Troubleshooting the X - Y and Z Sensors on the ASX-560 and ASX-280

Remove the Spill Tray and Z-drive from Arm Tube

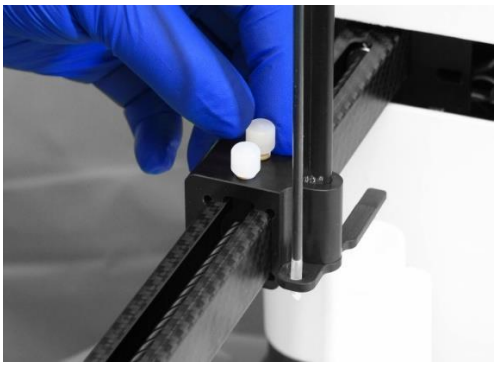

Figure 1 Remove Z-Drive and Spill Tray

1 Remove the Spill Tray from the Base Plate and set it aside, then remove the 2 Kynar thumb screws from the Z-Drive and slide the Z-Drive off the arm tube and set it aside.

Remove the Front Cover

Figure 2 Cover Screws

2 Looking at the back of the 560 remove the 4 screws that secure the top cover to the head assembly and then slide the cover off the front of the instrument.

Remove the Splash Shield

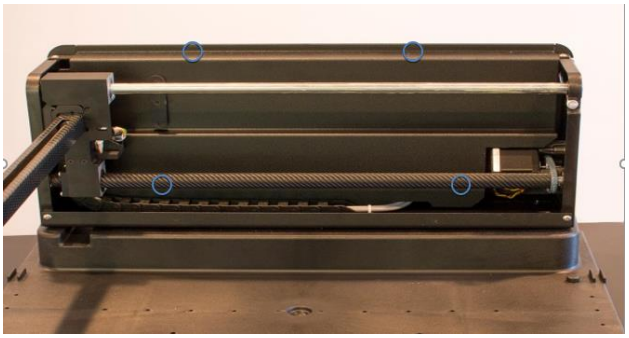

Figure 3 Splash Shield Screws

3 Remove the 2 screws from the top of the splash shield and the 2 lower screws located under the X-axis leadscrew.

4 Slide the Y-axis Arm Tube all the way to the left, then tilt the shield up on the right side (as you face the unit) and slide it out.

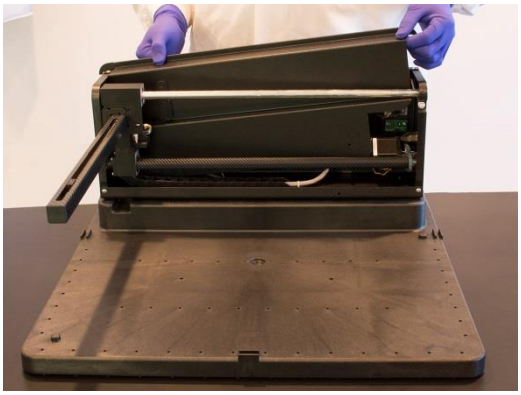

Figure 4 Lifting the Splash Shield

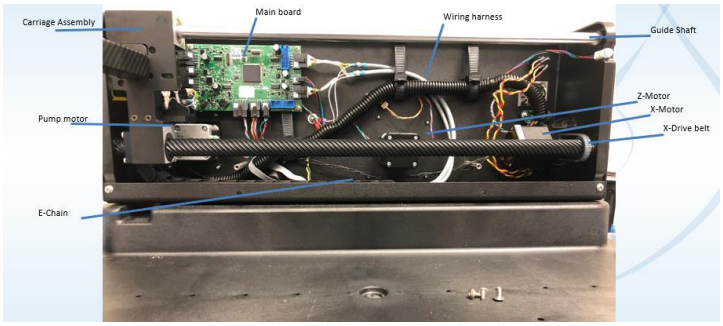

Figure 5 Internal Parts Identification with Shield and Cover removed.

5 Next, slide the Y-axis Arm all the way to the right to move it out of the way and have access to the main board.

6 Look at the Main Board, and find the gray, X and Y sensor cables located on the right side of the board. Press the connector clip and unplug both the X and Y sensor cables from the right side of the board.

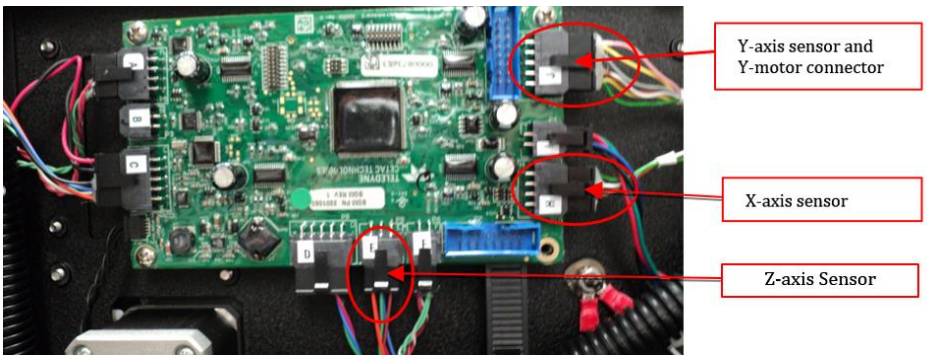

Figure 12 Main Circuit Board with X & Y Sensor Connections

7 After the 2 gray Sensor cables have been disconnected from the Main board reattach the Z-drive to the Y-Axis Arm and slide the Arm tube over to the left side, but not all the way, because you want to see if it moves to the home position. You do not need to reinstall the Splash guard at this time.

8 Once the Z-drive has been reinstalled on the Y axis Arm tube turn the autosampler on and observe the Z-rotor wheel on the back of the autosampler to see if it moves and lifts the probe up on the Z drive.

9 If the Z-axis rotor wheel turns and raises the probe than the Z Axis sensor is working OK and the problem may be with the X and Y sensor Cables. Skip to Step 11 if the Z-axis rotor wheel is working.

10 If the Z-axis rotor still does not move than the Z-sensor may be bad and will need to be replaced. Part # SP7444.

11 To test the X and Y connections individually, following step 12 and 13 to see which axis sensor cable has failed, however if either cable is bad they will both need to be replaced because they are both part of the Y-Axis E-Chain assembly.

12 To test the X-Axis cable turn off the autosampler and only plug in the X sensor cable and turn on the autosampler to see if the Z- drive and the X-axis move to the Home positions.

13 To test the Y-Axis cable turn off the autosampler and only plug in the Y sensor cable and turn on the autosampler to see if the Z- drive and the Y-axis move to the Home positions.

The Y-Axis E-Chain assembly is Part # SP7442.

Y-Axis E-Chain SP7442

The X- Y- and Z- axis sensors are all identical Optical Sensors and are Part # 7444 and shown below.

	X, Y, Z Sensor	SP7444