

LCP28 Chassis pack for GWR Collett 5600 0-6-2T

Components recommended to construct a complete chassis

6 off Markits scale 4"7" wheels (WH201)

3 axles 6 crankpins and washers (RM2)

1 set 14mm trailing wheels (WH33)

Gearbox GB5/20 and Drive Extender, or GB1/20

Mashima MH1624 motor

The frame etch contains sideframes, coupling rods, brake shoes, brake pull rods and balance weights to produce a basic chassis of the correct scale dimensions and appearance which can be used as a substitute for a kit or RTR chassis.

A separate fret of 00 spacers is included, which can be exchanged for EM (LS10) or P4 (LS60) by returning them to us in a stamped, self-addressed envelope.

As supplied the frames are suitable for the Dapol/Bachmann model.

We recommend the Mashima MH1624 motor with our gearbox GB5/20 and Drive Extender for this model, and can supply the latter two together with Markits driving and trailing wheels if required.

Assembly Instructions

Please note that all bends should be made with the half-etch to the inside and reinforced with a fillet of solder.

1. The frames may be assembled rigid, or with sprung axles using our hornblocks and springs (code LS55). If you wish to spring the chassis cut through the spring hangers using a piercing saw and remove them together with the centre portion of etch within the hornway. The sides of the hornways are etched at 5.85mm approx. so as to ensure that any slight variations in the width of the machined grooves in the hornblocks do not result in any one of them having a loose fit within the hornway. Each hornway must be carefully dressed with a file to achieve a good sliding fit to each hornblock, which should then be marked up or placed into a labelled bag to ensure it is assembled into the hornway to which it has been precisely matched. Take time and care over this stage, removing material slowly and from each face equally. The hornblock must drop freely under gravity but must not show any fore and aft play which might cause the coupling rods to bind.
2. For rigid axle assembly, carefully open out the axle bearing holes in the frames until the bearings are a close fit, ensuring the bearing flanges fit snugly against the frames. This is best done using a five sided broach. If you are using our chassis jigs (see below), DO NOT solder the bearings in place at this stage. Open out the holes for the brake cross-shafts to 0.75mm.
3. Select the appropriate frame spacers - the size and position of them will depend upon the siting of the body fixings and your preferred motor/gearbox and pick-up arrangements. Our own preferences are, where possible, for a tongue and slot fixing at the front buffer beam and a single bolt fixing under the cab, together with wiper pick-ups mounted below the chassis. A suitable layout of spacers is shown in sketch 1 to suit this and our gearbox GB5/20 with Drive Extender and Mashima MH1624 motor, or the GB1/20 gearbox.
4. Before proceeding with the assembly of the chassis, the tabs above the trailing truck cutouts should be bent over by 90°. Hold the frames in a vice at the line shown in sketch 2 and fold the tab over using a flat 'pusher' such as a small piece of wood.
5. If you are springing the chassis drill out the holes at each side of the hornways and those in the separate spring etches to 0.5mm, as shown in sketch 3. The frame spacers fold to right angles on the half-etched line. Solder your chosen ones to one of the frames, then assemble by clamping the other side frame to the first using the wheelsets to check alignment before soldering the second side frame. This crucial stage of the assembly can be achieved more easily and with greater accuracy by using our frame assembly jigs (code LS16 for 00, LS17 for EM and LS61 for P4). Full instructions are provided with them.
6. For a sprung chassis insert the spring and hornblock, ensuring that they are placed into the correct

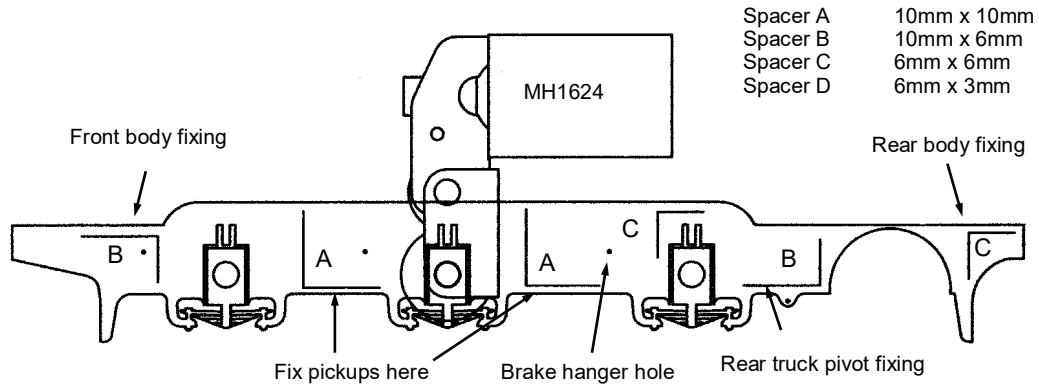
hornway only. Note the grooves on the hornblocks are not on the centre line. This allows you to choose a greater or lesser amount of sideplay on each axle. Use 0.45mm wire to locate the spring detail and solder in place, using the minimum of flux. This captures the hornblock, and the protruding shackle should ensure that the bottom of the hornblock is slightly above the bottom of the chassis, giving approximately 1mm of movement only. Do not be tempted to file too much material from the top of the centre shackle. Greater travel should not be necessary and there is then a risk that the spring may become dislodged if there is too much downward travel. See sketch 3.

