Mainline Railways Class 42 split gear repair.

I found a simple and very cheap way to repair the motor unit of a Mainline Railway Class 42 (Warship) Loco.
I found a suitable replacement gear on Aliexpress,

https://www.aliexpress.com/item/4001073250486.html...

This link is still active as of 12 January 2023

The cost is about NZ$3 (UKP1.5) of 10 gears, enough for 5 locos. Plus shipping to the UK.

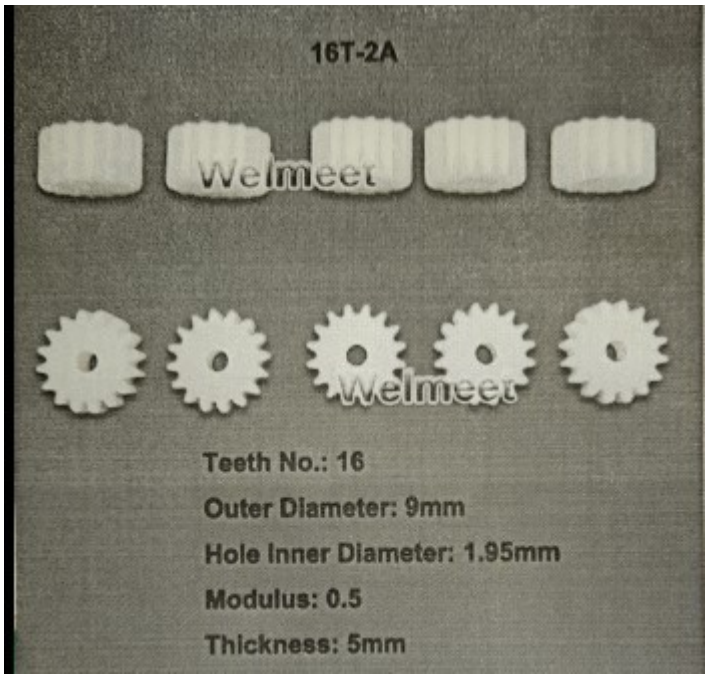
The Mainline Gear is 8.8mm dia and about 3mm thick', so I filed down the teeth of the replacement gear to around 7.75 mm dia and reduced the with from 5m to 3mm thickness. Reducing the width of the new gear allows the gear to be positioned without interferring with the rest of the gear train.

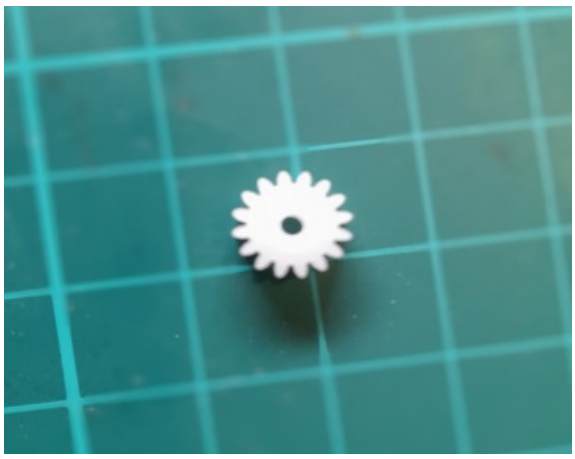
The axle size it a tight fit on the Mainline axle. and I used a 2mm drill as a mandril to hold the gear in a small vise to file (I marked all the gear teeth with a marker Pen so I could tell what teeth had been filed) a wee bit off each gear tooth to get the diameter down to size.

Test in the loco chassis without removing the drill. when happy swop the drill for the axle, test and remove from the chassis and apply a wee drop of CA glue to lock everything.

The split gear removed from the bogie.

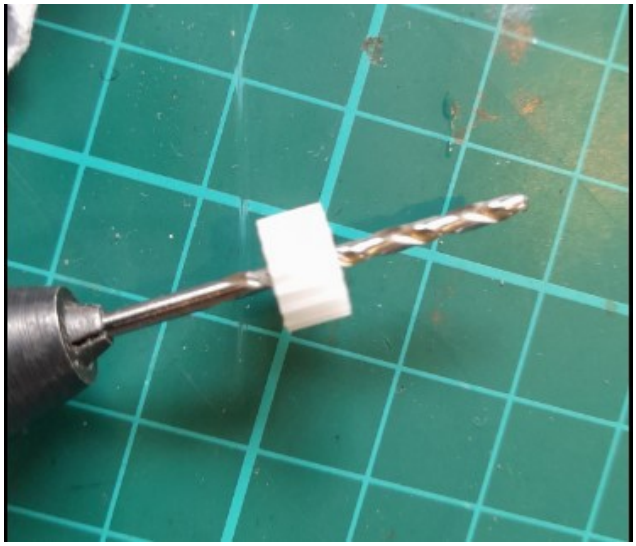
A pack of replacement gears, from **Welmeet. 16t-2A** for 10 gears, price excluding postage from China.



