



N Gauge Society Kit 30 Gresley Full Brake D113/245/260



**Injection Moulded Plastic Kit with
Glazing and Transfers**

***Builds **Crimson**, **Maroon**, or **Blue** versions
No Soldering required - **Wheels, Couplers
and Transfers included*****

*To complete this kit you will need:
Liquid Polystyrene Cement, Paint & Varnish*

The Prototype

Gresley full brakes broadly similar to this kit were built between 1929 and 1943. The most important changes that happened were the Fox bogies were changed to 8' Gresley heavyweight bogies in 1932, the rod underframe trussing changed to angle iron in 1934, and during the war years ply or steel sides were used instead of teak. The kit has the later trussing, Gresley bogies, and panelled sides which can represent either teak or ply but not steel, which had no beading.

Thus the kit represents the last 3 D113 brakes built in 1934, and 88 brakes built to D245 and D260 between 1938 and 1943. The only difference between the latter two diagrams was that D245 was fitted with racks internally for racing pigeon traffic.

The vans were often part of normal passenger trains, and regularly attached and detached along the route. In BR days they were mainly used in parcels trains, and as such could often be seen well away from home territory. Another use was carrying racing pigeons: sometimes one or two vans, sometimes a whole train.

Some survived well into the 1970s in revenue use, a few even longer in internal use, and a number have been preserved.

The cover photograph shows a preserved full brake on the Keighley and Worth Valley Railway (livery details not standard).

General Notes on Construction

Naturally the N Gauge society wants you to achieve the best results you can. These simple guidelines should help:

- * *Read the instructions through fully before you begin.*
- * *Clean any flash/moulding pips off plastic parts.*
- * *Make sure you understand each step before applying glue - carry out a dry run first with all parts.*

But above all....TAKE YOUR TIME!!

Identifying the Parts

Read the instruction carefully.

Look at the photographs on pages 5 and 6 and make sure you understand what all the parts are. Some parts are very delicate, and best not removed from the sprues until needed.

Tips When Building Your Model

It is recommended that you assemble the kit in the order suggested.

Be careful when removing small or delicate parts from the sprue - a sharp knife is recommended. Use an emery nail board to remove any flash or burrs. Check the fit of parts before applying glue. For most parts, a liquid cement such as *Plastic Weld*, *Plastic Magic* or *Mek-Pak* is recommended; hold the parts together and run the glue along the joint with a brush from behind. Hold steady for a count of 20.

Capillary action will take the glue into the joint and melt the plastic together.

Notes on Painting

Many a beautifully built model has been ruined by a bad day in the paint shop. The underframes and ends are moulded in black and can be left unpainted. The best results will be obtained by spray painting, either an airbrush or aerosol.

If painting red, it is recommended a red oxide primer is used first as many red enamels have poor covering powers: Halford's Red Primer spray cans are very good. Railway colours from Phoenix Precision (P) or Railmatch (RM) can be used for painting. An alternative is to find a close matching spray can from Halford's range: Ford Lacquer Red is good for maroon, and perhaps Nissan Red 465 for Crimson. Or you may want to try to match the colour of a particular RTR coach.

After applying transfers a coat of satin varnish, preferably sprayed,

Crimson	Body	<i>P116 or P303, RM311 *</i>
	Roof	<i>P131, RM313</i>
Maroon	Body	<i>P108, RM306 or H "Ford Lacquer Red"*</i>
	Roof	<i>P130, RM310</i>
Blue	Body	<i>P132 or P132W, RM207 or RM451</i>
	Roof	<i>P130, RM310</i>

**Plus matt or satin black for ends*

Livery

The LNER varnished the teak vans (body and ends) and added gold lining and lettering. Solebars, buffer beams, and wheel centres were painted teak colour (burnt sienna). Footboards, underframe, and bogies were black. Wheel rims were white. The later ply vans were painted to give a teak effect. The roof was painted with white lead, but this rapidly discoloured to grey. Transfers for teak livery are NOT included, but are available from Fox Transfers.

All BR liveries have black underframe and grey roofs..

