RAGSTONE MODELS

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LSWR 30ft Passenger Brake Van

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26 Wadham Close
Rowley Regis
West Midlands
B65 9S

LSWR 30 ft Lantern roof passenger brake van

History

These vans, first produced in 1882 were the forerunners of many similar vans and 123 vans were built between then and 1885, later vans (Roxey kit 7C28) had side lookouts (Duckets) and the final batches has elliptical roofs (Roxey Kit 7C7). Some may have been rebuilt with side lookouts and off centre doors, but now records were kept as to how many or which vans were involved. Most were withdrawn between 1910 and 1918 with the last surviving until 1930. Some were sold to the Brecon & Merthyr Railway (in 1911 & 1915) and the War department (1915), others being transferred to service stock for use as mess or tool vans. Several bodies were set down and used as lamp stores, shunters' cabins etc.

Numbers

LSWR drawing 3609 (DB79), SR diagram 852

1882 - 7, 9, 15, 111, 112, 311-319, 321-353
1884 - 3, 4, 37, 52, 60, 68, 76, 84, 86, 91, 96, 97, 100, 120, 127(4412), 128, 142(4421), 180, 185(4459), 206 (4476), 354 (4568) 355, 356 (4569) 357 – 395 (4570-4599)
1885 - 396 – 410 (4600-09)

From 1912 the surviving vans were renumbered in a new series (prior to this each vehicle type had its own series starting at 1, so it was theoretically possible for a whole train to be composed of coaches with the same number), but this was only done at overhaul so many vans may not have actually carried their new numbers

SR survivors (full history):

First LSW	Second LSW	SR	Set	Withdrawn	Service use
206	4476	16	no	11/26	070s
368	4578	18	45 (12/08)	8/28	
370	4580	19	46 (5/10)	6/29	
383	4589	20	47 (9/10)	9/28	
402	4606	21	48	6/29	
409	4608	22	49 (11/08)	3/30	

Service stock survivors (full history):

First LSW	Second LSW	SR	Withdrawn		Service use
112	-	-	12/10	41s	
206	4476	16	11/26	070s	
358	4571	-	11/21	47s	Signal dept. Woking
375	4583	-	11/17	61s	Breakdown Van Yeovil Junction
379	4586	-	7/18	65s	Bridge painters mess van
381	4588	-	3/16	47s	Signal dept. Woking
386	4592	-	10/17	60s	Stores Wimbledon
?	?			038s	Loco dept. Feltham
?	?			048s	Loco dept. Eastleigh

Livery

1882- 1923

LSWR coach livery was described as salmon and brown, the salmon being applied to the sides from the lower edge of the waist moulding to just below the cantrail, there being a brown line just under the cantrail. Body side below the waist moulding was brown as were the ends, solebars and buffer beams. It is possible that underframes etc. were black, but brown is also stated to have been used

Roof and wheel rims white, lantern lookout sides and ends brown (possibly black). Droplight frames (and quarter light frames – not applicable to this model) were varnished wood

Lettering was gold, shaded black applied to the waist panel

Lining was black/red line applied to all panels above the waist, except quarterlights. The red line was on the top edge of the raised moulding, the black line being applied to the inner curved edge. There was also a red line along the bottom edge of the waist panelling and top edge of the bottom moulding

1923 – Withdrawal
Body SR olive green. Lining in yellow/black applied to cantrail panels (except those with ventilators) and all waist panels, excluding quarter/droplights. Black underframe.

Lettering numbering also gold/black, guard/luggage on the doors as before but the number (twice, one at each end) and Southern Railway in the cantrail panels

1920's – withdrawal (Service stock)
Body dark grey (632 of BS381C 1964), however this faded to almost white if left long enough! B lack underframe, lettering in white often as the standard 'freight' style. Generally vans in this livery were individually lettered so a photo is a must

Brecon & Merthyr Railway

Eight vehicles were sold to the Brecon & Merthyr Railway, 4 in 1911 & 4 in 1915

First LSW	Second LSW	Sale date	B&M number	GWR number	Withdrawn
315		1911	76	51	6/23
343		1911	79	52	6/23
344		1911	80	53	11/22
345		1911	86	54	6/23
361	4573	6/15	97	55 (4/23)	3/24
390	4596	6/15	98	56	11/22
356	4569	6/15	99	57 (4/23)	2/25
	DB79b type – built with side lookouts				
79	4387	6/15	100	58 (4/23)	10/26

Note: This list is based on the vans being renumbered in numerical order, there is no proof that this actually happened! As LSWR no. 79 was built in June 1888, being the newest, it is feasible it was the one in better condition, and so was the last survivor