7. Lengths of 0.7mm wire are next threaded through the bottom brake hanger holes on one side of the chassis, through both sets of pull rods (ensuring they are the correct way round) and then through the second set of brake hangers. Solder the wire to the brake hangers, then slide the pull rods outwards to line up with the inner edges of the frames and solder them to the wire. Finally, solder on fixing nuts for the pick-ups.
8. Open out the bearing hole in the rear trailing truck to suit the wheelset you are using, then bend up the sides and add the trapezoidal frame extensions to the bottom, with the two etched pins going into the slots. The nut can now be soldered to the frame spacer using the completed truck to gauge for correct positioning.
9. The coupling rods can be articulated if desired by cutting the full length backing rod as shown in sketch 4 before soldering on the overlays. Whether you articulate the rods or not, this operation is simplified if the crankpin holes are first drilled (1.2mm for Markits crankpins), and the backing rod tinned along its length. Both the backing rod and the overlay can now be threaded onto the drill which will keep one end in alignment whilst the other is squared up and the rods soldered together. If using Markits wheels you will need to use a paper washer between the coupling rod and the crankpin washer to prevent the rods being soldered to the crankpins

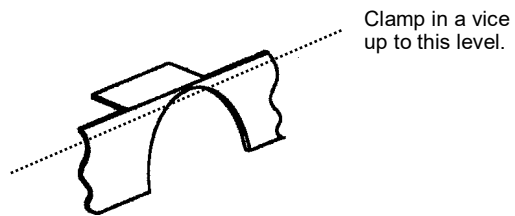
The chassis can now be washed to remove any flux residues, but before painting we suggest that you fit the wheels and check the fit of the body. You may find some slight filing is required to obtain a perfect fit.

Our preference is for wiper pick-ups made from 26swg phosphor bronze wire as per sketch 5. The wire is soldered to PCB strip which is bolted to a frame spacer. We recommend that, if possible, you arrange the pick-up to be "bolt on" since this allows for easy removal and adjustment of the wire wipers. Pack LS23 provides all the parts.

SKETCH 1 GB5 & Extender

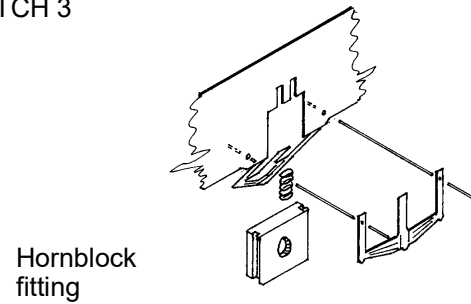


SKETCH 2

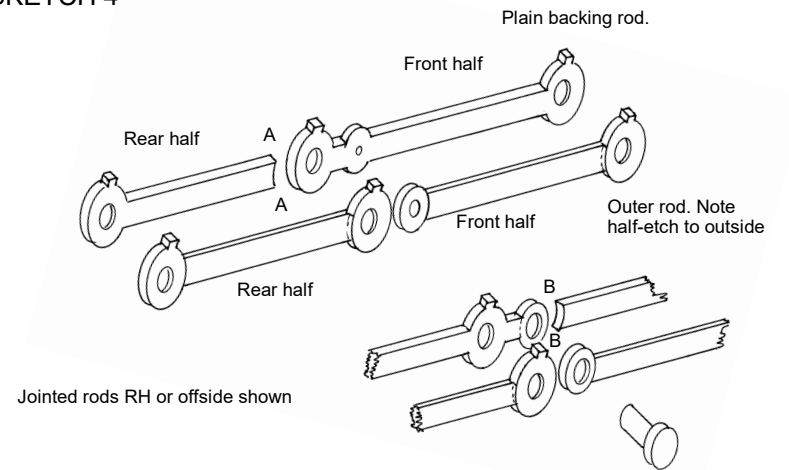


Showing the fold over tab bent at 90° to strengthen the frames over the cut out for the trailing truck

SKETCH 3



SKETCH 4



To split the rods over the centre crankpin cut the backing rod at A-A, solder to the corresponding halves of the outer rods and connect both halves at the centre crankpin.

To split the rods on the knuckle joint first drill through the half-etched centres on the knuckle and cut the backing rod at B-B. Solder the inner and outer halves together then join the front and back halves of the rods using a pin or rivet (not supplied) so that the rods are articulated in front of the centre crankpin.

SKETCH 5

