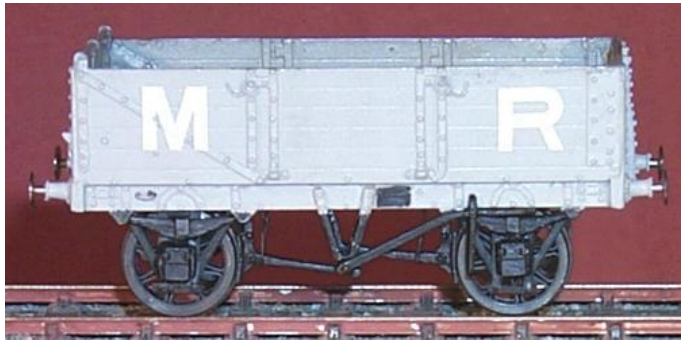
The 4mm wagon and van kit

MRD351

Midland Railway
London Midland & Scottish Railway
British Railways

D351 8 ton high-sided goods wagon
With side, end and bottom doors



1890 to early 1950s
for 00, EM, P4 and S4

Contains: whitemetal body, etched brake levers, W-irons and steel headed buffers
Required to complete: split spoke 12mm wagon wheels, bearings, paint, transfers, 3-link couplings

The Prototype
Fitted with end, side and bottom doors, the D351 8 ton high-sided goods wagons were most probably used for coal traffic. They were built to drawing number 790 of 1890 and over the next 10 years some 9000 were built in seven lots. It is believed that examples were still in traffic in the early years after nationalisation.

As built these wagons were fitted with Midland Railway pattern Ellis grease axle boxes and two shoe single sided brakes. It is probable that many wagons were fitted with either side brakes and possibly some with oil axle boxes.

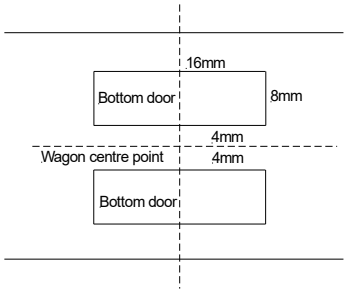
References
An Illustrated History of Midland Wagons
Volume 1 pp79-80
Midland Portrait, P Tryman, D Hunt, Plate 92
Midland Record No2 1995, p61
Midland Record No14 2000, pp49-53
Midland Record No 25 2007, p46

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Midland Railway Society
www.midlandrailwaysociety.org.uk

Assembly
Examine all the parts and familiarise yourself with their assembly. Remove any surplus casting flash and ensure all parts are clean and well fitting.

Assembly is best carried out using low melt solder or an epoxy resin such as Araldite. Glues like UHU, Multibond or Thixofix can also be used too. For small parts use superglue. It is suggested that a mixture of two or more of these methods will be best. Prior to assembly some preparatory work is required. Ensure the inside of the solebars are free of moulding marks that may prevent free movement of the W-irons. Bore out the buffer holes in the headstocks to accept the buffers. This may be done with a broach. Do not fit the buffers yet. Using the 0.3mm wire supplied fit horse hooks to the solebar. These are situated (pip marked) to the left of the left-hand crown plate. Fit one of the ends to a side, ensuring all is level and square. Attach the second end. Fit the second side, again checking all is square using a flat surface such as a glass sheet. From the supplied embossed plastic prepare a floor. D351 wagons had bottom doors which can be fitted if required following this sketch:



Remove the horizontal planking in line with the drop door and replace with longitudinal planking.

Fit the buffers to the ends ensuring the attachment bolts are at the 2, 5, 7 and 11 o'clock positions. Attach the solebars, which fit on a ledge adjacent to the curb rail. It is suggested that you solder the lower surface of the solebar at the headstock joint but use Araldite adjacent to the plastic floor if you have attached your floor in place. Attach a short section of plastic strip to represent the door banger plate. This plate is on the side sheeting in line with the position of the V when the door is open. On some wagons a sprung door banger was located on the solebar. This can be fabricated from brass strip. The side sheet plate will need to be slightly longer.