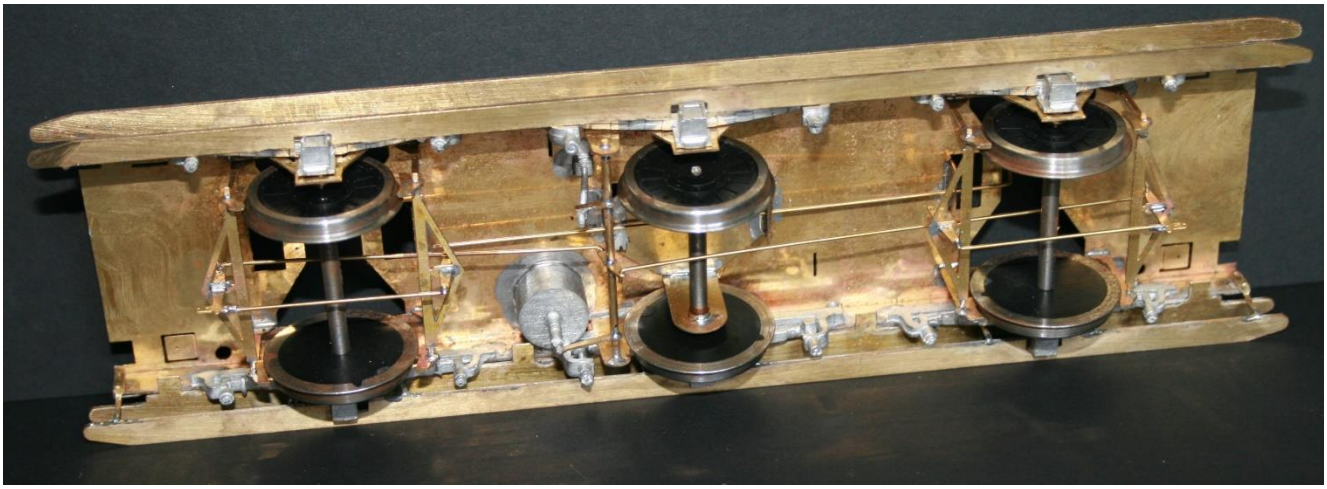
Only 55, 57 & 58 carried their allocated GW numbers. It is thought some of the vans may have been the rebuilt with side lookout version

Livery

Body, chocolate all over, black underframe with white roof

References

LSWR coaches vol1. G Weddell/Wild Swan 1992 - ISBN: 1 874103 08 9 - Drawings & photos
HMRS livery register (vol3) – Len Tavender/HMRS – SBN 902835 00 9
A Register of GWR Absorbed Coaching Stock 1922/3 – E Mountford/Oakwood Press 1978



Underside of completed chassis showing brake gear

Introduction to kit building

Etchings

Cut the brass parts from the fret using a *sharp* craft knife (or similar) on a firm surface rather than using tin snips as these can distort the delicate etchings. The etching process leaves a small 'cusp' on the edge of the parts which should be gently filed to remove, along with any remains of the tab. This is essential to enable the parts to locate accurately as well as providing a smooth edge, which as well as looking better, provides a better surface for the paint to stick to.

Castings

These are supplied either attached to sprues or loose, if the former carefully cut from the sprue and (in both instances) clean up the remaining feed and any area you intend to solder to. If the casting forms a moving part, the relevant surfaces will need smoothing to ensure free running. Using fine files and emery cloth or other fine abrasive sheet to give a polished finish will pay dividends in reliable operation.

Folds

Generally all fold lines are on the inside of the bend, if not this is stated in the instructions. Folding can be performed in a number of ways, such as using smooth jawed pliers up elaborate folding bars. Clamping the part to a flat surface with a steel rule and using a second one to perform the folding action can be very effective. Long folds are ok as they are, but any shorter than about 10mm, and especially very small ones (less than 3mm), will benefit from a reinforcing fillet of solder.

Solder

This kit is designed for solder assembly using either 188 degree solder (brass to brass), 145 degree (brass to whitemetal) or 'lowmelt' 70 degree for whitemetal only joints. Where the term 'solder' is used in these instructions it will refer to any of these methods. It is up to you to decide the appropriate type and use the correct flux and iron for the job.

Glue

Some small parts can be added with glue. Use a good quality product and follow the manufacturers' instructions.

Cleaning

Keeping the model clean is a vital part of a good final finish. Flux residues and metal filings build up so always wash this off at regular intervals, especially at the end of a modelling session when you are not going to resume for a day or two. Occasionally I will wash the model during a session if it gets particularly bad. Several products such as lime scale remover or scouring cleaners can be used, but some, such as most washing up liquids do contain chemicals to give added shine which then need to be removed before painting.

Paint

Before painting the model should be thoroughly cleaned to remove any remaining flux, dirt or other construction debris. Allow to dry completely before painting. It is best to use some sort

of etch primer, but providing the model is completely grease free, acrylic grey primer (car paint in spray cans) will provide a good base for the final livery.

Photographs

These instructions are a guide to assembling the kit, but in order to get an accurate model, reference photographs are essential - see references section on page 2

Assembly

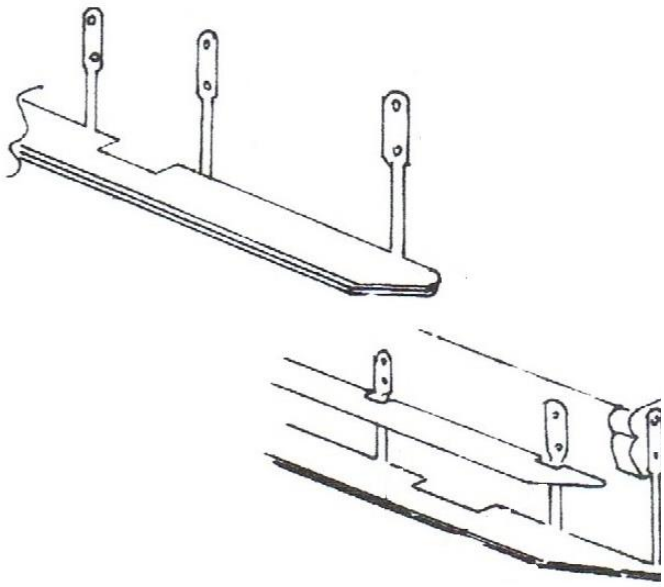
Underframe

1. Remove the underframe (1) and solebar overlays (2) from the fret. Form rivets from rear of part 2 and fold down solebars on part 1. Solder on the solebar overlays, note they are handed, the block of four rivets goes at the same end as the vac shaft mounts on the underframe

