

EASY-BUILD" HIGH-DENSITY STOCK CENTRE CAR ASSEMBLY INSTRUCTIONS.

SAFETY FIRST! CONSTRUCTING THIS KIT REQUIRES THE USE OF VOLATILE SOLVENTS, ALWAYS FOLLOW THE MANUFACTURERS INSTRUCTIONS AND ENSURE ADEQUATE VENTILATION. YOU WILL ALSO REQUIRE SHARP TOOLS AND THE EDGES OF THE ETCHED PARTS CAN BE VERY SHARP SO TAKE CARE WHEN HANDLING. WORK STEADILY AND SAFELY AT ALL TIMES.

KIT CONTENTS

1x	Floor moulding	1x	HD Stock Centre Car Etch		Styrene micro rod 1mm
1x	Roof moulding			2x	Roof fixing captive nuts
2x	Side moulding (1x left, 1x right)		Moulded window glazing	2x	Turned aluminium bogie mounting
2x	End moulding	1x	Pewter castings pack (see castings identification photograph)	2x	Body fixing bolts 4mm dia.
2x	Bufferbeam moulding	4x	Turned steel buffers	2x	Bogie fixing bolts 4mm dia.
	Seat moldings	2x	Screw-link couplings		
2x	Styrene strip (5mm wide)	3x	Moulded body stretchers		
1x	Bogie pack (1 pair inc. wheels)		Brass wire and rod		

INTRODUCTION

In order to get the most from your kit we recommend you read these instructions in full prior to commencing construction making notes as to any assembly options, or changes to the suggested order you think would suit your method of building better. However, we suggest you do follow to the order of construction as we know it works! The general idea for assembly is to construct a box with a removable floor. The images of the demo centre car use some items that differ from those in the kit, however the difference is not significant merely we didn't have the actual castings to hand at the time of construction. Some images are taken from our other products, but show what is required. Additional images of a model 116 build can also be found on the disk.

Let's get started by inspecting the components supplied, there's no point getting involved in construction only to find a damaged part. Start with the large moulded parts (ends, floor, sides, roof and bogie stretchers) checking for severe warping and/or twisting. The floor and roof sections will have a degree of bow along their lengths due to the production process, but you should be able to flatten out the bow without any real effort. Whilst we take great care to weed out sub-standard parts prior to packing, some still slip through occasionally, so remember that any severely mis-shaped parts will be promptly replaced upon return to Easy-Build. Once you're satisfied with the contents, wash all the plastic components with a household detergent to remove oils and contaminants left from the manufacturing process. Now...

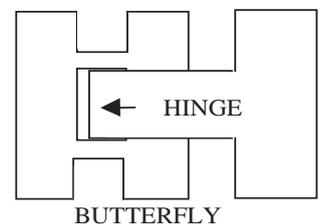
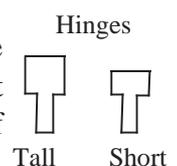
PREPARING THE SIDES

- 1) Whilst we take great care to ensure the ends of the side moulding are true and square, take a few moments to check that the ends will make a good joint with the sides. Also, remove a small amount of the moulded rib on the inside of each end of the side moulding - about 3mm is ample. Also check all window openings for cutting burrs and remove as necessary.
- 2) Drill through all the holes in the body sides as follows:
 - 0.7mm - Door hinges.
 - 1.0mm - Door bump-stops (these are the holes in the middle of the door panels with a corresponding hole to the left, or right of the door).
 - 0.5mm - door grab handles and cab handrails.
 - 1.2mm - All other door handles (T-handles).
- 3) Check the depth of score lines at the door positions and deepen if you prefer. Carefully remove the raised burr from the door opening scores, work steadily and re-open score marks as necessary until desired effect has been achieved.

***TIP - Use a gentle scraping action followed by fine wet-n-dry (wet is best) for these two operations. Alternatively, a small chisel can be used to shave off the burrs. Old flat needle files can be ground into chisels and are ideal for this purpose. Be careful not to dig into the surrounding surface of the sides.*

- 4) Now would be a good time to give the sides a rub down with fine wet & dry to really see what the job looks like. At this stage you can go over any of the previous body prep. operations quite easily until you are fully satisfied with the results. Once the door hinges are in place it is much more difficult to do so.

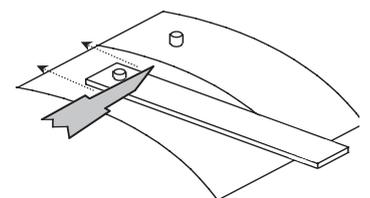
- 5) Remove 2 tall hinges and 1 short hinge per door, parts E18 (both types share the same part number) with the short hinge in the centre and tall hinges top and bottom. That works out at 40 tall and 20 short hinges per coach. Also, remove an equal number (60) of 'butterflies' from the etch, part E19 one for each hinge. The hinge piece is pushed through a butterfly shaped backing piece then through the appropriate hole. Applying superglue to the hinge peg from the rear will secure the hinge in the body side thus trapping the butterfly in place.



