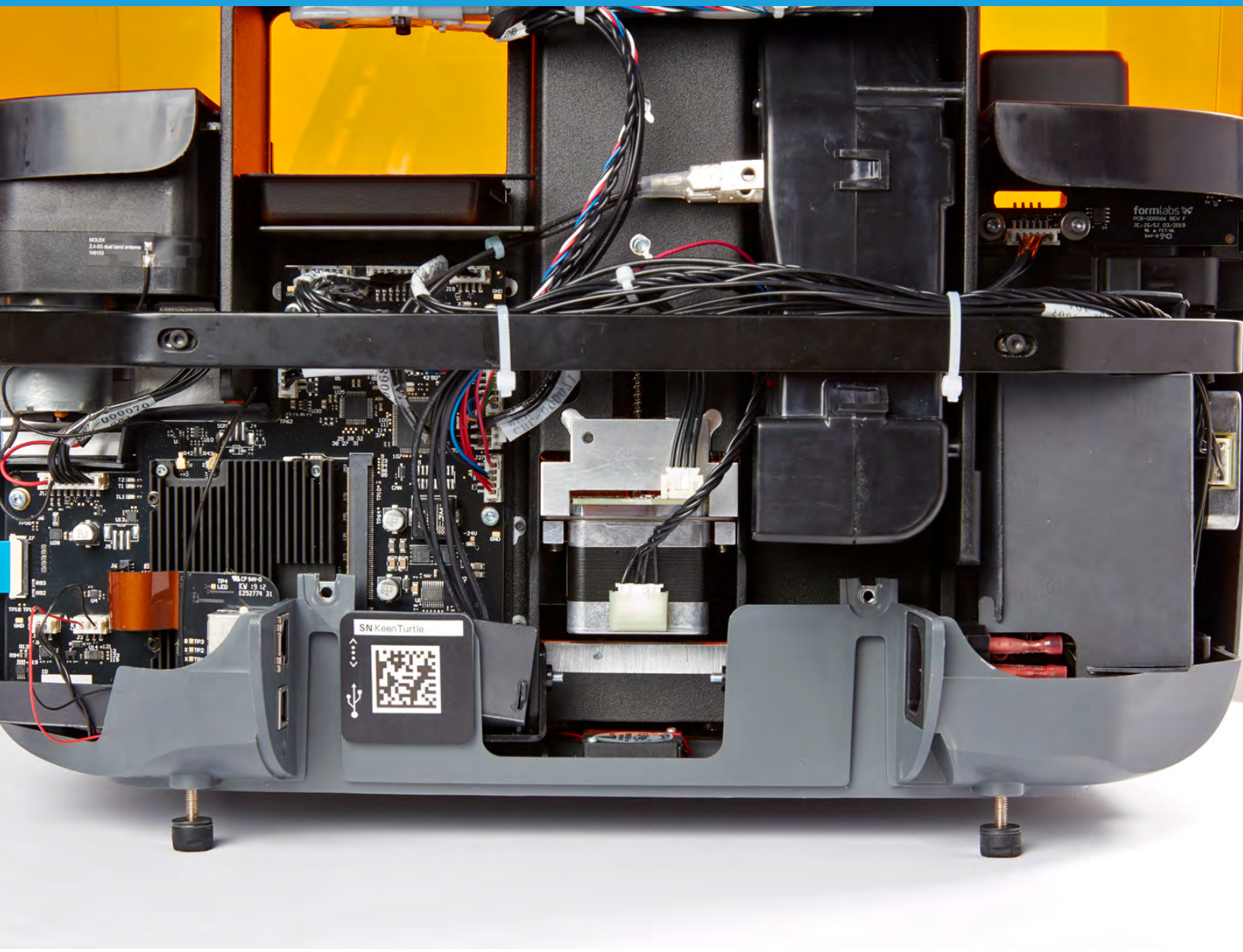

FORMLABS CUSTOMER SUPPORT GUIDES

Reseating the tensioner motor cable (Form 3)