Until 1956 BR painted them crimson, usually unlined, with black ends. Only one wooden brake received full crimson and cream lined livery. From 1956 they were painted unlined maroon, initially with black ends but from 1964 some may have received maroon ends. Both the maroon and crimson liveries had yellow lettering. From about 1961, overhead warning flashes were added to the ends (not supplied).

After 1965 they were gradually repainted in rail blue with rail blue ends and white lettering.

The running numbers were usually centrally positioned within in the upper of the two large panels at the right of each side, though sometimes top middle of the lowest panel. The "Load 8 Tons" text goes in the lower panel, at the bottom and central. The word "GUARD" goes on the upper panel of each guard's door. The diagram on page 10 shows typical positions.

To be absolutely sure, refer to a photograph.

References

Model Rail May 2005, pages 54-58. "Eastern Services in Transition - 8" by Steve Banks has 8 photographs and detailed notes.

LNER Standard Gresley Carriages, Michael Harris. Pages 174-181 have 4 photographs and drawings.

Historic Carriage Drawings - Volume 1 - LNER, Nick Campling. Pages 20-21 have drawings and 3 photographs.

British Railways Coaching Stock in Colour, Robert Hendry. Page 32, photograph of a dirty rail blue van.

British Railways Non-Passenger Rolling Stock, G Gamble. Plate 46 (also steel sided one, plate 45)

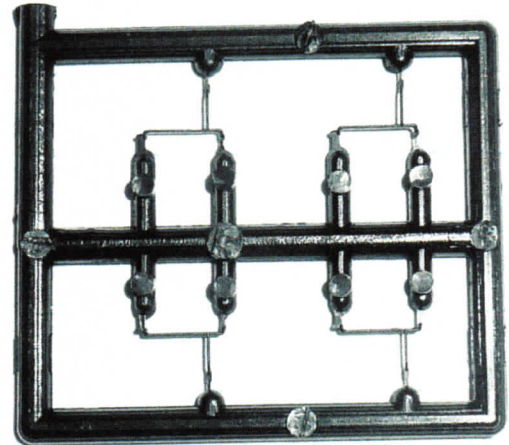
The internet has a number of photographs of preserved vans, mainly teak.

Gresley Full Brake - Identifying the Parts

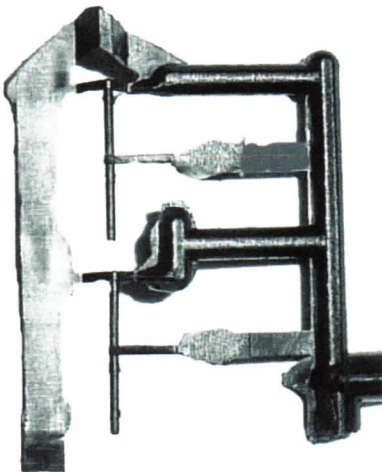
The smaller parts are shown in the pictures below and on page 6. As many of these parts are easily damaged or lost, it is best only to remove them from the sprue when ready to use them. Note that the buffer collars are so small it is recommended to cut off a part of the adjacent sprue to act as a handle while gluing them on.

The remaining parts are not illustrated:

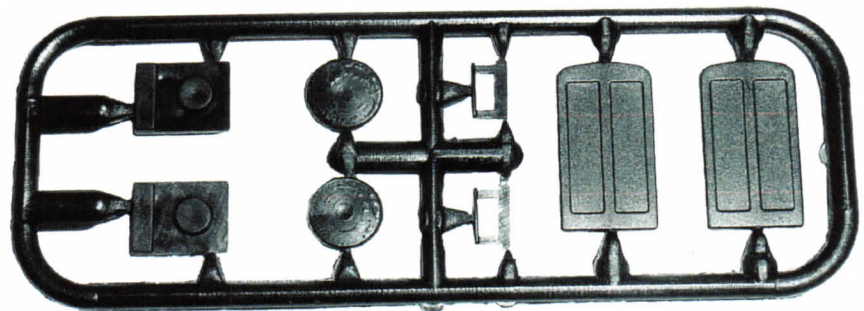
- 1 roof moulding.
- 2 coach sides (beige plastic). Note one side has a ducket and the other does not.
- 2 coach ends (identical – beige plastic).
- 1 underframe main moulding.
- 1 long pipe.
- 3 lengths of acetate strip for window glazing.
- 2 gangways.
- 2 Gresley 8' heavyweight bogies.
- 4 sets of wheels on axles.
- 2 close coupling bars with coupling pocket on end.
- 2 coupling springs
- 2 Rapido and 2 buckeye couplings
- 1 transfer sheet.