2. Inside bearing compensation is provided for, but the kit can be built with rigid axles at both ends. Drill out the holes in the fixed end W-irons (or both ends if not compensating) with a No. 40/2.5mm drill and then fold down the W-irons and brake shaft hangars, reinforcing folds with solder. Drill brackets for the compensation units 1.0mm and fold down

3. Add Centre Wirons/brake shaft hangars (1a) and drill brake rod holes 1.6mm

4. Fit the two inside bearings into the rocking unit (3) and the centre unit (3), drill the holes for 1.0mm wire and bend all 4 parts down. You can ream the inside bearings to give plenty of clearance for the axle, if you wish to avoid paint clogging them. Fit wheels and remove pinpoint axle ends. Fit rocking units to under frame with 1.0mm wire and fit the fixed axle into the W-irons



5. Laminate lower footboards (4) and overlays (5) - fit to side with out the rivet ½ etch, then form rivets and fold hangar brackets. Reinforce bracket/footboard joint with solder. Fit assembly to underframe, locating over raised areas on solebar overlay. Note: the extreme end bracket is joggled and fits behind the solebar (in reality, it was attached to the bottom of the bufferbeam

6. Laminate upper footboards (6) and overlays (7) – fit to side with fold lines, then fold brackets and fit to solebars.

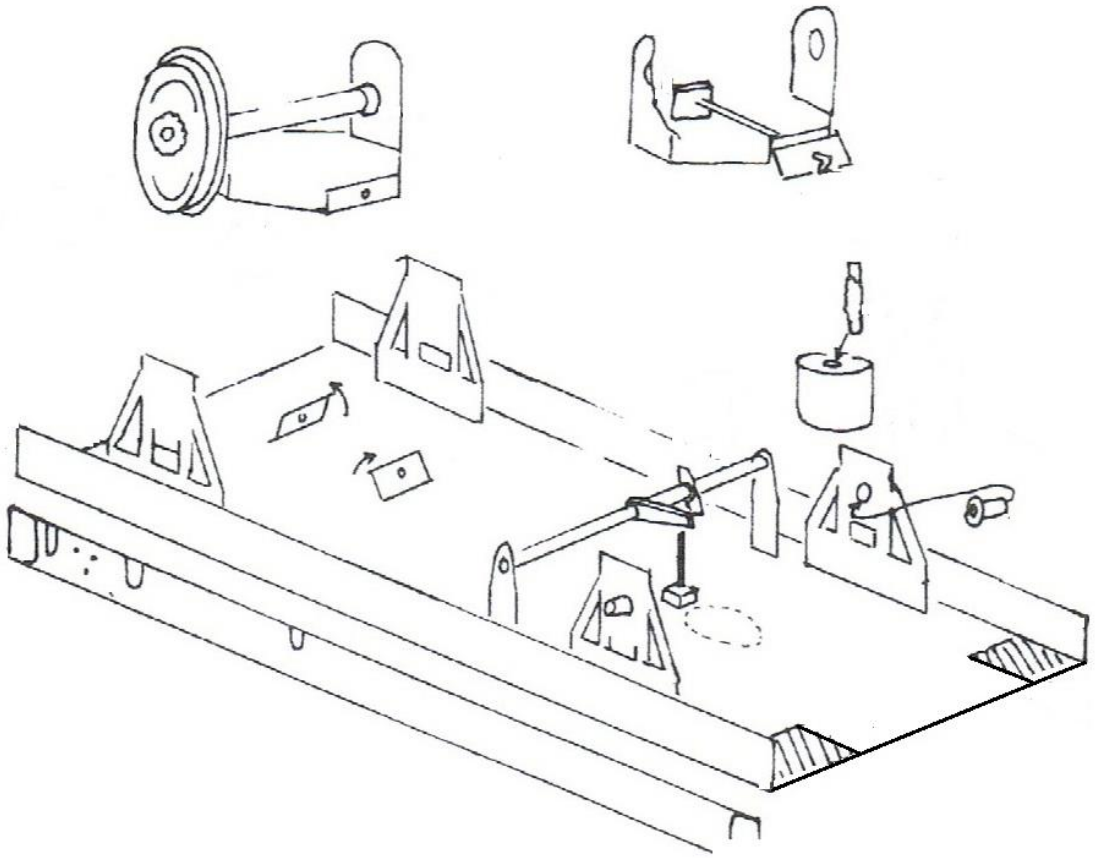
The small cut outs for the lower footboard hangars will need filing to ensure a snug fit

7. Ease axleboxes and springs into position behind the stepboards and fix them in place. You can either glue or solder – note longer hangars on centre pair

8. Make brake crosshaft from a 45mm length of 1.5mm wire, loosely add the vacuum cylinder crank (8) a double crank (11) centrally and handbrake crank (9) to the rod and fix to the two supports. The double crank (11) is a bit over length, so drill 2 new pull rod holes (6mm centres) and shorten the crank accordingly before fitting

9. Fit the piston rod into the vacuum cylinder. Position the vacuum brake cylinder over the etched outline and fix it to the floor. Fix crank to piston

