

Fusion3

EDGE 3D Printer

REPAIR:

REPLACE PRINT HEAD CABLE

Revision 6/1/2023

REPLACING THE PRINT HEAD CABLE ON EDGE

How to replace the print head (nanoflex) cable on EDGE.

WHEN TO FOLLOW THIS PROCEDURE

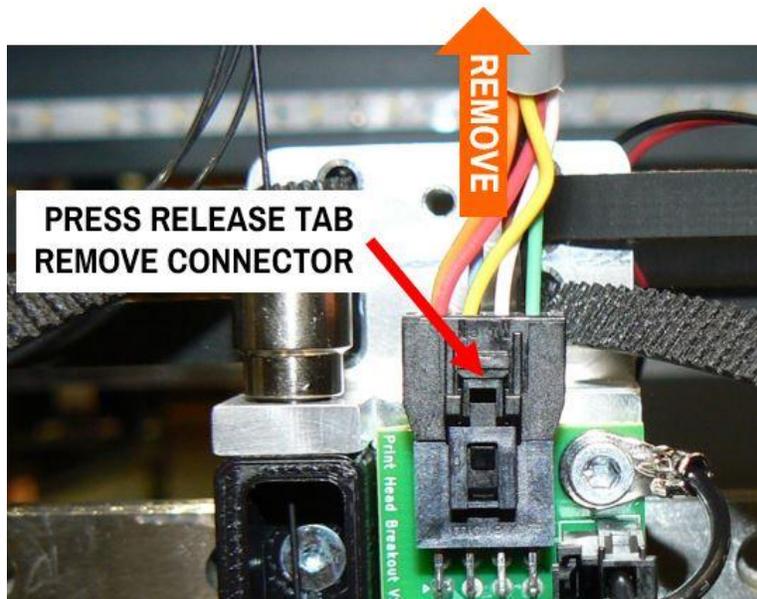
Generally, Fusion3 Support will tell you when you need to perform this repair. It will likely be for one of the following reasons:

- The print head (nanoflex) cable is obviously broken or damaged
- You're getting an intermittent open or short circuit on one or more of the components on the print head assembly. This might include a heater fault, fan or blower issues, or inconsistent heating of the print head.

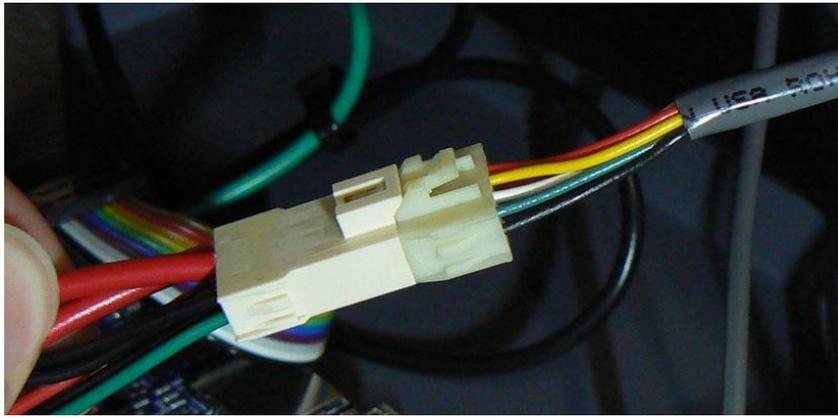
HOW TO REPLACE THE NANOFLEX CABLE

NOTE: Complete removal of the old cable is not required.