Guards Handrails



Brake Rodding



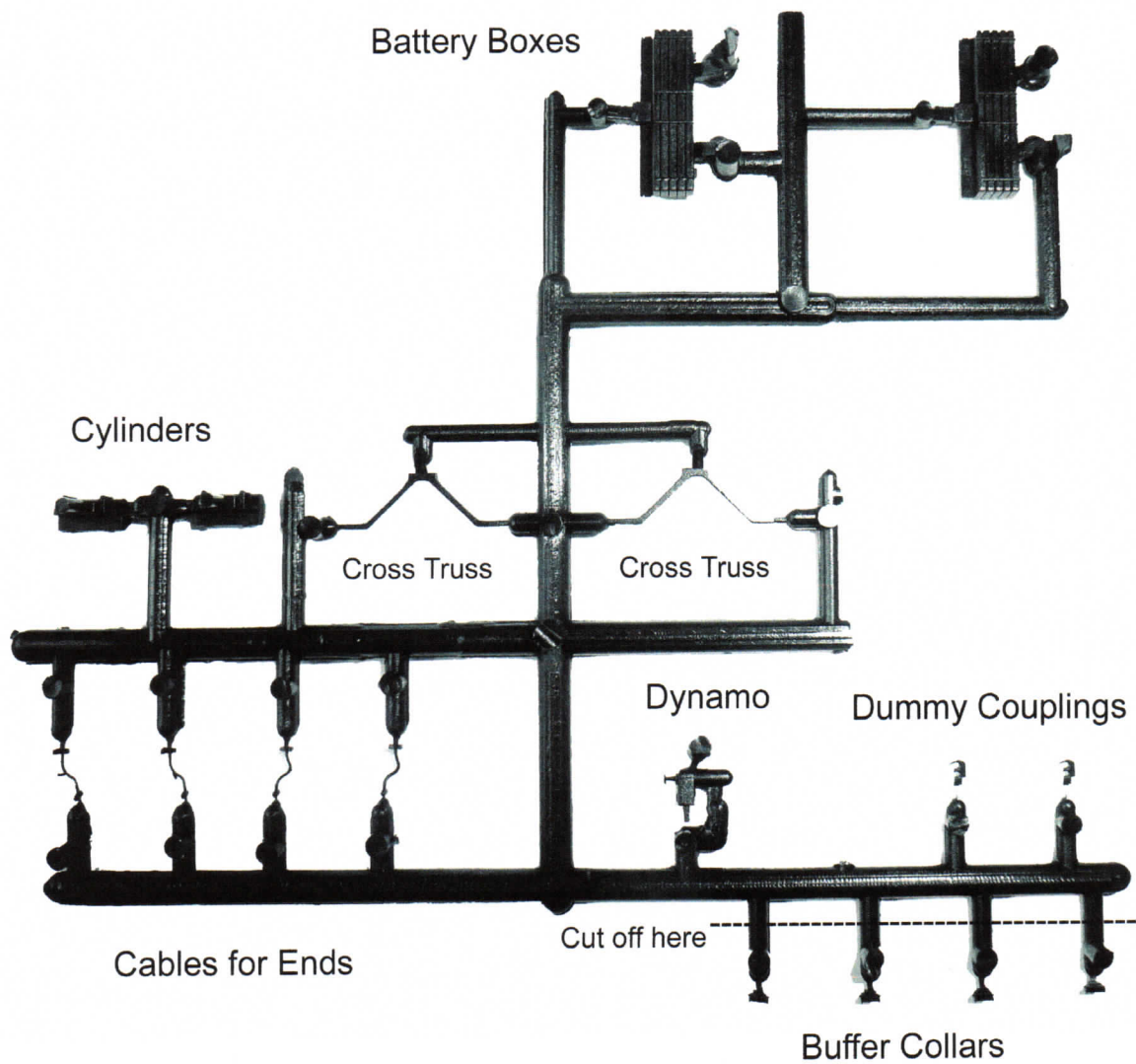
Bogie
Pivots

Bogie Pins

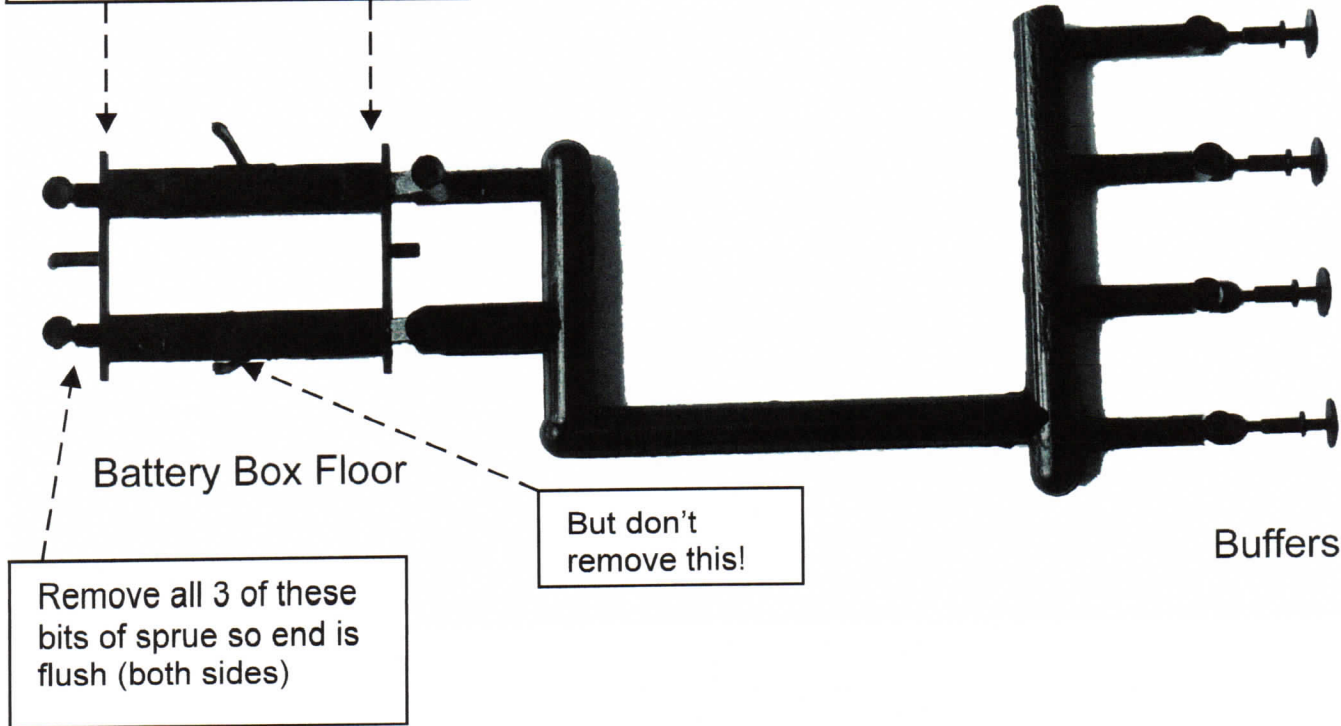
Guard's
Steps

Gangway Covers

Note: the brake rodding sprue also contains 2 toilet filler pipes, not shown or used.



