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How to replace X and Y Motors (CORE One)




help.prusa3d.com/g922449

Escanea el código QR para ver la última versión de este capítulo.

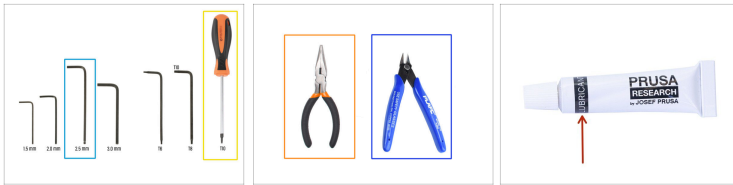


PASO 1 Introduction



- This guide will take you through the **X an Y motors** replacement on the Prusa CORE One.
 - Las piezas de repuesto están disponibles en nuestra tienda prusa3d.com.
-  Ten en cuenta que debes iniciar sesión para tener acceso a la sección de repuestos.

PASO 2 Tools Required






- **Por favor prepara las herramientas para este guía:**
 - 2.5mm Allen key
 - Llave Torx T10 / Destornillador
 - Needle-nose pliers
 - Se recomienda el uso de alicates de corte plano como herramienta opcional.
- Prusa lubricant or another suitable grease (available in e-shop)

PASO 3 Printer Preparation 1



 Before you begin, make sure the **printer has cooled down** to ambient temperature.

-  En la impresora, ve al menú **Control** y selecciona **Auto Home**.
-  Go to **Control > Move Axis > Move Z** and enter a value around 200 mm
-  El objetivo es bajar la base calefactable lo suficiente como para que sea fácilmente accesible desde arriba, dejando al mismo tiempo algo de espacio debajo.

PASO 4 Printer Preparation 2



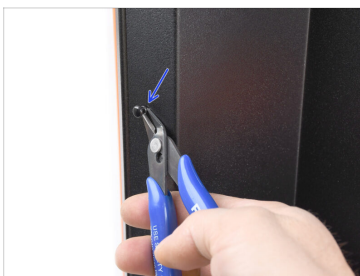
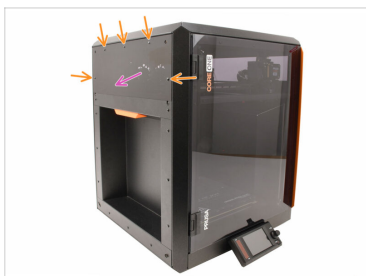
- Apaga la impresora mediante el interruptor situado en la parte posterior.
- Desconecta la impresora de la corriente.
- Retira la lámina de acero, en caso de que aún esté colocada.

PASO 5 Top Cover Removal



- Open the printer. From the inside, reach for the nylon rivet on the front left of the top cover. Push it out to unlock it.
- A continuación, retira el remache desde el exterior.
- Retira los remaches de nylon restantes de la cubierta superior utilizando la misma técnica.
- Retira la cubierta superior.

PASO 6 L Side Cover Removal



- Retira los cinco remaches de nylon que sujetan la cubierta lateral de plástico.
- Recomendamos utilizar alicates de corte plano para levantar con cuidado la parte superior del remache y desbloquearlo. A continuación, retira la parte inferior del remache.
- Retira la cubierta lateral de plástico.

PASO 7 Extracción Panel Lateral L



- Retira los remaches de Nylon marcados que sujetan el Panel Lateral de Chapa.
- Remove the panel.

PASO 8 Extracción Cubierta Trasera 1



- En el interior de la impresora, retira los dos tornillos que sujetan la cubierta posterior.
- En la parte posterior de la impresora, desliza la cubierta central hacia abajo.
 - 📌 Si te resulta difícil moverla, utiliza un destornillador como palanca a través de la abertura para ayudarte.
- Ensure the four hooks on top of the cover have disengaged from the metal chassis.

PASO 9 Extracción Cubierta Trasera 2



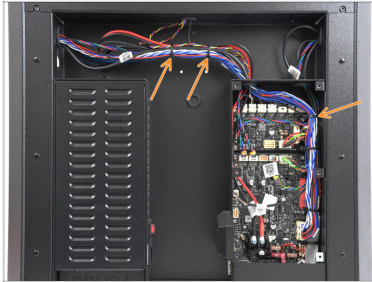
- Mueve la tapa ligeramente hacia atrás.
- Tira de la parte inferior de la cubierta hacia fuera mientras inclinas la parte superior hacia la impresora. Esto la desenganchará del haz de cables situado detrás.

