



Upgrading rolling stock wheels, or even just opening out the bearings, will result in freer and more reliable running.

Inset: Replacement wheels are available from myriad sources: Hornby, Dapol and Bachmann offer upgrade packs at budget prices, but turned metal wheels from the likes of DCCconcepts, Gibson, Markits and Romford are vastly superior.

# HOW TO... FIT WHEELS THE EASY WAY



**GEORGE DENT** demonstrates how easily rolling stock wheelsets can be changed with the aid of a rather nifty new tool.

**T**he plastic wheels of Hornby's new Railroad BR Mk 1 coaches (MR190) reminded me of my early days in this hobby. Back in the 1970s and 1980s, plastic rolling stock wheels were common, often with hugely over-scale flanges that would foul point frogs or bounce along the rail chairs on anything but Code 100 track.

Upgrading plastic or coarse-scale metal wheels – or those that are showing signs of wear and tear – should be a simple task of prising out the old and pushing in the new. However, some replacement wheelsets may have slightly longer axles, and trying to force them into the original space is not a good idea. In this case, the bearing holes must be enlarged.

Anyone who's ever tried doing this with a drill will know from bitter experience that it's virtually impossible



**DIFFICULTY**



**ESTIMATED TIME**

One hour per vehicle

**TOOLS NEEDED**

- DCCconcepts axle reamer
- Back-to-back gauge

### USEFUL SUPPLIERS

Alan Gibson and Romford/Jackson wheels and back-to-back gauges available from Mainly Trains. Tel: 01278 741333. Web: [www.mainlytrains.co.uk](http://www.mainlytrains.co.uk)

to get the bit exactly horizontal in such a confined space. Far better, then, to use a special reaming device, especially one tailor-made for the job, such as this one offered by DCCconcepts.

Supplied as a pair of reamers, each with a different plastic 'grip' to allow easy operation on a range of different vehicles, they're optimised for 'OO/HO' gauge. They're also essential for those wanting to fit 'EM' or 'P4' wheelsets. As the reamers cut at both ends at once – and are self-centring – the job is done quickly and accurately.

This technique can also be beneficial even if you see no need to change the wheelsets. It's surprising how a little

extra play in the axles can produce much freer running, and a couple of revolutions of the DCCconcepts reamer can have a positive effect on most vehicles. However, it's important not to introduce too much side-play as this can have a negative effect on ride quality, hence why the reamer tools are set at a fraction over 26mm in length (the most common length of 4mm: 1ft scale axles). This reduces the risk of the bearing holes being bored too deep.

There's no doubt that high-quality metal wheels from the likes of Romford, Markits, Gibson or Ultrascaple will transform running qualities. Quieter, smoother and less prone to derailments or other problems, a good set of wheels forms the crucial foundation to any item of rolling stock. With free-running axles, there will be much less drag on the locomotive, allowing for longer trains to be hauled more easily. **MR**

## HOW TO DO IT: CHANGE ROLLING STOCK WHEELS

1



Most bogies simply unclip from the chassis. If not, the body will need accessing in order to remove the mounting screws. The coarse flanges of the Hornby Railroad Mk 1 wheels are evident in this view.

2



Gently prise out the axles, stretching the solebars outwards if necessary. The DCCconcepts reamer can then be inserted and rotated to open out the bearing holes.

3



A choice of reamers is supplied with different nylon 'handles' to suit different bogies or underframes. Gripping the axleboxes prevents the bogie sides being pushed apart while the reamer works.

4



Test-fit your new wheelsets, checking that the pinpoint axles easily slot into the bearings and that the wheels rotate freely. If they're stiff, simply repeat the use of the reamer until you're happy.

5



It helps to check that the new wheels and axles are installed correctly by placing them on to a sheet of glass. All four flanges should be in contact with the glass, otherwise one of the axles may be misaligned.

6



Another check to make is the back-to-back measurement – that is, the distance between the inner faces of the wheels. For 'OO', this should be 14.5mm, whereas finescale 'OO' and 'EM/P4' have their own specifications.

7



Refit the bogies and test the model on your layout, looking out for how it runs over points and crossovers. These Gibson wheels have made a massive difference to looks and performance, although the centres require painting.

## WORKBENCH ESSENTIALS



### TOP TOOL AXLE REAMER

A pack of two DCCconcepts DCF-BR2 axle reamers (£14.95 per pair) will last a lifetime and are suitable for 'OO/HO' and 'EM/P4' gauges. The two different 'grips' allow them to be used on a wide range of rolling stock types, without the need for any dismantling, except for the removal of the wheels and axles. Available from DCCconcepts stockists, such as Gaugemaster, OnTracks or Hattons.

### TOP TIP

Store your reamers carefully, so that the cutting tips do not become blunt. Leaving them to flail around a toolbox is not a good idea, so keep them in the original packaging or in a padded case.

### DID YOU KNOW?

The back-to-back measurement between wheels on each axle is an important factor for reliable running. It's easy to inadvertently shift the wheels on their axles while fitting the sets to an underframe, so a final check with a back-to-back gauge is important. The 'standard' back-to-back specification for 'OO' gauge track is 14.5mm, whilst the common 'spec' for 'EM' is 16.5mm, 'P4' is 17.7mm and some finescale 'OO' modellers employ 14.8mm. However, there are countless variations of up to a tenth of a millimetre depending on the width of the wheels and the obsessiveness of the modeller!