Formlabs Form 2: Changing Resin Cartridge and Tank

A guide explaining how to change materials on the Formlabs Form 2 printers

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Introduction

This guide will explain how to change the material on the Formlabs Form 2

Source: Inspecting the Tank, Replacing Resin Tank

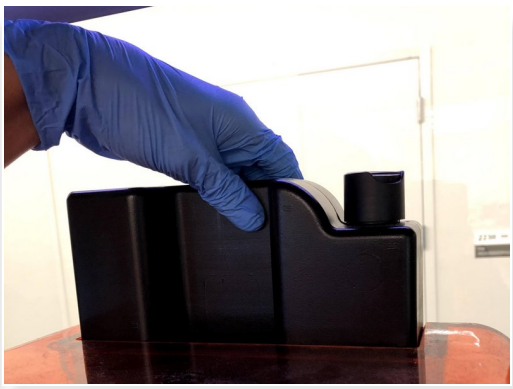
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Step 1 — Remove Cartridge



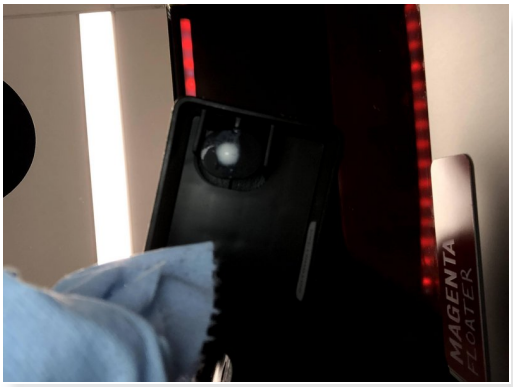


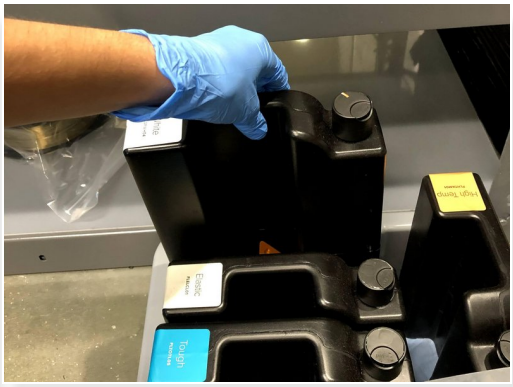


⚠ Put on nitrile gloves and keep them on throughout this entire process

- Retrieve the cardboard empty resin tank box and the new resin tank box you will be putting on the machine
  - ⓘ Using the cardboard box is safer than leaving the tank out in the open
  - ⓘ Getting the new tank box out helps minimize potential dust settling on the exposed glass window and ensures you actually have the material you want to switch to
- Take the orange nipple cap and tank cover out of the empty box
  - ⓘ The orange nipple cap is used to keep the resin from dripping out of the nipple on the bottom of the **resin cartridge** when it is being stored
- Push down the cap of the **resin cartridge** if it is not already closed
- Pull the **resin cartridge** straight up using the indent in the back of the container

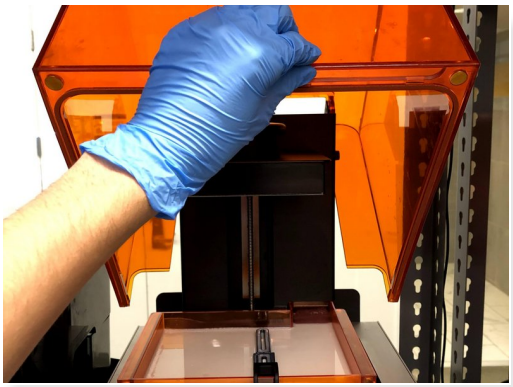
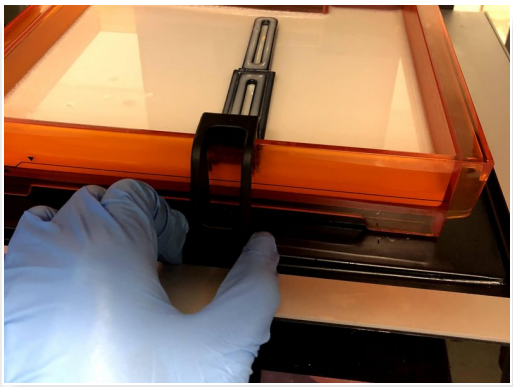
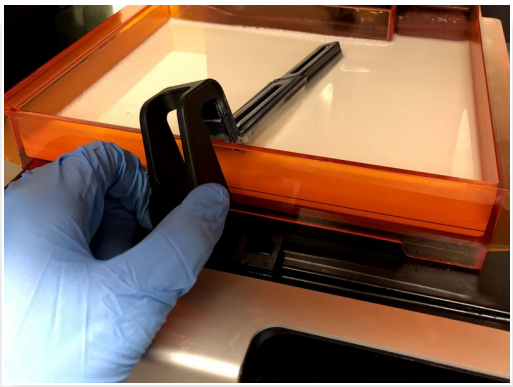
Step 2 — Store Cartridge





