

Wheel Replacement in Old 00-gauge Models

Background

00 gauge models have been around for a long time and there are many old examples in good condition lurking in sheds and cupboards. These do turn up from time to time on Ebay, in second-hand markets or may be handed down to younger modellers from well-meaning friends or relatives. Some are much-loved items from our childhood.

However, when we try to use them on today's tracks, they don't work because their wheels are too coarse.

Many of these models are still quite presentable in other respects and they are much more tolerant of the rough handling from younger modellers than most of today's scale models. Good ones can be bought second-hand very cheaply, also, making the hobby more affordable.

Upgrading wheels can therefore turn them into useful items in our collections.

The following tips are written around Tri-ang models, but can be adapted to other brands.

Plastic Underframes

In the case of wagons with plastic underframes and closed axleboxes, it is usually a simple matter of gently springing apart the axleboxes to release the old wheelset and then inserting a new Hornby or Bachmann wheelset purchased from the local model shop or on-line. (You need to ensure that the axle length for the new wheelset is the same as the old one, so as to avoid running problems.)

A further refinement is to carefully drill a shallow hole 2mm dia into the plastic axlebox and insert a brass bearing (such as those illustrated below). This can be tricky and should not be attempted by the novice modeller, but it does give better running qualities.

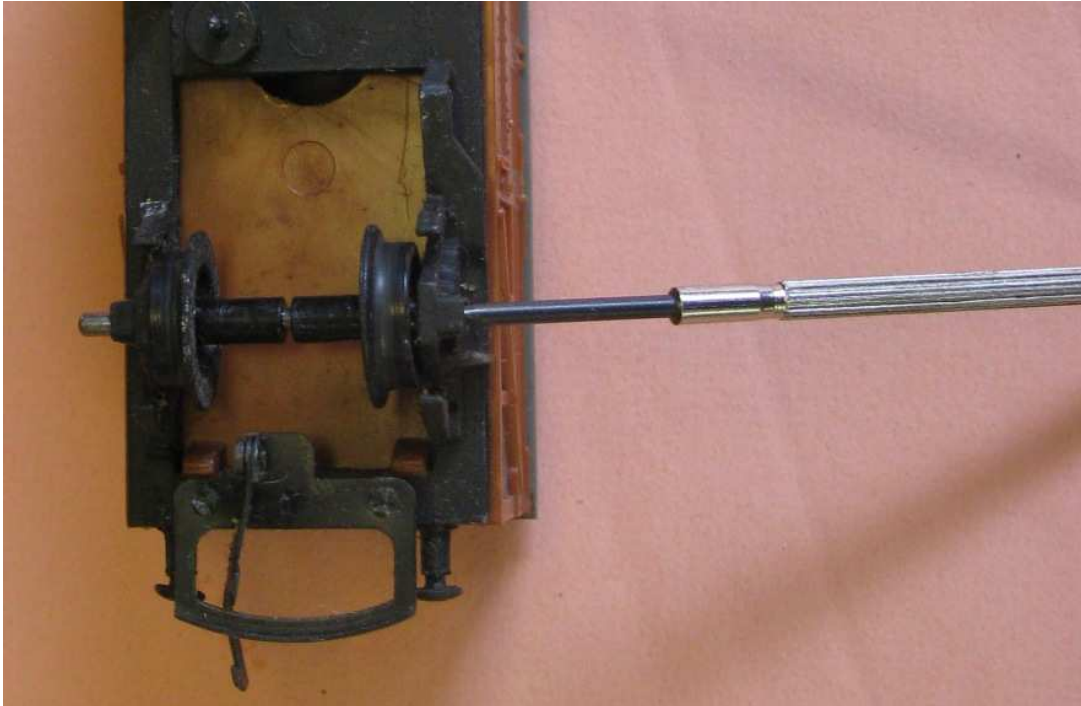
Diecast Underframes

The original Tri-ang models all used open axleboxes in diecast frames. These cannot be sprung apart like the plastic ones. The wheels were very coarse, designed so that one of each pair could slide along the axle, varying the gauge and facilitating operation on very small radius curves. The flanges are so coarse that they bounce off the sleepers of modern 00-scale tracks. The gauge is usually too narrow to pass through points. When included in trains made up of more modern stock, they cause many derailments.