***TIP - You will find that the application nozzle on many brands of superglue will fit neatly over the hinge's spike. Once pushed through the body side push the nozzle over the protruding spike and gently squeeze a small amount of glue into the hole.*

- 6) Using the 1mm micro rod 'plug' the holes in the door centres and those to the left (and right for baggage doors) of the doors to represent the door stops. Remember that when drilling the holes the size stated for the door bump-stops was 0.7mm, this enables other solutions to be considered for this detail. If you intend to use micro rod open out the holes accordingly. The stops should be trimmed so that they protrude not more than 1mm from the sides. Do not fit door handles and grab irons until after painting.

***TIP - To ensure all the bump stops are trimmed to the same length: drill a 1mm dia. hole in a piece of 1mm (40 thou) thick scrap styrene (or other sheet material). Place the scrap styrene over the bump stop so that it protrudes through the hole and gently pare back the excess with a sharp knife, followed by a fine file. Remove the styrene and, once all bump stops have been so treated, give them all a gentle rub over with fine abrasive paper to round the edges slightly.*



ROOF PREP

You will notice your roof has a curve due to the moulding process this is useful when fitted as it ensures the roof is a tight fit in the centre of your coach.

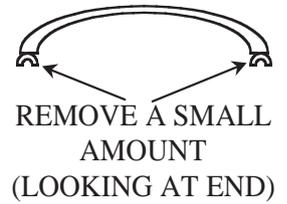
- 7) Clean off any burrs of plastic then put a strip of masking tape down the centre of the roof

onto which you can mark the positions of roof vents etc. from the drawing provided (Drawing 2, p10).

- 8) Drill 2.8mm dia. mounting holes for the roof vents at the locations marked.
- 9) Remove a small amount of material (about 5mm in length) from the inner edge of the underside of both side locating channels at each end of each roof (see right). This allows the roof to sit down over the end moulding. Do not remove the outer part of the channel as this forms the roof gutter. (See photo: Inner roof channel mod.jpg)

**** NOTE** You might prefer to leave step 10 until the body has been assembled. See Step 24 before proceeding.**

- 10) Finally, for the roof, create the roof overhang by attaching strips of 2mm x 0.5mm styrene to the ends of the roof. Pre-form the strips by drawing them gently over a blunt edge (a fingernail works well). Starting at the centerline of the roof, align the strips with the upper surface of the roof and follow the roof contour round to the gutter applying solvent from the underside. Once secure, give the surface a rub over with abrasive paper to blend the joint with main roof, then slightly round the bottom corners of the extensions.

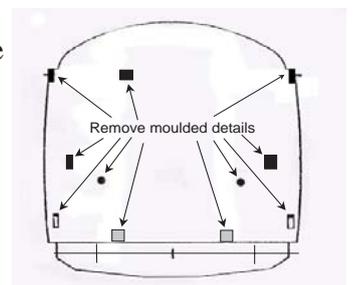
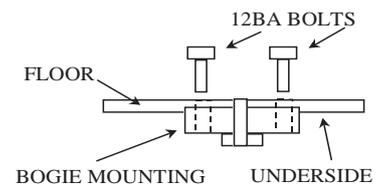


FLOOR PREP

- 11) Check the floor moulding for flatness - if it appears too distorted (some curvature is quite normal) gently bend it in the reverse direction to correct.
- 12) The floor moldings may need to be reduced in width to obtain the best fit inside the body - the finished size of our demo model was 58mm. To reduce shave off small amounts evenly from each side to keep the floor central to the body. You may need to repeat this operation when the body is fitted onto the floor for the first time.
- 13) Locate the two aluminium bogie mounting turnings and prepare them by scoring their upper surface (the spigot faces downward when in use). Treat the mounting areas likewise. Use a strong adhesive fix the two round turned bogie mounts in the holes in the floor.

***TIP - Bogies present quite a load to their mountings mainly due to the ease by which they get knocked and twisted when the model is off the tracks, it is therefore necessary to select an adhesive capable of withstanding such shocks. Two part epoxy resins are more suitable than superglues.*

- 13a) (Optional, but strongly recommended) To make a much stronger job of fixing the bogie pivots in place, you might consider a 'belt and braces' approach by adding a mechanical fixing to the mounting. Good results have been achieved by drilling two 1mm holes through the bogie mountings and floor (once the mounting has been fixed in place) either side of the bogie pivot bolt and tap 12BA. Now secure the bogie pivot in place by bolting down through the coach floor with short 12BA bolts (see bogie mounting diagram right).



ENDS PREP

These are our standard BR Mk1 suburban ends and so have some details not required on a these units.

- 14) Remove all the moulded details flush with the surface of the end.
****TIP:** This is best achieved by shaving small amounts off with a sharp blade, followed by a fine file and finally fine abrasive paper. See photo: End prep (Cl. 105 model).