10. The hand brake pull rod square base fits to the half etch location in the floor. Fix crank to lower end



11. Fit brake shoe detail overlay (14) to brake hangar (13) (side with fold line), drill for yokes and fit to underframe in line with wheels, they may be a tight fit, but this helps hold them in place whilst soldering and they can be pulled away from the wheels slightly one fixed

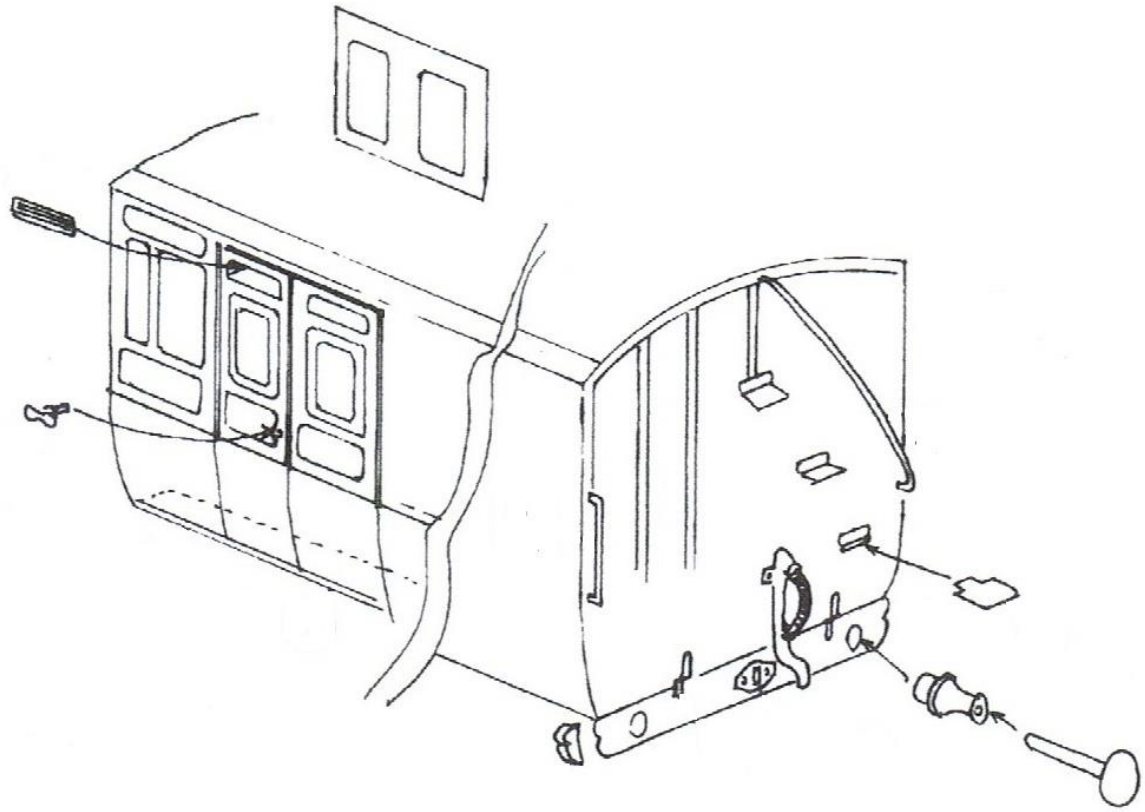
12. Drill holes 0.7mm in connecting levers (10&11), fit to slot in the yokes (12) (note orientation and fit to brake hangars, pointing away from the axle

13. Join connecting levers to each other and brake crank with 0.7mm wire, the top outer pull rod from the vacuum cylinder end is connected to the top of the brake crank, the lower end of the brake crank fits to the top outer pull rod at the far end away from the vacuum cylinder. The bottom ends of each pair connect together and the top inner ends are (on the prototype) fixed to a pivot mounted on the underside of the floor

Body

14. Remove the body sides (15) and ends (16) from the fret. The vent gills for the dog bog may not have etched right through so need clearing. Place side face down on a hard surface and run a sharp blade along the lines, you are trying to clear the etch cusp not cut through the slots – this will deform them. Turn side over and repeat from the front. Use fine grade wet/dry paper to remove any burs produced by this process

15. Before folding the top and bottom flanges, it *can* be beneficial to run a triangular file the half etched line. This helps ensure that the side folds where it should, rather than along the edge of the beading, however providing you have a means of securely clamping the bodyside (i.e. folding bars), is not absolutely necessary. Once you have folded top and bottom flanges , form tumblehome in lower sides to match the ends to match ends



16. Form bumpstops (or drill and insert 0.7mm wire), fold glazing bar support flanges and fit the droplights (17&18) behind the windows. Fit the door vents (19&20) above the doors – note the guards door ones are longer

17. Add hinges (from scrap strip) in slots in body side and 8ba nuts over holes in bottom flange

18. The ends (16) need 6 rivets forming, 2 beneath each of the steps and can then be assembled to the sides, noting they fit inside them. Make up two L shaped assemblies, ensuring the top of the bufferbeam is just below the bottom of the bodyside, a small amount of metal may need to be removed from the end of the bottom flange/bottom of side area to achieve a neat join. Ensure both sections are square, then join them together

19. You can now fit the coupler pocket (21), the end steps (22), lampirons (23) – these fit on the buffer beam at 23mm centres, middle stepped part level with the top of the beam