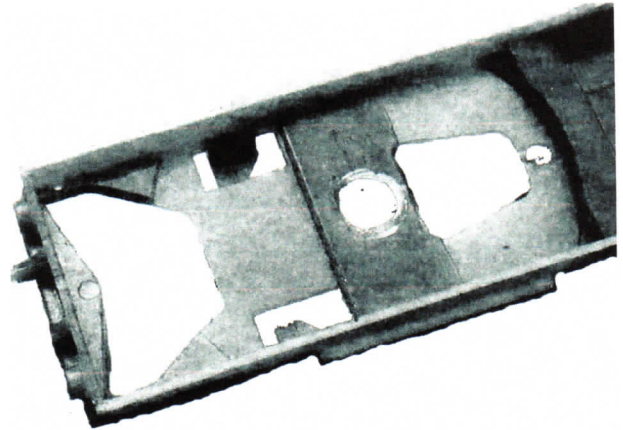
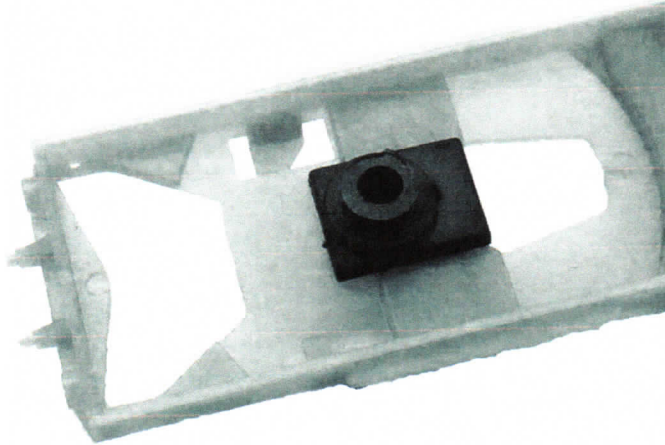
Cut here to remove 1 box floor



Gresley Full Brake – Chassis Assembly

Replacing the Bogie Pivot

Cut off the bogie pivot on the underframe (right) as close to the floor as you can get with a pair of side cutters, then trim flat with a scalpel, craft knife, or emery board.



The replacement bogie pivot goes over where the old pivots were but so that the new pivot is nearer to the end (left). A lip and pin on the upper side locate it in position. Glue in place.

Underframe Components

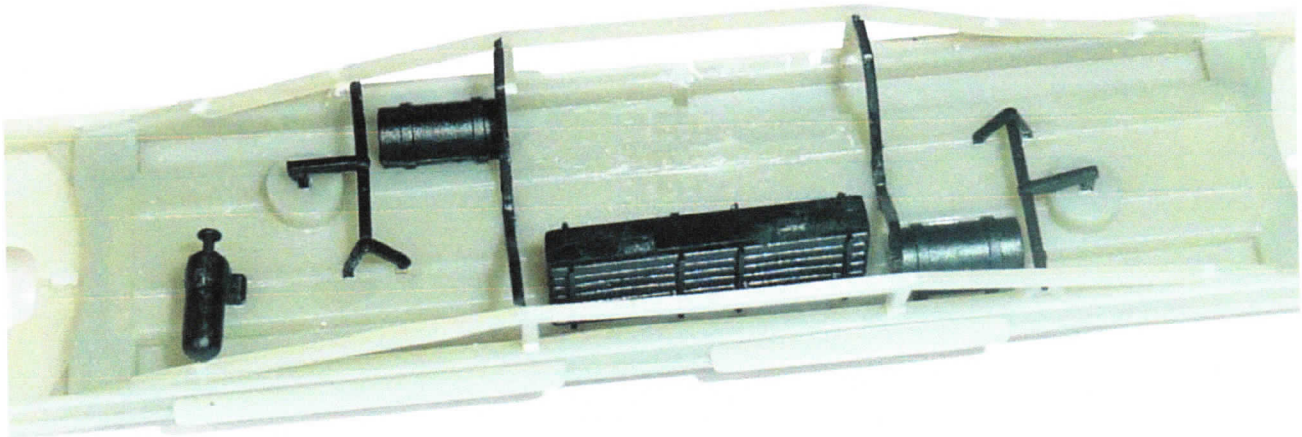
For the remaining assembly, if you have a Dapol Gresley coach you will find it useful to compare its underframe with the kit to see where the parts go.

Glue the dynamo into the hole in the underframe towards the bogie pivot at one end of the chassis with the pulley towards the centre as shown.

Almost all full brakes only had one battery box, on the same side as the dynamo, so only this one should be fitted. Glue the battery box side inside the truss moulded on the sides of the main chassis moulding on the same side as the dynamo, the lug in the small rectangular slot.

Glue the two cylinders between the battery boxes and bogies, with the lugs in the rectangular slots.