- 15) Turning to the inside face of the end cut a rebate (darkened here in the photo, right) in the outer edges to clear the window openings. The rebates need to be about 20mm in length and 20mm up from the bottom of the side, but check against a side to confirm. You might also want to cut off the two round projections in the upper corners of the end (circled), see right.



16) With a fine razor saw, cut off the molded on buffer beams level with the bottom of the ends. Use the underside of the end as a fence to guide the saw blade and finish off with a flat file to remove any burrs.

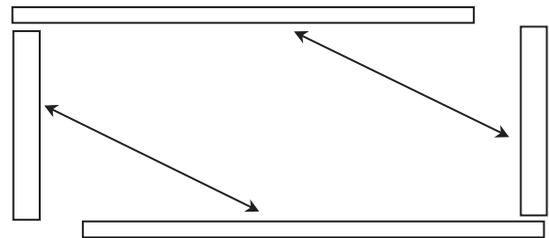
17) Give the ends a final inspection and rub over with fine abrasive paper before moving on; 800 grit should be sufficient unless you have any really deep scores to remove.

*** NOTE. for some reason these ends come out a little too short to give the best fit against the sides. We advise you add a 1mm strip of scrap styrene along the bottom once the end prep has been completed. Sorry!

BODY ASSEMBLY

Whilst the solvents used to assemble the components evaporate very quickly the joints they produce take considerably longer to achieve maximum strength. DO NOT RUSH THESE NEXT STEPS. Leaving ample time for the joints to harden is essential and you will be rewarded for your patience by not having unsound joints later on.

18) Fix an end to each side on opposite corners to form an 'L' shape half box as shown below right. NOTE, the sides fit to the OUTSIDE of moulded ends and flush with the rear face.



19) Assemble the two half boxes again using a flat surface to aid alignment. The box may twist a little during this process due to the flexible nature of the materials, but do not worry unduly as the roof will bring everything back in line later. Reinforcing the joints with epoxy resin, or micro rod (not supplied) is strongly recommended.

Assuming care was taken when preparing the ends and sides your sides will be level at the bottom. Allow the ends to harden before attempting the next step.

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***TIP - Working on a glass sheet will aid accurate bottom alignment of the sides and ends.*

LEAVE TO SET HARD AND BUILD THE BOGIES

Note that the bogie spues contain parts that are not intended for the DMU so please refer to the illustrations to identify the appropriate parts to use.

20.1) Remove two bogie frame stretcher plates from the casting sprues and cut off the ends level with the inside edge of the molded angle (see right). Clean up and square off as necessary.

20.2) Push brass bearings into the axle holes making sure they are an easy sliding fit, but not sloppy - if necessary clean hole with a 2.5mm drill. Do not fix in position as adjustments will be made later.

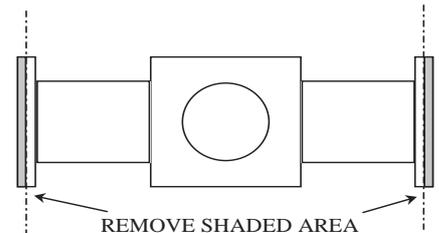
20.3) Using a pin, add a tiny drop of oil (NOT WD 40) into the bearing surface.

20.4) Place two axles in the bearings of one side frame and, ensuring correct orientation of bogie frame stretcher plate (reinforcing cross members down), assemble the side frame to the frame stretcher.

20.5) Once the first frame is reasonably firm, assemble second side frame onto frame stretcher in the same manner. When the side frames are secure enough to hold themselves in place, make certain all is square and in line, minor adjustments can still be made at this stage by applying more solvent to soften the joints and adjusting as required. Note: wheels should be a loose fit in the bearings at this stage. Leave the bogie to set for at least 1 hour, 2 is better.

With the joints set hard you can now set the axle bearings:

20.6) There is less side-play evident in the DMU bogies than is found in our coach bogies. If care has been taken so far the wheel sets will require only minimal adjustment of the bearings to obtain optimal performance, If adjustment is necessary begin by inserting a thin piece of card between each wheel and the side frame to prevent lateral movement.



NOTE: Do not over-pack the wheel sets as this might cause the sides to spring when you remove the card later resulting in stiff wheel movement.

- 20.7) Push in the bearings from the outside until the bearings connect with the axle ends.
- 20.8) When satisfied that the bearings are (just) against the pinpoint ends fill the bearing hole with the 2.5mm sprue supplied, or micro-rod (not supplied) and fix with liquid solvent from the outside and leave to harden.
- 20.9) When set, remove spacing card and trim any excess rod flush with axle box face
- 20.10) Remove the bogie pivot mountings from the casting sprue and remove any flash. Test the bogie pivot bolt is an easy sliding fit in the mounting hole. If tight, open the slightly with a 3.5mm drill to ensure a smooth swivel movement.
- 20.11) Drop the bogie pivot mounting into its locating holes in the top of the bogie stretcher plate and, using only sufficient glue to attach the plates, fit keeper plates over pivot spindles. Ensure pivot remains free to move until the liquid solvent has evaporated.

