



**Midland Railway
London Midland and Scottish**

D529 all brake van

Prototype information

At least 371 of these 25' Clayton arc roof all brakes were built between 1877 and 1894. This was by far the most numerous of all the Midland 'all brakes'. Originally oil lit these vans were converted to gas probably at the same time as the Clayton 6 wheel stock, between 1892 and 1902. A number of these vans, believed to be 10, formed part of the Midland and Scottish Joint Stock arrangements. Of the 49 vans known to have been passed to the LMS at Grouping only one remained by 1933, all were extinct by 1935.

These vehicles were built as follows:

To drawing 58/348
100 to lot 11 of 1877
50 to lot 19 of 1878
10 to lot 28 of 1879 (MSJS)

Drawing 58/456
25 to lot 37 of 1879
100 to lot 96 of 1893
30 to lot 140 of 1885
9 to lot 165 of 1887

Drawing 58/457/696
63 to lot 195 of 1887
30 to lot 260 of 1892
10 to lot 292 of 1892
4 to lot 345 of 1894
TOTAL at least 371

The earliest brake vans (lots 11, 19 and 28) had a slightly different underframe, for which provision is made for in the kit (drawing 348). Brake vans from lot 37 had the standard underframe (drawing 456), but with internal handbrake on the brake vans. Drawing 696 vans, from lot 195 onwards, show a modified internal arrangement which does not affect the model (the communication cord reel, was moved to the side from the end).

References

Midland Carriages, D Jenkinson, R Essery P140 P167.
Midland Railway Carriages Volume 2; R E Lacy, G Dow, P365/6

Numbering

Numbering information is only sparse and precise withdrawal dates are not known but at least one was given a 1933 LMS numbers.

	MR	LMS 1923	LMS 1933
Brake Van	48	324	33932
	129		

MSJS I-20

Additional information

Brake Van, drawing 348 underframe, MR 29, 501-530, MSJS 1-20.

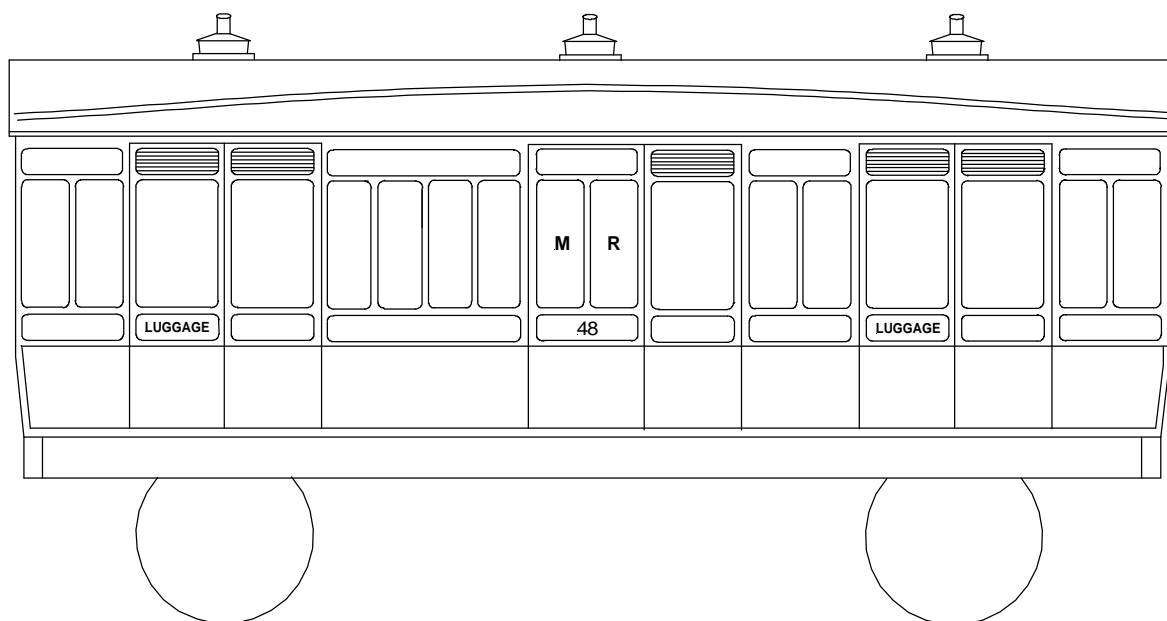
Brake Van, drawing 456 underframe, MR 531-575.

MSJS number 7 as photographed has the dog box louvres at the right hand end. Drawings show only one box. All drawings and other photographs consulted show it at the left, where it has been placed in the kit.