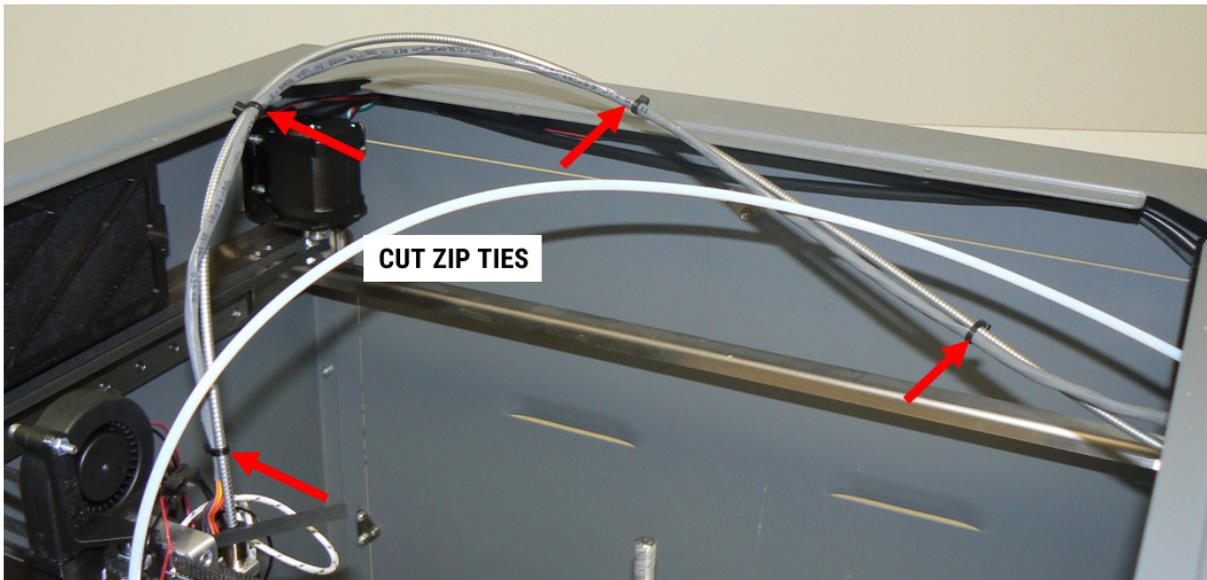
1. Power EDGE off and unplug it from the wall.
2. Remove the electronics bay service door.
3. Unplug the print head assembly end of the cable from the top of the breakout PCB. This connector has a latch you must depress to remove the connector.



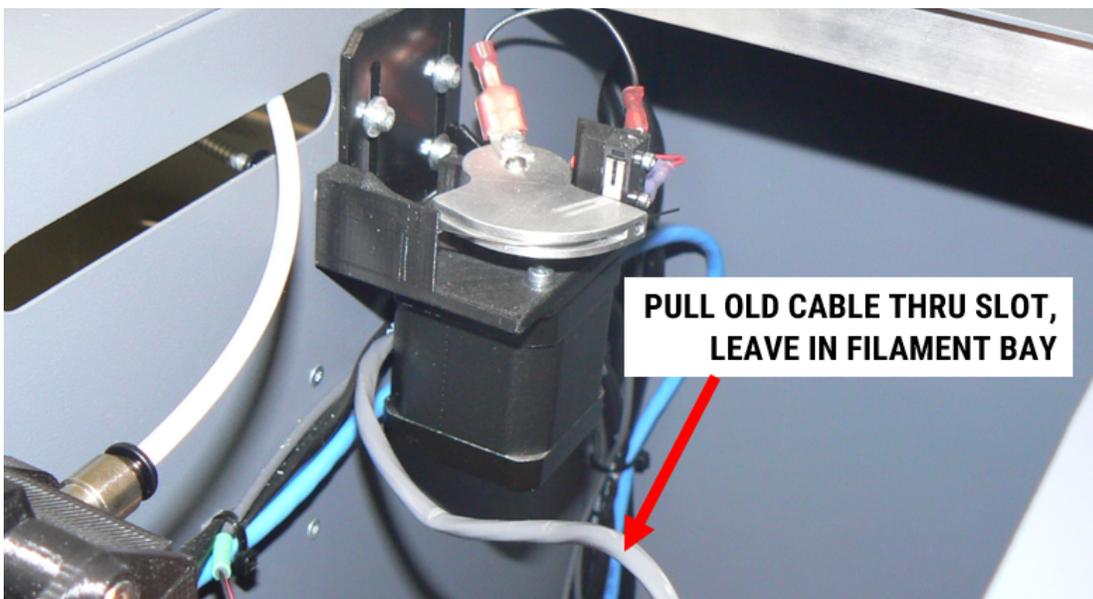
4. Unplug the electronics bay end from its matching connector. This end also has a latch.