PASO 10 xBuddy Cover Removal




- Retira los seis tornillos que sujetan la cubierta de la xBuddy.
- Retira la tapa deslizándola hacia fuera.

PASO 11 Cable bundle Disassembly



- On the back of the printer, carefully cut off the marked zip-ties holding the cable bundles.

 Proceed extremely carefully to avoid damaging any cables.

PASO 12 Y Motor (Right) Disconnecting



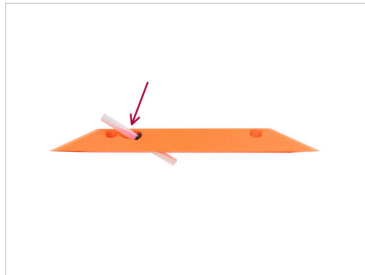
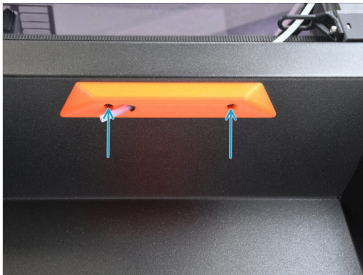
- ⚠ First, we will be replacing the **motor on the right side** (when viewed from the printer's front)
- ⓘ Although a given motor drives both the X and Y axes in the Core-XY configuration, the one on the right side is **labeled as "Y"** on the printer.
- 🟡 Disconnect the Y-motor cable from the xBuddy board.
- 📌 There is a safety latch on the connector, which must be pressed in, in order to disconnect it.
- 🟠 Guide the Y-motor cable out of the xBuddy box and let it hang freely, for now.

PASO 13 R Side Cover Removal



- Let's move onto the right side of the printer.
- Retira los cinco remaches de nylon que sujetan la cubierta lateral de plástico.
- Retira la cubierta lateral de plástico.

PASO 14 Side Handle Removal



- Using the T10 Torx key, remove both screws from the handle.
- Retira el asa junto con el tubo corto de PTFE. Deja el tubo insertado, por ahora.

PASO 15 R Side Panel Removal

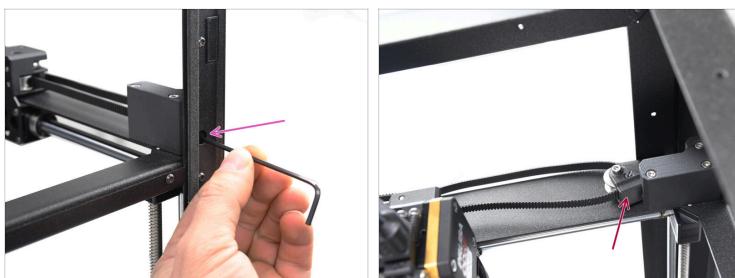


- Remove 11 Nylon rivets holding the sheet metal side panel.

⚠ Proceed carefully to avoid cutting the rivet into pieces.

- Retira el panel lateral de la impresora.

PASO 16 Belts Loosening 1



- On the front right side of the printer, fully loosen the belt tensioning screw.

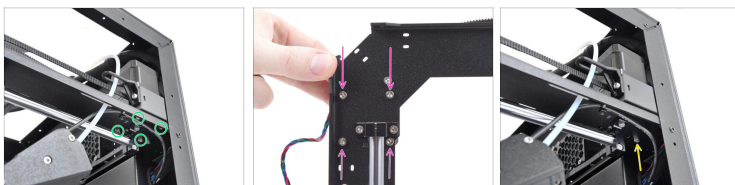
- Keep loosening the screw until the pulley assembly disengages from the tensioner part.

PASO 17 Belt Loosening 2



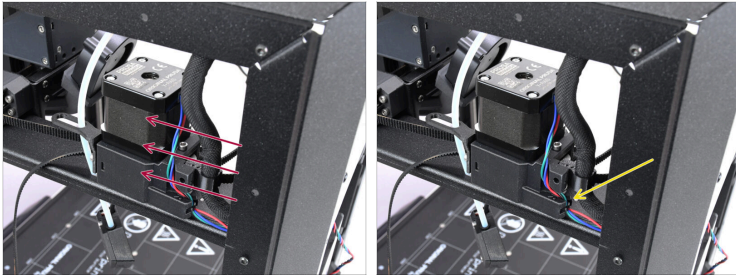
- On the front left side of the printer, fully loosen the belt tensioning screw.
- Keep loosening the screw until the pulley assembly disengages from the tensioner part.

