

## C402 – GWR 42xx/72xx Connecting Rods

The replacement rods were originally designed as part of the Brassmasters EasiChas for the Hornby 42xx/72xx locomotives and Alan Gibson or Ultrascale replacement wheelsets. However, they can also be used to replace the original rods on the Hornby locomotive or with any other model of a 42xx or 72xx.

The prototype rods had very thick bosses and overlays for these are provided on the etch. However, thicker bosses can lead to clearance problems in model form, so a half etched version has also been provided

Brassmasters also produce replacement coupling rods for the 42xx and 72xx, available separately (C401).

1. Each side is manufactured from 2 etches. There are also front and back overlays for the boss.
2. Cut one set of rods from fret, parts [1 & 2].
3. If using Markits wheels, find the largest drill that will pass through the crankpin holes; if using the original Bachmann wheels, Alan Gibson or Ultrascale wheels, open the crankpin holes using a 1.5 mm drill. Using the same drill, drill perpendicularly into a scrap piece of wood. Leave the drill in the hole in the wood. Tin the mating surfaces of the three etches and place over the drill. This holds one end of the rod accurately ready for soldering. It is critical to align the three parts exactly in order to make one rod so take some time tweaking. See photo.
4. Place a little flux along the edge of the rod and apply heat; the solder on the soldering iron will run between the rods and join them. The secret is to apply only a little solder at a time. Solder will fill the “cusp” and give the impression of a solid rod. See photo left. Repeat for the whole length of the rod.
5. Repeat for the other connecting rod.
6. There are four bosses to be fitted, two each side of the connecting rod. For thicker bosses use both [3] and [4] on both sides of the rod. For thinner a thinner boss omit either the half etched boss [4] or the full etched boss [3]. Apply each boss, holding in place with a cocktail stick, and solder in place using the same technique as for joining the rods. Clean up each rod with files.
7. Open up the crankpin holes in order that the rod will rotate on the crankpin screw (if using Markits wheels), the fitted crankpin screw (if using Hornby wheels) or on the crankpin bushes (if using Alan Gibson or Ultrascale wheels). This can be done with a reamer, broach or a fine Swiss file.
8. Using the indent provided, drill out the hole at the little end to suit the pin being used to attach the rod to the cross head.