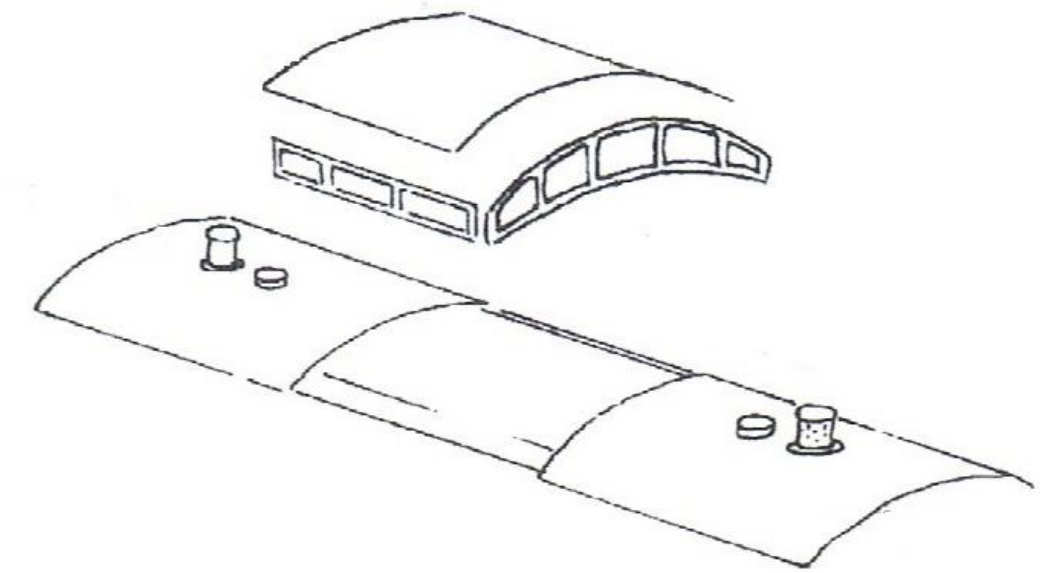
20. Form the hand rails from 0.7mm wire then fit to body sides and ends

21. Fit buffer castings with the bolts aligned NESW. Drill 1.2mm all the way through and 1.8 mm about 5mm deep (don't go all the way through!). Check using heads and springs that they operate correctly and adjust if required. Vacuum pipes fitted to the right of the coupling, with the pipe central complete the end detail

22. File a small rebate (to accommodate the bottom flange of the bodyside) on the bottom of the partitions (24), then fold and fit dogboxes (30,31 & 32) to partitions – they fit to the side with the planking on

23. With the body temporarily fitted to the underframe, fit partitions (24) in place using slots/tabs and lookout sides (ends between sides) to achieve correct positioning – the stepped one (raised seat) fits to the same end as the vacuum cylinder. Only fix these to the body sides or you won't be able to dismantle it again!

24. Fit the roof sections (27) notch the infill pieces (28) so that they fit between the lookout ends and fit them between the outer roof sections. The roof sections should be trimmed to give approx. 1mm overhang at each end.



25. Fit the lookout sides (25) and once happy add centre roof section (26)

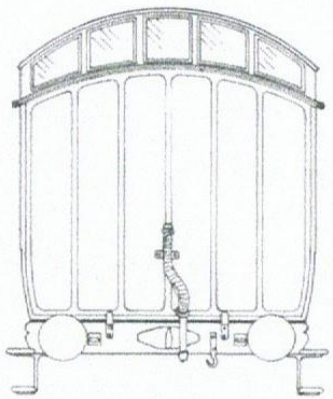
26. Lamps fit on the roof centre line, about 36mm in from the end (on the centre line of the outer droplights). The bung (to go in the lamp hole when the lamp is removed) is fitted 10mm inboard of the lamp

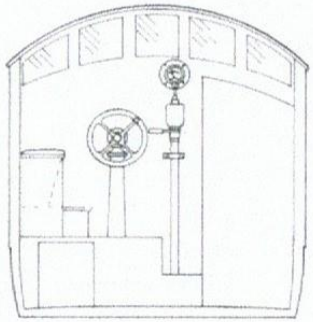
Final assembly

27. Paint body (and underframe), add lining/lettering and once fully dry, fit glazing to all droplights and lookout.

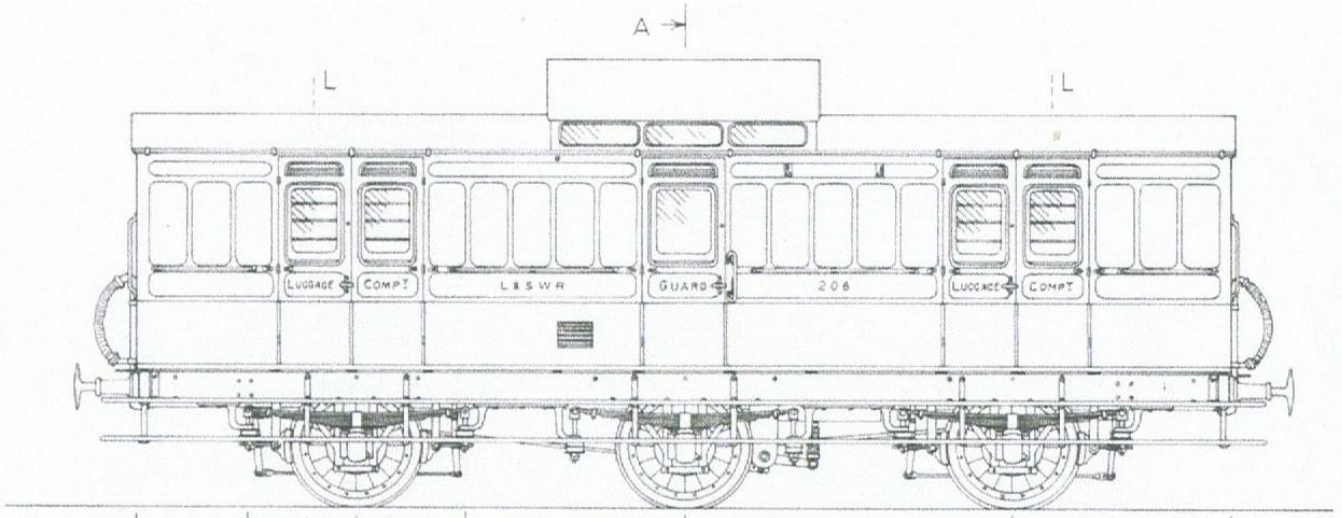
28. Paint luggage grilles (29) grey, fit (horizontally) behind the luggage compartment droplights and door handles to doors

