

## Modelling

# A new heart for a 56

Whatever its branding the 4mm scale class 56 has always been a bit of a racehorse. **Jim Smith-Wright** decided drastic surgery was called for



The 4mm scale model of the class 56 has, excuse the phrase, been around a bit! Starting with Mainline, through Dapol and currently residing with Hornby. Not a lot has changed to it in its lifetime, probably because on a cosmetic level it hasn't been needed. On its introduction it was a deeply impressive model. Very nicely proportioned. with 3 Axle drive on 1 bogie. Working lights, some excellent mould work and even separate metal handrails.

Things have moved on, but in respect to the body moulding it still holds its own. The chassis, both cosmetically and mechanically could do with some improvement.

### Mechanics

I looked at the options. Fit another power bogie. Replace the power bogie with a Hornby class 58 bogie fitted with a DS10 and flywheels. The Tech Cad conversion But in my opinion the best option (and as it turns out the cheapest one) was to use the chassis from an Athearn PB1 locomotive. The PA1 and PB1's are effectively the same loco. One has a cab at one end the other is a slave. From a model point of view the chassis are identical for both. Ironically the prototype locos are of an A1A-A1A power arrangement while the model has all axles powered - great news for us! The Athearn chassis is an old design and pretty low tech by modern

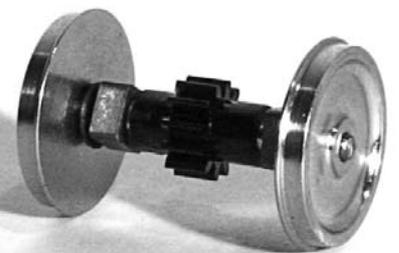
standards but it does still boast all wheel drive, a central motor and twin flywheels. And all this for less than a tenner (excluding paying the nice customs man for letting it into the country!) There are 2 designs of chassis Athearn employ. The older one had metal sideframes and outside bearings and as such is useless for this application. The later one, with inside bearings and plastic sideframes is the one you want.

In fact it was the low tech part that appealed. The chassis is somewhat floppy. It rattles a fair bit because of this but the loose (ish) fit of the axles means that road holding is excellent. Plus it will still pull down the side of a house if required and slow speed control is great. The Wheelbase is not exactly the same as the 56 but I considered I could live with this in exchange for the improved performance.

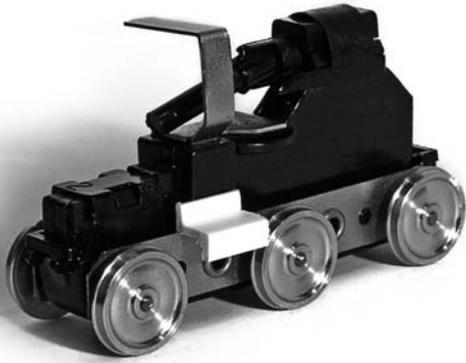
My original conversion (to a Lima class 50) used scratchbuilt bogie supports, which resulted in a loco with a unacceptable amount of body movement and roll. The class 56's (I have done 5 so far) all use the original fixings from the chassis which do need a little thinning down to fit. The metal is awkward to file but easily cut with a hacksaw.

Turning to the bogies, Athearn have used an axle size of 3/32". As it turns out Sharmans wheels do a 2mm to

3/32" adaptor bearing. You will need 4 per axle, 1 for each bearing and 2 for the main drive gear. If you model in OO gauge you might want to keep the original Athearn wheels but they are too small for a grid. I used my wheel of choice, branchlines 14mm to P4 gauge. (see pic 1 - below)



The original drive picks up through split axles and the bogie. Since the branchlines wheels have a live axle it is important to get them all the same way around although it does mean you only need to worry about pickups to one side. I used a piece of copper clad soldered to the metal bogie frame. Be warned though soldering to this seems to give off a very foul gas. I am sure it is very bad for you so don't breath it in (like I did!).



The plastic used is somewhat slimy and rejects most glues. You will need to use Araldite to secure the sideframes to the bogie. I use angled plastic strut as a spacer (pic 2 above) which needs to be 7mm wide. Refer to the picture for its shape and positioning.

The motor comes in a small plastic cradle which can be screwed to a new floor made from 80thou plasticard. Drive is through a sliding driveshaft to the bogies. This driveshaft is too short and needs to be cut in half and lengthened with plastic tube (inside diameter 3.5mm). Use superglue to stick it all together. You will need to open out the holes in the chassis to accept the new bogies but as the original mounting is reused you don't have to worry about complicated shapes - a simple rectangle will do. This is another advantage over the extra power bogie approach. Picture 4 (below) shows the completed chassis before wiring and adding weight.



