

Tension Cord Replacement Procedure

Please note: Autosampler Guys provides a dedicated set including the long and short tension cords as well as a Size 8 Torx screwdriver.

Part number: PAL MZ 30-2X

If you already own a Torx Size 8, you only need the individual tension cords MZ 30-23 and MZ 30-21.

ESD WARNING

Disconnect PAL System from power and unplug the power cord before any repairs or maintenance. Also be sure to disconnect the PAL System from any other device (e.g. PC, GC, and LC).

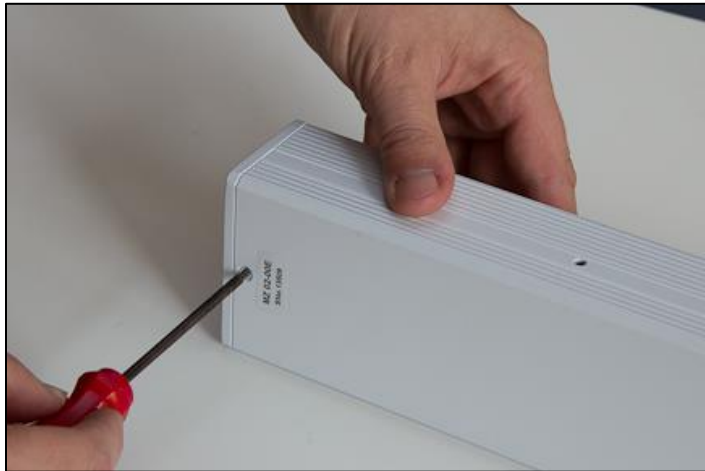
CAUTION

We strongly recommended the use of an ESD Strap when touching electronic parts. Failure to observe this basic precaution can result in erratic behavior of a component or even a damaged printed circuit board (PCB).

Step 1: Remove the Injection Unit (“Head”) from the Y-Axis. *Note: Be careful not to pull the ribbon cable too far out when disconnecting it from the head.*

Important: Note that the three screws to disconnect the Injection Unit are behind the black slider assembly. By moving the slider assembly (**up or down, depending on the model PAL you have**), three holes in the assembly will line up with the screws behind. Required Tool: Torx T20

Step 2: Remove the top cover screw (Required tool Torx T10) and remove the top cover plate.

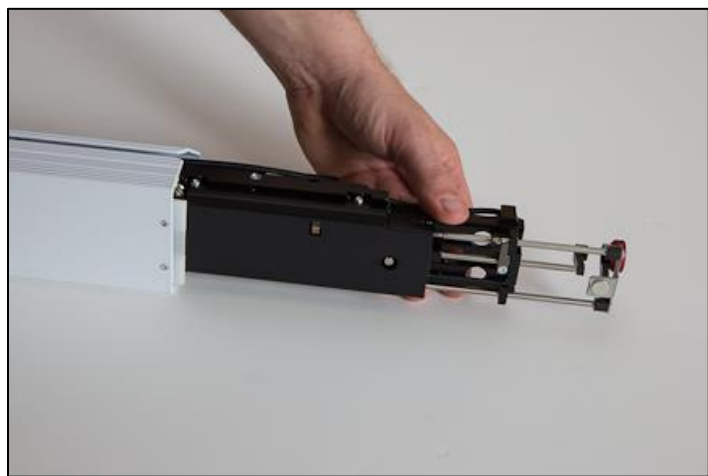


Step 3: Undo the long Tension Cord (MZ 30-21) (Figure 2)

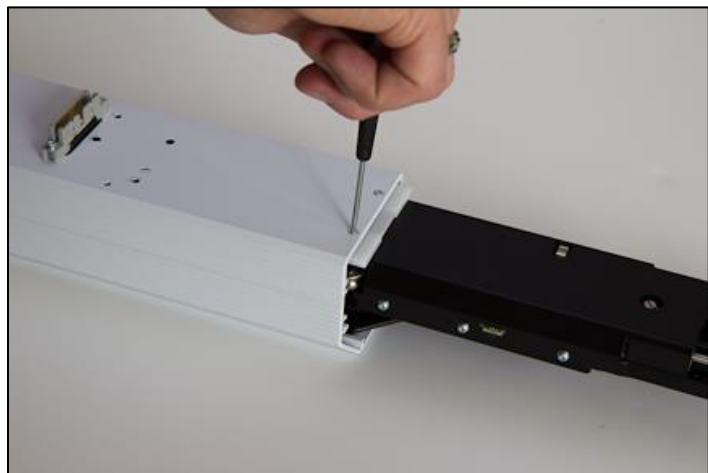
Note: The purpose of the long Tension Cord is to hold the syringe slider assembly in position when the power is switched off. We recommend replacing the tension cord once a year. It is also part of the PMKit1 (LC) and PMKit2 (GC) Part number of long tension cord: MZ 30-21



Step 4: Place the PAL head with attached syringe slider on a clean workspace. Pull the black syringe slider assembly out of the Z-axis (head).

