



How to make your Portescap Motor/Gearbox run as quietly as possible

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Please note that if you have only recently purchased your unit it has a 12 month warranty from date of manufacture and this warranty will be breached by any disassembly as described below.

Portescap motor/gearbox assemblies used to be silent. Over the years, the moulds from which the bevel pinion and crown wheels are made have worn, so that the mesh has become increasingly poor and therefore unbearably noisier. So, until Portescap decide to renew their moulds, the problem will continue, and like good wine, the older ones are worth more.

There is a solution. The bad news is that the assembly needs to be out of the loco, really. This is how I do it. You may vary the details, it's up to you, but I know this works.

First, prove that it IS the gear mesh that's the problem. Remove the motor from the gearbox. With a 1219 it unscrews from the mounting block. The larger ones can be withdrawn with mounting block after removal of the side screws. Take care not to stress the gear mesh when doing this. Connect the motor to your regular controller and wind it up. If it screams, stop immediately and lube the front, gear end, bearing. There is no bearing at the other, wire end, so don't let any fluids near it. It probably won't make any sound at all, in fact you may have to look carefully to make sure it is going round.

Now, with the motor still out, and with an axle but no wheels fitted, grip one end of the axle in your mindrill chuck, connect the drill to your controller, and turn up the power GENTLY. You won't have to drive the axle end very quickly to get the idea that the gearbox is now, probably, silent too. Fit the motor back into the gearbox. Be very careful not to force the mesh. Hold the motor in a vice and turn the gears by hand as you push the motor home.

Take a few drips of 10W40 car engine oil in an old but clean lid or bottle top. (I use Comma Synthetic) and add to it some Eucryl Smoker's Toothpowder. I prefer the original flavour myself, but the fresh mint will probably work just as well. Mix the two into a fairly stiff paste, and after applying clean oil to the rest of the gearbox, and mounting the assembly into a vice by holding the motor with the wire end higher than the rest, put a few drops of the paste onto the nylon gear set.

Connect to the controller, and run for roughly 30 minutes at 3-4 volts, or about 1/4 speed. Don't run it too fast, or you'll throw the paste all over the gearbox and yourself, too. After this, add some more paste, reverse the polarity, and run for a further 30 minutes.

After this, hold the motor, with the gearbox only in a jar containing a non aggressive solvent such as paraffin or turps substitute and run for 30 seconds or so in each direction. I use Isopar-G, but at around 4 quid a litre I'm not sure I'll buy any more when my stock runs out.

Dry it off. If using compressed air, protect your eyes. Relubricate. Portescap supply a recommended lubricant; it's that thick red stuff that clockmakers use, the name of which I can't remember, but I find the car engine oil works fine for me.

You'll find that now the unit is near silent at up to 6 volts, and 90 percent of the noise at max speed has gone. Okay, some of you will find a lot of the above near patronising, and others still too complicated. I hope to have trod a middle enough road to be useful to most.

Silent running to all,

Ted.