

# PARKSIDE DUNDAS

## Instruction Sheet

## PS45 LONDON & NORTH EASTERN RAILWAY 12 TON GOODS VAN (DIAG 94)

### Preparation

Basic items required are craft knife, tweezers, light flat file, round rat tail file, pliers, 1/32", 3/64" drills, liquid plastic cement, 'super glue' and paints. Parts **19, 26, 27, 28, 29, 30, 31, 42** and **43** are moulded in ABS plastic. This tough material is not amenable to weaker cements but can be held by ABS cement, super glue or strong cements such as EMA Plastic Weld.

### Construction

Assemble body. Attach the sub chassis (**6**) to the underside of the floor (**4**). The short wider part on one of the longitudinal members should go adjacent to the 'X' on the floor. If you need to remove any ejector pin marks from (**6**) make sure the small locating bumps which line up with the corresponding holes under the floor are not damaged. It will make subsequent construction easier if only the longitudinals are cemented at this stage and the cross members are left unfixed. Make up body with both ends (**3**) and sides (**2**). Drop in the floor / sub chassis assembly from the top. Note that floor rests immediately above buffer beam and that as in the prototype the underside of the floor is above the foot of the sides. Make sure the assembly is square and that the roof will fit correctly - there is only a very small overlap between the end of the roof and the two end verticals. Attach roof (**1**) now or later as suits.

Assemble chassis. Assemble axle boxes by fitting the lid (**9**) to the axle box body (**10**) and cementing this to its base plate (**11**). Use a bearing cup (**13**) to line them up. Push bearing cups (**13**) into axle box backs (**12**), insert into 'W' irons (**8**). Note that for both parts (**11**) and (**12**) the correct way up is with the axle hole in the bottom half of the moulding. Clean out the axle box holes if necessary to fully take the bearing cups. Put a drop of 'super glue' on the end of each bearing cup (**13**) and add the axle box assembly (**9,10,11**). Alternatively cement the axle box assembly onto the back (**12**). In any case ensure that the assembly moves freely on the 'W' iron. This will give an element of compensation. The axle box can also of course be cemented rigid onto the 'W' iron. Make sure that the axle boxes sit evenly under the springs. Now fix the 'W' iron / axle box assemblies onto the backs of the sole bars (**7**).

For simplicity the two sides of the wagon will be called either 'X' or 'Y' corresponding to the letter marked on either side of the floor. Before assembling the brake gear clean out any holes. The larger holes are 3/64" and the smaller 1/32" Take one solebar and add Vee hangers (**14**) and (**15**). This will go on the 'Y' side of the wagon. On the other solebar add one Vee hanger (**15**) in the right hand position. This will go on the 'X' side. Cement the two solebars into position. Insert the wheels and check that they turn freely.

Attach the brake shoes (**16**) to the cross members under the floor with the brake shoes in line with the wheels. The brake shoe mouldings should be fitted with the round ejector pin marks facing towards the inside of the wagon. If the shoes bind on the wheels pull them gently outwards. When satisfied, finish cementing the sub chassis (**6**) to the floor (**4**) as mentioned above.

Refer to the diagram for the correct alignment of the brake gear. Onto the cross shaft (**17**) - plastic rod (which if necessary may be sanded down to fit the holes) - slide on the brake cylinder lever (**18**), the cross shaft double lever (**19**) and the cross link (**20**). Slide the safety loop (**21**) on the cross link. Pass this assembly through the two Vee hangers (**14**) and (**15**). Leave enough rod at the (**15**) end to attach the brake lever (**22**). Attach the brake lever guide (**23**) to the lever. The cross link (**20**) goes against the back of the Vee hanger (**14**). Cement the assembly (except **14** and **20** and the two levers **18** and **19**) into place. With another piece of the plastic rod pass it through the other end of the cross link and the other Vee hanger and add the remaining brake lever and lever guide as before. Locate the top of the safety loop (**21**) against the floor. Cement the assembly.

Take vacuum cylinder (**24**) and add trunnions (**25**) to either side. The thicker part of the trunnions should rest on the lip of the cylinder. This will give the correct height for the cylinder. Attach underneath the floor (**4**) with trunnions against the longitudinal chassis member (**6**) at the short wide section and the corresponding recess in the X side solebar (**7**). Cement the end of the brake cylinder lever (**18**) against the shaft of the brake cylinder.