You may prefer to use a larger piece of sheet styrene (not supplied) rather than the molded keeper plates supplied.

- 20.12) If desired, fit the brake shoes on the inside of the sideframe. They should be positioned just off the wheels with the circle detail on the shoe just visible below the bottom of the side frame.
- 20.13) Fit the bolster detail (See photo: Bogie Sprue Labelled.jpg) centrally to the inside of the sideframe by placing the square beam against the back of the sideframe and butt against the underside of the bogie stretcher.

While the basic bogie assembly sets, identify and remove the bogie channels from the etch.

- 20.14) Fold up the bogie channels E1.
- 20.15) Glue the bogie channels to the front and rear of each bogie with the bottom of the channel level with the bottom of the sideframe (superglue is recommended for this).

(See photo: Bogie end channel in place.jpg - your bogie will not have guard irons fitted)

- 20.16) Fit the axle box covers; there are two different types of axle box covers supplied in the kit, use the slightly domed Timken covers.

BODY ASSEMBLY CONTINUED...

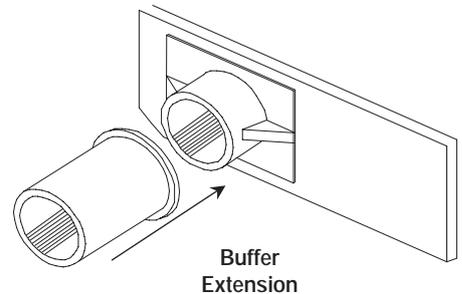
- 21) Fit the roof fixing captive nuts into the molded channel on the underside of the roof. Slightly reducing of the width of the captive nuts will make their fitment and adjustments easier, however don't overdo it as you don't want them sliding about when trying to get the bolt to go in, nor have them dropping out!
- 22) When the roof is in place the top of the sides will locate in the groove under the gutter. You may find the central molded channel on the underside of the roof needs trimming back to enable to roof to fit between the end moldings. Should this be necessary, a cutting burr in a motor tool is the easiest way to remove the material.
- 23) Place the roof in position and apply generous amount of solvent to the roof/sides/ends joints from inside. Now use the floor and long bolts to clamp the roof tightly in place and allow to harden.
- 24) Remove the floor and reinforce the roof joints as appropriate. Some filling might be required on the roof/end joints. This is made easier if the roof extension (step 10) has not yet been fitted.
- 25) Affix moulded body stretchers between the sides sitting on top of the moulded side rib at the base of the body side. Align the stretchers centrally with the 3rd door in from each end. A third stretcher located more centrally will prevent the floor sagging. Reinforce the stretchers as necessary. **(See photo: mid body strengthener and cab walls.jpg as fitted to our Cravens Cl.129)**
- 26) If step 10 was skipped, do it now.

UNDERFLOOR ASSEMBLY

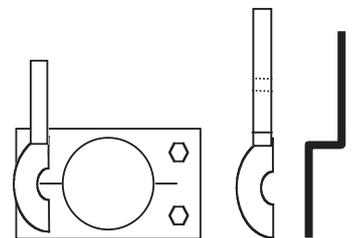
24) Check again the floor will fit within the sides and end moldings, it is possible that you will have to adjust the floor width to gain the best fit. Do this carefully removing the minimum amount evenly from each side to keep the floor central to the body.

25) To improve the visual appearance of the underframe, cut the two lengths of 5mm wide 0.5mm styrene to 437mm and affix to the outside face of the molded solebars. Keep the strip firmly butted against the underside of the floor lip and aligned with the ends. You may prefer to cut the strip slightly long and trim back to the floor ends once in place.

26) Remove the buffer beams from their sprues together with their associated extension collars, clean flash, etc. and check the fit of the buffer shanks into the holes. Use a 3mm drill bit to carefully open any tight holes to allow the buffers to slide easily. Use a buffer to align the buffer stock extension collar to the end of the buffer housing - affix with solvent and remove the buffer immediately. Once the joints have hardened run the 3mm drill through again to ensure the holes are clean.



27) Lamp irons (E9) are fitted to the outer edge of the buffer stocks. First remove the outer two molded bolt heads from the face of the buffer stock. Bend the lamp iron to form a joggle using the half etches as a guide and glue to the face of the buffer stock, see right. Superglue is recommended for this. (See photo: Lamp Irons.jpg)



28) The buffer beams should be fitted directly to the floor moulding. Take care as it is quite easy to glue everything together solid! With the floor in position, initially tack the buffer beam in place then remove the floor from the body and finish off the job, reinforcing the joint as appropriate. Remember the buffer beams will be holding the train together when in operation!

