



**Website: [www.mtrains.co.uk](http://www.mtrains.co.uk)**

**If you need a magnet for a Hornby Dublo motor, but aren't sure whether you want an original magnet or a neo-magnet:**

**Advantages of original magnets** Original Dublo magnets are 1940's / 50's / 60's technology and are compatible with a mechanism of the same vintage. On the basis that Meccano built their mechanisms so that every component worked well with every other component, these are the most suitable, and are authentic.

**Disadvantages of original magnets** Over many years, they / some of them slowly lose magnetism. In addition, they rapidly lose some of their magnetism when they are removed from their chassis, and when they are separated from their pole pieces, however briefly. It is best to assume that once you have fitted a replacement original magnet and pole pieces into your chassis, from whatever source, you will need to have the rebuilt chassis remagnetised.

**Advantages of neo-magnets** New magnets are powerful and will never need remagnetising (perhaps that means their useful life is centuries long, but not infinite). The locomotive they are fitted in will draw less current in order to run at the same speed, reducing armature windings burning out, also less sparking and heat. They will enable longer trains to be hauled, subject to adhesion.

**Disadvantages of neo-magnets** Longer trains means more wear. A few of my own engines have neo-magnets, I observe that on some Duchesses and Cities, the drawbar gets gently pulled to one side of the loco. I wonder whether this indicates that there will be uneven wear of the armature bearings? The magnet's strength can disguise the fact that the brushes are set too tightly against the armature. The magnets are ceramic and brittle (not evident in normal use).

**The comments below are from a runner of Hornby Dublo trains about the pros and cons of neomagnets versus original magnets in his CoBo locomotive. He has experimented with a neomagnet, and then with having the original Meccano 'normal' magnet re-magnetised (please enquire if this service is of interest to you):**

*"I have fitted the larger 'normal' Ringfield magnet back in to my CoBo and I have to say the result is very pleasing. Slow speed running and control has been resumed. With the neomagnet fitted when using a Meccano A2 or C3 controller, even at the lowest setting, the locomotive would take off, so at the minimum controller setting the loco ran at about one quarter full speed. I know that a lot of this is down to the type of controller I am using and with the A2 and C3 controllers and I suspect the A3 controller (although I don't have one of these) the output voltage is proportional to the amount of current drawn, leading to the problem I have described.*

*I have since acquired a Marshall 111 controller and the output voltage is not totally dependent on the load, there is also an F and P switch which gives even better slow speed control. I have tested this with my Ludlow Castle which is still fitted with a neomagnet, and slow speed control is OK, but I still intend to fit the re-magnetised original and see how this performs.*

*In summary using the handle type controllers (A2 A3 and C3) if neomagnets are installed, the loco may run fast OK but there is absolutely no slow speed control. To achieve any kind of slow speed control, you need to use a Marshall 111 type controller, or my preferred option would be to stick with the original magnets and have them re-magnetised when required.*

*The other thing I didn't mention was full speed running, I would say both tested locos run faster with original (re-magnetised) magnets than they do with the neomagnets.*

*Just a final thought on neomagnets, one of the unexpected side effects of fitting these magnets, certainly to my CoBo, was that as soon as anything metallic was placed close to the motor bogie (even with the body attached) the magnetic pull was such that it was attracted with great force to the side of the loco. For a loco in pristine condition this is obviously not a desirable property since the object had then to be wrestled away from the body while trying not to damage the paintwork."*

[www.mtrains.co.uk](http://www.mtrains.co.uk) for Hornby Dublo Spares and locomotive subassemblies etc.