

PDF MODELS – BAGULEY CHASSIS



NOTE :: This chassis kit is sold as part of the Baguley 99hp & 60hp locomotive kits, and as a generic chassis for other kits. The instructions are therefore separate from the locomotive instructions.

Thank you for buying this Loco kit. Please read all the instructions before assembly.

Certain tools will be necessary, screw drivers, pliers, tweezers, Allen keys, etc.

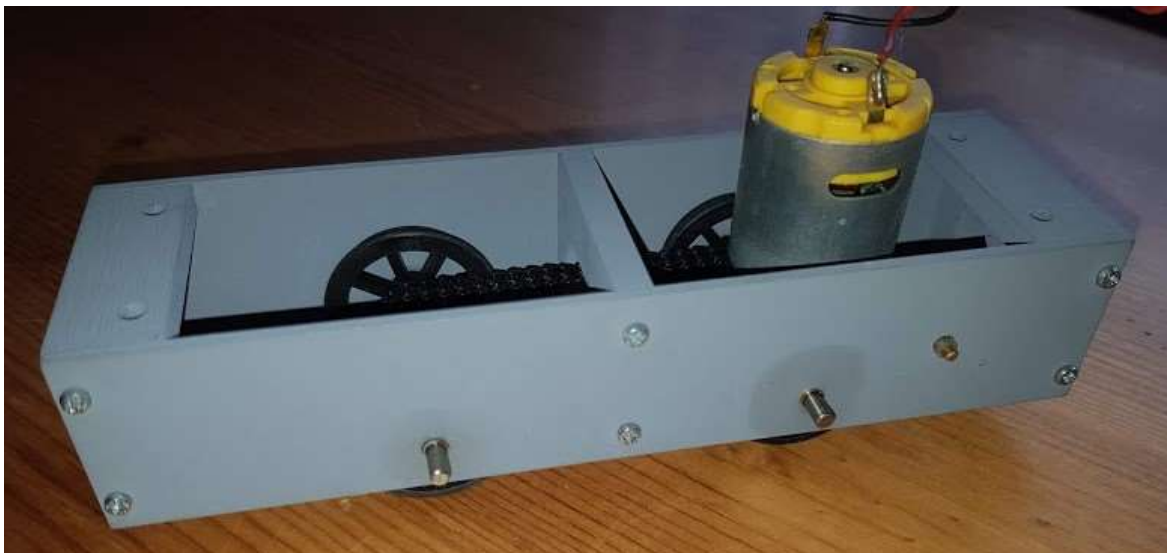
Another very useful tool is a tapered reamer!

TAKE CARE WITH THE REAMER - MAKE A SMALL CUT, TRY, AND CUT AGAIN.

Good results can be obtained from good rattle spray paints, Halfords is a very good source.

It is not necessary to paint the chassis, it will not be on view in your model.

However, some of the photo here show the spacers & frames in grey undercoat for clarity.



The chassis is built up from a combination of laser cut acrylic sheet and 3D printed parts. The whole assembly is secured with nuts & screws and can be assembled and disassembled to allow for painting and maintenance.

The Baguley chassis is built up from a few major parts

Acrylic Frames

Frame Spacers, or stretchers

Wheels

Motor/Gearbox Assembly

Delrin Chain Drive

The assembly of the chassis requires a little forethought ensure the correct order of parts.

The drive axle will eventually need (from the outside to the outside) - bush, wheel, bush, gear, bush, Delrin sprocket, wheel, bush

The trailing axle will eventually need - bush, wheel, Delrin sprocket, wheel, bush.

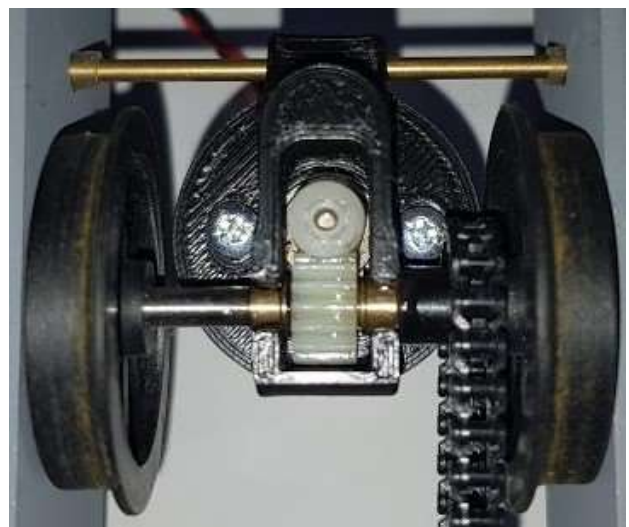
Start with the gearbox, open the holes/slots that take the axle bushes until the bushes are a tight fit into the gearbox.

Next, prepare the drive axle. The gearbox axle bushes need to be pushed onto the axle before the Delrin sprocket. And the wheels go on last.

With the wheels, sprocket & bushes on the drive axle, offer the axle to the gearbox, lining the bushes up to their corresponding slots on the gearbox. Applying pressure, the bushes will pop into the gearbox print. (Leave the motor off for the time being, it can be screwed to the gearbox later when the chassis is complete.)

The trailing axle requires the wheels and sprocket only.