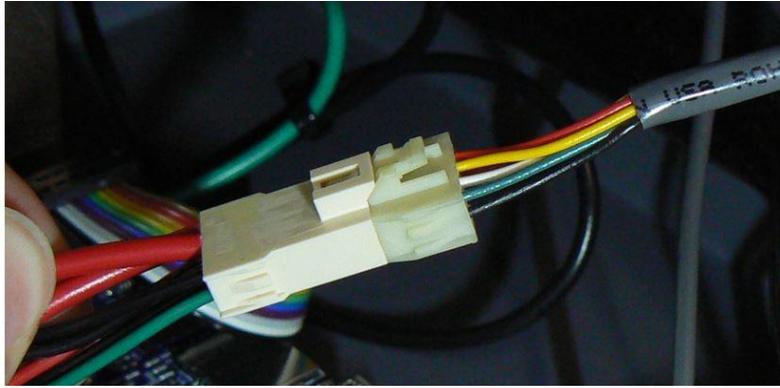
5. Cut the zip ties that hold the old cable to the metal spiral-wound bed probe tube AND to the strain relief bracket (not shown in pic below).



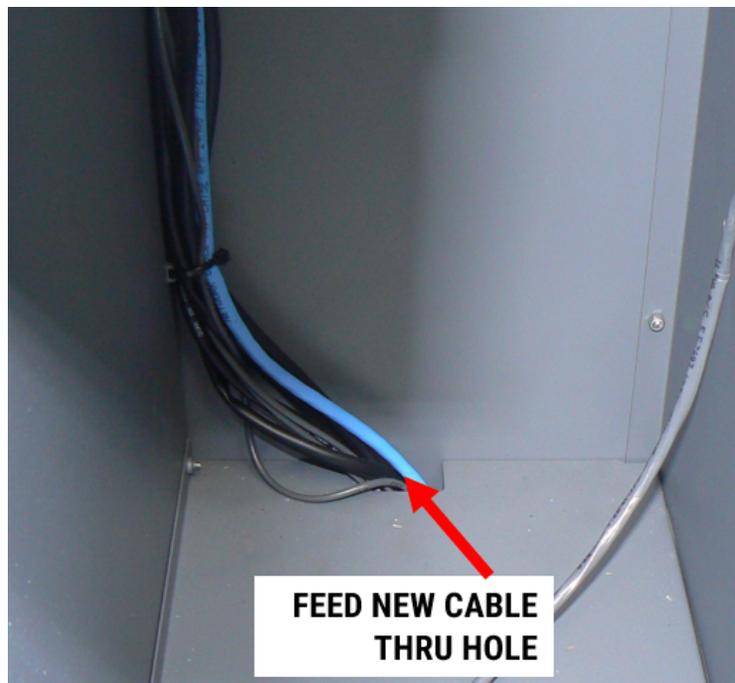
6. AT MINIMUM, if you are not completely removing the old cable, you must get it off the tube and folded back into the filament bay so it's out of the way.

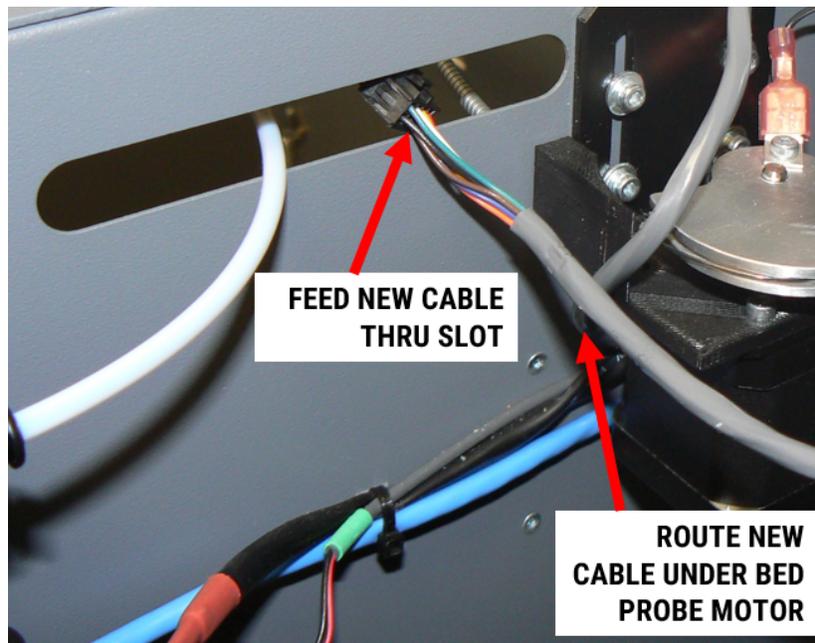


7. Plug the tan end of the new cable into the connector in the filament bay. The color of the connector halves must match (black/black, tan/tan).

