COMET MODELS

LCP12 Chassis pack for LNWR/LMS G2 7F 0-8-0

Components recommended to construct a complete chassis:
6 Markits 18mm “Crewe” flanged wheels (WH200B) & 2 flangeless (WH200C)
4 axles
8 crankpins and washers (RM1 x 2)
GB5/20 gearbox and Drive Extender, Mashima MH1624 motor OR
GB8/15 gearbox, Canon CA1620 motor

This etch contains sideframes, 00 spacers, brake shoes, brake pull rods and coupling rods 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.

As supplied the chassis is suitable for the Mercian Models kit and will also suit the GEM kit.

We recommend either of the above motor/gearbox combinations and can supply all except the Mashima motor together with Markits driving wheels if required. EM spacers are available separately, code LS10, as are P4 spacers, code LS60.

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

Parts List

1. Frames x2
2. 00 frame spacers x8
3. Brake hangers x16
4. Brake shoes x8
5. Brake pull rods x2
6. Guard irons x2
7. Coupling rod backing rod x6
8. Coupling rod overlays x6
9. Jointed coupling rod backing rod x2
10. Jointed coupling rod overlays x2

Assembly instructions

1. Although designed primarily as a rigid chassis, compensation systems such as Perseverance, MJT or Sharman Wheels can easily be used if the hornways are cut out at the half etched lines before starting assembly.

2. 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 and press out the rivet detail at the front of the frames.

3. Select the appropriate frame spacers - their size and position 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. Two suitable layouts of spacers are shown in sketch1 to suit the two drive combinations given above.

4. 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.

5. With the frames assembled, solder lengths of 0.7mm wire through the brake hanger holes, then thread on and solder the brake shoes in place. Each brake consists of a brake shoe (4) sandwiched between two hangers (3) and you will find it easier to assemble these separately as a unit before soldering them to the chassis. Their alignment is made easier if something of suitable thickness is used to space out the brake shoe from the frame, with a wheelset fitted to ensure correct spacing relative to the wheel treads (sketch 2).

6. 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.

7. The guard irons (6) locate in the half-etched recess at the front of the frames. Solder them in place and bend to shape.

8. Alternative coupling rods are provided for the two main variants - either separate or jointed.

   For separate rods, solder together the backing rods (7) and the separate rod overlays (8). You now have six pairs, three per side. The first and the third pair are placed over the appropriate crankpins and the middle rods placed over these, giving four thicknesses on the second and third crankpins (sketch 4).

   If your chosen prototype has jointed rods then solder the jointed rod overlay (10) to the central portion of the full length backing rod (9). The overlays for the outer ends are obtained by cutting the appropriate boss off the separate rod overlays (8). If you wish to articulate the jointed rods then cut the full length backing rod (9) at the half-etched marks before soldering on the overlay (10). See sketch 5 for this arrangement, and also how to hinge on the crankpins.

   Soldering the overlays to the backing rods 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.

9. The chassis can now be washed to remove any flux residues and painted before final assembly. 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.

Our preference is for wiper pick-ups made from 26swg phosphor bronze wire as per sketch 6. 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.