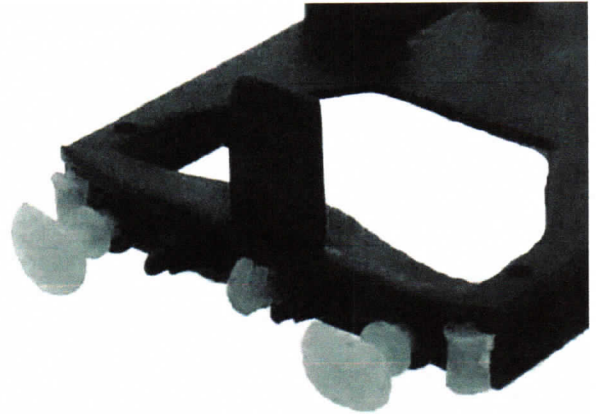
Fit the two cross-truss mouldings between the ends of the side trusses in the central rectangular slots - it is better to glue them after fitting the battery box floor. Glue the two sets of brake rodding as shown, with the one end in the V hanger and the other in the holes in the floor (one of these does not fit well).



The battery box floor (not shown in the picture) needs to have the floor on one side removed (eg with a razor saw). It is glued on top of the battery box and against the side trusses. The sides of this moulding that go up against the cross trusses need to be cleaned of all flash and filed smooth. The truss protruding from the centre of the floor (which is very delicate) is located in the holes in the chassis floor.

Chassis End

The 4 buffer extender collars which fit on the chassis corners are very small: to make handling easier cut the side sprue off the main sprue with them attached so the side sprue acts as a handle. Glue them in place in the rectangular slots on each corner of the buffer beam. When dry cut the sprue off. Note that if the screw coupling was in use they would be on the buffers, so you can omit them.



Glue the dummy screw coupling hooks into the slot in the centre of the buffer beams.

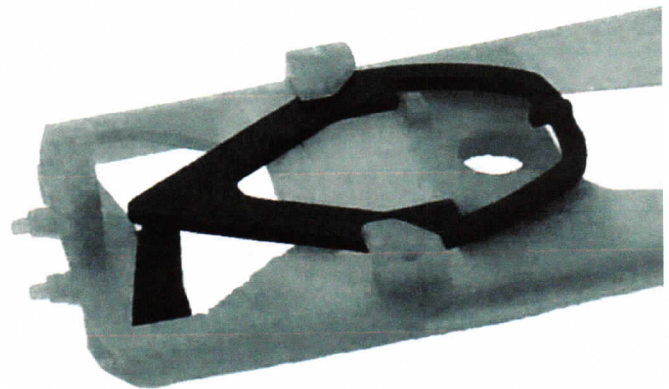
Glue the four buffers into the appropriate holes. The flat part of the buffers is at the top.

Pipe

Glue the long pipe along one side of the solebar with the lugs in the holes in the solebar (only one side has these holes), and with the pipe bending downwards at the ends.

Couplings

From above, put the end with the coupling box through the large hole near the end of the chassis and then clip it under the retaining arms on the top side of the chassis. DO NOT GLUE.



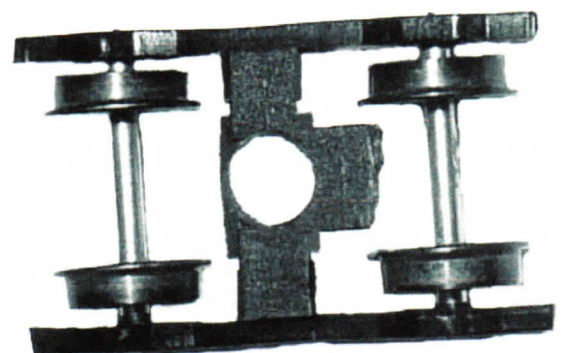
The coupling spring fits between the lug on the end of the coupling bar and the lug on the top of the chassis. Put one end over the lug on the chassis and use a pair of pointed tweezers to put the other end over the lug on the coupling bar.

Clip either buckeye or Rapido couplings into the NEM socket on the end of the coupling arm.