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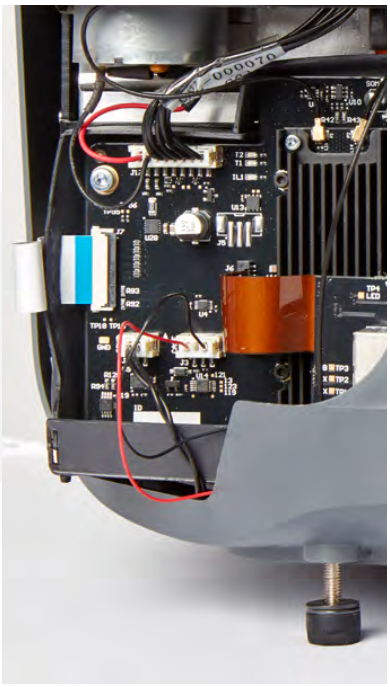
Required Supplies:

- 3 mm hex driver
- 2 mm hex driver
- T10 Torx driver

Estimated time: 5–10 minutes



The bottom of each Form 3 resin tank is made of a flexible film. At the start of each print, the Form 3 applies tension to this film, pulling it taut so that each layer of the part is flat and uniform. If the tensioner motor is damaged or its cable is not fully seated, the printer may not be able to tension the resin tank film and print properly.

Use this guide to reseat the the Form 3 tensioner motor cable.

> **DANGER:** Read and follow all safety instructions and warnings in the operator manual. Replacement with incorrect parts can lead to burns, shock, fire, or explosion. Dispose of all parts in accordance with local regulations.

Preparing the workspace

OVERVIEW: *Prepare the Form 3 and a dust-free workspace for reseating the tensioner motor cable.*

STEP 1: REMOVE THE BUILD PLATFORM
Remove the build platform first to avoid dripping resin into the printer cavity.

STEP 2: REMOVE THE RESIN CARTRIDGE
Remove the resin cartridge and close the vent cap to prevent resin from dripping off of the bite valve and into the printer.

STEP 3: REMOVE AND STORE THE RESIN TANK
Remove the resin tank, place it in the resin tank carrier, and cover it with its lid. Set the carrier and tank aside on a clean, flat surface.

> **NOTICE:** Wear gloves and hold the resin tank by the tank grips on either side to avoid contamination or damage to the underside of the tank.

STEP 4: PREPARE THE WORKSPACE

Clear a workspace around your printer. Ensure that the workspace is well-ventilated and free of dust. Prepare additional space for storing the rear panel of the printer during maintenance.

STEP 5: CLEAN THE PRINTER CAVITY

> **WARNING:** Resin may cause skin irritation or an allergic skin reaction. Wear gloves when handling liquid resin or resin-coated surfaces. Wash skin with plenty of soap and water.

Open the printer cover. Clean any resin pooled on the printer floor, inside the printer cavity, with paper towels. Dampen the paper towels with isopropyl alcohol if necessary to fully remove the resin.

> **DANGER:** Fire hazard. IPA is flammable. Keep containers closed, and keep out of the reach of children.

STEP 6: UNPLUG THE PRINTER

Disconnect the power cable from the printer before continuing with maintenance. Do not perform maintenance on the printer while it is connected to power. Wait five minutes after disconnecting the printer from power before proceeding.

