
CETAC
Z-Drive Nylon Cable

Installation Guide

Manual Part Number **610104** rev1, © 2010 CETAC Technologies, Printed in USA

Overview

This guide describes how to replace the nylon line which operates the autosampler Z-drive assembly.

These instructions apply to many CETAC autosamplers. The appearance of your Z-drive may differ from what is shown in this document.

Tools Required

You will need the following tools:

- Crimp tool (supplied with CETAC part number SP6578A).
- Wire cutters, for trimming the cable.
- Small needle-nose pliers for removing the old cable.

You can remove thumbscrews with tools if necessary, but do not tighten them with anything other than your fingers.

CAUTION

Do not allow the cable to bend sharply. Avoid pushing up on the probe bracket (z-axis slider) or pushing on the Z-drive cable. Doing so can kink the cable, in which case the cable must be replaced.

Replacing the Cable

WARNING

Ensure the power turned off before proceeding with installation.

- 1 Place the autosampler on a flat surface and turn the unit off.

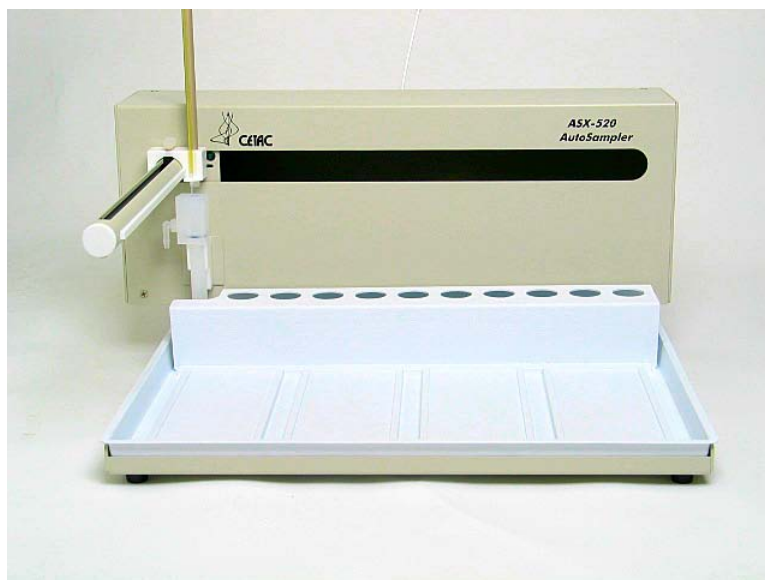


Figure 1 Front view of ASX-520 autosampler.

- 2 Remove the old PEEK or nylon cable from the rotor by loosening the thumbscrew on the rotor.

- 3 Cut the old cable just above the crimp.

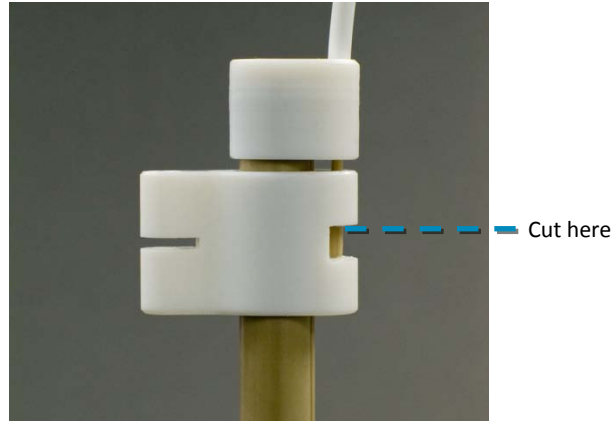


Figure 2 Location of cut (standard Z-drive).

- 4 Hold the probe bracket (z-axis slider) in place while pulling the loose end of the cable from the far end of the sheath.
- 5 Use needle-nose pliers to pull the bit of cable from the probe bracket.
- 6 Thread the new cable through the sheath.
- 7 Align the end of the cable with the bottom of the probe bracket.
- 8 Insert the crimp tool into the slot of the probe bracket and squeeze as hard as you can.