You may wish to leave the buffer beam details until later as they are quite vulnerable otherwise proceed as follows:

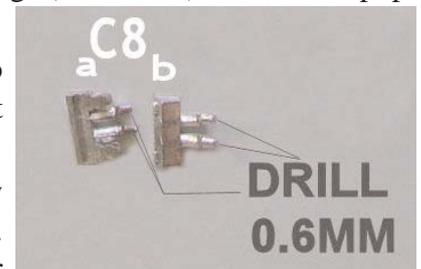
MU PLUGS

What is required to prepare the MU sockets depends on your preferences. If you want to connect the centre car MU cables to the driving cars MU cables some method of attaching the cables is necessary, if not the castings can simply be fitted as is.

29.1) After cleaning up the castings square off the ends of the cable plugs (C8a and b) and make a pop mark in the ends with something sharp (mind those fingers!)

29.2) Drill a small hole in the castings (0.6mm) just deep enough to secure a short length of wire. Insert short pieces of wire leaving about 3mm protruding onto which the cable sleeve will be fixed.

29.3) Fit the castings to the underside of the buffer beams centrally under each buffer as follows when looking end on: C8b left, C8a right. Remember you'll be working upside down so it's easy to get the order wrong! (See photo: MU Fittings.jpg)



UNDERFRAME DETAILS

30) With the floor still in place mark the solebars to show where the doors are (both right and left hand edges of the openings).

30.1) Before removing the floor, drill holes through the floor and moulded body stretchers, these will be used later to secure the floor in place. Drill small (1mm dia.) holes initially and then open the holes in the floor to 3mm and the holes in the stretchers to 2.2mm.

See the diagram for the underframe layout for the dimensional positions of the various underframe

components.

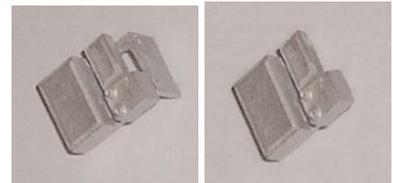
31) Gently straighten the tank fillers C10. Once the pipe is reasonably straight finish off with flat bladed pliers. Pewter is quite malleable and should not break during the straightening process, but working the material slowly will ensure success.

32) Drill two small holes (1.6mm dia.) into the ends of the tank where the pipes will enter. Mount the fuel tank C1 across the floor and fix the straightened fuel tank fillers into the tank ends angled up to the edge of the solebars as shown right. photo: Derby 108 CTR 4.jpg)

33) Assemble the large vac tank from C6a, b & c - you can't put this together wrongly! just remember to keep the mountings square to each other, or it will be difficult to attach to the floor. Drill a 0.7mm dia. hole in the centre of one end into which you will fit a pipe angled down to the underfloor when the tank has been fitted into place. Mount onto floor and add pipe from 0.7mm wire.

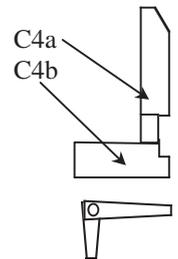
(See photo: Derby 108 CTR 5.jpg)

34) Modify casting C3 by removing the cast on buttons on the small box and mounting base. Shown right unmodified and with base removed.



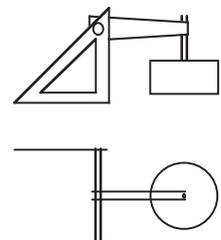
35) Mount the modified C3 with the largest cast box against the floor.

36) Electrical box C4a needs mounting onto part C4b so that the angled edge will be at the bottom when mounted on the floor. Mount C4 assembly and C7 and add conduit to the castings from 0.9mm wire. (See photo: Derby 108 CTR 3.jpg)



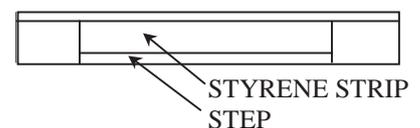
37) Fold the mounting bases of the brake hangers (E5). Assemble the brake levers (E6, E11 (optional)) centrally onto short lengths (24mm) of brass rod. E11 can be mounted between the two E6 to create the pull rod to the bogie if required. Drill a 0.9mm dia. hole into the centre of the brake cylinders and insert a short piece of 0.9mm wire as a pull rod.

38) Mount the brake hangers either side of the molded central ribs so that the straight leg is away from the bogie. Remember to insert the brake pivot rod before fixing both hangers in place. Once the brake hangers are in place, mount the brake cylinders so that the pull rods coincide with the brake levers. See diagram right for basic idea. (see above picture references for more detail).



39) The remainder of the details can be fitted in place simply by reference to the underframe diagram and photographs on the CDROM.

40) Cut 20 off 12mm x 5mm of 1mm (40 thou) styrene as step treads. NOTE: the steps are not aligned to the bottom of the solebars, but about 1mm above the lower edge; horizontally align the steps centrally with the door. Additional strength can be gained by adding a strip of styrene to the front of the solebar in line with the step, once painted it is hardly noticeable, see right.