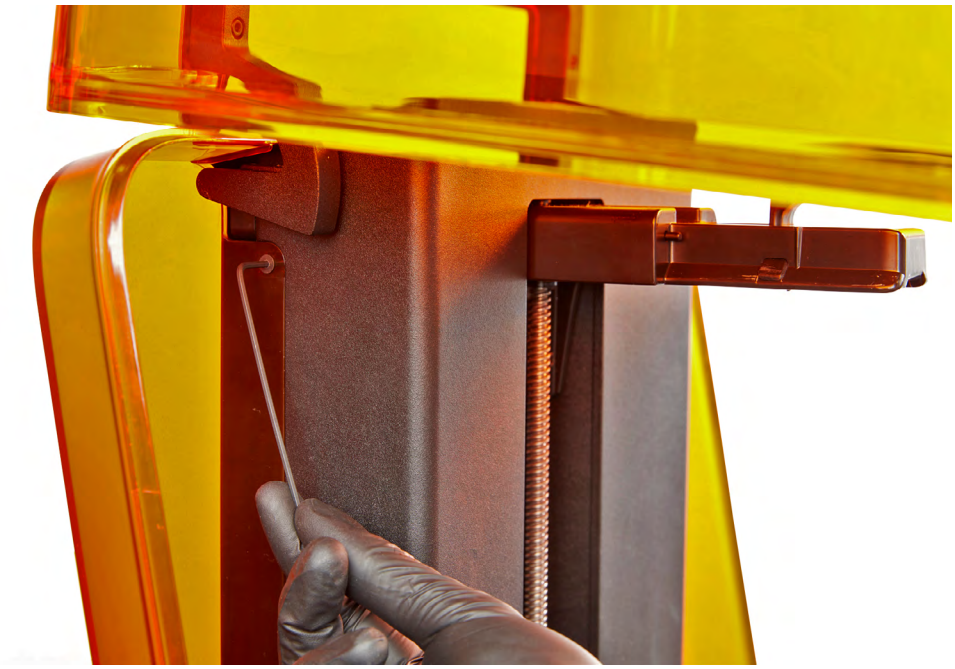
> **DANGER:** Performing maintenance on the printer while it is plugged in increases the risk of electric shock. Never remove the rear shell of the printer while the printer is plugged in. Never reconnect the printer to power while the rear shell is uninstalled.

Removing the rear shell

OVERVIEW: *Remove the rear shell of the printer.*

> **NOTICE:** The Form 3 contains sensitive electronic components. Ground yourself before touching any electronics in the printer by using a grounding strap or touching a grounded piece of metal.

STEP 1: REMOVE THE REAR SHELL SCREWS (INTERNAL)



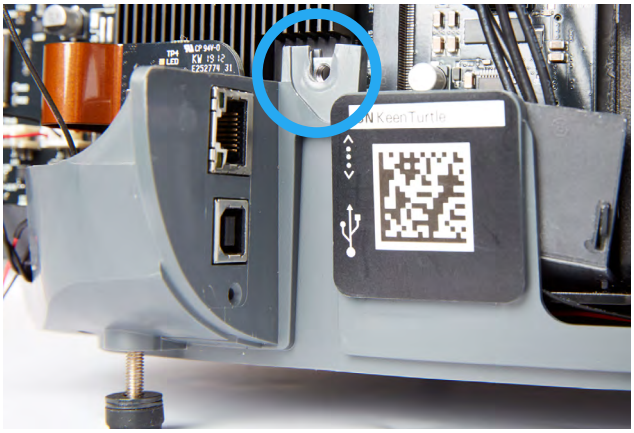
Open the printer cover. There is one screw on each side of the Z-tower. Depending on the age of your printer, they may be 2 mm hex screws or T10 Torx screws. Use the appropriate driver to loosen and remove the two screws on the side of the Z-tower.

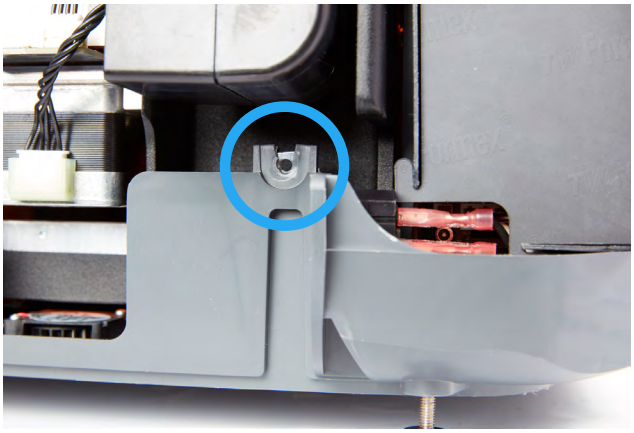
STEP 2: REMOVE THE REAR SHELL SCREWS (EXTERNAL)

Rotate the printer to access the rear. Use a 3 mm hex driver to loosen and remove the two screws on the back of the printer, near the power and data ports.

STEP 3: REMOVE THE REAR SHELL

Gently flex the sides of the rear shell outwards to unclip it from the printer frame. Pull the rear shell directly away from the printer to remove it. Set the rear shell aside.