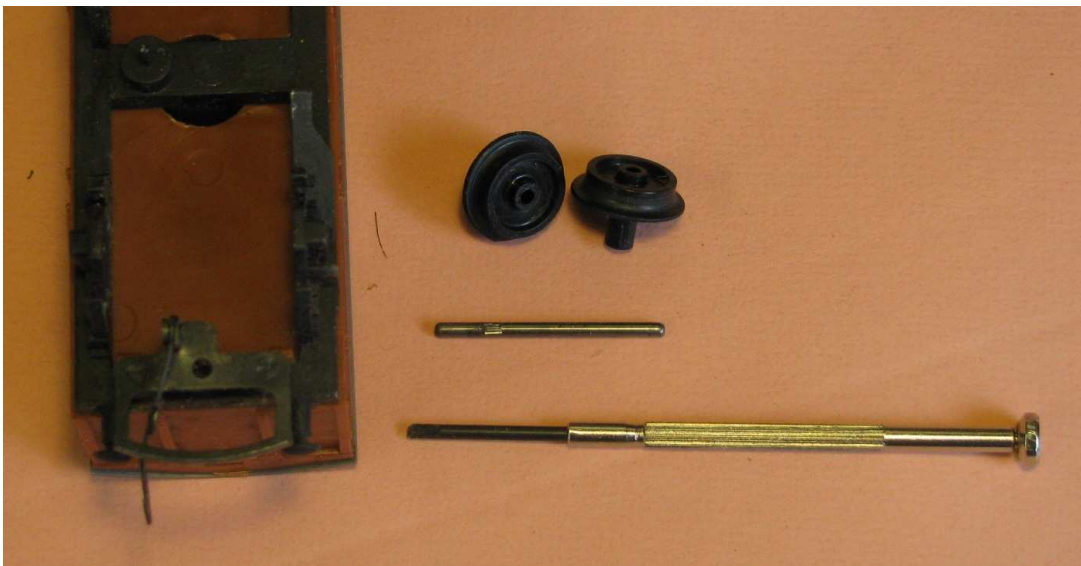


Each wheelset is assembled into the frames so that one wheel is held rigid on the axle by crimps in the steel axle and the other is free to slide back and forth. (Rusting of old axles may reduce this movement.) When new, the wheels were loosely placed between the axleboxes and the axle was inserted from the outside of one axlebox, through the wheels and into the other axlebox. Removal is simply the reverse operation.

1. Turn the model upside down.
2. Hold one wheel and rotate the other on the same axle.
3. Check whether the axle is moving with the rotating wheel or is stationary.
4. Using a small blunt screwdriver or similar metal probe, push the axle through from the side which has the loose wheel.



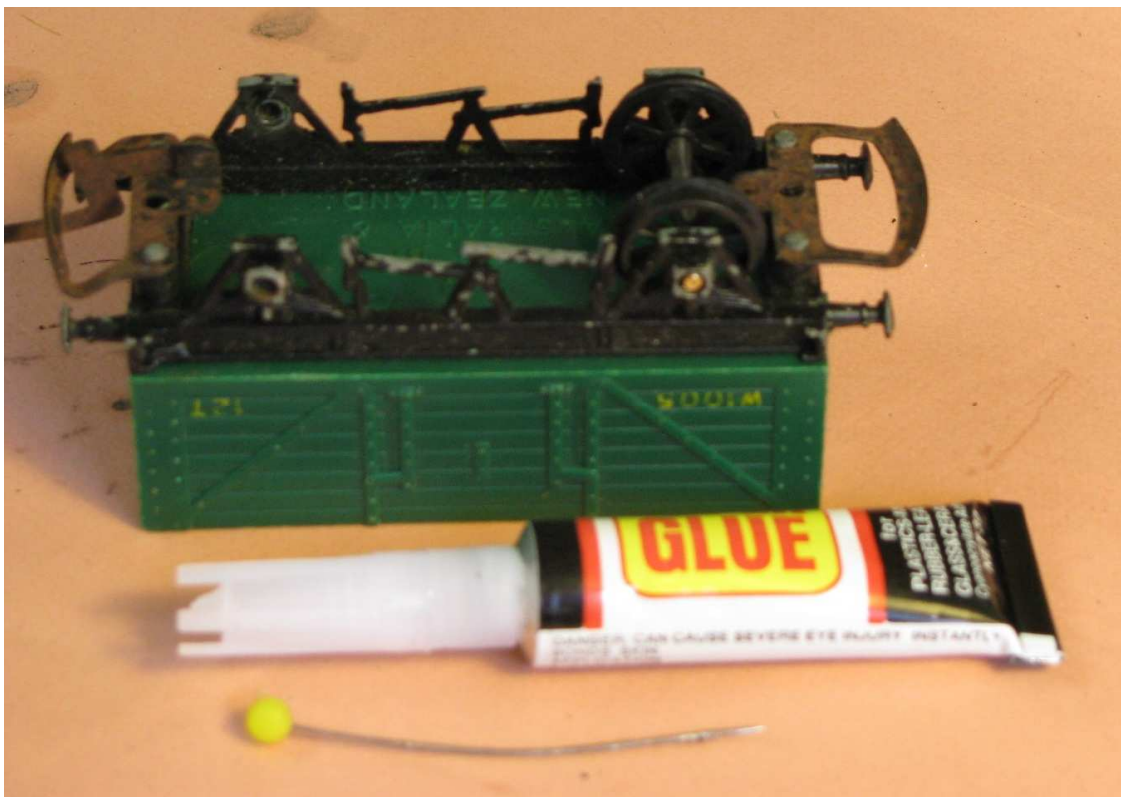
5. Remove and discard the old wheels and axle.



