

This kit represents a typical 9ft wheelbase, 16'6" over headstocks, wooden chassis and conforms to the dimensions recommended on Drg. WS34 in the Yearbook. To complete, it requires two pairs of wheels on 12,25lg axles (3 hole disc 2-205, 8-spoke 2-209 or open spoke 2-213), 4 wagon buffers 2-441 or 2-443, 4 top hat bearings 2-041, set of 4 cast axleboxes e.g. RCH 2-413, couplings if required e.g. BB or DG 2-110 and approx. 25mm of .010" or .012" diameter brass or P/bronze wire.

The kit can be constructed with the following variations:-

- * Morton brakegear having single 'V' hangers and operation via a cam on one side.
- * Independent either side brakes with double 'V' hangers and no cam. (see Italic text).
- * Etched buffer beams as part of the chassis.
- * Etched buffer beams discarded where beams (0.75mm thick) are built integral with body.
- * Mineral wagon door stop spring can be clipped off if not needed.
- * Automatic coupling support platforms need not be formed up unless required.
- * Coupling hooks and their retaining plates are provided but may not be applicable.
- * Can be converted into metal chassis versions by using separate accessory kit Part 2-335 (16'6") or 2-339 (17'0" over headstocks).

Separating the parts. Place the etch on a hard surface with the $\frac{1}{2}$ etch side of the component retaining tabs downwards. Cut the tabs close to the waste material by pressing down firmly with a sharp scalpel blade e.g. Swann Morton No 15. When the components are free turn them over and closely trim off the remainder of the joining tabs in the same way. No other cleaning up should be necessary. Do not separate the solebars from their two backing strips or separate the three components of each buffer beam.

Note. Generally all $\frac{1}{2}$ etch bend lines are on the inside of the bends. Ensure that all bends are a true 90 degrees. Recommended solder is Carrs 188 paste applied sparingly with a fine paint brush. Suggested adhesive is Loctite Super Glue 3 (or similar) or Rapid Araldite.

Chassis/'W' iron Unit. Bend buffer beam supports to 90 deg. Cut the two joining tabs securing each coupling platform and form to shape. Locate platform inner flanges into the slots at each side and solder. For Morton Brake version break off the 'V' hangers at the bend lines and discard them.

For independent brake version bend the 'V' hangers to 90 deg.

Bend 'W' irons to 90 deg. Insert top hat bearings and secure them with solder ensuring that the flange on the bearing sits square in the $\frac{1}{2}$ etched counterbore.

Brake Unit. For a Morton version bend at 90 deg. at bend lines. Note that 4 location tabs will stand proud of the flat surface that mates with the underside of the 'W'iron unit.

For an independent brake version, separate the two halves of the brake unit at the centre line. Bend the side with one short location tab with the $\frac{1}{2}$ etch bend line inside the bend. Bend the side with the slot within the bend line with the $\frac{1}{2}$ etch line outside the bend.

Solebars. Concertina the $\frac{1}{2}$ etched front layer together with its two backing pieces at the hinge points to form a 'Z'. Having applied minimum solder paste between the layers squeeze flat in a vice. Apply heat on the inside. Take care to keep the square brake lever hole clear. Remove the temporary 'hinges' with a file. Form to shape the door stop spring or cut it off if it is not required.

Buffer beams. Concertina the three thicknesses to form the beam with the 'hinge' $\frac{1}{2}$ etches outside the bends. Squeeze flat having applied a little solder paste or adhesive between the layers. Take care not to fill the holes. Align the buffer holes if necessary using 0,8mm dia. pins or drill shanks. Apply heat to the inside layer. Carefully smooth the edges and remove the 'hinges' after soldering or the adhesive has set.

Brake Handles. The small notches along the edges of the brake handles indicate the exact position of the bends. Using tweezers make the bends in the order shown in the sketch. The brake handle shape can be checked by aligning it with the template slot in the waste part of the fret.

For independent brake version snip off the lower cam section of the one brake lever.

Assembly. For Morton brakes, position the brake unit into the location slots in the chassis. Note that the small tab goes into the short slot. Place a blob of solder paste into each of the large holes in turn and apply heat. The solder will run between the layers.

For the independent brake version locate the two halves of the brake unit into the slots, again with the short tab in the small slot.

Using the 0,8mm dia. pins or drill shanks through the buffer holes, locate the buffer beams on to the supports on the ends of the chassis. Note that the narrow coupling slot goes to the outside. Glue the beams in place ensuring accurate squareness. Note that the top edge of the buffer beam prototypically stands slightly higher than the top surface of the chassis. Stick on the solebar units, using .010" wire to ensure alignment with the inner 'V' hanger (if applicable) and the brake unit. The top edges of the solebars should be flush with the top surface of the chassis. Lightly solder the .010" crossrod at 4 points for Morton brakes.

In the case of the independent brakes the crossrod is lightly soldered at 5 points and then the unwanted centre portion of the rod is cut out.

Place the brake lever on the end of the crossrod and into the location hole in the end of the solebar as far as its stop and lightly solder in the two places. An access hole is provided. Form the end of the handle to its correct shape. Fit the coupling hooks and their retaining plates if required soldering them to the coupling platforms. Finally glue on the buffers, couplings and axlebox/spring units before painting.