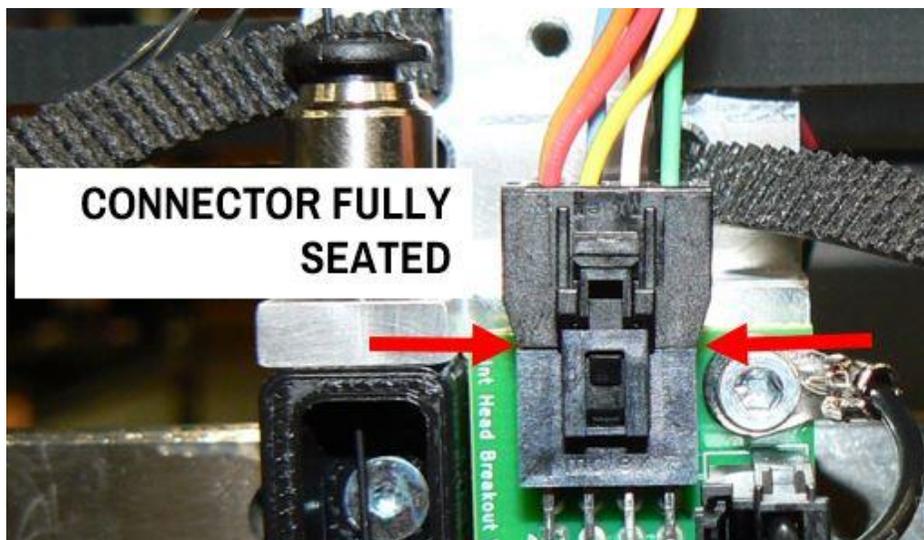


8. Route the black connector end through the top of the filament bay as shown. Follow the path of the old cable to route it up through the filament bay and out the feed-thru slot.

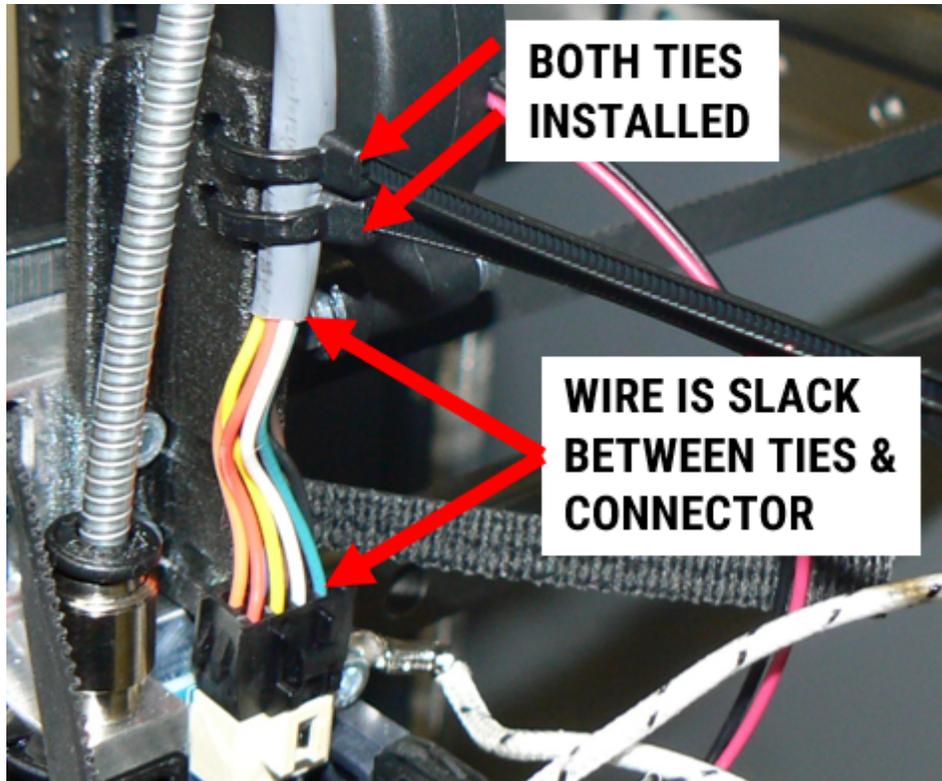




9. With the cable loosely routed through the print chamber, plug in the black connector end to the connector on the top of the breakout PCB.