6. Take the new wheelset and locate it so that the axle ends are loosely in the open axleboxes.
7. Take a 2mm dia brass bearing and place it loosely into one axlebox, dimpled side IN, until it just touches the end of the axle.

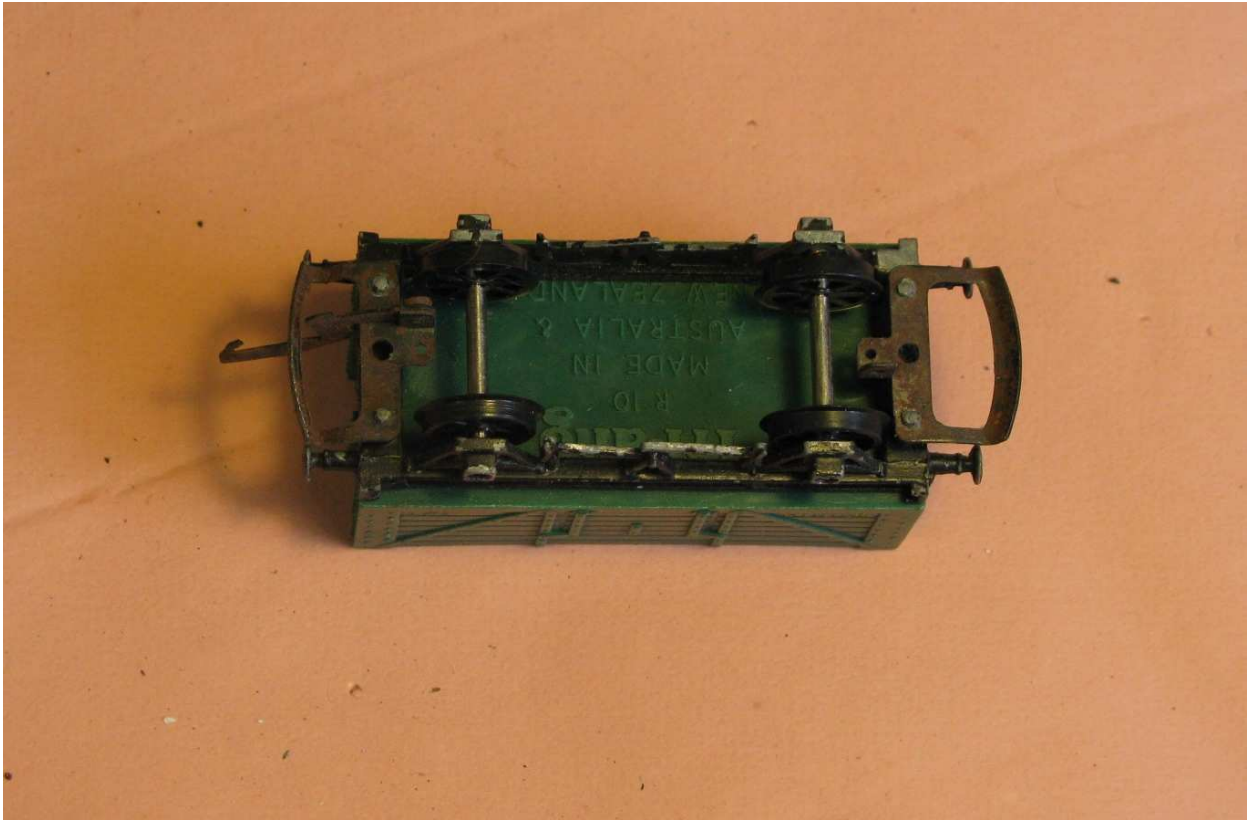


8. Adjust the wheelset until it is centred, with the new bearing just touching the axle.
9. Apply a tiny drop of Superglue to the axlebox, using a pin, taking care not to let any get onto the axle beyond the bearing.



10. After this dries, place another bearing in the opposite axlebox and adjust it so it just touches the end of the axle and glue it into position.

11. Repeat with all other wheelsets.



12. If desired, paint the visible ends of the bearing to match the underframe colour.

Items Needed

1. Wheels of the same diameter on axles with pinpoint ends. (Hornby or Bachmann may be suitable.)
 - 4-wheeled goods wagons: 12 mm
 - Bogie goods wagons: 10.5 mm
 - Coaches: 14 mm
2. 2 mm dia brass bearings (Romford, or similar)
3. Small screwdriver with shaft of the same diameter as the old axles
4. Superglue
5. Long, glass-headed (dressmaker's) pin

(For those choosing to insert bearings to closed plastic axleboxes)

6. Pin vice
7. 2 mm (or 5/32 in) dia drill bit