Bogies

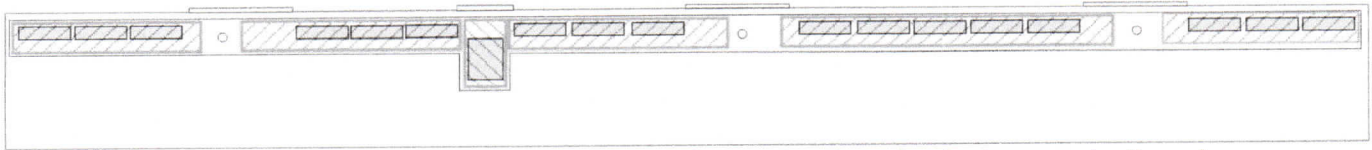
The couplings are part of the chassis so the ones on the bogie are not needed – the bar for the couplings can be cut off. Add the wheels to the bogies and check they run freely.

Place the bogies in position and push in the retaining pin – do not glue as it is a tight fit and you may want to remove the bogies later.



Gresley Full Brake - Constructing the Body

Remove the sides and ends from the sprue. The end of the side may need a small amount of filing to get a perfect fit with the ends – check before assembly.



Cut the glazing to length before assembly, as shown by the shaded areas in the above diagram. First cut pieces to glaze the guard's doors and continuing up to the top of the recessed area. Then cut lengths to fit the recessed areas for the windows along the top, leaving some spare at each end beyond the ends of the windows for gluing later. Note that the ones next to the guards windows should not overlap the glazing of the guards windows. DO NOT glue the glazing to the sides at this stage as this should only be done after painting is complete. There is spare glazing in case you make a mistake or get glue on the visible part.

You may want to paint the sides and ends now, particularly if spray painting and having black ends. The joints will probably need touching up with black after assembly.

Glue an end and side together on a flat surface to make an 'L' shape. Glue the other side and end to make a corresponding 'L' shape. Then glue the two 'L' shapes together to make the body. It helps to clip the roof on while doing this, but do not glue it. Fit the body onto the chassis. MAKE SURE THE CHASSIS IS THE RIGHT WAY ROUND so that the footboards match up with the doors. You may need to file something off the end clips on the chassis. It is recommended that the sides and ends are glued onto the underframe for rigidity. Take care the chassis is straight and does not bend up or down in the middle.

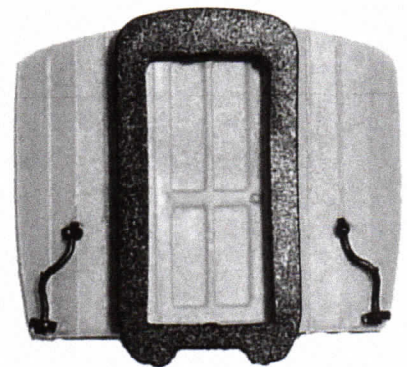
Note. The sides when glued together like this stick out a fraction more than they ought at the bottom. If you want to improve this, the lip at the bottom of each side needs to be filed thinner on the inside and the rib on the ends filed thinner at the bottom before assembly.

Ends

The corridor gangways fit on the ends, locating in the 4 small holes (the holes may need opening slightly if painted over). Many had the gangways removed in later (blue livery) days.

A pair of cables goes on each end, as shown.

The gangway cover plate can be fitted over the gangway if desired. Usually they were fitted to the end coaches of passenger trains but not to full brakes used in parcels trains.