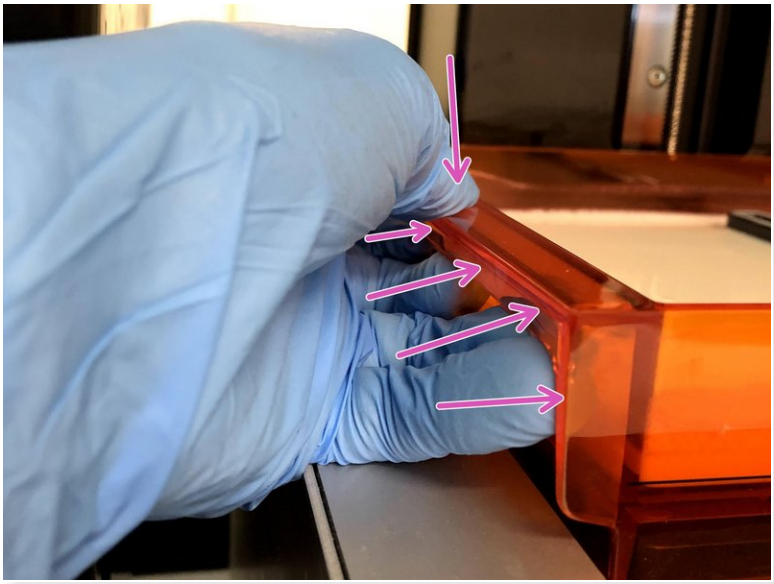
- Clean the nipple on the bottom of the **resin cartridge** with a paper towel
- Place the orange nipple cover on the nipple
- Place the **resin cartridge** in the specified storage location

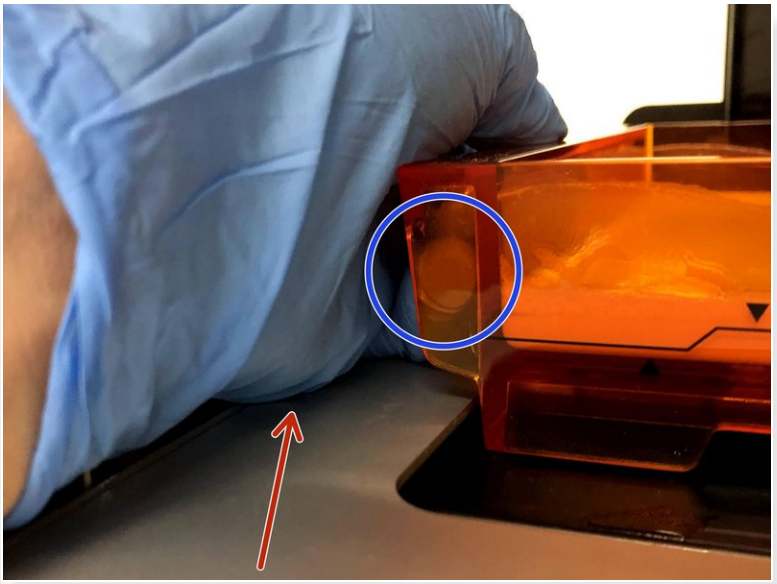
Step 3 — Remove Wiper

- Lift up **orange hood** of printer
- Pull back on base of **wiper arm** to release it from machine
- Leave the wiper in the tank

