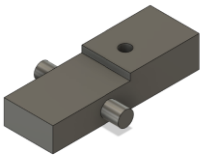
NEM Coupling Shanks

These shanks allow DG couplings to be fitted to proprietary stock with NEM pockets without modifying the original model. A close coupling mechanism, such as is fitted to most coaches, will still operate allowing close coupled stock to negotiate tighter curves than would otherwise be possible. Even with large radius curves this can be a benefit.



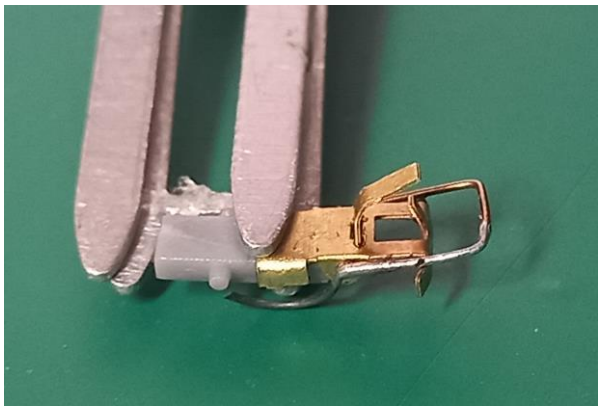
The shank is glued to a cut down DG coupling so that it can be mounted in an NEM pocket. The shanks could be used with other coupling types, this note only covers DG couplings.

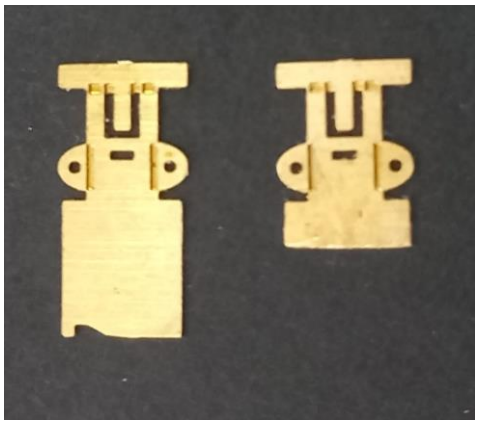
Assembling the Coupling

For a standard length coupling (often referred to as a long coupling) cut the rear of the DG base plate off to leave just 2mm of the full width area of the plate. This leaves two 'ears' sticking out of the sides, bend these down at slightly more than a right angle. These together with the brackets for the loop create a channel into which the shank fits. The raised pad (0.3mm) is the top of the front of the shank and is the area the coupling is glued to. It must not be glued any further back than the rear of this pad else it will not fit in the pocket. Get the corners where the ears bend down as square as possible, else the coupling will not fit flat on the shank. Squeeze the 'ears' to the side of the shank to hold it, then fix in place with cyanoacrylate glue or Araldite.

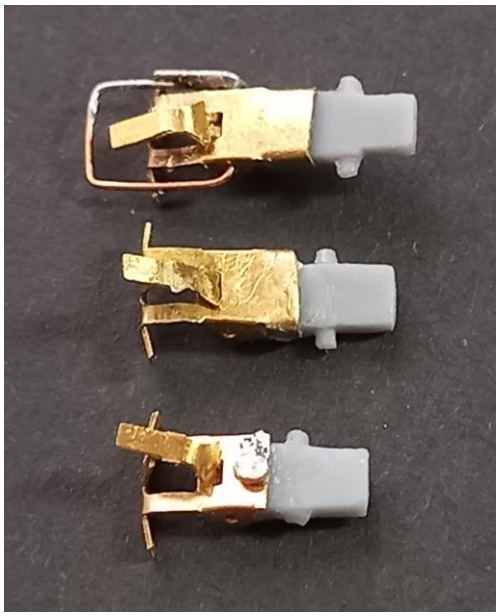
If you are using a lower height for the couplings than the usual 4.5mm you can use the shank upside down (with the pad on the bottom) to lower the coupling.

