

How to Replace the Extruder

IMPORTANT: *If this extruder has been sent as a “Swap” exchange extruder, for a repair, we really need you to send back your old extruder to us! Contact robin@polyprinter.com to get a prepaid shipping label to put on the box. Put the old extruder into the plastic carrier and put that into the box we shipped the new extruder to you in. Cover the old shipping label with the new one. **IF THE EXTRUDER IS NOT RETURNED WITHIN 30 DAYS, YOU WILL BE CHARGED \$250! (And it will still be broken :-)***

Removal

1. Raise the extruder to roughly the height at which you raise it in order to change a nozzle.
2. Remove the electrical connector at the rear of the base of the extruder.
 - a. It helps to look through the side panel area first, to identify the yellow plastic gripper that holds the actual connector (black).
 - b. The gripper has a bendable tab on it that will need to be squeezed upwards as you are trying to pull the connector off.
 - i. A good method of removing the gripper is to work from the front.
 - ii. Place one hand on each side of the extruder, just above both smooth rods.
 - iii. Each hand then pinches half of the gripper, so that your thumbs are on the top side of it, and your index fingers both share the bendable tab on the bottom of it.
 - iv. Squeeze the tab upward with your index fingers, and then push the gripper away from you while slightly rocking it sideways to help it come loose more easily.
3. The extruder is held on with two screws, from below. The screw heads are painted yellow to help you identify them.
 - a. Use the 2.5mm hex driver from the Owner’s Kit.
 - b. Remove both screws completely.
 - c. The extruder is hooked onto the X carriage under the back of the extruder motor. To remove it, tilt it up at the front, like a dump truck. Once the front of it (fan duct, hot end etc.) is clear of the X carriage, you should be able to lift the entire extruder up and away from the X Carriage.
 - d. You may need to maneuver it around a little if the Z was raised close to the top of the printer, to actually get it out from being trapped up there.

Installation

Installation is the reverse of removal, but has an added step at the end because the Z-height will need to be reset before you can print with the new extruder.

Put the extruder into place and fasten the screws

Look for the two hooks (on the blue printed part) which engage the rear of the X Carriage. Position the extruder so that those hooks line up with the holes in the rear of the X Carriage (look through the right side door opening to get a view of this).

1. Holding the extruder tilted upwards, as it was when you removed the original one, engage the hooks on the extruder with the slots on the back of the X Carriage.
2. Pull toward the front of the printer to keep the hooks engaged, and lower the front of the extruder like a dump truck lowering its bed. You may need to wiggle it a bit to get the fan scoop and other bits to go down through the opening in the X Carriage fully.
3. Make sure that the extruder rests completely or almost completely flat on the top surface of the X Carriage. If not, check to see if the hooks are actually engaged vs. sitting up on top of the X Carriage. If they are not engaged properly, tilt and lift the extruder off and try again.
4. Once the extruder can sit flat, it is safe to re-install the two long screws with yellow heads. Install the left screw first. You may need to wiggle the extruder a bit in order to get the screw to line up and start going into the proper hole. Using the 2.5mm hex driver, thread the screw in partially to make sure it's engaged.
5. With the first screw engaged but not tight, you should be able to still wiggle the extruder a little which will help you line up the right hand screw to engage it. Thread it in using the hex driver and if everything looks lined up and the extruder is sitting nicely on the X Carriage, you can gently snug up this screw.
6. Snug up the left screw, then tighten with low to moderate force.
7. Tighten the right screw with the same low to moderate force.

Connect the connector

1. Look through the side opening of the printer and line the black connector in the yellow gripper with the corresponding connector on the extruder.
2. Engage the connector and when it is in place and goes towards the front of the printer fully, give it a firm push. You should hear a small click, indicating that the retainer has latched.

Get the printer operating again

1. Reset the printer, using the red reset button on the light switch box.
2. Reconnect in PolyPronter.
3. Perform a Paper Test to determine the new Z Height Adjustment level.