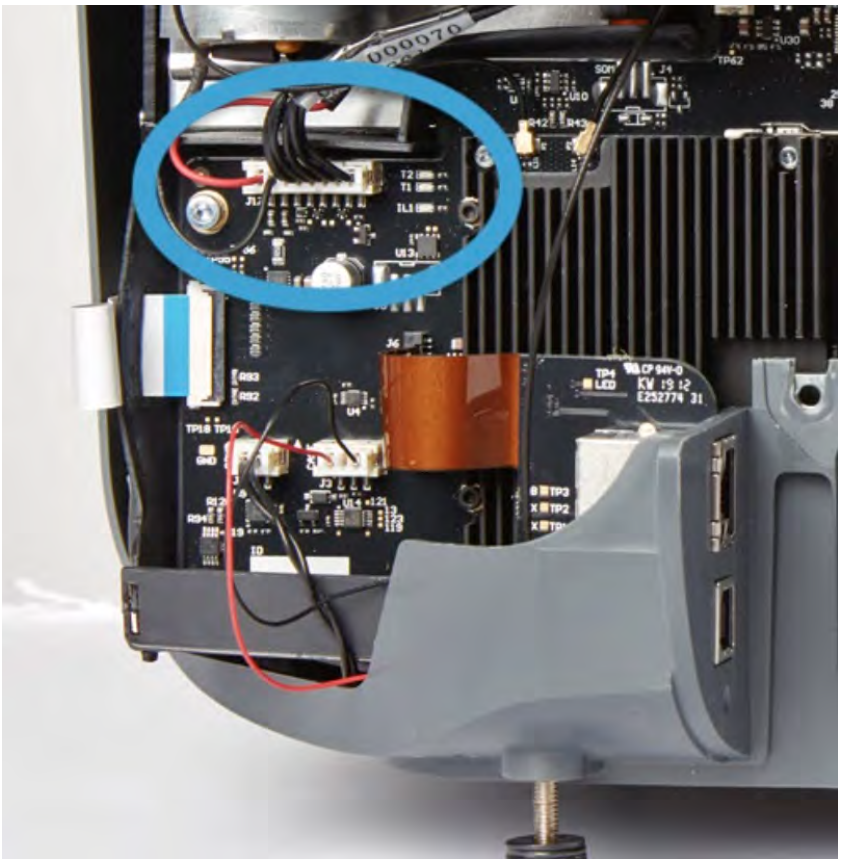


Locate—but do not remove—the two nuts, retained in the lower shell, that previously secured the external rear shell screws. Ensure that they did not come loose while removing the rear shell.

Reseating the tensioner motor cable

OVERVIEW: *After uninstalling the rear shell, locate and reseat the tensioner motor cable.*

STEP 1: LOCATE THE TENSIONER MOTOR CABLE



The tensioner motor cable plugs into the motherboard at the rear of the printer. The cable is plugged into the board at its top-left edge.

STEP 2: RESEAT THE TENSIONER MOTOR CABLE

Grip the tensioner motor cable connector and disconnect it from the motherboard. Do not pull on the wires themselves. Reconnect the cable to the motherboard. The connector will only plug into the motherboard properly in the correct orientation. Be careful not to bend the pins in the plug. Ensure that the cable is fully seated in its plug and is undamaged.

Reinstalling the rear shell

OVERVIEW: *After reseating the tensioner motor cable, reinstall and secure the rear shell.*

STEP 1: REPLACE THE REAR SHELL

Place the rear shell back onto the printer. Press it towards the front of the printer to ensure that it fully seats in place. There should be no gaps between the rear shell and the side or bottom shells.

STEP 2: SECURE THE REAR SHELL

Using a 3 mm hex driver, screw the two 3 mm hex screws into the rear of the printer.

Open the printer cover. Using a 2 mm hex driver or a T10 Torx driver (depending on the type of screws in your printer), screw the two Z-tower screws into the sides of the Z-tower.

Finalizing the repair

OVERVIEW: *After reinstalling the rear shell, power on the printer and perform final checks.*

STEP 1: POWER ON THE PRINTER

Close the printer cover and connect the power cable to the printer and the power supply. The printer will initialize.

STEP 2: TEST THE REPAIR

Start a print to check that the tensioner motor turns and tensions the resin tank film. Contact Formlabs Support or your authorized reseller to share the results of the procedure.