

Improving the operation of Gopher Models' locomotives

Text & photos Tony Scott

The problems some people have had with poor running of the Gopher Model's 42, 44, B, S and GM class diesel loco has been discussed on the Groups.io forum, with various reasons advanced and remedies suggested.

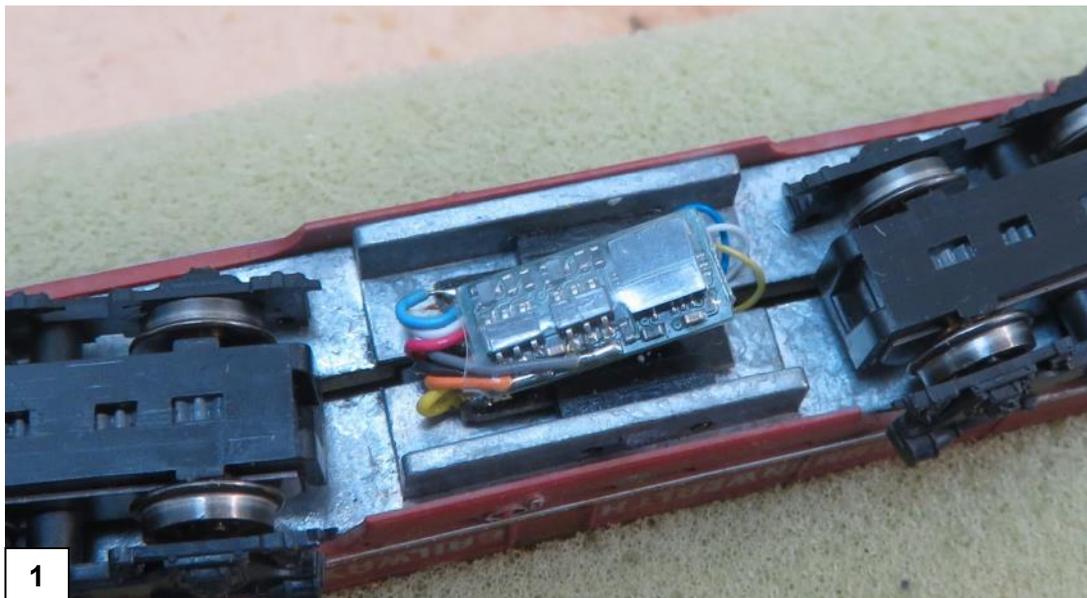
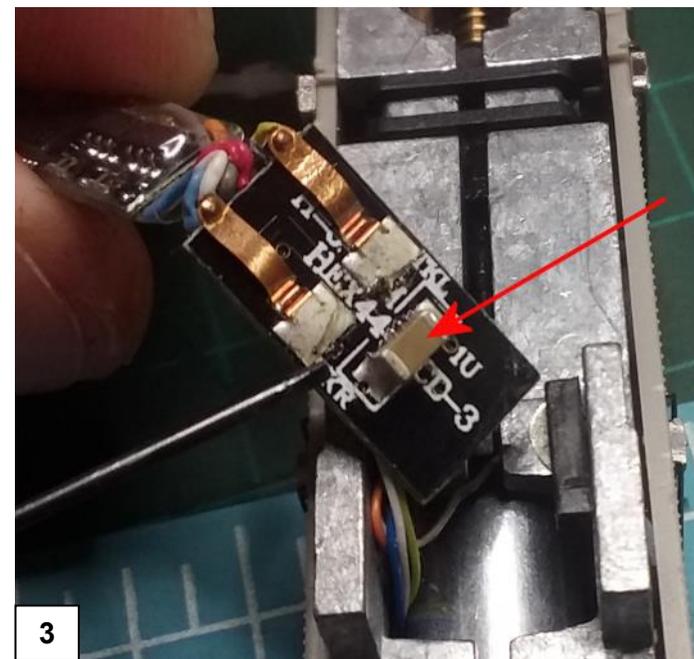
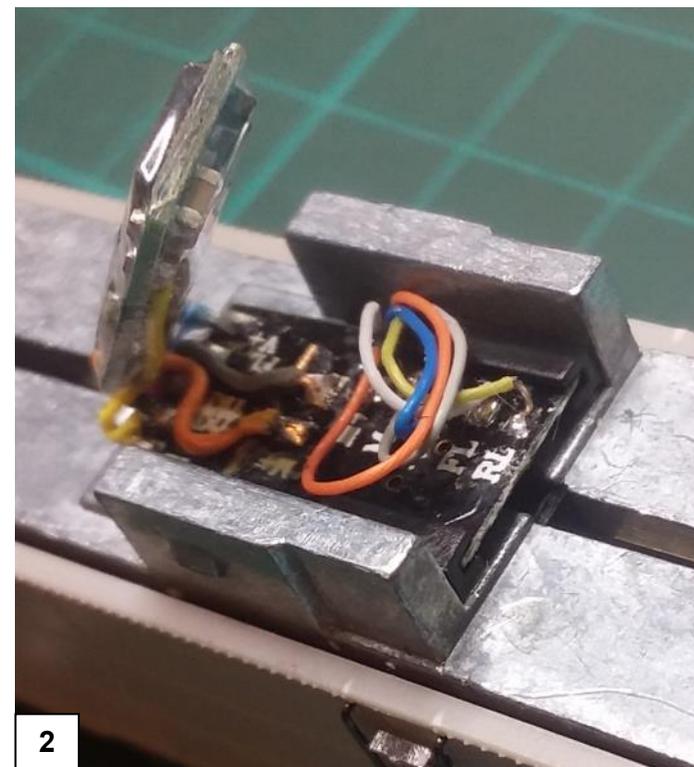
One issue pinpointed by Phil Badger was the different metals used in the bogie pickup plates compared with the sprung wipers attached to the chassis. It is conjectured that this could cause conductivity problems at the contact points, such as arcing, corrosion, etc. Phil is having replacement bogie plates made of phosphor bronze to match the wipers.