Assemble the W-irons as outlined in the enclosed sheet (use the straight bridle bar). It will be appreciated that these W-irons are intended to be used either in the rocking or non-rocking mode. It is also strongly suggested that the W-irons are primed and painted matt black before final assembly into the wagon. Place both W-irons on the floor using the crown plate coach bolts on the exterior of the solebar for positioning; the wheelbase is 36mm (9'). Check the 'rail to buffer centre height' adding packing to underside of W-irons as required, to achieve 14 mm. We expect some 0.060" packing will be required. This enables the floor to be thickened and thereby strengthened. Ensure any added packing does not interfere with the brake shoe castings. Glue the W-irons in place. (It may be helpful to draw axle and wagon centre lines for guidance.) We do not recommend an Evostick type glue for this purpose. If the wagon is gently pushed along a flat surface it should run in a straight line. If not one or more of the W-irons are out of line and should be adjusted by gentle tweaking.

Attach the brake shoe assembly in place so that the shoe detail faces outwards. Ensure the brake shoes are not fouling free movement of the wheels. Following the enclosed instructions, fit the brake lever guides, levers and V's. Use a length of 0.5mm wire to support the V's in place one either side of the solebars whilst gluing them place. The lever guide should be about 2mm to the right of the left hand spring carrier.

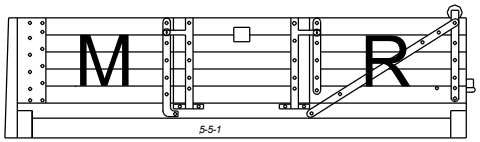
Add the brake gear to the second side if required. The brake safety loops should now be added. Form a loop from the supplied etched components, cut to length and place over a push rod about 2mm from the brake shoe. Repeat for each push rod.

Clean and degrease your wagon prior to painting. We suggest using an etching primer such as Precision Paint PS1 followed by the wagon paint of your choice. Prior to lettering clean the wagon with a white spirit dampened tissue to remove any surface dust. This is particularly important if dry lettering is to be used.

Livery

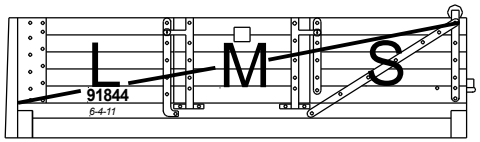
Letter and number your wagon to suit your chosen period. Suitable lettering is supplied by Fox Transfers, HMRS and Modelmaster and paints by Precision Paint for the MR, LMS and BR periods.

Midland Railway 1905-1922



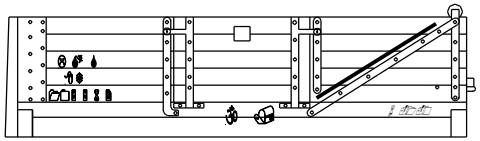
Bodywork and solebars: light/medium grey, P360. (This changed for a period after the Great War to a dark grey, P361.)
Underframe/brake levers: black
Insignia: white, Fox FRH 4610, HMRS sheet 17. The wagon number was on a cast iron plate fixed to the solebar rather than painted on the side.

London Midland & Scottish Railway 1923-1936



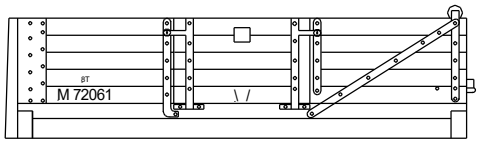
Body, solebars and all ironwork: grey, Precision Paint P38
Insignia: white, Fox FRH 4255, HMRS sheet 6 or Old Time Workshop sheet 4701

London Midland & Scottish Railway 1936-1948



Body, solebars and all ironwork: bauxite, Precision Paint P39
Insignia: white, Fox FRH 4255, HMRS sheet 6 or Old Time Workshop sheet 4701

British Railways 1948-demise



Bare timber or light grey with lettering on a black patch, Precision Paint P126
Insignia: white, Fox FRH 4255, HMRS sheet 25 or Modelmaster sheet 4619

Many wagons would not have been repainted immediately by the LMS or if at all by BR and would have remained in their previous weathered livery or well-weathered bare timber.

Matt varnish the wagon to protect both paint and transfers. Lastly add three link couplings of your choice.

Sample numbers

Known numbers include 50897, 64046, 91844, 99908, 100000, 105563, 105895, 112709 and 123984. The MR numbers were not changed by the LMS. Any wagons surviving into BR ownership would receive an M in front of the number.

A more recent version of these assembly instructions may be available on the Wizard Models website.

51L

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Wizard Models

Wizard Models stocks a wide range of components and other necessities for the modeller in 00, EM and P4.

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