Assemble the brake rigging. Make up the two hangers (26) and (27). Then take the short yokes (30) and fit their lugs into the middle set of holes in the double levers (28,29) and cement the two parts of the double levers together at the spacer on (28) and the hole on (29). Now slip the outer ends of these lugs into the holes in the hangers (26) and (27). The long yokes (31) should be fitted with their lugs in the remaining holes in the double levers (28, 29). These assemblies should then be fitted as shown in the diagram. On the vacuum brake cylinder end of the wagon the linkage with the short hanger (27) goes over the axle, while at the other end the linkage with the long hanger (26) goes under the axle. It is suggested that the short yokes (30) should be fitted to the outer brake shoes (16) first, then the inner shoes connected and finally the hangers fixed to the locating slots under the floor. Take a 35 mm section of the brass rod and make a hook around one end. Attach this to the bottom of the double lever (28, 29) at the vacuum brake cylinder end of the wagon and loop the other end into the bottom hole of the cross shaft double lever (19) so that the rod lies approximately horizontal (32). Repeat this operation at the other end of the wagon with a piece of rod 65 mm long (33), again running from the top hole in the cross shaft double lever (19) to the top of the corresponding double lever (28, 29).

Bend up the thin brass wire for the door handles (47 and 48) and attach to the doors (46). Both are a 'staple' shape with legs 2.5mm at each end. (46) is 14.25mm long and (47) is 6mm long. Fit the doors (46) onto the sides, if necessary filing the foot of the doors to clear the three runner plates on the sides (immediately under the door space).

Assemble buffers. Attach the buffer ring (42) to the end of the buffer casing (43). Slide two springs (44) onto the shaft (41), slide into buffer casing and secure with the 12ba nut (45). The nut should also be secured with a drop of Loctite or similar. The buffer castings make a tight push fit into the holes on the buffer beam. Note that the short web on the casting should be uppermost. The buffers should be just under 12mm long.

Assemble coupling chains (40). Attach these to eye hole of each coupling hook (38). Insert it through buffer beam, slide on spring (39) and bend out ends to retain spring.

Add the lamp irons (34) to the ends (3) as indicated. Attach the vacuum pipes (35) and (36) - noting these are handed - (35) goes on the vacuum brake cylinder (24) end of the wagon.

#### **Historical:**

The LNER was a little slow in adopting more modern wagon building techniques. This type from 1934, although it has a 10 foot wheel base, still retains the time honoured wooden chassis. However the basic design was sound and many lasted into the middle 1960's. An 'outstanding' feature of these wagons was their roof height of 12'3", which is over 6" taller than for example the BR standard van. 2,167 were built to carry general merchandise traffic. The small shutter in the end is to facilitate the loading of long items through the side doors.

Number Series 174900 - 175566, 179009 - 180008 and 186587 - 187086. After Nationalisation an 'E' prefix was added. References; A Pictorial Record of LNER Wagons, Peter Tatlow, OPC; The 4mm Wagon, Geoff Kent, Wild Swan. British Railway Vans Vol 3, Gamble, Cheona Publications.

#### **Painting & Lettering**

LNER; Body including buffer beams and solebars, brown red oxide (Railmatch 625). Lettering, white. Roof, white or grey. Buffers, running and brake gear, black.

BR; Body including buffer beams and solebars, bauxite brown (323); buffers, running and brake gear, black; roof, coach roof grey; lettering, white. Examples of different lettering styles are shown in the drawings. The 'XP' is common to both post 1937 LNER and to BR.

This kit is supplied with self adhesive type transfers. Ensure that the painted model is free from dust and grease. Remove the protective paper from the transfer sheet and with a sharp knife cut lightly round the transfer required, through the carrier tissue only and not through the heavy backing paper. Lift of the transfer and lay it very gently on the model. Adjust as necessary and then press down firmly. Soak the tissue with water and leave for 20 -30 seconds before peeling of the tissue. Wash of surplus gum and dry. Varnish if wanted, but cellulose varnish should only be air brushed on. Some transfers are for use on other models.