PASO 18 Y Motor Assembly Removal



- On the right side of the printer, remove the four marked M3x35 screws holding the motor.
- These screws can be identified from below by their square pattern.
- Remove the M3x10 screw holding the motor assembly.

PASO 19 Y Motor Removal



- ◆ Move the motor assembly towards the front.
 - ⓘ Make some space at the back to access the cable. Proceed carefully to avoid damaging any cables.
- ◆ Carefully cut off the zip-tie holding the motor cable to the motor assembly.
 - ⚠ Proceed extremely carefully to avoid damaging the cable, as this spot is tight with limited space behind it!

PASO 20 Y Motor Removal 2



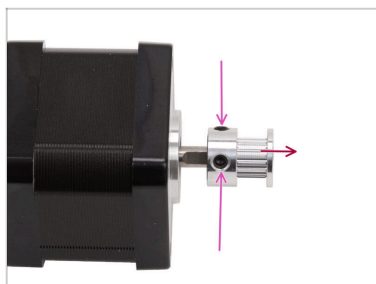
- Lift the motor from the plastic assembly, in order to remove it.



Note that the belt is still wrapped around the motor pulley. Proceed carefully to disengage the motor, keeping the belt in its original shape to simplify reinstallation later.

- Guide the motor cable out of the rear plate.
- Guide the motor cable upward, behind the XY assembly. Then, remove it from the printer entirely.

PASO 21 Y Pulley Removal



- Using the 2mm Allen key, loosen the two grub screws on the motor pulley.
- Remove the pulley from the motor and save it for later use.

PASO 22 Y Motor Preparation



⬠ **Para los siguientes pasos, por favor prepara:**

⬠ Y-motor (1x)

⬠ Assembly-multi-tool (1x) *Supplied with the printer kit.*

⬠ Zip-tie (1x)

PASO 23 Y Pulley Installation



- Note the flat part on the motor shaft. Rotate the motor shaft with the flat part facing you.
 - ⚠ Slide the Pulley on, and **note the CORRECT orientation**. The Y-axis pulley orientation is **DIFFERENT** from the X-axis. Make sure the pulley teeth face away from the motor. Use the wider hook on the assembly tool.
- Utilizando el gancho de la Assembly-multi-tool, coloca la parte curvada más gruesa entre la polea y el motor.
 - 📌 Do not try to hook it around the shaft. Just rest the tool against the motor and make sure the hook tip slides between the motor and the pulley.
- Push the pulley towards the tool and firmly tighten one of the screws against the flat part on the shaft.
- Gira la polea y aprieta firmemente el segundo tornillo prisionero.
- ⚠ **Double-check the pulley orientation. The teeth must face away from the motor.**

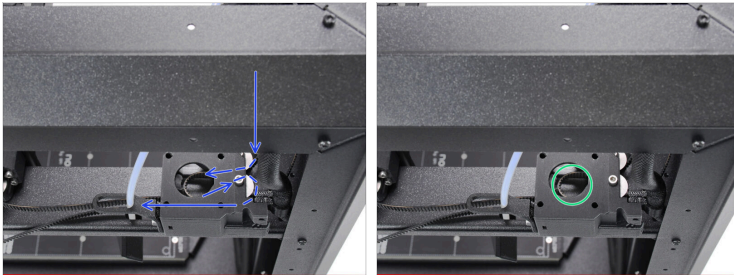
PASO 24 XY belts INFO



- i** The next steps cover the motor installation where belt guidance is an integral part of the work. Before starting, refer to the illustration for an overview and better understanding of each belt's path.

- ◆ Y-motor belt is at the **bottom position**.

PASO 25 Y Motor Belt Preparation



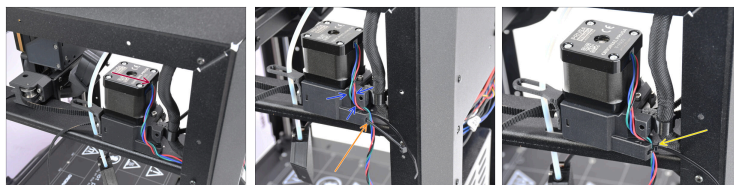
- ◆ Arrange the belt inside the plastic part as shown in the diagram.
- ◆ Create a loop on the inside where the motor pulley will be inserted.

PASO 26 Y Motor Installation



- ✦ Insert the Y motor into the motor assembly so that the belt wraps around the pulley.
- ✦ Check through the inspection window on the inside of the printer, that the belt has wrapped properly around the pulley.