### The chassis cosmetics

Over recent years I have become more and more interested in the chassis of a locomotive. It is an area often ignored by modellers and is equally often the worst part of RTR models. The 56 falls into this category. What is there is basically correct but where is the relief? Ok I know about manufacturing allowances but I wanted something more like picture 5 (right).

First step is to cut off the battery boxes. Use a small circular saw in a minidrill as you need the cut to be as fine as possible. Most of what is there is reusable. The battery box needs to be separated into its component parts

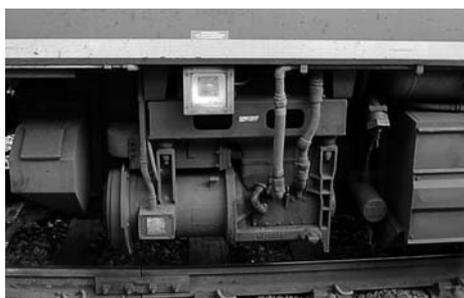
those being, main battery boxes, sand boxes, compressors and emergency engine shutdown switches. The large air tanks can go as can any moulded on pipework. I fitted a small washer to the end of the compressor and made new air pipes from plastic tube, capped off with old plastic bufferheads from the spares box. You can't see right through a 56 battery box area so a new subframe was made, an open box measuring 50 x 17 x 17mm. A space was cut out of the top of the subframe to clear the motor mounting screws.

The various parts are reassembled to the subframe using plasticard spacers and photos as a guide. The cables and pipes are made from florists wire, handrail wire or microstrip where appropriate. When it's all reassembled you should end up with something looking like picture 6 (above right)

### The Body

There have been a lot of articles dealing with converting the 56 to its earlier guises but I don't remember seeing one that deals with the later build. The cab doors need replacing with .33mm wire and the kick plates below the doors need adding, for this I used Intercity Models checkerplate. The inside of the roof where the exhaust panels fit needs to be trimmed so that the new motor fits. The roof fans were replaced with the excellent etched items from Shawplan while on one model the side

grills were replaced also, again with Shawplan etches. These I am a little less sure about and I include the final picture so that you can draw your own conclusions. All that is left is the usual bufferbeam pipes. Interestingly there are a set of very prominent pipes behind the bufferbeam on a 56. Again the trusty



florists wire was put to good use.

### Weathering

Oh No - Not the black art! Weathering for me is the biggest thing that brings a model to life. I always follow a set pattern and everything gets weathered - even if it's to appear spotless. It is important that any paint finish on the model is thoroughly dry. A week at the very least and transfers are included in this.

First stage is to mix up a general dark grime colour mostly brown but a lot of black. This is then thinned to the consistency of water and washed onto the model with a wide brush. Make sure your brush strokes are vertical at all times. Leave it to dry for 24 hours and no longer.

Your loco should now look a right state but the next step is to "clean" it. Clean thinners on a cotton bud do the trick remembering to keep all strokes vertical. The amount of cleaning you do depends on how clean you want your loco to be. For a spotless loco aim to clean off as much as you can. You will find however that the cotton bud can't reach certain places such as inside grills and around door handles and this is exactly the effect you want. This is the washed on dirt taken care of.

Next is the dusty kind of dirt and it's a case of right tool for the job. The Airbrush! I tend to do the roof first using a mixture of matt black and metalcote gunmetal. A light dusting over the whole roof followed by more detailed work around the exhaust ports. Next attention turns to the chassis and bodysides. I am lucky in that I can have 2 airbrushes running together. One is filled with a mixture of mostly gunmetal with a hint of dark brown. The other uses matt leather.

First stage is to lightly airbrush (using the dark colour) the bottom of the bodyside grills where dirt accumulates. I do it freehand but you can make yourself a mask if you want to - post it

notes are good. Then give the chassis a reasonable coating of dark colour sprayed side on. With the light colour and the loco tilted away from you spray the areas where brake dust accumulates - refer to pictures and again let it all dry.

By using metal cote you can polish the roof to highlight raised detail such as rivets or the edge of grill louvres. Equally you can do the same to the underframe. Use a clean, dry brush to do your polishing with. You might want to dry brush on more, neat gunmetal to enhance the effect further.

The end result is a class 56 that not only looks better but more importantly performs better. I don't know how old the Athearn PB1 is but I wouldn't be surprised if it is as old as the 56 if not older.