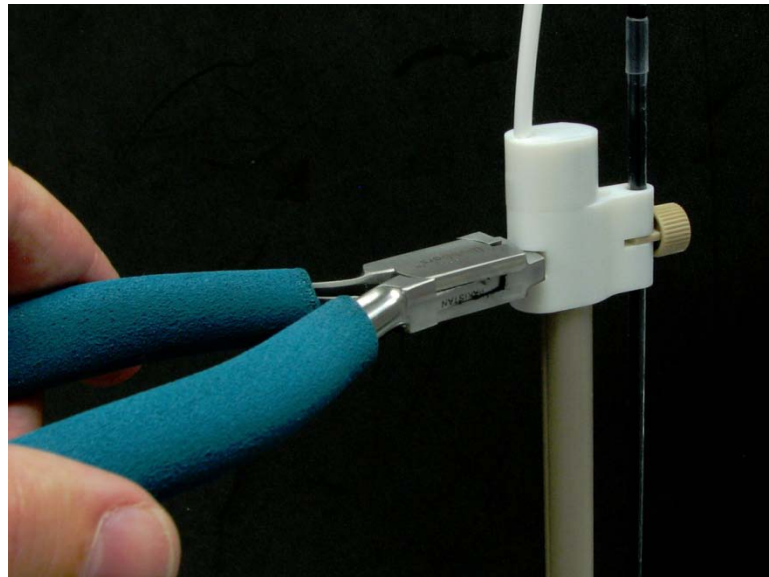
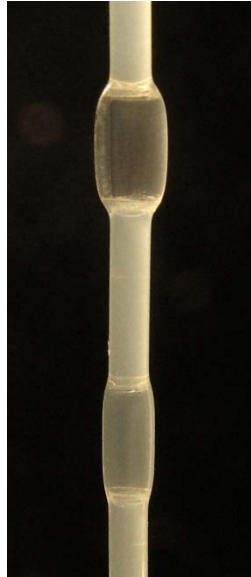


Figure 3 Crimping the cable.

- 9 Check the quality of the crimp. The shoulder of the crimp should be distinct. If you pull on the cable, the crimped area should remain within the slot of the probe bracket, without becoming wedged in the hole above the slot.



The crimp should be noticeably wider than the diameter of the cable and have distinct shoulders like this

The crimp should *not* look like this

Figure 4 Good and bad crimps.

Once you are satisfied that the crimp is good, attach the free end of the cable to the Z-axis motor as described in the following steps.

- 10 Turn the rotor clockwise as far as it will go.
- 11 Slide the cable onto the rotor on the back of the autosampler.
- 12 If necessary, re-attach the guide block to the back of the autosampler. Note that it is important to install the mounting block in the correct orientation



Figure 5 Securing block to back of autosampler.

- 13** Gently move the probe bracket (Z-axis slider) until the gap between the bracket and cap is approximately 2mm.

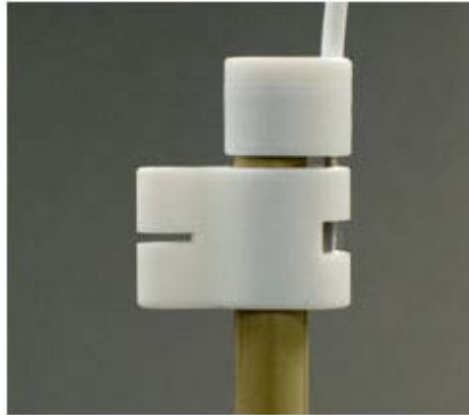


Figure 6 View of gap between probe bracket and cap (standard Z-drive).



Figure 7 View of gap between probe bracket and cap (carbon fiber style Z-drive assembly).

- 14** Hold the cable flat against the rotor and secure the cable by tightening thumbscrew on the rotor. The thumbscrew should be as tight as you can get it using just your fingers.

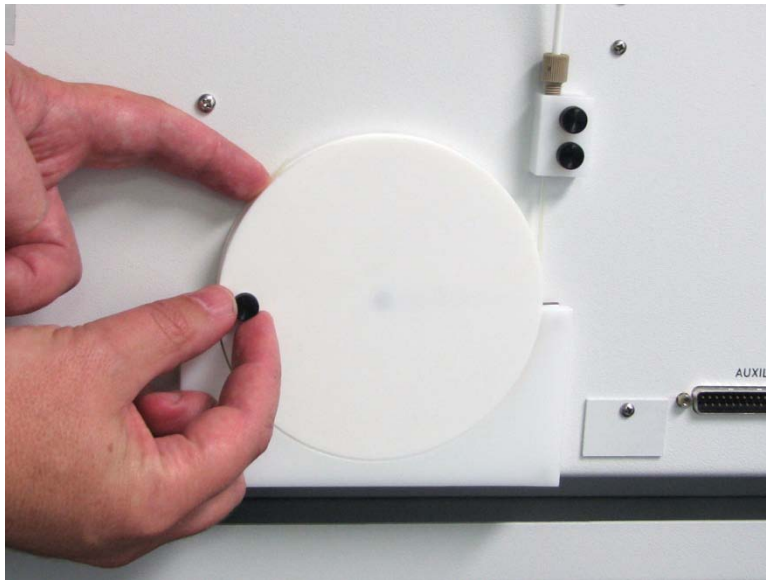


Figure 8 Securing cable to rotor.

- 15** Rotate the rotor back and forth to ensure that it moves freely. If there is excessive friction, check that the full width of the cable is under the clamp.