PASO 27 Y Motor Installation 2



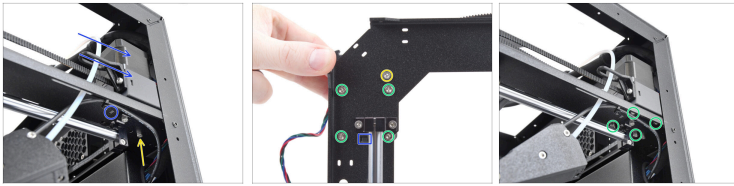
- Orient the motor so that its cable is pointing to the back of the printer.
- Guide the cable through the dedicated channel on the side of the plastic part.
- Insert a zip tie into the opening on the back of the plastic part.
- Secure the cable with a zip tie, but do not overtighten it—the cable should still be able to move slightly behind it.
- Carefully trim the excess zip tie and position the knot toward the inside of the printer to prevent it from obstructing part placement.

PASO 28 Y Motor Installation 3



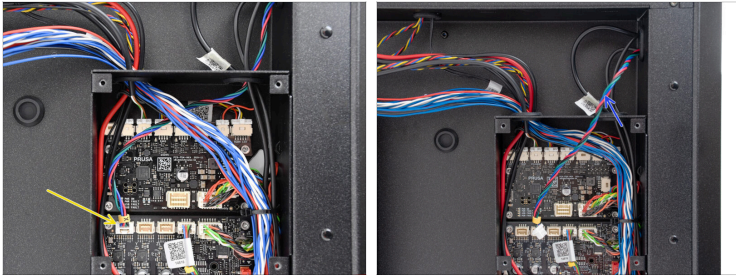
- Guide the motor cable through the dedicated opening, towards the back of the printer.

PASO 29 Y Motor Installation 4



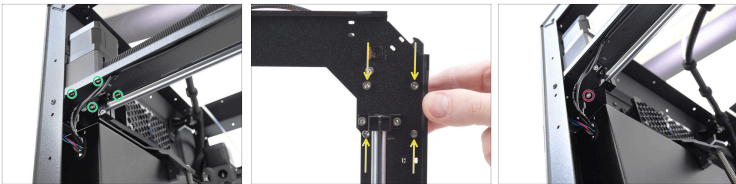
- ◆ Move the motor assembly back into its original position, until the small protruding tab aligns with the opening in the Core-XY assembly.
- ◆ Fix the assembly in place using the M3x10 screw in the outermost hole.
- ⚠ **Make sure the assembly is well seated, no cable is getting pinched.**
- ◆ Secure the assembly together using the four M3x35 screws.

PASO 30 X Motor (Left) Disconnecting



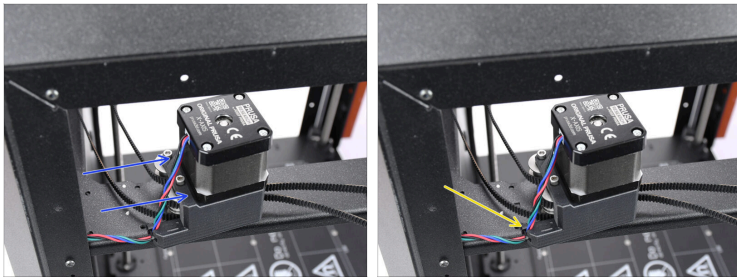
- ⚠ Next, we will be replacing the **motor on the left side**. (when viewed from the printer's front)
- Disconnect the X motor cable from the xBuddy board.
 - 📌 There is a safety latch on the connector, which must be pressed in, in order to disconnect it.
- Guide the X motor cable out of the xBuddy box and let it hang freely, for now.

PASO 31 X Motor Assembly Removal



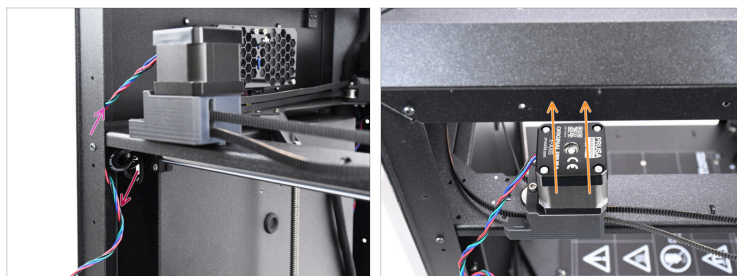
- On the left side of the printer, remove the four marked M3x35 screws holding the motor.
 - These screws can be identified from below by their square pattern.
- Remove the M3x10 screw holding the motor assembly.