Livery

Body sides and ends, crimson lake, mouldings black with gold lining on edges, yellow from about 1900, no lining at the extreme edges, no lining on the end mouldings. Droplight frames were probably mahogany when new. Solebars, headstocks and buffer bodies crimson lake lined in gold or yellow until about 1902 then unlined red-brown until 1912, then finally black. Wheel centres indian red. All other fittings below the solebars, black. Roof and fittings, light grey. Lettering and insignia, see diagrams for placing. The word "LUGGAGE" may have been omitted on Brake Vans re-painted after 1906. We have no information at present regarding LMS insignia on these vehicles, but the probability is that LMS in 3" letters and the number in 3" serif figures would have appeared in the waist panels, the L.M.S. towards the left and the number towards the right. As well as the van lettering transfers we have included in the kit a set of 6-wheel carriage transfers to provide suitable transfers for the LMS if required. The transfers are the Pressfix type. We suggest the following Precision Paints:

Crimson Lake	P350
Lemon straw	P356
Lining gold	P362
Coach roof light grey	P365



Assembly

The Chowbent 4mm 25' Midland vans underframe includes parts for the Fruit and Milk, Parcels and Brake vans on the same etch. Some parts will not be used for the Brake van.

Underframe

- 1) Floor, raise the rivets on the W-irons and end of headstocks and then bend to shape. For drawing 348 (early brakes) DO NOT bend down the V-hangers from the floor but use part 1a instead, fix this to the floor at the same distance from the solebar as the normal (drawing.456) V-hangers but 2.5mm nearer to the end with the fixed W-irons.
- 2) Solebar detail, V-hanger side, for drawing 348 use 2a instead, Note parts 1a and 2a apply to Brake Van only. Raise rivets and fix to floor.
- 3) Solebar detail, raise rivets and fix to the other side.
- 4) Buffer beam detail, raise rivets by coupling hook and fix in place at each end.
- 5) Buffer base, fix in place and fix buffer bodies.
- 6) Brake Block detail, left.
- 7) Brake Block detail, right.

Fit these to parts 8-11 on the side of the bend lines.

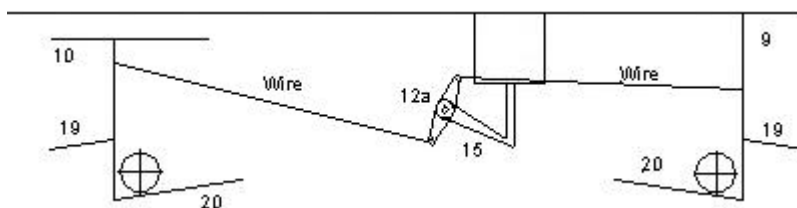
- 8) Brake hangers, fixed axle guard end. Fit to the floor, the locating tabs fit into the slot in the centre of the W-irons.
- 9) Brake linkage hanger. Fit to the floor between the W-irons with flap above the floor and located lengthwise in the slot.

- 10) Pivoted W-irons, raise rivets and bend to shape.

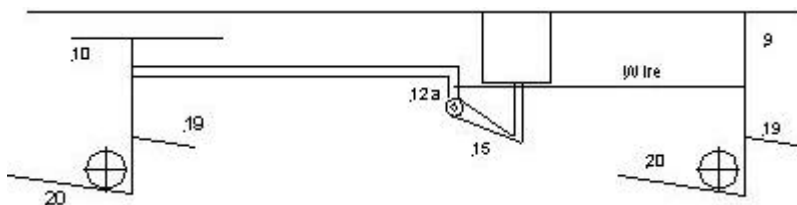
- 11) Brake hangers, fit to pivoted W-irons.

Pivot part 10 to the floor by folding down the flaps and passing a length of wire through the matching holes, thus securing the assembly to the floor and allowing it to pivot. The brake linkage hanger (part 9) goes on the outer side of the axle for drawing 348 and on the inner side of the axle for drawing 456.

Brake shaft. Cut from wire a length of 16mm for Brake. Before fixing, thread on parts for brake gear as required, read notes to parts 12, 12a, 14, 15 and 16.



Sketch of drawing 348 brake gear



Sketch of drawing 456 brake gear

- 12) Brake lever and pushrod for standard underframe, drawing. 456. Runs along the centre line towards the pivoted axleguard end. Lever goes upwards towards the floor from the shaft.