Step 4 — How to grip the Tank





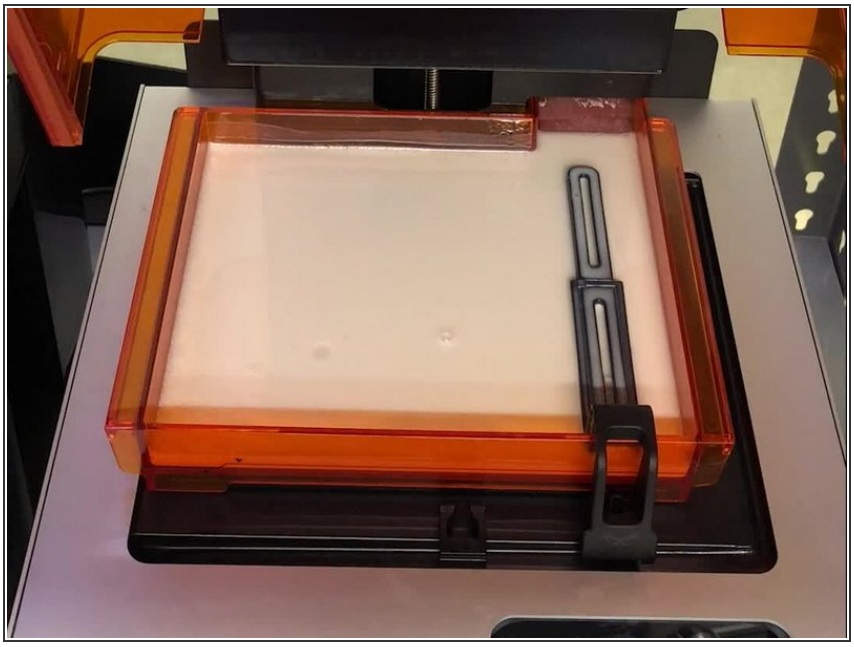
⚠ Never touch the underside of the **resin tank** as light needs to propagate unobstructed by dust or other particulate to achieve successful prints

⚠ Never touch the glass optical window

- Grip the edges of the **resin tank** with your four fingers on the bottom and your thumb on the top edge
- Use your pinky finger to push directly back on the front lip of the **resin tank**
- Keep the edge of your palm against the base of the printer to act in a frictional capacity
- Instead of pulling directly back rotate your hands about the pivot point created from the edge of your palm to limit sudden movement

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Step 5 — Remove Tank



- Carefully rotate your hands to remove the **tank** from the machine
  - ⓘ This is going to take some force so be careful to not jolt back and spill the resin

Step 6 — Store Tank







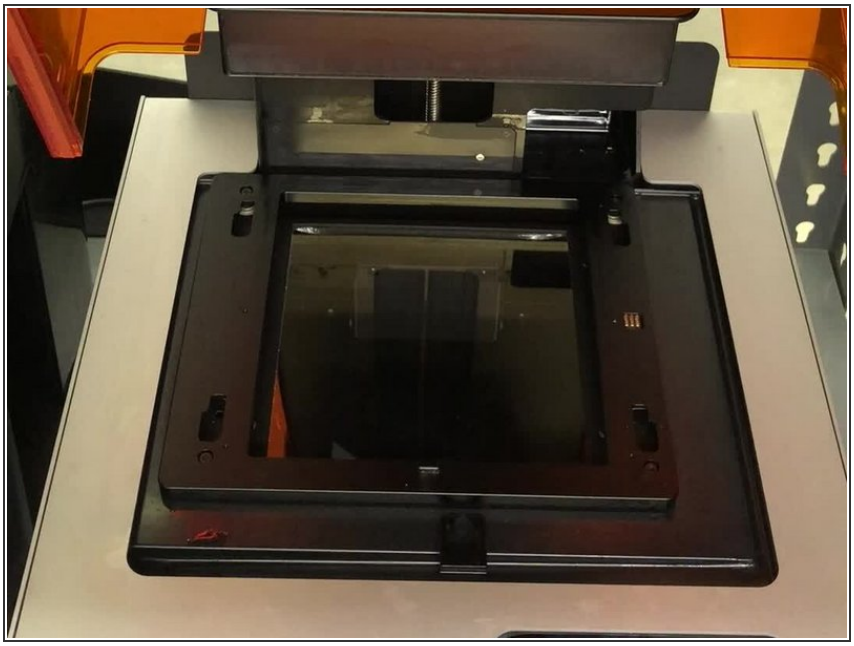
- Open empty tank storage box
  - Make sure the label on the box matches the resin you're about to put in it
- Gently place the tank in the box and cover with the black plastic cover
  - ⓘ Make sure the wiper arm is situated in the pocket of the cover so the box is able to close
- Place the tank box in the specified storage location