PASO 32 X Motor Removal




- ◆ Move the motor assembly towards the front.
 - ⓘ We need to make some space at the back to work with the cable; proceed carefully to avoid damaging any of the cables.
- ◆ Carefully cut off the zip-tie holding the motor cable to the motor assembly.
 - ⚠ **Proceed extremely carefully to avoid damaging the cable, as this spot is tight with limited space behind it!**

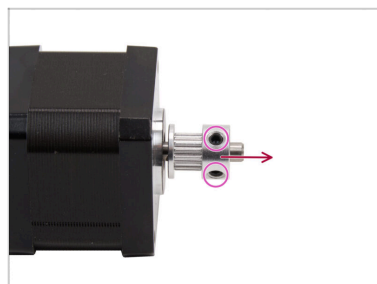
PASO 33 X Motor Removal 2



- Guide the motor cable out of the rear plate.
- Guide the motor cable upward, behind the XY assembly. Then, remove it from the printer entirely.
- Lift the motor from the plastic assembly, in order to remove it.

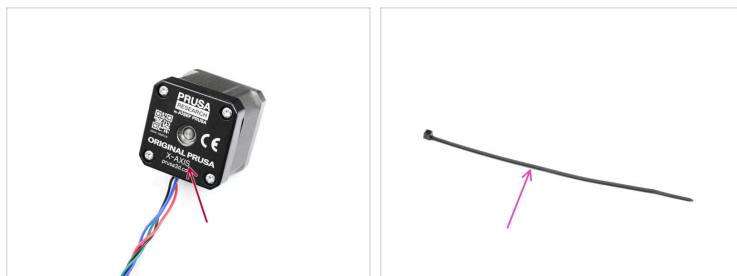
 Note that the belt is still wrapped around the motor pulley. Proceed carefully to disengage the motor, keeping the belt in its original shape to simplify reinstallation later.

PASO 34 X Pulley Removal



- Using the 2mm Allen key, loosen the two grub screws on the motor pulley.
- Remove the pulley from the motor and save it for later use.

PASO 35 X Motor Preparation

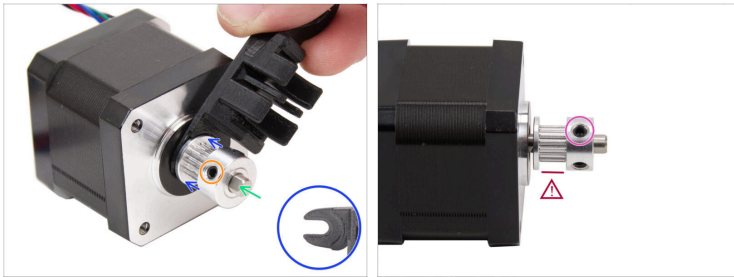


● Para los siguientes pasos, por favor prepara:

● X motor (1x)

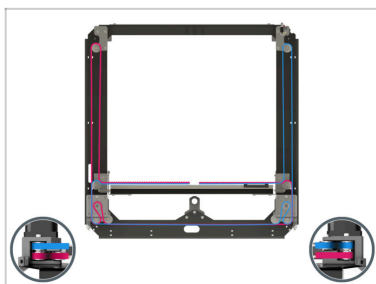
● Zip-tie (1x)

PASO 36 X Pulley Installation



- Fíjate que el eje del motor tiene una parte plana.
- ⚠ Slide the Pulley on, **note the CORRECT orientation.**
 - Orienta girando el eje del motor con la parte plana hacia ti.
 - Utilizando la horquilla de la Assembly-multi-tool, deja un espacio entre la polea y el motor.
 - Push the pulley toward the tool and firmly tighten the screw against the flat part on the shaft.
 - Tighten the other screw on the pulley.
- ⚠ **Double-check the pulley orientation. The toothed side of the pulley must be on the motor side.**

PASO 37 XY belts INFO

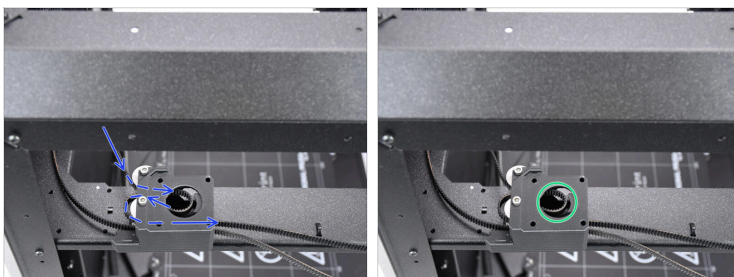


- ⓘ The next steps cover the motor installation where belt guidance is an integral part of the work.

