut from scrap plasticard to produce a filling blank 1.5mm thick (0.060") that fits inside the box (an alternative is to use Milliput epoxy putty). Solder the boxes in place and drill through with a 1.75mm or equivalent drill to suit the self tapping screws provided. Screw the No 2x1/4 self tapping screws in place to establish the thread and remove.

**2.3** Finish the underframe by gluing (epoxy) the vacuum cylinders in place and the gas tanks (for UM/E 1232 & 1233) or vacuum cylinders, dynamo, battery boxes & [etched] voltage regulator. Using the wire provided fabricate the brake linkage. Drill 0.4mm holes in the vacuum cylinder castings to accept the wire and solder the linkage to the truss frames with 188 solder.

**2.4** Etched spot marks are provided to show where to drill 0.4mm holes for the grab handles fitted around each door. Also provided are end lamp brackets but not all types had these fitted. Overlay end door hinge strapping adds extra rivet detail. Cut and carefully solder/glue in place. Also provided on the fret for the "rivet counter" are side lamp brackets, side stiffening brackets and door hinges! (due to the small sizes involved it is not possible to guarantee 100% reproduction of these parts)

## INSTRUCTIONS

## STAGE 3

## ROOF DETAIL

**3.1** The aluminium roof can now be assessed for fitting. The vans when first built had twin rain strips fitted as shown on the roof drawing (In BR days when the vans were serviced the inner pair of rainstrips were not refitted). Fabricate these either from Slaters micro-rod or use 0.5mm self adhesive lining tape (Letraline black or from Freestone Model Supplies). Take care in applying this as it is one of the most noticeable features seen on the model.

**3.2** Use the roof drawing to position the gas lamp tops. Glue the gas vents in place and check the roof for overall length and fit with the ends. File the roof and/or ends to achieve an acceptable fit.

**3.3** The roof can now be painted and stored before final fitting. *N.B. CONSIDERABLE CARE IN THE CONSTRUCTION OF THE ROOF IS IMPORTANT AS THIS THE MOST NOTICEABLE FEATURE ON THE MODEL.....A BAD ROOF DETRACTS FROM APPEARANCE*

## INSTRUCTIONS

## STAGE 4

## ASSEMBLING THE BOGIES

**4.1** The original coupling (white metal casting) for the bogie was clumsy and heavy. An etched pivot box is provided that will accommodate a standard PECO coupling (not provided). Remove the original coupling slot and fit the pivot box instead. After folding and assembling, set the coupling height adjuster plate to suit the bogie. (Alternatively fit one of the coupling systems available e.g. MBM, DG, BB or Sprat & Winkle [MSE]). The original Cav'ndish 9' American bogie coupling support has to be removed to accept these alternative coupling systems and a replacement bogie support piece is provided to help stiffen the ends of the bogie. The thin 'T' with tabs is designed to solder to the inside of the ends of the bogie frame while the main structure locates on the underside of the bogie stretcher with pivot holes aligned to the pivot holes and also soldered in place.

**4.2** The bogies are provided with overlays (2 layers) that form the axleboxes. These are best soldered or glued in place while the bogie is still flat. Turn over and drill with a 1.0mm to deepen the pivot hole to accept an axle. (top hat bearings are provided for those who prefer them. Once soldered in place deepen pivot hole to accept the standard 15mm length axles.)

**4.3** Now fit the bogies with the wheels of your choice (not included with the kit) and screw the bogies onto the model with the etched washers provided. Test the model on the track before final fitting and painting

## **INSTRUCTIONS                      STAGE 5                      PAINTING AND GLAZING.**

**5.1** Remove the bogies and roof. Clean the model thoroughly (if the model has only been assembled with solder then it should be washed with care, in hot soapy water, to remove flux residues with an old tooth brush and allowed to dry). The best results are achieved by spray painting with thin coats. Use a red oxide primer all over followed by the desired colour for the sides, ends & roof (the underframe & bogies were always black). Apply sparingly in coats to the roof so as not to lose any details.

**5.2** Cut and fit the glazing to the windows and paint the interior a darker shade (brown) if desired.

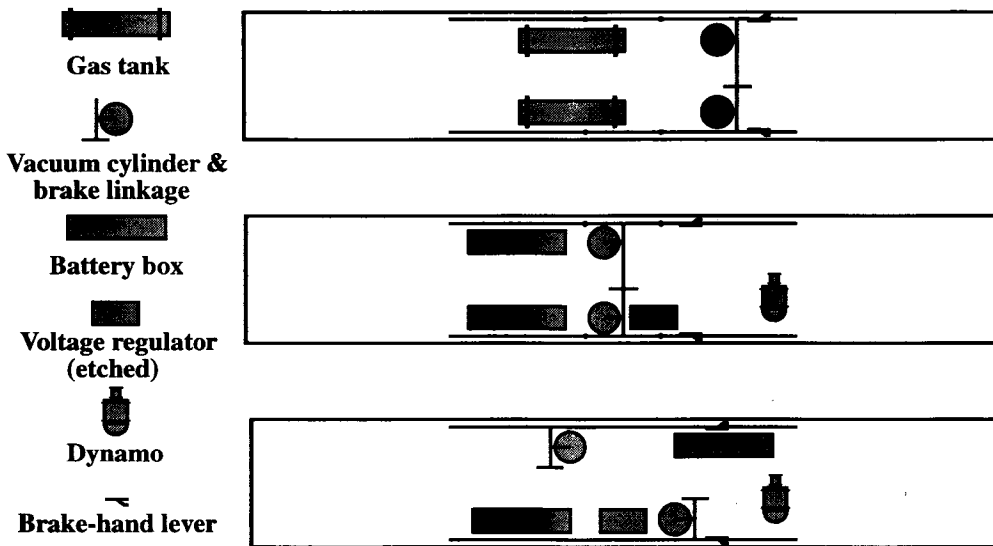
## **INSTRUCTIONS                      STAGE 6                      FINAL ASSEMBLY .**

**6.2** RE-FIT the roof checking the interior is clean and glue in place. Fit the bogies and wheels and test on a piece of track. (The N Gauge Society Shop is recommended as the best source for purchasing wheel sets).