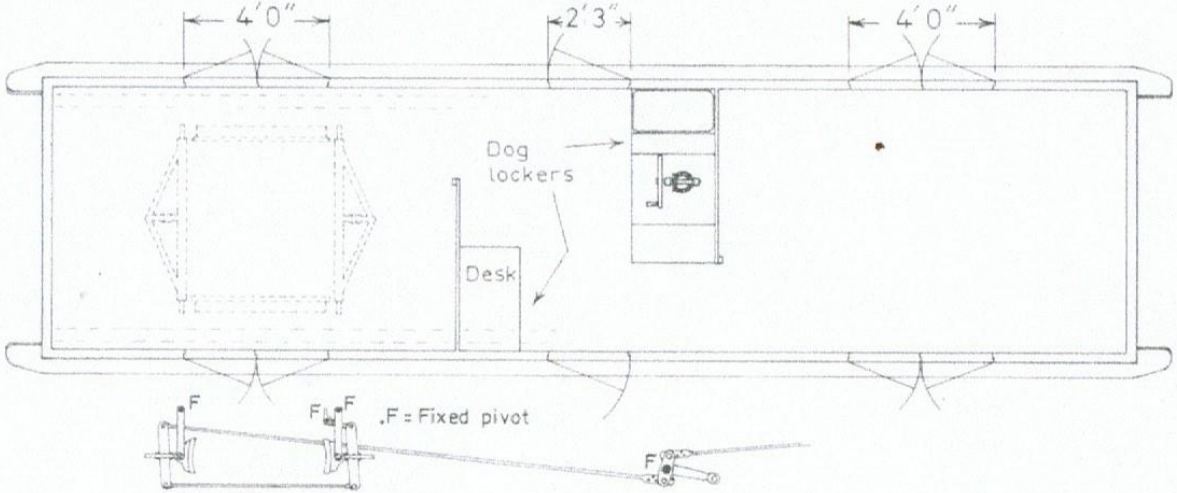
29. Fit body to chassis, assemble and fit couplings