Before starting, refer to the illustration for an overview and better understanding of each belt's path.

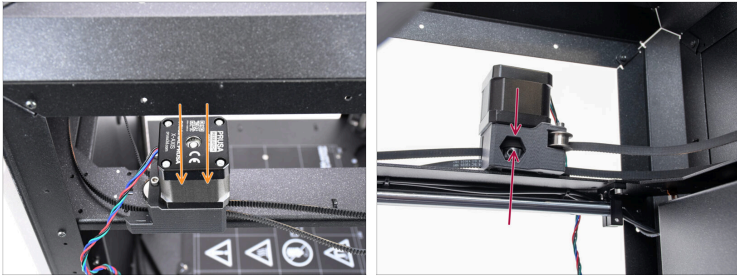
- ◆ X-motor belt is at the **top position**.

PASO 38 X Motor Belt Preparation



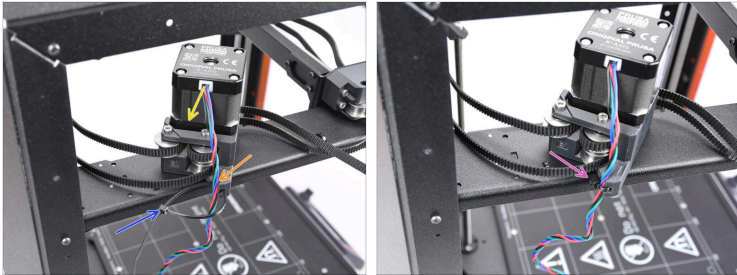
- ◆ Arrange the belt inside the plastic part as shown in the diagram.
- ◆ Create a loop on the inside where the motor pulley will be inserted.

PASO 39 X Motor Installation



- ✦ Insert the X motor into the motor assembly so that the belt wraps around the pulley.
- ✦ Check through the inspection window on the inside of the printer, that the belt has wrapped properly around the pulley.

PASO 40 X Motor Installation 2



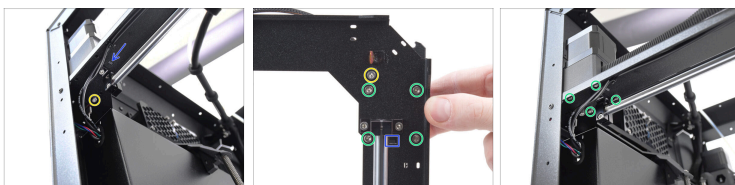
- Orient the motor so that its cable is pointing to the back of the plastic part / back of the printer.
- Guide the cable around the dedicated channel on the back of the plastic part.
- Secure the cable with a zip tie, but do not overtighten it—the cable should still be able to move slightly behind it.
- Carefully trim the excess zip tie and position the knot toward the inside of the printer to prevent it from interfering with the printer frame later on.

PASO 41 Y Motor Installation 3



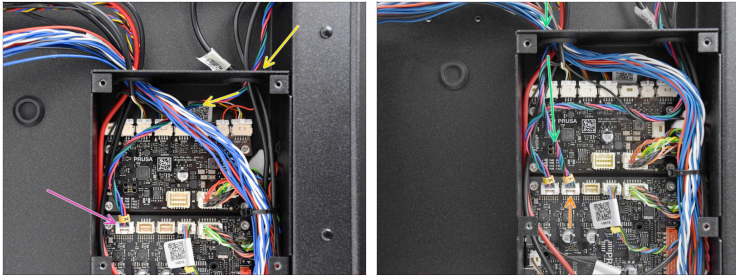
- ◆ Guide the motor cable through the corner opening, down behind the Core-XY assembly frame.
- ◆ Move the motor assembly back.
- ◆ Guide the cable through the dedicated opening, towards the back of the printer.

PASO 42 Y Motor Installation 4



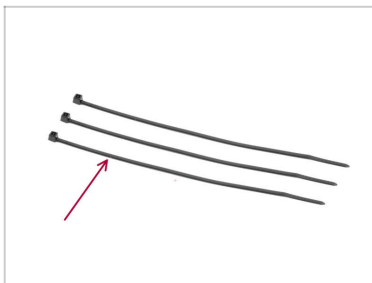
- ◆ Move the motor assembly back into its original position, until the small protruding tab aligns with the opening in the Core-XY assembly.
- ◆ Fix the assembly in place using the M3x10 screw in the outermost hole.
- ⚠ **Make sure the assembly is well seated, no cable is getting pinched.**
- ◆ Secure the assembly together using the four M3x35 screws.