***TIP - The outer edges of the steps should not be left too square cut, i.e. round off the upper edges and slightly round the corners. The steps were made of wood and soon became worn.*

CREATING THE INTERIOR PARTITIONS

See Drawing 1 for layout of the interior of the car including the partitions as described in the following steps.

41) Remove 2 partitions E2 with offset doors from the fret and check the width of the cab

partitions inside your body and trim as necessary to achieve a sensible fit. It is advisable to clip off the top outer corners to ensure they don't foul the roof moulding. The partition should also be able to sit between the molded ribs at the base of the body sides.

42) Fold the bottom three sections along the half etched lines, making each fold towards the half etch. You should now have two short tabs and long central tab folded at 90° in opposite directions and have a partition that can be stood up, if not you've folded it up wrong! (See photos: Cab Partition Bottom.jpg) - these are of the original components as used on the driving cars, but show the principle of what to do.

NOTE: If you have fitted the body stretchers (step 24) you can remove the tab that goes towards the stretcher and glue the partition directly to the stretcher on that side.

43) Remove the appropriate number of seats from the sprues and prepare them by removing the ejection pin marks (small round marks on seat back) and moulding feed joints.

44) To form the seat, flex the moulding until the joint between the base and seat back shows a thin white line. Apply solvent, or superglue to the joint holding together briefly to prevent the back from initially springing apart.

45) Cut two floor strips from the supplied styrene sheet: 1x 20mm wide, 1x 26mm wide. Depending on where you fitted the moulded body stretchers (if different from our suggestions) you might prefer to fit the end seats directly to the body ends, which can make fitting the false floors easier. However, We've found it is possible to make the false floors long enough to accommodate all the seats and still get the floors into position. Cut the false floors to the appropriate length depending on which option you've adopted.

46) With the body upside down, lay each floor section in position butted up against an end and mark where the doors and dividers fall, also remember to drill holes in the false floors to allow the floor fixing screws to pass through. Now paint the floors (the marks are on the underside) and seats.

47) Attach the seats either side of the door openings (and dividers) as necessary remembering to allow a gap between the seat backs where a divider will have to slot in.

FINISHING

With the main construction now complete it is time to prepare the model for painting. Whilst this consists of mainly cleaning and washing of all the parts, it also gives you another opportunity to check the security of the various fittings. Anything that cannot stand cleaning will probably not withstand long-term use, so it's better to have bits falling off now than later - refit as required!

FINAL ASSEMBLY

48) Install the glazing into the window openings from inside the body. Fit dry and secure in place by running dilute canopy glue around the edges with a small brush. Dilute the canopy glue to the consistency of milk and add a single drop of detergent to aid the flow of the glue into crevices.

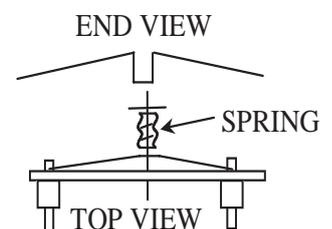
*** We've had some customers complain of having to sand the glazing panels prior to fitting. To address these concerns the openings have been increased slightly with the consequence that the glazing might be a bit loose - getting a perfect fit is impossible. If you encounter sloppy panes, apply a thin coat of neat canopy glue into the opening and allow to dry (it doesn't take long). Now fit the glazing panel and apply dilute canopy glue as instructed. ***

49) Fit the door windows by applying a bead undiluted canopy glue to the edges of the openings and pressing the glazing into it.

50) Fit the false floors and secure if necessary.

51) Fit the floor and secure in place with the self tapping screws into the body stretchers

52) Check the fit of the buffers in the stocks once again for a sliding fit, adjust as necessary. To spring the buffers create a loop of the spring wire (supplied), pass each end of the loop through the hole in the buffer shank. Secure



the spring in place by passing the coupling shank through the hole in the loop and trap with the coupling mounting spring and split pin, see right. (See photo: Buffer springing.jpg)

NOTE: The standard links used on model couplings are too short to couple these units together and still be able to negotiate model curves. You might wish to add an additional link, or replace the stock links on one unit with a longer example,

- 53) Mount the bogies ensuring they are free to rotate.
- 54) Fit all door 'T' handles and grab handles E10.
- 55) If connecting the MU connections, cut short lengths of flexible tubing and slide over the MU connector spikes. The lengths of the cables will depend on the minimum radius your model will have to negotiate - initially too long is better than too short.

We hope you have enjoyed building this kit and welcome your comments.

SHAWN KAY JULY 2012

“EASY-BUILD”

TRENARTH, VICTORIA ROAD, CAMELFORD, CORNWALL, PL32 9XE.