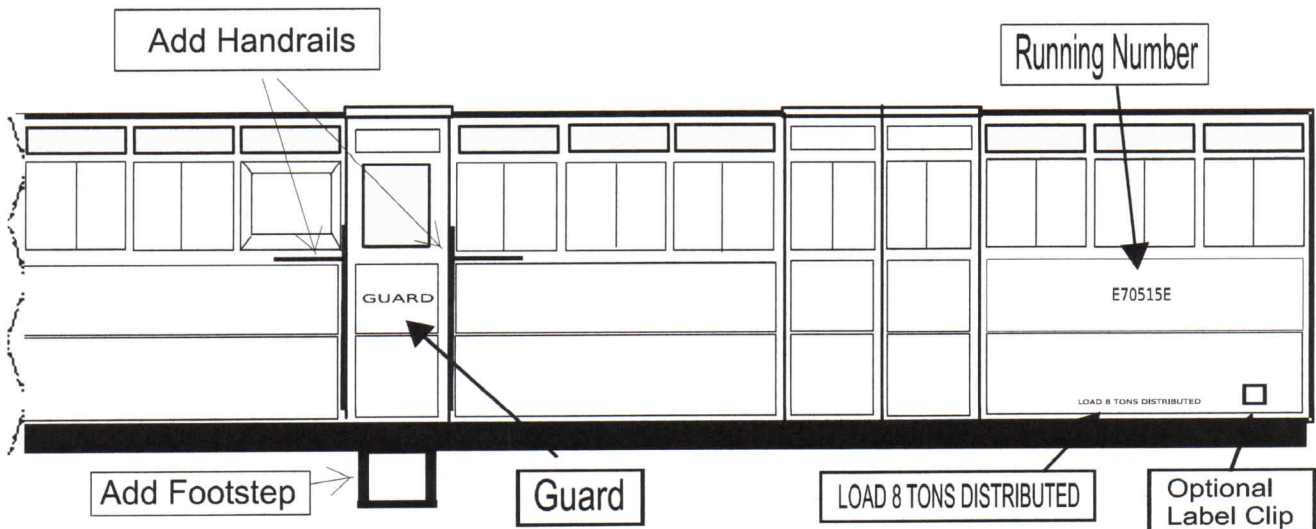
Roof

The roof clips on. Check that it fits snugly in position. If not there may be some flash along the top edges of the sides or ends. Remove the roof by gently pulling it off before further painting.

The rainstrips above the doors are modelled as recesses in the roof, to match RTR coaches. However these really were very thin strips on the edge of the side, and the roof edge was straight. It appears that on full brakes the rainstrips were often removed in BR days so the roof line appears straight. So you might want to file the sides level and fill in the recesses on the roof.

Sides

The guard's handrails fit onto the sides as shown below. You may need to open out the holes using a 0.45mm or 0.5 mm drill, particularly if the sides have been painted.

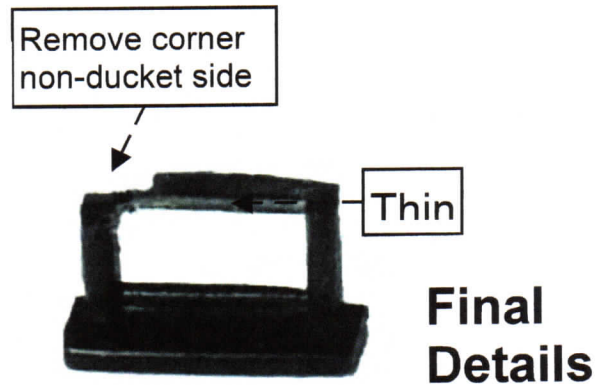


Under BR label clips were added on the lower right of each side, you can add these using a rectangle of white plasticard about 1.6mm wide x 1.3 mm high. The exact position varied.

Guards Steps

Adding these steps is left to the end as it is easier to get them to line up exactly with the guard's doors once the body and chassis have been put together. The fixing plate across the top of the steps is thick for strength during moulding, but can be filed down so it is paper thin before gluing it on.

The steps fit on each side immediately below the guard's doors, the single doors with windows in them, as in the diagram above. The steps on the non-ducket side fit with the left hand support over the vertical truss support, and to allow this a small rectangle needs to be snipped away from the back corner of the upper fixing plate as shown opposite – if you hold it where it is to go you will see what needs removing.



Glue the glazing strips onto the back of the sides. A clear drying PVA based glue is best for this: plastic glue or superglue is likely to fog the glazing. Finally clip the roof back into place.

You may want to highlight a few details: pick out the door handles in brass colour paint; paint vacuum release handle stars on the underframe in line with the vacuum cylinders; paint the windows in the ends of the ducket dark grey and then a couple of coats of gloss varnish.

You may want to glue a little extra weight inside the coach as there is no interior.

Finally few full brakes were ever clean – little light came through the windows! So you may want to weather your coach.