PASO 43 Motors Connection



- Guide the **X motor** cable to the inside of the xBuddy box.
- Connect the X motor cable into the top left connector on the xBuddy board
- Guide the **Y motor** cable to the inside of the xBuddy box.
- Connect the X motor cable into the second connector on top of the xBuddy board.

PASO 44 Zip-Tie Preparation



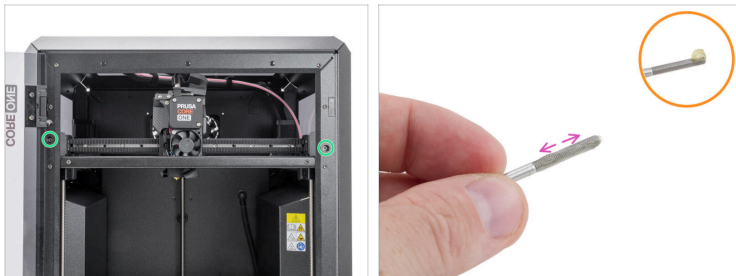
- Para los siguientes pasos, prepara:
- Zip-tie (3x)

PASO 45 Cable Bundle Tidying Up



- Fix the cable bundle in the middle using two zip-ties. Do not overtighten the zip-ties.
 - ⚠ On the back of the printer, move the cable bundle upward as much as possible to create space below the cables; this will make installing the metal cover easier later.
- Fix the cable bundle inside the xBuddy box to its side.
- Vuelve a colocar la cubierta de la caja xBuddy y fíjala en su sitio con los seis tornillos M3x4bT. ¡Asegúrate de que ningún cable quede atrapado detrás de la cubierta!

PASO 46 Tensioning Bolt Lubrication



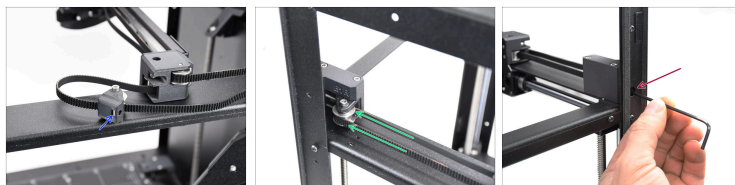
- Before reinstalling the M3x30 belt tensioning bolts, lubricate them to ensure smooth belt adjustment and prevent the tensioners from seizing.
- Remove both the M3x30 belt tensioning screws. Apply a small amount of Prusa lubricant to the tip of both the screws.
- Extiende el lubricante uniformemente por toda la rosca.
- Reinstall the tensioning bolts into their original positions.

PASO 47 Belt Tensioner L Installation



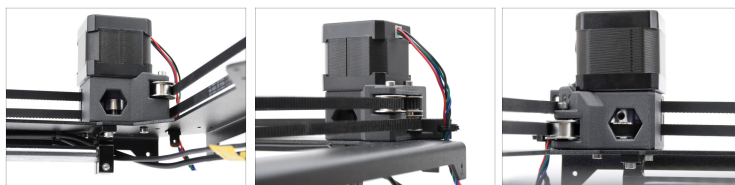
- ◆ On the left side of the printer, check that the M3nS nut is present inside of the belt tensioner pulley assembly.
- ◆ Push the pulley assembly into the tensioner, so that the M3x30 tensioning bolt reaches the nut.
 - ⚠ **Make sure all belts are properly aligned and not twisted.**
- ◆ Fix the pulley assembly in place by tightening the tensioning bolt just a few turns.
 - ⚠ **Do not tighten the belt fully yet!**

PASO 48 Belt Tensioner R Installation



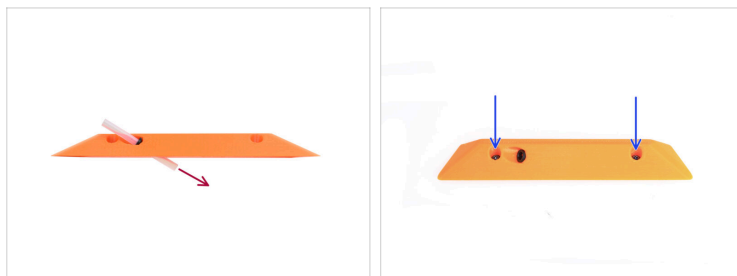
- ◆ On the right side of the printer, check that the M3nS nut is present inside of the belt tensioner pulley assembly.
- ◆ Push the pulley assembly into the tensioner, so that the M3x30 tensioning bolt reaches the nut.
 - ⚠ Make sure all belts are properly aligned and not twisted.
- ◆ Fix the pulley assembly in place by tightening the tensioning bolt just a few turns.
 - ⚠ Do not tighten the belt fully yet!