Step 7 — Open New Tank



- Open the box and remove the cover from the tank

Step 8 — Install Tank

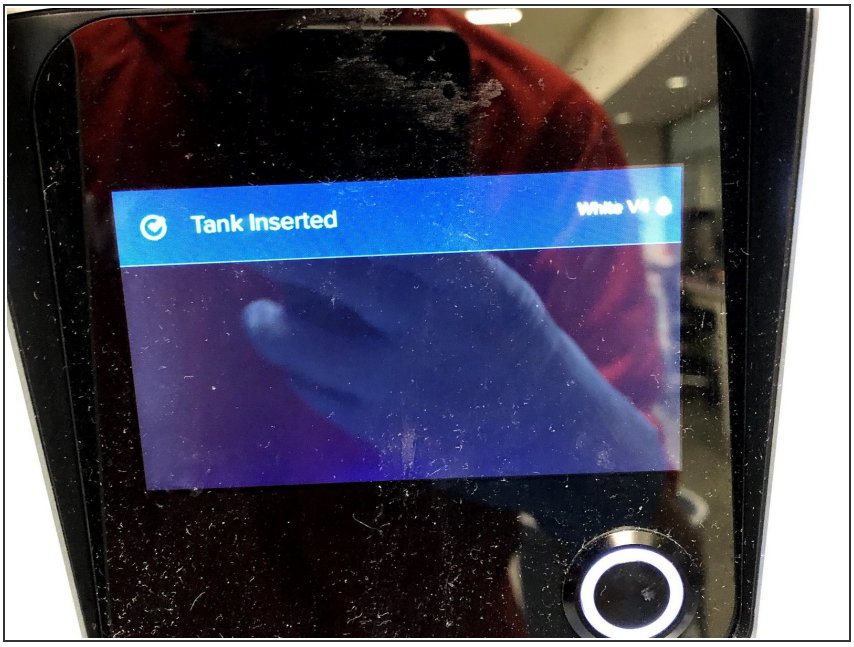


- After confirming the integrity of the tank place it in the printer
- Line up the tracks on the bottom of the tank with their mates on the printer
- Then using the same grip discussed in step 3 rotate your hands forward until you hear the tank *click* into place
- Slot the wiper arm into place by placing the male end of the wiper into the female slot on the machine

ⓘ This functions exactly like the industrial teardrop pallet shelving

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Step 9 — Install Tank II

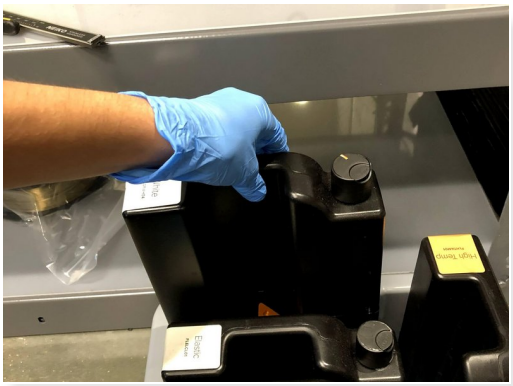


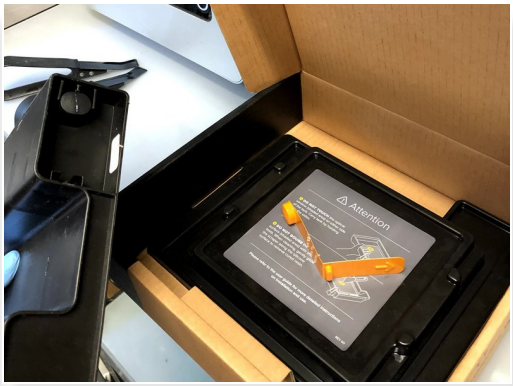
- The printer should automatically recognize the resin that is inside the tank from the data connector

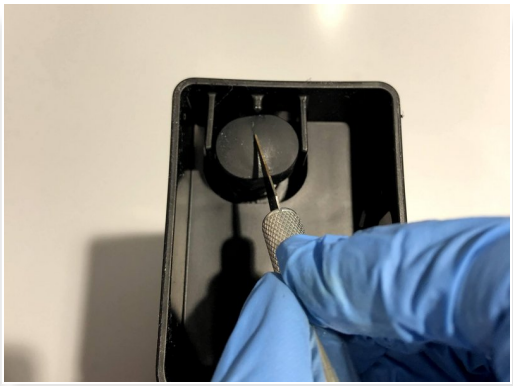
  If the printer doesn't recognize the tank pull it out and try again

  If the problem persists talk to your peers or contact Formlabs support for guidance on how to proceed

Step 10 — Retrieve Cartridge







- Retrieve the cartridge from the specified storage location
  - If the material is not there, get a new cartridge from storage
- Remove the orange tab from the bottom nipple and place it in the same box that you just got the tank out of

ⓘ If you open a new cartridge you'll need to cut the bottom nipple so that it opens properly

- Turn the cartridge upside down and use a razor knife to trace the pre-cut line until you're able to open the nipple and see into the cartridge

Step 11 — Install Cartridge





- Orient the cartridge so that the label faces away from you
- Proceed to lower the cartridge into place at the back of the machine
- The machine should automatically recognize the cartridge just like the tank so once it does you're all set