

Chopper Couplings

Unlike most model chopper couplings, these will work with two opposing hooks, which looks so much better and allows you to turn stock at will. They are still compatible with most other makes of similar couplings, but only with one hook. The only real criterion is that they must all be at the same height, give or take 0.5mm or so. Therefore, you must ensure that they are fitted at the same height as your existing ones, or choose a suitable height for them all. I use around 7mm from rail top to coupling underside as a standard measurement, but that is just my preference.

Warning – the small washers must be removed from the fret in joined pairs, and the hooks must have their washers still attached as well.

Assembly

Follow the sketches for assembly. Grip the main body of the coupling in the centre while folding up the sides to avoid distortion. Use the front plate of your choice. Solder the square tube in place with less than 1mm between the coupling sides and cut it to the length of the bottom strip after soldering.

Fold the twin washers and hook and washers double with the etched line on the outside of the fold. Thread the parts onto an oiled broach, line up the hooks and solder together. The extra washers can be on either side but all hooks must be the same, not handed. File a slight angle on both sides of the hook pivot until it drops into place. Test fit the hook on 0.7mm wire ensuring that it does not foul the square tube. Remove metal with files from the hook pivot and tube end if it does. Fit the hook last after the coupling is fitted.

Fitting

There are many ways to fit these couplings;

Rigid – Solder centrally in the coupling slot or glue to the underside of the vehicle in question. Plastic card packing can be used to get the height right. This will only work on short vehicles with a small overhang at each end, not recommended.

Sprung – They can be fitted with a spring, washer and splitpin (not supplied) by drilling through one of the holes in the bottom tag. There will be little control over the height of the coupling which may sag in use, not recommended.

Pivoting – An L plate with hole marks is supplied, which should be soldered or glued to the inside of the buffer beam, flush with the coupling slot top or bottom depending on where you fit it, see sketches for variations in fitting and use the method that suits your model best.

My favourite is plastic card packing above the coupling and the L bracket below, sketch 1. Choose a convenient hole in the bracket and drill 0.7mm through into the plastic card. Choose a convenient hole in the coupling and drill this 0.7mm right through the tube. Test fit with one of the pins and ensure that the coupling swings freely, correcting any problems as you go.

The pin fitted from above as in sketch 2 is only usable if the buffer beams are attached to the chassis. With a footplate above the couplings it would be impossible to fit the pin.

Sketch 3 is most suitable for low coupling heights as only the pin head is below the coupling underside. You may have to use a bent bit of wire to glue the pin end if the footplate prevents access from above.

On rolling stock the spring wire can be single around 30mm long and be retained centrally by a wire loop fitted to the floor underside, or use twin wires bearing against the buffer beam.

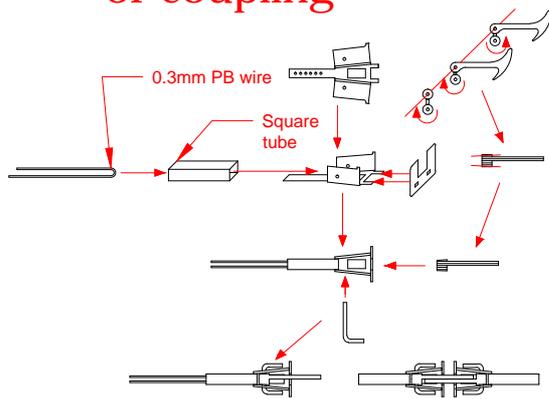
If you need to fit a coupling to a vehicle with a coupling slot too low for your chosen height, consider the stepped method in sketch 4. I have used this several times and is the sort of mechanical bodge that a company would do to an incompatible item bought second hand. If the height of the tube raises the coupling too high, file a step in the end and solder to that.

Centring spring

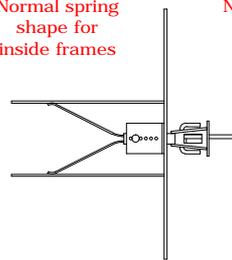
The spring is made from 0.3mm PB wire which must only be bent with round nose pliers, sharp bends will fail quickly. Shape a piece like the sketch around 15 to 20mm long, insert it into the end of the tube, position it so as not to foul the hole you drilled and solder in place.

Once the coupling is fitted the ends of the wires can be bent round to bear against the inside of the frames or rear buffer beam. With the coupling central and at rest, both sides should be just touching to hold it there. If the coupling won't stay central, one side of the spring is stronger than the other and needs easing. If the coupling is sluggish to move and tends to stay where it ends up, both springs are too strong and need easing. Finally, secure the pin with a spot of superglue to stop it falling out. If you used plastic card packing, the pin will probably stay in without glue, one of the reasons that I use that method most.

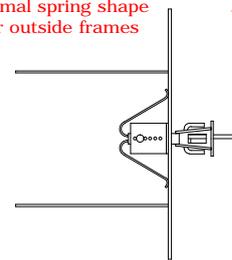
Assembly of coupling



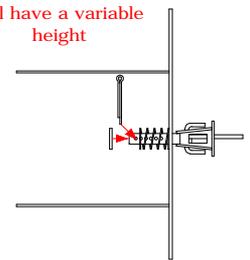
Normal spring shape for inside frames



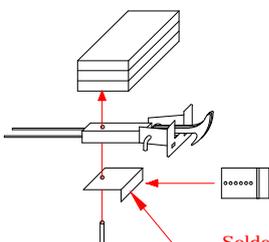
Normal spring shape for outside frames



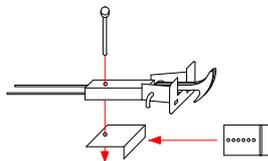
A spring, washer and split pin is possible but not recommended, as it will have a variable height



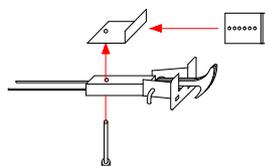
1 - Pack between underside of footplate and coupling top with layers of plastic card



2 - If accessible from above, this method can be used



3 - This method only works if you can get to the end of the pin to glue it



4 - If the buffer beam height is a bit low you can create a step in the coupling, allowing the correct height to be achieved