IMPORTANT :: The wheel back to back measurement should be 28mm for 32mm gauge & 40mm for 45mm gauge – the sprocket will need to be up tight to the back of the wheel, chain closest to the wheel. This will allow the chain to clear the gearbox/motor mount screws – examine the image below carefully.



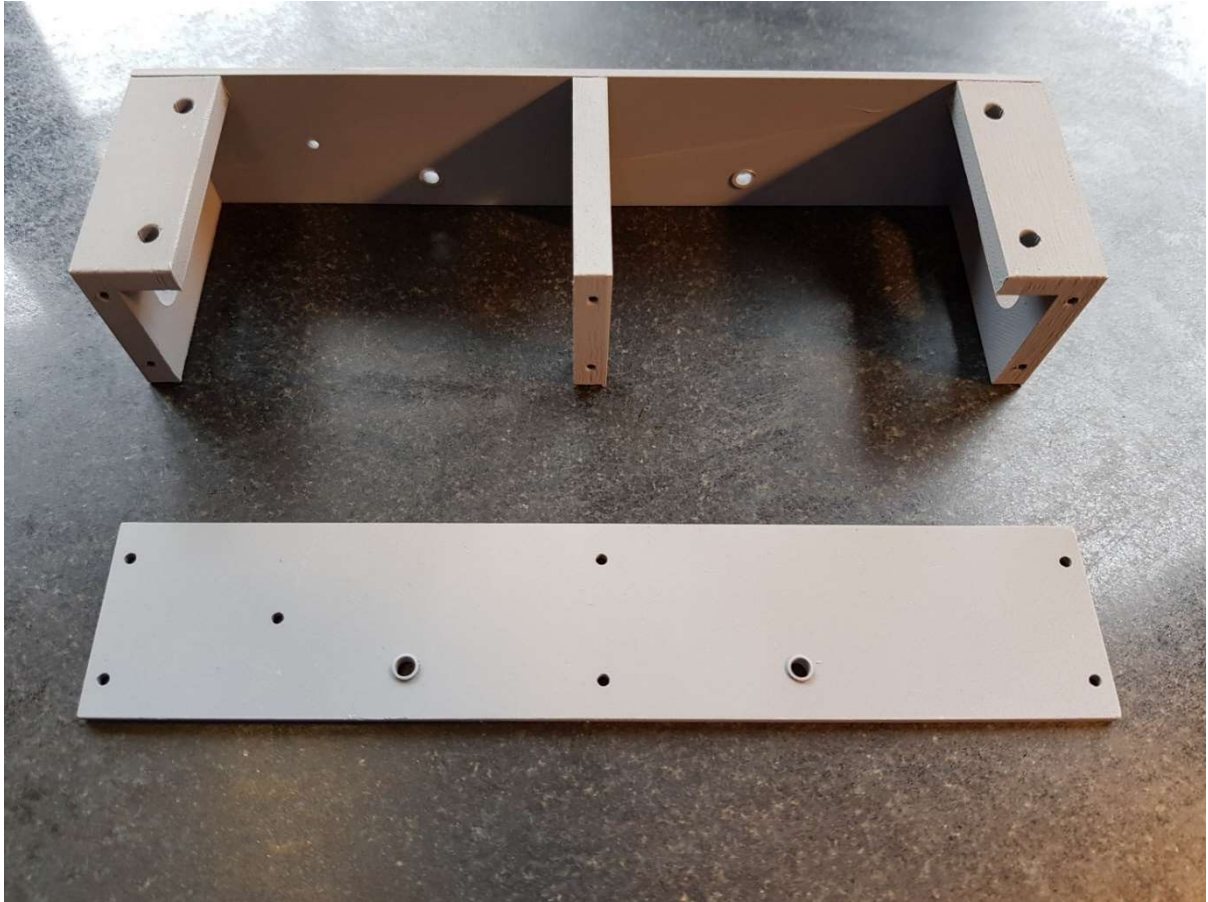
The gearbox & motor assembly – note the bushes!

The drive axle, note the order of wheels, sprocket & bushes.

Build half the frame unit, using three spacers and one frame.

Open the 4 bush holes slightly to fit the axle bushes. A tiny amount of glue on each bush will stop the bushes from moving during construction.

The bushes should be placed from the inside with the rim of the bush on the inside of the chassis. The frames are secured with 12 screws (6 each side) and are self-tapping into the spacers.



The following is a little tricky, and requires patience...

The two axles need to be located into the axle bushes; the motor is held upright in the chassis by the short brass rod supplied. It goes through both frames and the gearbox. Ensure the rod passes through all three easily, prior to assembly. If needed, open the holes with a small drill.

You will also need to add the chain to the sprockets before locating the axles in the bushes!

Once the chain, axles and gearbox mount are all in place, the second frame can be offered to the chassis.

At this point you should have a rolling chassis. A tiny, tiny amount of light oil on all 6 bushes will help. Do not expect a totally free running chassis at this point, the Delrin chain seems to require a couple of hours of running to “stretch” and bed in before to runs completely smoothly.

The motor can no be screwed to the gearbox (it can be added earlier, but I have found it easier to test the chassis without it). A little trial and error are needed here, to ensure a smooth gear interface. The slots in the gearbox mounting face, allow for some movement of the motor.

With the motor attached, we recommend attaching a battery to the motor and running the chassis on the bench for a few hours. Do not forget oil the bushes, and gears regularly.

The Delrin chain need no oil and can pick up detritus from the garden if to oily!