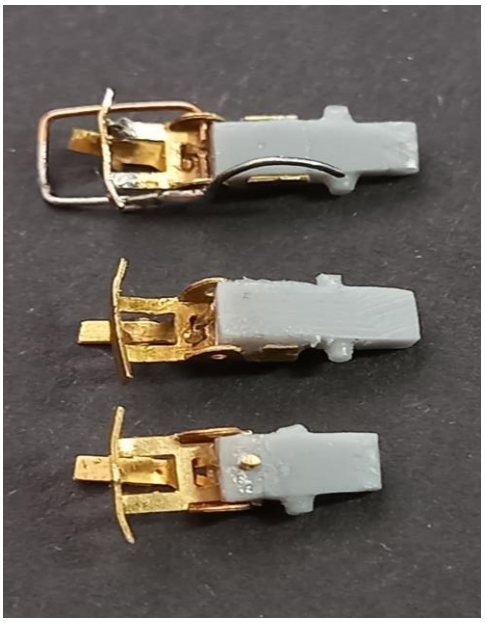
The coupling can be made shorter by cutting more off the coupling base plate and the same amount off the front of the shank. If you reduce it by more than 1 mm the gluing area will be very small, and it is recommended you add a pin through the rear of the coupling and shaft for strength. A hole is provided in the shaft, one needs to be drilled in the rear of the coupling. This is best done before removing the coupling from the etch. A length of 0.6mm wire is suitable, or a pin can be used (as below) though the pin head may catch on the buffer beam if on top of the coupling. The pin can be soldered to the coupling, the heat will not damage the resin. Araldite is recommended for strength.





The shortest possible coupling is a reduction of about 2mm by cutting the base plate off completely, as in the bottom coupling below.





Mounting and Removing Couplings

Pushing the coupling into the pocket with fingers will bend and damage it. Instead grip the metal ears on the sides with fine nosed pliers to push it in and pull it out.

Coupling Height

One of these couplings in an NEM pocket has the bottom of the buffing plate about 4.1 mm above the rail, possibly higher depending on glue thickness. The height of pockets on different models is largely the same.

The usual height for DG couplings is 4.5 mm between the bottom of the buffing plate and the top of the rails. It is possible to bend the DG coupling up to this height.

On some stock with a close coupling mechanism, particularly Farish Mk1 coaches, there is only just clearance between coupling and buffer beam and if the coupling is not flat on the shank it may catch.

You might prefer to adopt a lower standard coupling height of say 4.0 mm if most of your couplings are in NEM pockets. If you do you can use the shank upside down to lower the coupling by 0.3mm. This allows more clearance to the buffer beam for stock with a close coupling mechanism.

Coupling Length

A coupling assembled as standard length is correct for coupling pockets conforming to the NEM standards, with the front of the pocket 6 mm behind the faces of the buffers. Unfortunately, most pockets are closer to the buffers, so need shorter couplings. You have to check each item of stock to find the best length.

As a guide:

- Revolution, and a few items from other manufacturers like the Dapol Hymek are to NEM standards
- Most models, including most Farish and Dapol, have the pocket closer to the buffer faces, usually 4mm to 5mm.
- Some couplings are even closer to the buffers, about 3mm. These include some freight stock and steam loco bogies and pony trucks.

- For any less than 4mm it is not possible to shorten the coupling enough. Either accept the larger gap between stock or remove the NEM pocket and glue the coupling on directly.

Issues with Non-Standard Pockets

- Early Farish pockets such as on MK1 coaches were tighter than the specification, though the shanks will fit. They need considerable force to remove them.
- Some Dapol pockets have an extra insert to allow the coupling to pivot sideways in the pocket. DGs are best rigid, if you find it causes operational problems you might have to glue the pocket rigid.
- The latest design of Peco wagons has a pocket that looks like an NEM pocket but is not to NEM standards and NEM couplings will not fit. The Peco glue on NEM pockets, sold as being for OO9, are to NEM specifications.