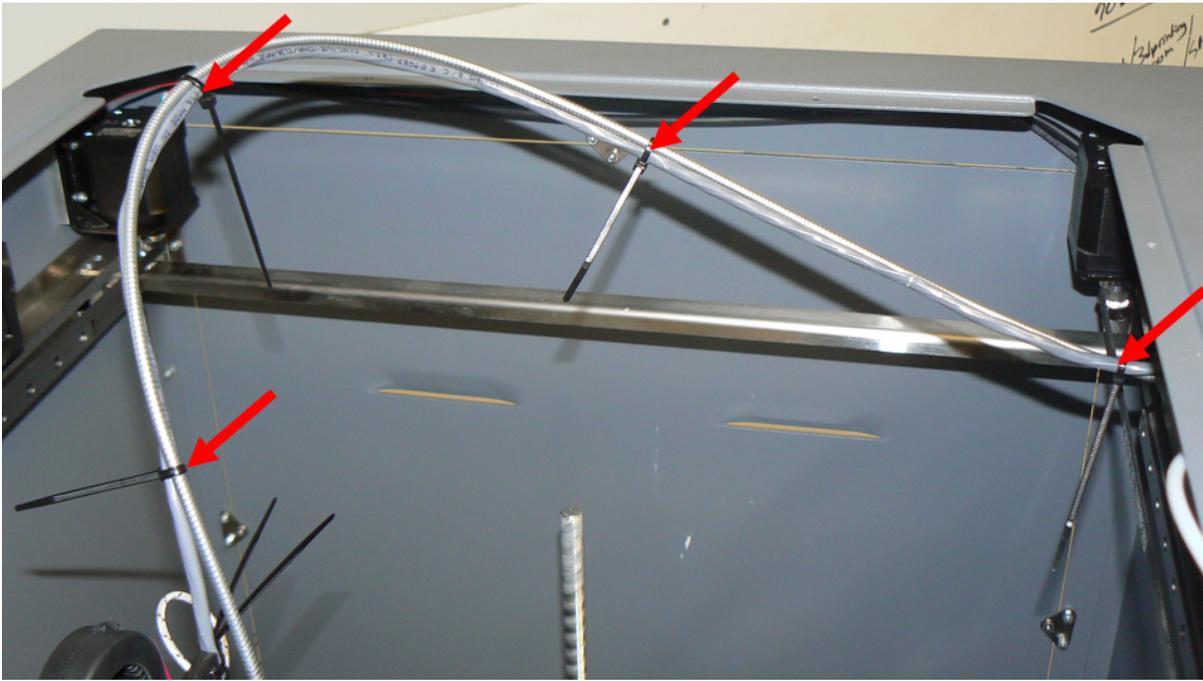
10. Now use zip ties to secure the cable to the strain relief bracket and the spiral wound sleeve as shown. **THE SLACK SHOWN IN THE PICTURES DIRECTLY ABOVE THE CONNECTOR IS CRITICAL TO RELIABLE OPERATION OF YOUR PRINTER. DUPLICATE THE WIRE ROUTING EXACTLY AS SHOWN.**



11. Route the wire along the spiral metal tube. You want to adjust the slack so that there is not excess wire hanging off. But you don't want it to be so taut that it pulls the spiral tube out of shape or out of position.

12. Install a zip tie around the spiral tube and the wire about 3-4" above the bracket.

13. Install 4 zip ties along the length of the spiral tube, spaced evenly apart. The one closest to the print head should be 1" - 1.5" above the top of the strain relief bracket.



14. Pull the zip ties tight, and trim them flush.

15. Move the print head through its full range of XY motion and make sure the wire does not catch on anything and you have sufficient slack to reach all corners.

POWER ON & FUNCTION TEST

1. Plug EDGE back into the wall. Power on.
2. Check that the print head temperature is reporting correctly
3. Manually heat the print head. Make sure:
 - a. It heats and does not generate a heater fault.
 - b. At 45C, the 30mm fan begins to spin
4. Check blower functionality using the slider on the main screen.
5. Go to the Control screen. Make sure the probe smoothly deploys and retracts.
6. Reinstall the electronics bay service panel and the rear service panel.