

Technical Bulletin #16 Alignment of the Carriage Gears on MKI IDS

The MKI IDS Carriage is fitted with three gears that are located on the left hand side of the Carriage, as shown in figure 1.

The Center gear is the Drive gear and is connected to the Stepper Driver Motor that is fixed to the underside of the Carriage. The gear is secured to the Stepper Driver Motor Drive Shaft, by a Grub Screw.

The two outer gears are used to steady the Carriage as it traverses the length of the pinion track

Alignment procedure

1. Place the Carriage onto the pinion track, ensuring that the roller guides on the right hand side of the Carriage are correctly located.
2. The two outer gears teeth should fit snugly in-between the pinion track, if not the M5 bolt that passes through the two outer gears will each need to be loosened off in order to set the correct ride height.

Each M5 bolt passes through an off-centered shaft that sits inside the outer gear. See figure 2.

PLACE FIG 2. HERE!

Figure 2.

The shaft is off-centered so that the height of the outer gears can be self-adjusted. Once the correct height has been maintained each of the M5 bolts can now be re-tightened.

The height of the outer gears should be set, so that the gear teeth should sit snugly between the pinion track. See figure 3.

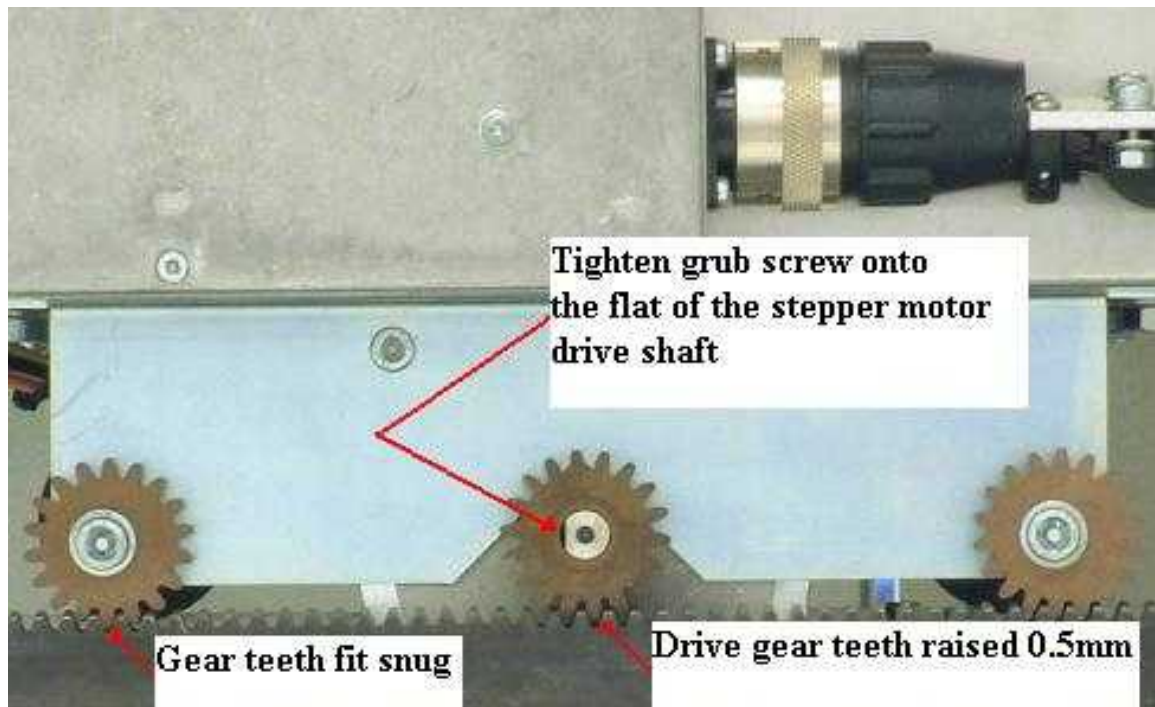


Figure 3.

3. The Stepper Driver Motor Drive Gear teeth should be set so that they sit approx 0.5mm just slightly above the pinion track. Now ensure that the grub screw that secures the Drive gear to the Stepper Driver Motor Drive Shaft is tight. See Figure 4.

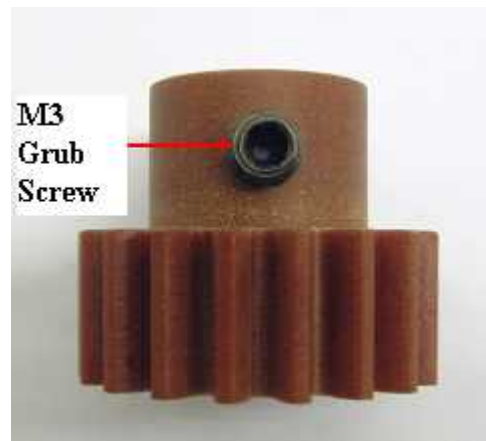


Figure 4.

CAUTION: DO NOT over-tighten the grub screw, this may cause the Drive Gear to split as the material is quite soft.

4. Now move the Carriage by hand, up and down the pinion track. The Carriage should run up and down smoothly (with no bumping). If the gears DO NOT appear to turn concentric or run true, then re-check the height of the outer gears again.
5. Now move the Carriage all the way to the rear of the pinion track, either by hand or using InkManager test software. This movement check will determine if the ride height and also the Drive gear are correctly set.