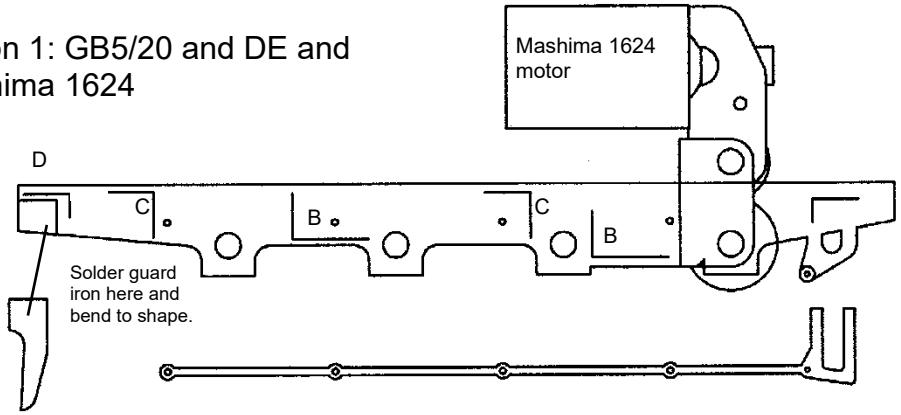
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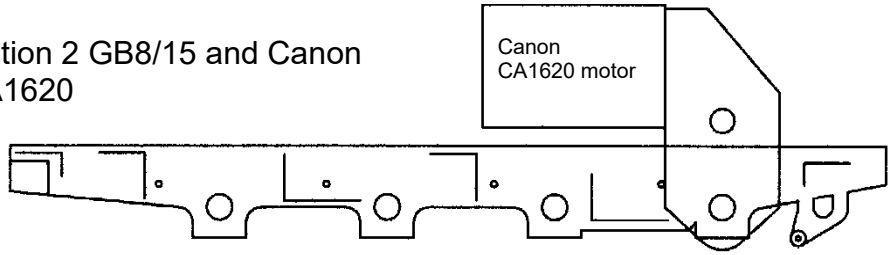
Sketch 1

Spacer A 10mm x 10mm
Spacer B 10mm x 6mm
Spacer C 6mm x 6mm
Spacer D 6mm x 3mm

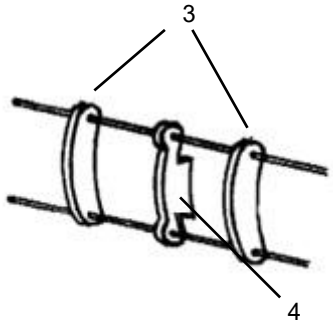
Option 1: GB5/20 and DE and Mashima 1624



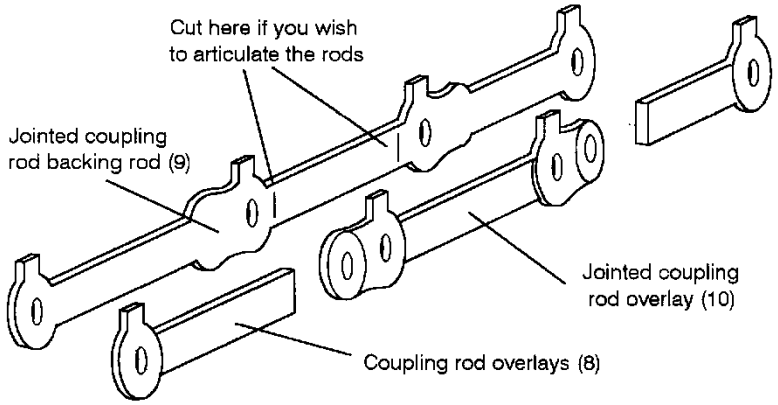
Option 2 GB8/15 and Canon CA1620



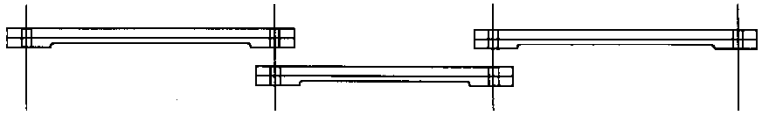
Sketch 2: Brake shoe assembly



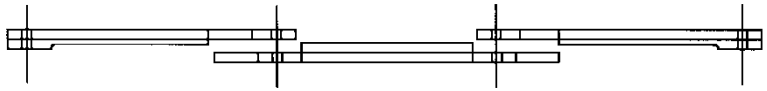
Sketch 3: Coupling rod details



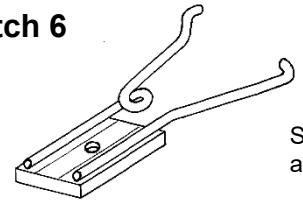
Sketch 4: Separate rods



Sketch 5: Jointed rods



Sketch 6



Suggested pick-up arrangement