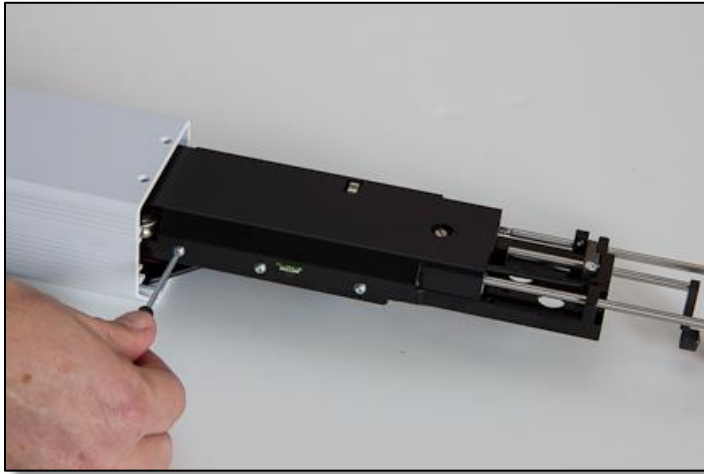


Step 5: (CombiPal only) Remove the part PAL MZAgiOpen (bumper)

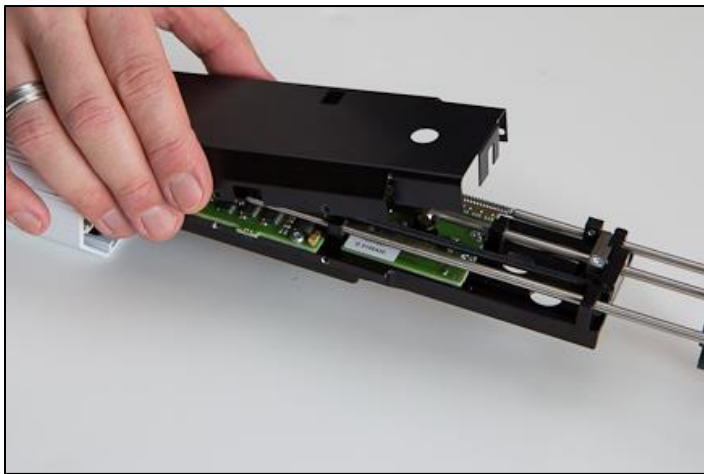


Step 6: Remove the five screws holding the cover plate for the electronics and needle guide assembly. (Required tool Torx size 8)

Note: Some older systems were equipped with Phillips screws. If possible, replace these screws with Torx screws (size 8).

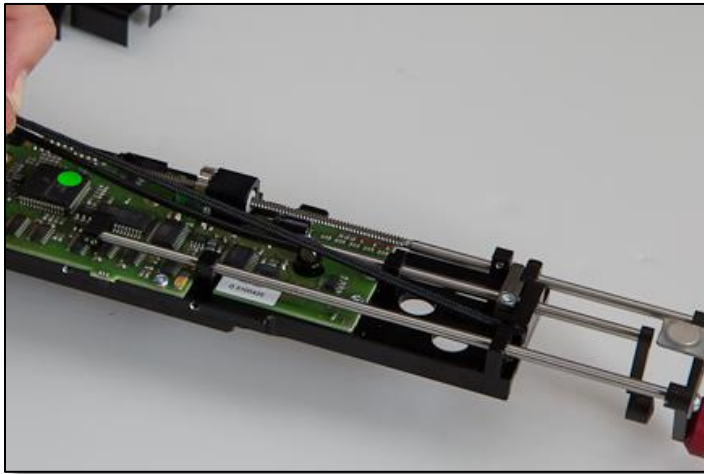


Step 7: Remove the cover to gain access to the electronic and needle guide mechanical part.

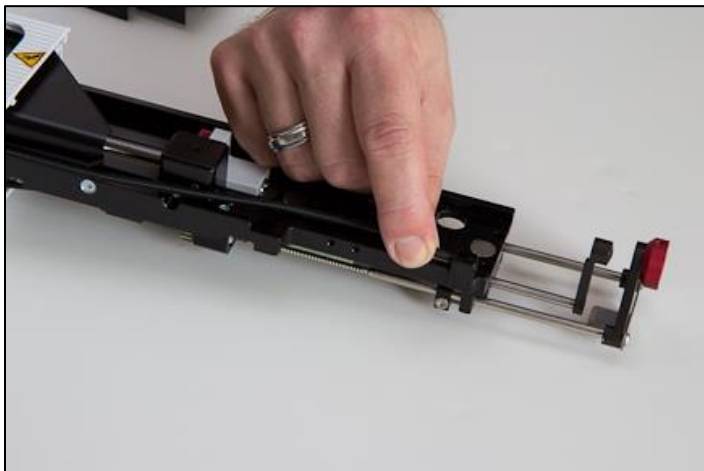


Step 8: Disconnect the top end of the short tension by stretching it and then remove it.