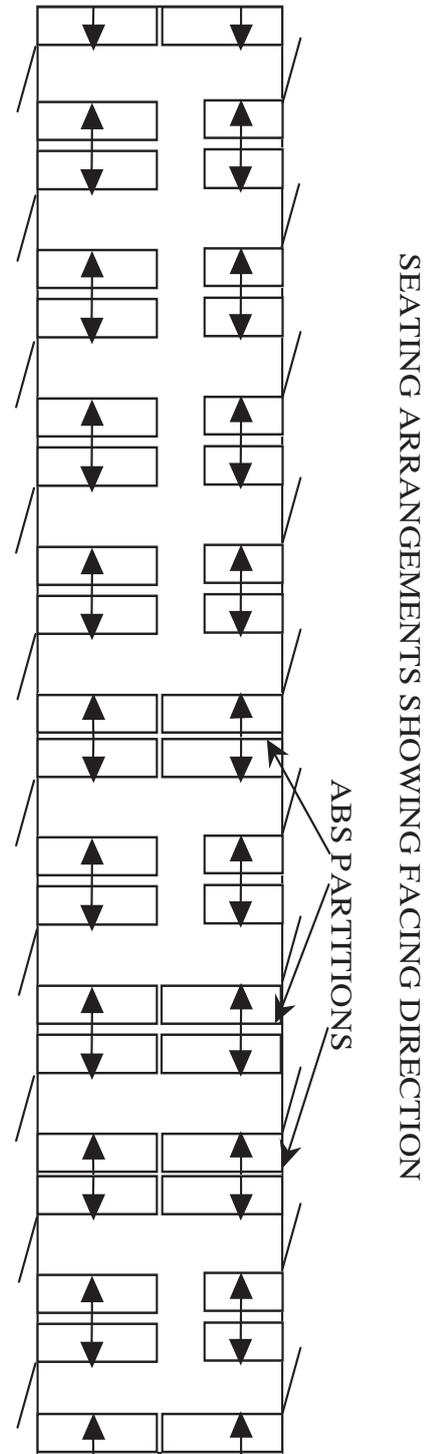
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E-MAIL: SHAWN_EASYBUILD@BTINTERNET.COM WEB:

