

S126—GWR T49 4 Compartment Brake Third—Guide

To be read in conjunction with the *Shire Scenes* Coach and Chassis Guide and the instructions for the Ratio kit. Please read all the instructions and familiarise yourself with the parts and options before bending, gluing or soldering anything. Slower curing 'gel' superglue (applied with a pin?) is recommended. Folding is made easier by lightly scoring along the opposite side from the half etched line with a pointed instrument.

History

This coach makes an interesting change from the general pattern of GWR 4 and 6 wheel vehicles insofar as the guards 'duckets' or 'projections' are at the extreme end of the coach and thus form part of the coach ends. The prototypes were constructed in two lots. Nineteen vehicles to lot 582 in 1891 and five to lot 700 in 1894. They worked on branch lines throughout the system. At least one survived into preservation and has been beautifully restored by the Great Western Society (GWS) at Didcot. A 'blister' had to be put in the end to accommodate the handbrake standard which was mounted at the end of the vehicle. V hangers and cranks below the buffer beam transferred the 'pull' to the braking system. The blister was removed when the coach entered departmental service and had a lever handbrake installed on the sole-bar. This kit contains the blister and cranks and an alternative blanking piece for the coach end. A photograph of a T49 Brake 3rd in departmental configuration can be found on page 37 of Reference 3. The GWS website has photographs of the restored coach number 416 in full period livery.

Specific Instructions for Coach Sides and Ends

These sides are intended for use with the Ratio 613 'long chassis' kits; SR613 from *Dart Castings*. Because one end of this vehicle is integral with both sides it is necessary to digress from the general instructions found in the Coach and Chassis Guide. The sides and ends are put together to form an open 'box' which is attached to the Ratio chassis floor. The key to getting this right is in folding the guard's 'look out projections (or duckets)' which wrap round the coach sides and lock them in place. These are on the 'B' end of the coach (with the cut-out for the blister).

Emboss the rivet detail on both buffer beams following the general instructions; while they are still flat. Curve the 'tuck-under' into both ends before folding any projections or tabs. Fold the outer wall of one of the duckets through 90°; there is a half etched guide line on the back / inside of the fold. Take great care to hold / support the projection itself and particularly the whole of the narrow window frame in a folding clamp of some kind to avoid distorting it. Repeat for the other side. Fold the 'inboard' side wall of the ducket through 90° using the half etched line as a guide and again supporting the whole of the frame of the small window in a clamp to avoid distortion. Next curve the top and bottom panels on the ducket to line up with the (slots in the) the coach sides.

Assemble the buffer beam detail and attachment flanges on both ends. Fold the buffer plates, bolt straps and coupling face plates (14, 15, 17) through 180° so that they lie flat on the front face of the buffer beam. These details may be removed if using buffers and / or couplings that come with their own plates. Fold the mounting brackets (16) back under the beam through 90°. These can (optionally) be used to mount vacuum pipes or steam

heat pipes. Fold the 'wings' (24 / 8) back through 180° to thicken the buffer beam taking care that the buffer mounting holes align; something round and tapered will help. Fold the tabs (8) through 90° with the half etched fold line on the outside of the fold. These attach (the body assembly) to the top face of the Ratio floor.

Curve the tuck under into the coach sides and add the detail. Attach the 'B' end to the sides using the projecting tabs on the duckets and the associated slots on the sides. Fold the upper attachment tabs (10) on the 'A' end through 90° using the half etched guide line on the inside of the fold and attach to the sides to complete the carcass. Take care to ensure that everything is 'square'.

If the under frame is to be detailed, this is best done at this stage as completed coach bodies do not respond well to being inverted and worked on. On the T49 the underfloor brake gear has to be attached. Fold the rigging as shown (inverted) in the picture and glue the assembly to the underside of the floor below the blister. A piece of 0.6mm wire (supplied) can be inserted through the etched holes as a crank axle and also to form the brake rodding (both shown).



Glue the carcass to the Ratio floor using the tabs on the back of the buffer beam; note—the floor was designed to mate with thicker plastic ends so there will be a gap at the ends. The flanges along the top and bottom of the coach sides (2) fold through about 180° to strengthen and thicken the sides and provide faces to mate with the Ratio parts. Short lengths of styrene strip attached along the top of the bottom flange might help alignment of the floor albeit leaving it a little (0.5mm) high (2+).

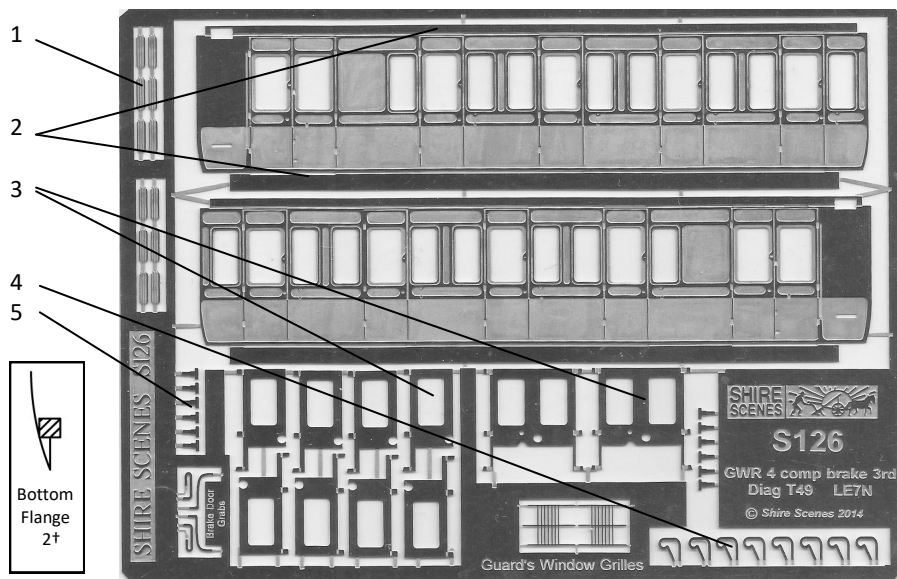
Weighting the vehicle evenly will assist the riding characteristics. Cast metal Passengers; PP1 from Dart Castings, will help with this.