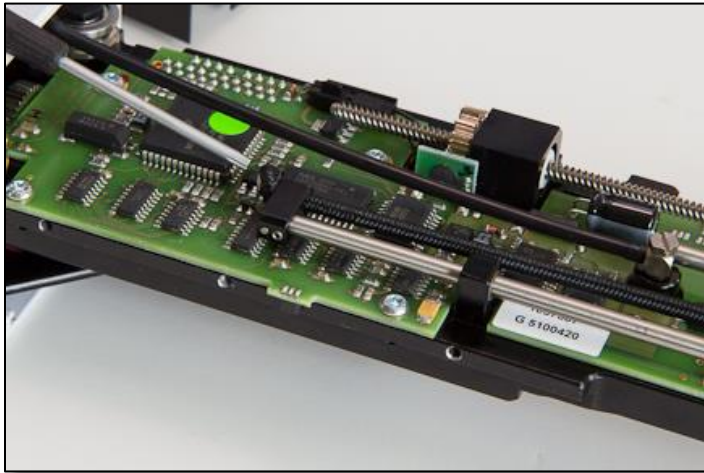
Note: The purpose of the short tension cord is to press the vial or well plate down with the lower needle guide at the moment at which the syringe is pulled from it. The main sign of a loose tension cord is bent needles. We recommend replacing the short tension cord once a year. It is also part of the PM Kit1 (LC) and PMKit2 (GC). Part number of short tension cord: MZ 30-23



Also undo the other end of the long tension cord:



Step 9: Insert the short tension cord in such a way that the fat part of the knot points away from the electronic board (for example at a 60 degree angle towards you).



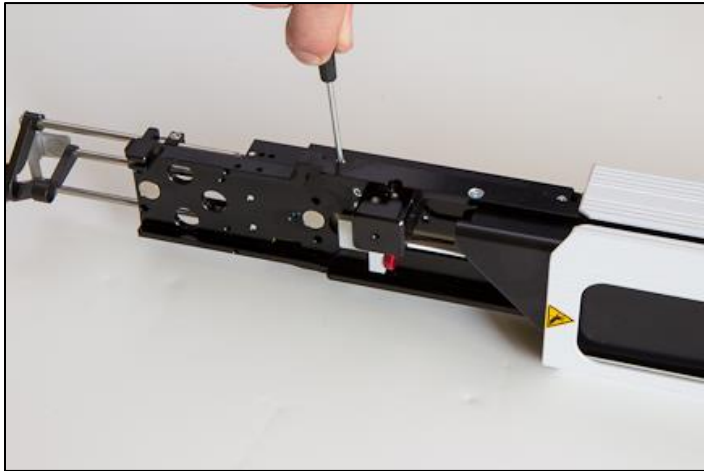
Push up the lower needle guide to the stop to check that the knot of the Tension Cord does not touch the electronic board and that nothing hinders the up and down movement of the needle guide assembly.

Step 10: Install the black metal cover while paying attention that the flush tube (only applicable to the Combi Pal) is not placed incorrectly relative to the roller. The cover has a pin-guide for the tube. This picture shows the INCORRECT position:



Step 11: Insert the syringe slider into the injection head. Push the syringe slider all the way up the injection head. You should see the upper pair of rollers as shown here:

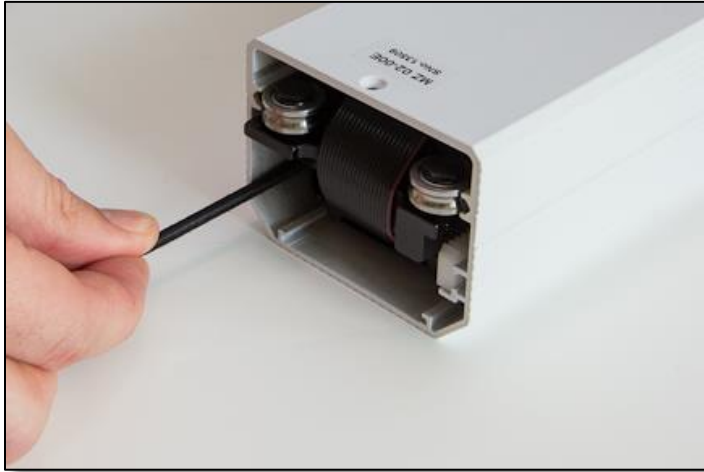
Step 12: Tighten the five screws holding the cover plate in place.



Step 13: Insert the bumper (PAL MZAgiOpen) and tighten the two screws holding it in place.



Step 14: Grab the end of the long tension cord with a suitable tool such as a pair of large tweezers.



Step 15: Connect the long tension cord to the top cover of the injection head. Tighten the screws to secure the cover to the top of the injection head. Required tool: Torx T10



Step 16: Mount the head onto the Y-axis by first connecting the cable from the Y-axis to the rear connector on the head and then inserting and tightening the three head mounting screws.