Section at AA

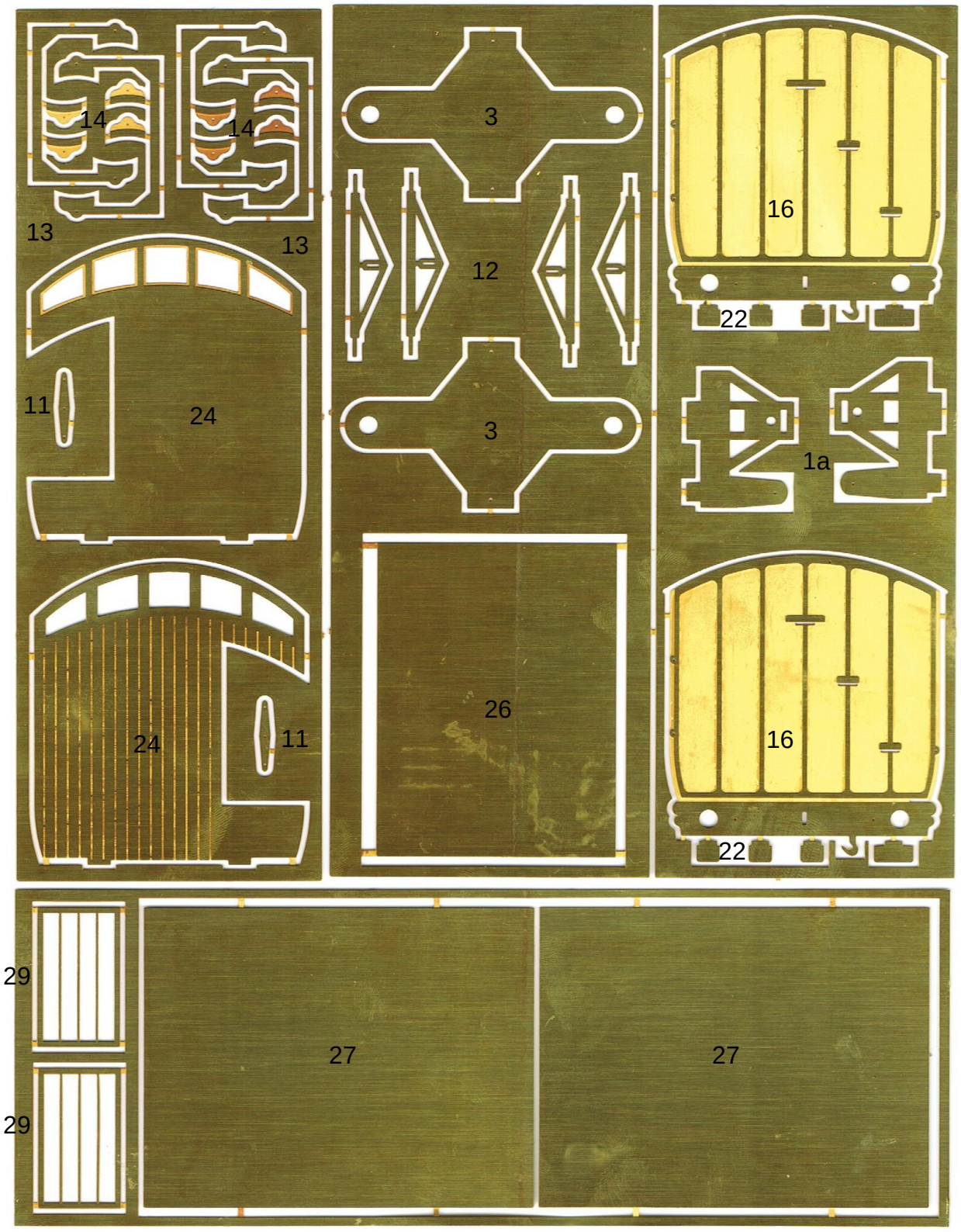




The 1884 version is shown here; those of 1882 had underframes, axle-guards, brakes and spring attachments similar to those of the original 34ft Thirds.

No lamps when built but oil ones later fitted at LL.