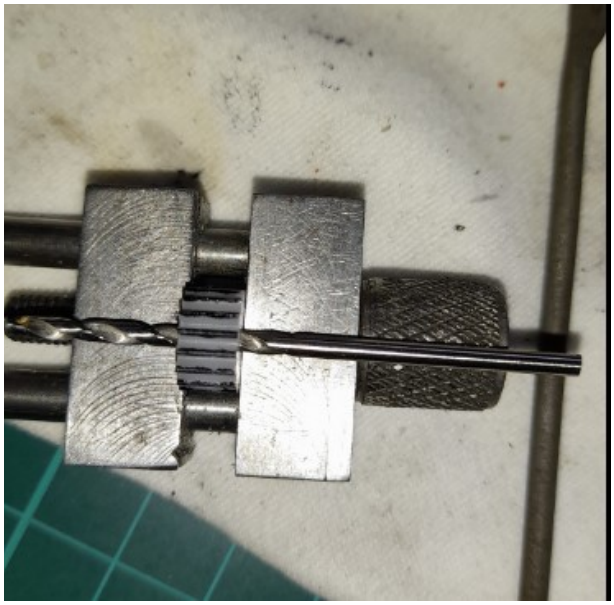


Preparing the replacement gear:

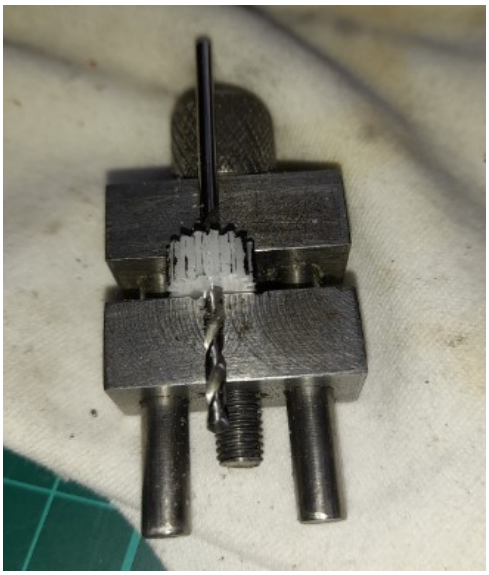
Using a 2mm drill as a temporary axle



The tips of all the teeth marked with marker pen

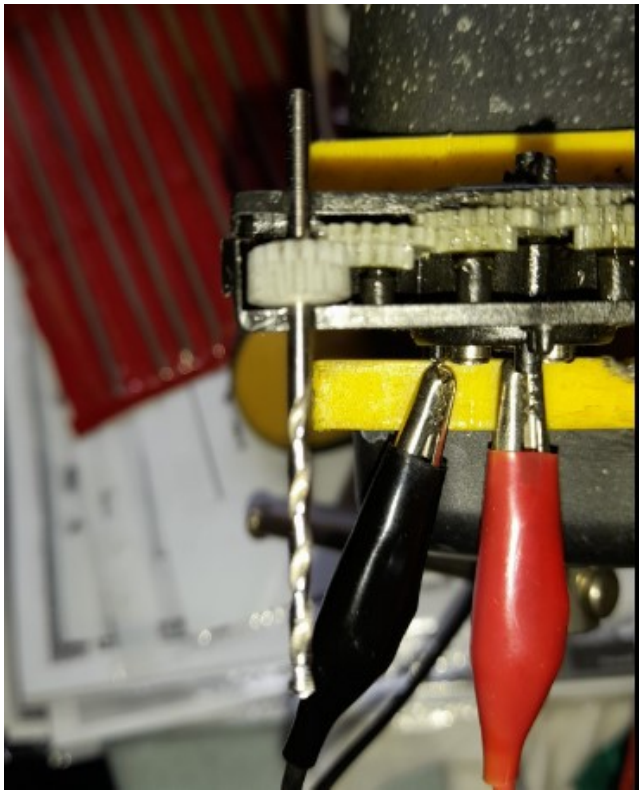


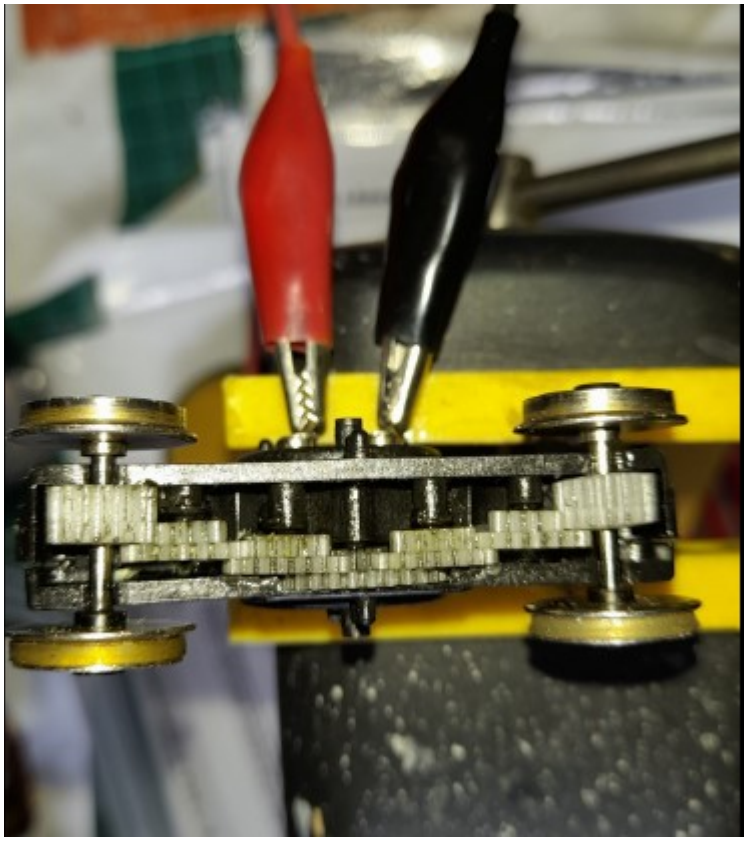
Showing that 4 teeth have been slighly reduced in size



Reducing the gear width from 5 to 3mm

Test fit and run to check smooth running, , when happy apply CA instant glue to lock the new gear on the



When happy apply CA instant glue to lock the new gear onto the original axle. Refit wheel and check the Back to Back.

Both axles repaired and test run for a few minutes to check everything is fine.