Livery

Generally, GWR coaches carried the fully lined Brown & Cream livery until 1908 when all-over 'brown/crimson lake' was introduced. This lasted until 1922 when the lined livery was re-introduced. Those that lasted into the 1930s would have carried the 'simplified' brown and cream GWR livery. During WW1 a simplified brown livery may have been used. Check the GWS web site for a photo of their restored T49. Surviving T49 vehicles certainly finished their career in all-over brown when in workman's or departmental use.

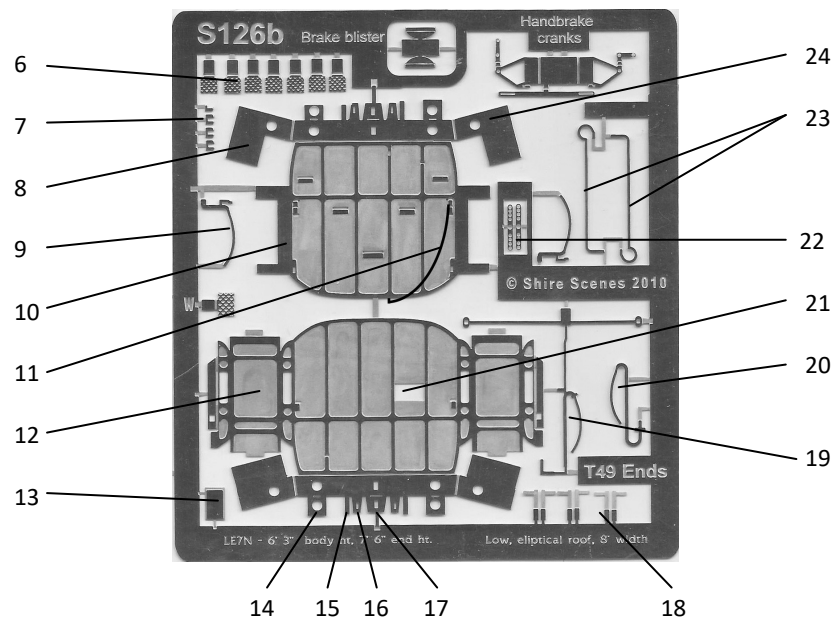
Roof

The Ratio roof can be used without cutting and shutting. Remove the plastic moulded gas lamp tops from the roof with a craft knife and sand smooth. Drill five holes to accept MJT Gas Lamp Tops (MJT 2945). Locate four of these holes to align with the centres of the passenger doors and the fifth a little (2mm) behind (outboard of) the division between the luggage doors.



1. Door ventilators. Mount in panels above (all) door windows*.
2. Top and bottom flanges
3. Droplights and hinges. Hinges fold forward and fit through slots in the coach side (and help locate the droplight). The recess on the back (inside) is to facilitate glazing.
5. Commode handles. The handle sits to the left of the mounting holes.*
4. 'T' handles. For door locks.*

*- If modifying a Ratio coach these features can be seen on the discarded side.



6. End steps ('A' end).
7. Mounting lugs for emergency brake rigging (19).
8. Tabs to attach ends to ratio Floor.
9. Steam heat pipe.
10. Side to end attachment tabs.
11. Position of 'A' end handrails (23) - one only shown.
12. Guard's duckets or Projections.
13. Blister blanking plate.
14. Buffer back plates.
15. Strap.
16. Mounting bracket for vacuum pipe and steam heating pipe.
17. Coupler back plate.
18. Lamp irons. The mounting tab must be twisted through 90°; the iron stands vertical.
19. Vacuum pipe and emergency brake rigging ('A' end).— not usually used
20. Vacuum pipe ('B' end)
21. Hole for blister.
22. Under floor brake rigging adjuster.
23. 'A' end handrails. The end of the 'shepherd's crook' attaches to the roof.
25. Wings—for back through 180° on to back of buffer beam.

Diagram - Lot/Date		Type	Numbers pre and post 1907	Notes
T49	582/1891	4 Compartment Brake 3rd	400/410-13 416/419-20 422/427/429 442/444/453 461-4 475/476	Shire Scenes Ref. S126 Preserved example at GWS Didcot is vehicle 416 of Lot 582 constructed in 1891
	700/1894		2601-2605	

References

1. *Great Western Way*, Lewis et al, HMRS 2009. ISBN 978-0-902835-27-6,
2. *Great Western Coaches from 1890*, M Harris, David & Charles 1985 ISBN 0-7153-8050-8.
3. *A Pictorial Record of Great Western Coaches* by J.H Russell, Oxford Publishing Company, ISBN 902888 03 X. pp48
4. *Great Western Coaches Appendix Volume 2.* by J.H Russell, Oxford Publishing Company, ISBN 0-86093-154-4

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