You should now be ready to place your completed model on the track. It is hoped that you have enjoyed constructing the kit and that the model provides you with years of good service. *(to make use of the standard kit box for storing the finished model cut from 1mm thick card e.g. art mounting board internal packers. These lift the lid high enough to accommodate the model. Cut two pieces 23mm x 60mm and two pieces 23mm x 209mm. Fit the long side pieces first and glue if desired. The end pieces are a good push fit that holds the sides in place)*

**ULTIMA(2mm/N)MODELS RESERVES THE RIGHT TO CHANGE THE  
SPECIFICATION OF THIS KIT WITHOUT PRIOR NOTICE  
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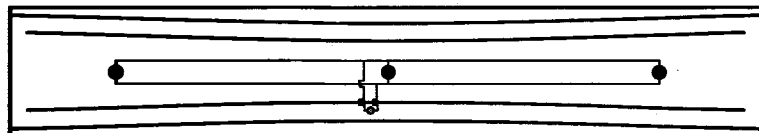
**UM/E 1224/30-33 GWR 50' MONSTER & GIANT VANS-  
-UNDERFRAME & ROOF LAYOUTS PLUS ASSEMBLY DETAILS**



**DIAGRAM P 18(U/F)**

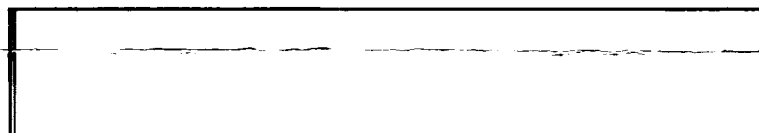
**DIAGRAM P 21(U/F)**  
(use UM/P334 for correct V hangers & brake gear)

**DIAGRAM P 23/24(U/F)**  
(use UM/P334 for correct V hangers & brake gear)



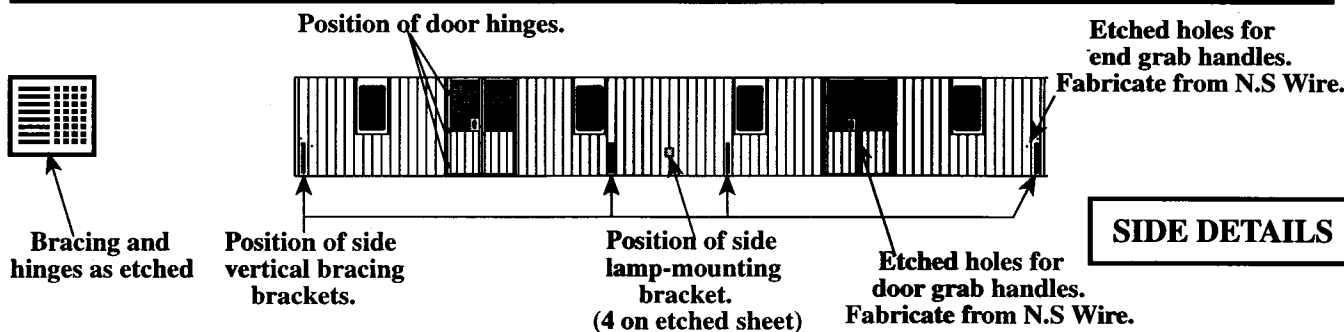
**Gas piping arrangement including feed point for three lamps**

**DIAGRAM P 18 ROOF DETAIL**



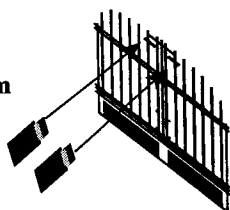
**2" Wide ribbing at each end-use 0.5mm self adhesive lining tape (available from Freestone Model Accesories.28- OX8 6HH)**

**DIAGRAM P 21/23/24 ROOF DETAIL**

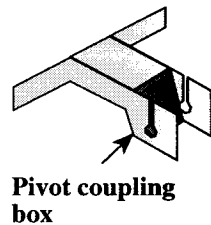


**SIDE DETAILS**

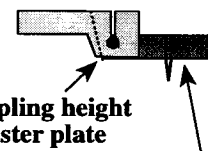
**Twin door vents-tab fits slot. Solder from inside then fold down vent to 10 degrees from the vertical.**



**END DETAILS**



**Pivot coupling box**



**Coupling height adjuster plate**

**PECO Coupling**

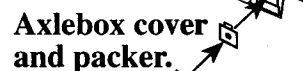


**Etched holes for door grab handles. Fabricate from N.S Wire.**

**Hinge strapping(overlay)**

(P18 & P23)

(P21 & P24)



**Axlebox cover and packer.**

**BOGIE DETAILS**