The 1882 version had caboose end windows like those of 34ft Brake Thirds.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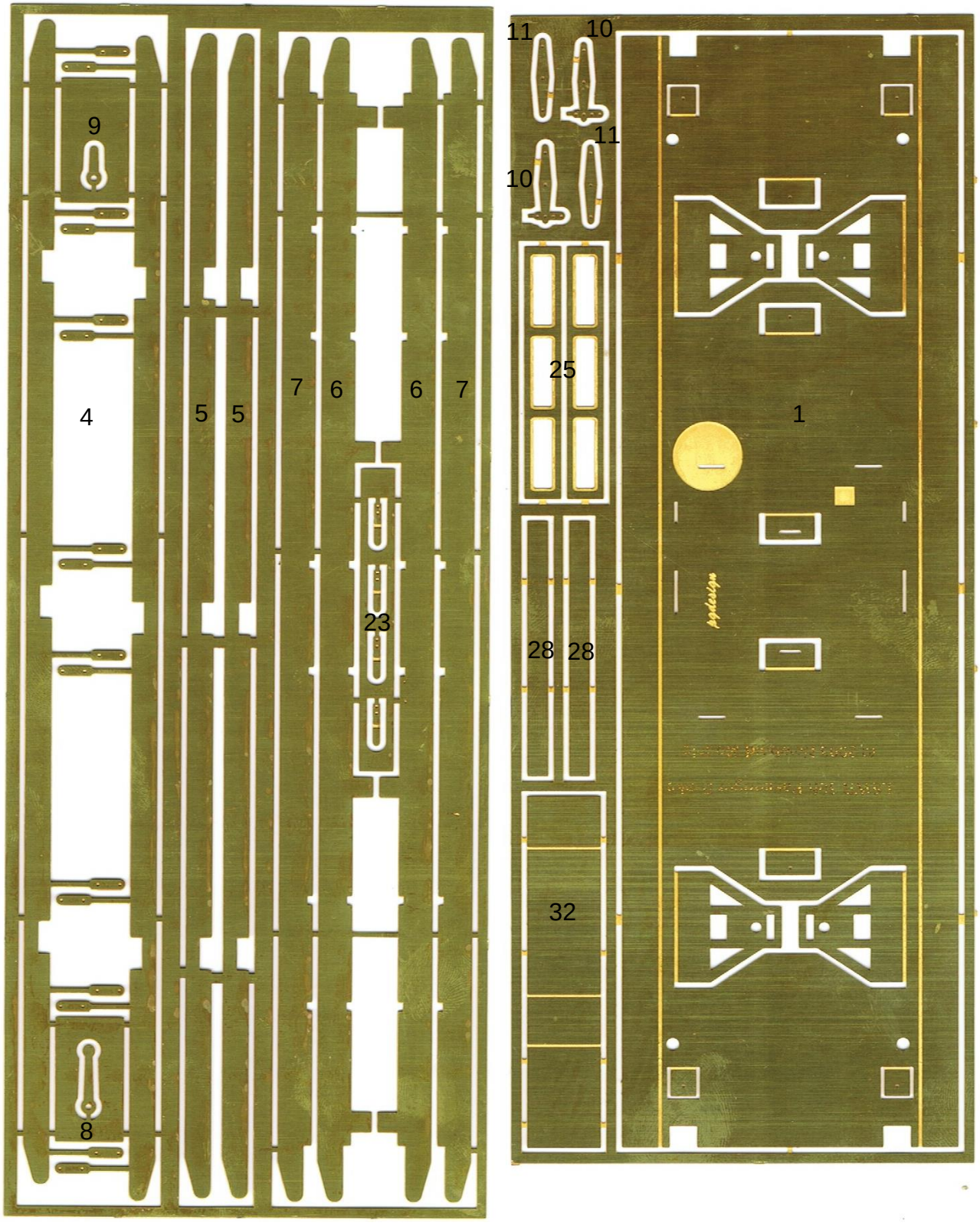
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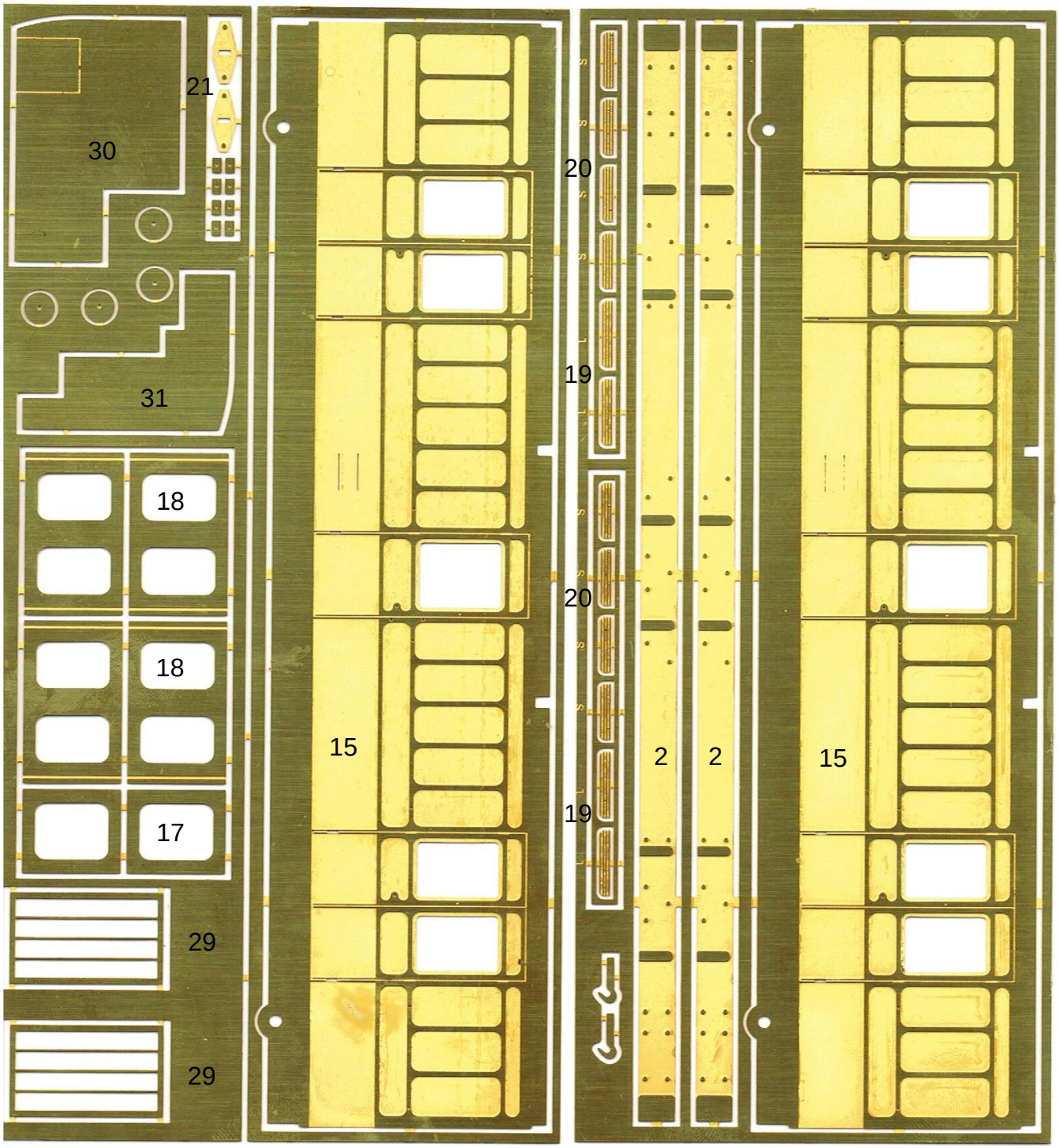
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Parts List

Etch

1	Underframe
1a	Middle W iron & brake hangar
2	Solebar overlay
3	Rocking cradle
4	Lower footboard
5	Lower footboard overlay
6	Upper footboard
7	Upper footboard overlay
8	Vacuum brake crank
9	Brake crank
10	Outer brake lever
11	Inner brake lever
12	Brake yoke
13	Brake hangars
14	Brake block overlay
15	Body side
16	End
17	Droplights – guards door
18	Droplights – luggage door
19	Vent – guards door
20	Vent – luggage door
21	Coupler pocket
22	Step
23	Lamp iron
24	Caboose end
25	Caboose side
26	Caboose roof (rolled)
27	Roof section (rolled)
28	Roof infill
29	Luggage door window grille
30	Dogbox & Guards' desk
31	Raised seat side
32	Raised seat top

Castings

Whitemetal

4x	Axlebox & spring
1x	Vacuum cylinder
1x	Vacuum cylinder piston
1x	Handbrake pull shaft
4x	Bufferbeam ends
4x	Buffer body
2x	Oil lamps
2x	Lamp bung

Lost wax brass

1pr	Couplings
2x	Vacuum pipes

Other Parts

4x	Turned buffer heads/springs/nuts
2x	Coupling springs
2x	Split pins
6x	Door handles
4x	1/8 axle bearings
1x	Glazing strip

Wire

2x	0.7mm approx. 300mm

Parts required

3x	3' 7" Mansell coach wheels (1½ packs Slater's 7127)

Transfers for your chosen livery