- 12a) Brake lever for Drg.348, use instead of 12. 0 n the centre line approx. vertical.
- 14) Brake cylinder lever, parcels and fruit and milk van. Fix to brake shaft and brake cylinder, which fits under the floor in the marked circle.
- 15) Brake cylinder lever, brake van. Use instead of part 14 if constructing your underframe to Drg.348, ensure the cylinder is placed 4mm along from the marked circle.
- 16) Hand brake drop arm, brake van. Fit to brake shaft and to the locating slot in the centre of floor(drawing 456) or the notch in the V-hanger plate if constructing Drg.348.
Bend the stirrup to shape, see sketch, then fix to solebar. Thread the lever through the stirrup, bend the end of the lever around to form a loop.
- 17) Lower step supports. Raise the rivets on the solebar brackets and bend to shape.
- 18) Lower steps, these make the steps into "double thickness &', bend to shape and fit to parts 17, then fit into place on the van. This section is between the centre support and the next to the right. This step must in this case be cut into two before being fitted in two sections.
- 19) Brake block connecting bars (short). See brake rigging diagrams, fit according to the type of underframe you are constructing.
- 20) Brake block connecting bars (long). Fit temporarily, these must be removable to allow you to fit your wheels.
- 21) Gas cylinder brackets, optional. Fit into locating slots either side of the floor if required. Do not fit cylinders yet.
- 22) Safety loop for pushrod, drawing 456, or upper pull rod for drawing 348.
- 22a) Safety loop for lower pullrod.
- 23) Safety loop for part 20., fixed axle guard end.
- 24) Safety loop for part 20 pivoted axle guard end.
- 25) Coupling hooks. Use 2 layers to each hook for strength.
- 26) Coupling upper link.
- 27) Coupling centre section.
- 28) Coupling centre section lever pivots to part 27.
- 29) Coupling lower link.
- 30) Side chain eyes. Fit into holes in the buffer beam if required, these had been removed by 1922.
- 31) Side chain hooks. Connect to part 30, five links of chain per hook.
- 34) Brake right hand step, lower layer. Raise the rivets and bend the brackets to shape.
- 35) Brake right hand step, upper layer. Fix to part 34.
- 36) Brake left hand step, lower layer. Raise rivets and bend the brackets to shape.
- 37) Brake left hand step, upper layer. Fix to part 36. Fitting the steps, the upper steps are level with the lower edge of the solebar on the brake Van, but they are attached with their own brackets. The left hand step is centred over the left hand axle. The right hand step has its outer end 6mm outward of the right hand axle.
If you fitted the optional gas cylinder brackets, parts 21, now fit the cast gas cylinders in place.
Now fit the axle bearing cups and wheels. Carefully lift part 20(connecting bar) out of the way and spring the wheels into place.
Spring-axle box castings. At the fixed axle guard end, trim any excess length at the outer end so that the casting fits within the headstock when centred on the w-iron.
Fit the buffers, follow the instructions on the card with the buffers. The couplings are retained by threading a piece of wire through the hole in the bracket in the floor and through a hole in the hook.
You can now paint the underframe.

The body

- 38) Side, inner layer.(dog box side on the brake). Bend to shape, curving the tumblehome to match the shape of the ends. 39.Side outer layer, first curving the tumblehome as on part 38, then pass the door hinges of part 38 through the etched holes on part 39 to provide location. It is normally sufficient to fix from the inside at the hinges and around the edges.
Midland Railway 25'0 wheelbase non passenger coaching stock, Diagram 529

38a and 39a. Side without dog box, assemble as parts 38 and 39.

53) Look out left hand side.

54) Look out right hand side.

55) Look out front. Curve this at the top and bottom to match the profile of parts 53 and 54, assemble parts and fit to body sides.

40) Step end.

41) End steps. Form the end tumblehome to match the side profile, fit the end steps from the rear of the inner end, then fit the end lamp irons parts 42 again from the rear but do not bend to final shape until you have fitted the outer layer over the step and lamp irons to provide accurate location.

43) End without steps. Curve the tumblehome as part 40. Fit end lamp irons parts 42 from the rear then overlay outer layer over lamp irons to ensure an accurate fit. Bend lamp irons up. Assemble the body ensure right angle corners, from wire fit end hand rails only in the provided holes.

48) Door vents (not the fruit and milk van). Fit to the etched bases in the upper door panels., ensuring the narrower louvre is at the bottom.

49) Attach waist level door hinges. Fit the hinges on the upper waist moulding.

50) Corner lamp irons. Raise rivets, bend as shown on the sketch and fit as shown on the end view.

51) Modellers now might wish to fit the pre-formed brass roof in place, and detail with the castings provided, A captive nut may be fitted to a scrap piece of brass and soldered in place between the body sides. Drill a hole in the floor so a matching bolt may secure the body in place. Alternatively the body can be glued to the floor after final detailing using the tabs on the body sides and the slots in the floor.

As seen from the V-hanger side of the underframe the brake van dog box was on the other side and the end steps at the right. The end with gas control was on the left. There is evidence for this assembly but no evidence to say that some vehicles were not the other way around!

Final detailing after painting/lining and fitting transfers

52) Ring door handles, used when first built. Probably changed by 1922 to the T type.

53) T door handles.

54) Lever handles. Used on the right hand of each pair of double doors on the brake van when T handles were fitted. The brake van had handrails along the upper waist mouldings between the holes, only the guards door and lookouts not fitted. The right hand side of each lookout had a handrail near the guards door.

On the brake van fit the glazing to the guards door, lookouts and to the four roof sky lights from the rear.

Fit the underframe to the body having referred to 51) above.

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