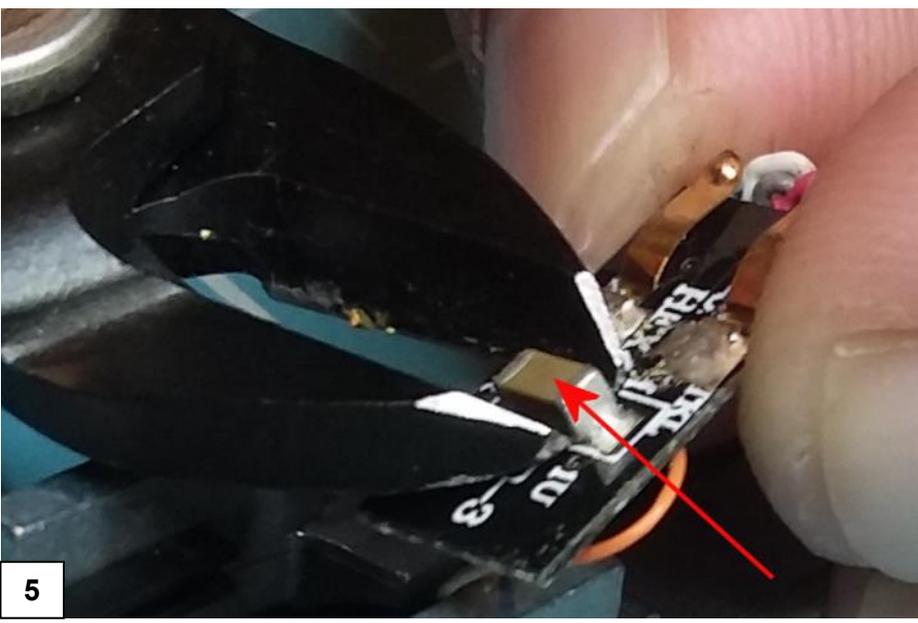
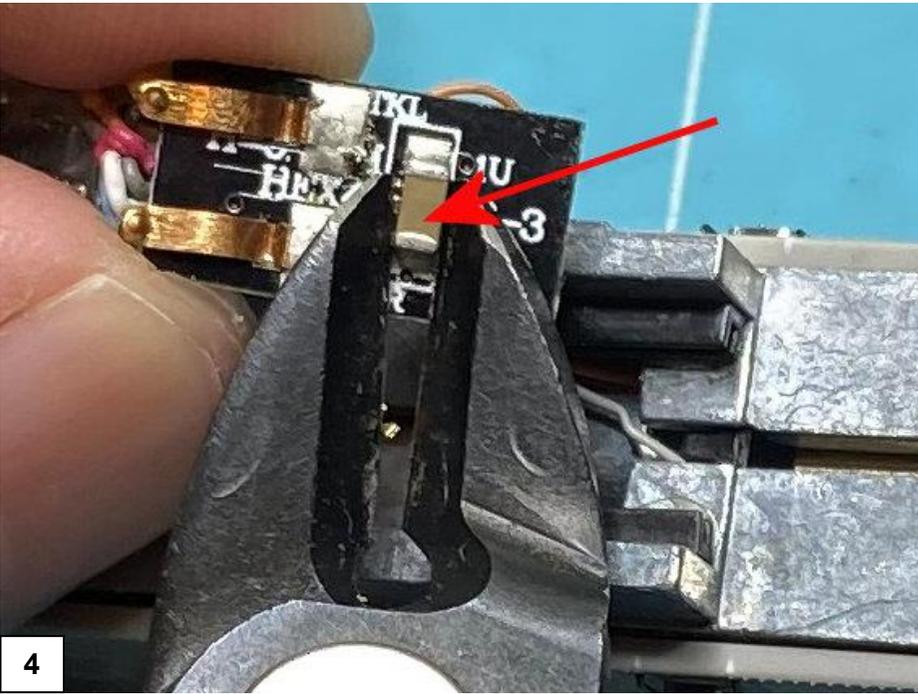
Another issue was the build-up of grease thrown off the drive train and fouling the wiper contacts. This gunk should be removed, and the flat end of a wooden skewer used to carefully burnish the wipers and the rounded contact points of the bogie pickup plates.

However there is another issue with these locos that seems to have slipped under the radar, although it is known to a few. Because Phil markets his models to some European countries, they were made to satisfy a European regulation concerned with radio interference caused by DC motors. As such they have a small capacitor installed across the motor terminals to smooth out the DC signal. But when converting the loco to DCC, the capacitor interferes with the waveform reaching the motor often causing erratic behaviour, and therefore needs to be removed.

In every case, removal of the capacitor has dramatically improved the running characteristics of the locomotive. The remedy is quick and fairly easy – it just requires a little care.

1. Remove the fuel tank cover. This can be done without removing the loco body. Inside is either the DC/DCC dummy board, or a decoder (if fitted) [1].
2. Lift it up [2] to reveal a PCB with wires attached to various pads. This is held in plastic grooves in the two sides of the chassis.
3. Slide the PCB out of the grooves and turn it upside down. The capacitor is the small rectangular gold-coloured shape [3, arrowed].
4. Using a pair of side cutters, nip the capacitor free from its solder pads [4, 5].
5. The PCB should then look like [6] where the capacitor's solder pads (arrowed) are now exposed. (The freed capacitor is shown at lower right.)
6. Slide the PCB back into its grooves and reinstall the fuel tank moulding.





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