WWW.EASYBUILDCOACHES.CO.UK

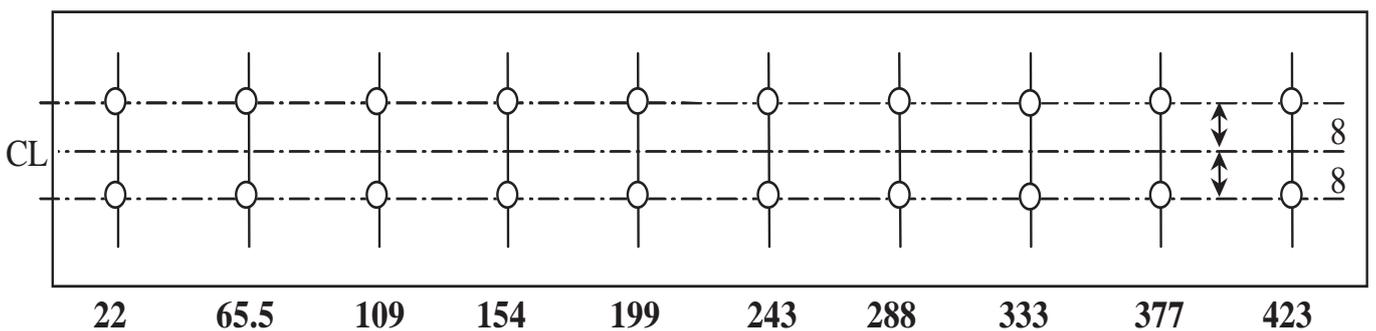
NOTES

DRAWING1

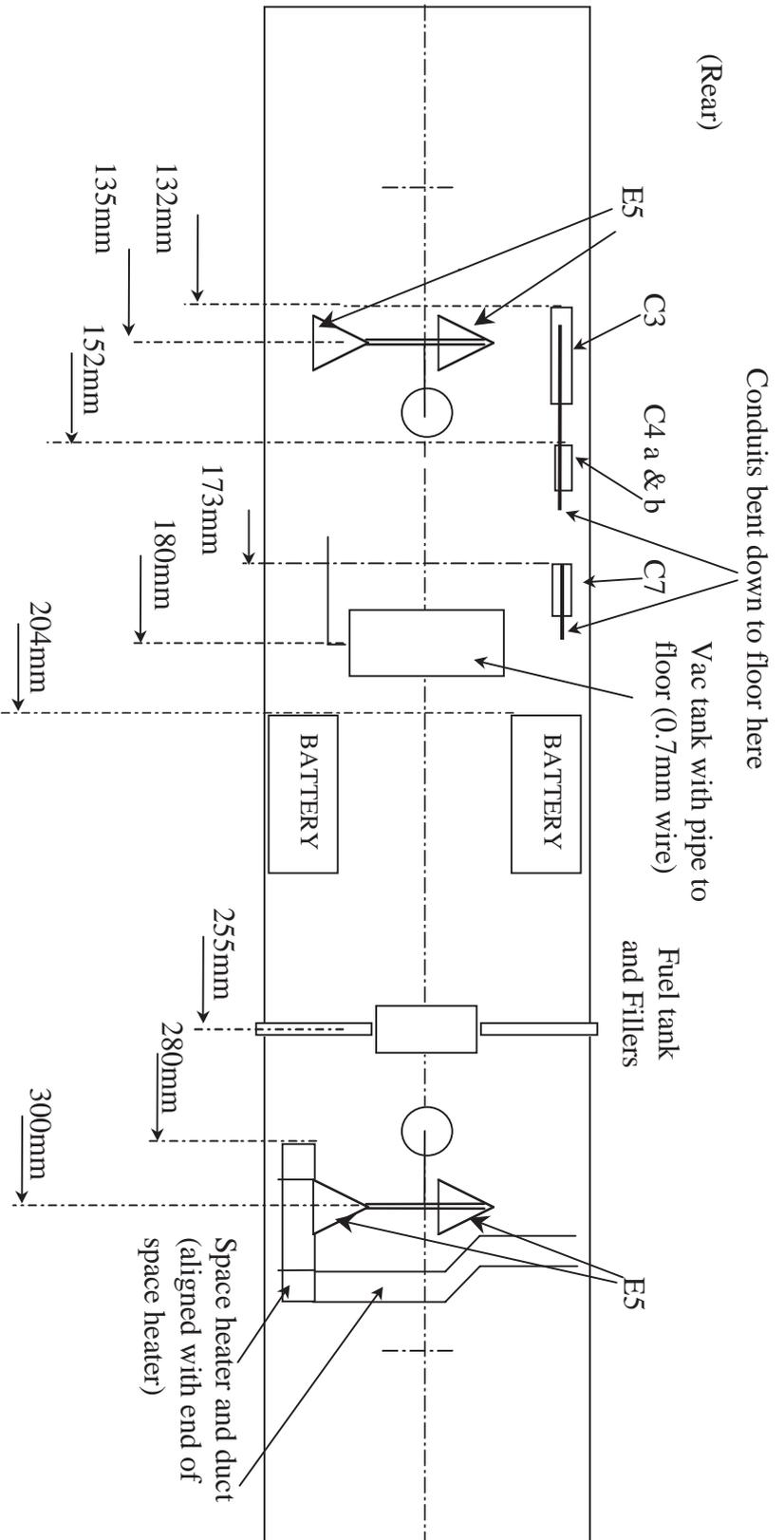


DRAWING2

All measurements (in mm) taken from one end of roof. Orientation of roof dictated by aligning vents with doors.

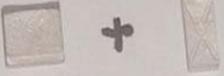


UNDERFRAME DETAILS LAYOUT



The underframe details differ significantly in layout from that found on the driving units. With the exception of the battery and electrical boxes, all other details are located on the floor centre line. This gives the under floor area a decidedly empty look when compared to the driving units. Use the molded ribs down the centre of the floor as a guide. The space heater should be pushed firmly against the molded rib then the cast duct aligned with it across the floor. Likewise the brake hangers should be affixed to the floor against the molded rib and the brake cylinder itself should sit on the centre ribs. **(See various photos of both underside and side views to see more clearly what is required)**

CASTINGS

 <p>C1 FUEL TANK</p>	 <p>C2 AIR DUCT</p>	 <p>DOOR 'T' HANDLES</p>
 <p>C3 ELECTRICAL BOXES</p>	 <p>C4a C4b ELECTRICAL BOX AND BASE</p>	
 <p>C6 a,b,c VAC TANK</p>	 <p>C7 ELECTRICAL BOX</p>	 <p>C8a C8b MU CONNECTORS</p>
	 <p>C10 FUEL FILLERS</p>	 <p>C11 DYNAMO</p>
 <p>C12 SPACE HEATER</p>	 <p>C13 BRAKE CYLINDERS</p>	 <p>C14 BATTERY BOXES</p>

ETCHED PARTS

Key:

- E1)** BOGIE FRONT CHANNEL
- E2)** SALOON PARTITION WITH OFFSET DOOR
- E3)** SALOON PARTITION WITH CENTRE DOOR
- E4)** FALSE FLOOR SUPPORTS
- E5)** BRAKE PIVOT BRACKET
- E6)** BRAKE LEVERS LONG
- E7)** DOOR HINGE BUTTERFLIES
- E8)** HINGE PINS (short and tall)
- E9)** LAMP IRONS
- E10)** DOOR GRAB HANDLES
- E11)** BRAKE LEVERS SHORT
- E12)** DYNAMO MOUNTING BRACKET
- E13)** GUARD COMP. STEPS
- E14)** BAGGAGE DOOR HANDLES
- E15)** GUARD DOOR HANDLES