PASO 49 Belt Guidance Check



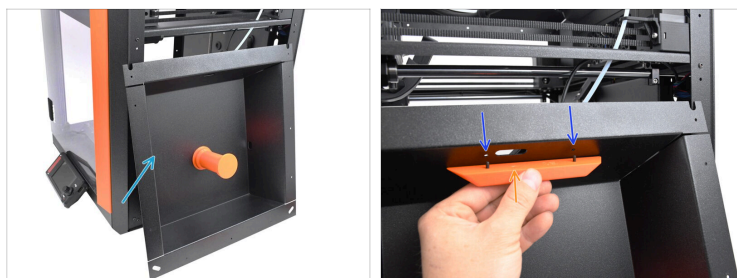
- ⚠ Before continuing, it's a good idea to check the belt routing while the printer is still partially disassembled, as all belts are clearly visible for inspection.
- ◆ Verify the belts are guided straight.
- ◆ Verify the belts align with the pulleys properly.

PASO 50 Side Handle Preparation



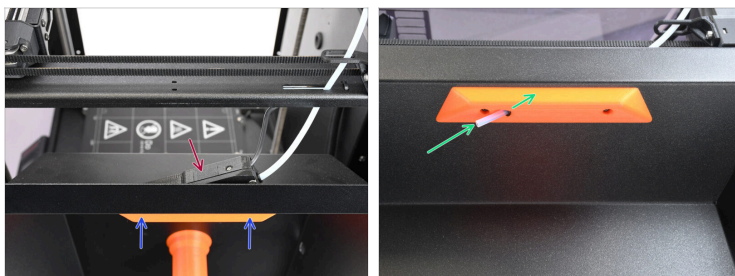
- Coge el mango con el tubo de PTFE.
- Empuja el tubo de PTFE completamente a través del mango y la presilla para poder retirarlo.
- Vuelve a colocar los dos tornillos M3x10rT en el asa.


PASO 51 Side Handle Installation



- Take the right side panel and place it just next to the right side of the printer.
- Align the bolts in the handle with the openings in the panel.
- Make sure the filament PTFE tube opening aligns with the larger hole in the panel.

PASO 52 Side Filament Sensor Installation



- ◆ Align the side filament sensor assembly with the side panel.
 - ◆ Tighten the M3x10rT screws inside the handle, through the side panel, into the sensor assembly.
 - ◆ Push the short PTFE tube through the collet in the side handle. Press it all the way in, until it reaches the sensor assembly on the other side.
-  Push it until it reaches the sensor assembly on the other side.

PASO 53 R Side Panel Installation



- Push the side panel into its original position.
- Fix the side panel in place using the 11 Nylon rivets.
- Reinstall the plastic sheet side cover.
- Fix the side cover in place using the 5 Nylon rivets.

PASO 54 Rear Cover Installation



- Vuelve a instalar la cubierta metálica trasera en la impresora.
Asegúrate de que ninguno de los cables queda atrapado detrás de ella.
- Empuja la cubierta hacia arriba hasta que las cuatro lengüetas metálicas encajen en las ranuras de la parte trasera de la impresora.
- Mientras empuja la cubierta de la parte posterior hacia arriba, alcanza el interior de la impresora y fija la cubierta en su lugar utilizando los dos tornillos M3x4bT.

PASO 55 L Side Cover Installation



- Añade el panel de chapa lateral a la impresora y alinéalo con la abertura.
- Fija el panel en su sitio con 11 remaches de nylon en los puntos marcados.
- Coloca la cubierta de plástico en la parte superior y alinéala con la abertura.
- Fijala en su sitio con 5 remaches de nylon.

PASO 56 Top Cover Installation



- Ahora, podemos volver a instalar la cubierta superior.
- Alinea la tapa con el marco metálico de la esquina derecha.
- Alinea también la tapa con el hueco de la parte delantera
- Secure the cover in place using at least two nylon rivets in the marked openings.

PASO 57 Belt Tensioning



- Conecta la impresora a la corriente.
- Enciende la impresora mediante el interruptor situado en la parte posterior.
- Visit the Adjusting belt tension article and tighten both the belts to the correct tension.

PASO 58 Selftest



- Para finalizar la reparación, ve al menú Control -> Calibraciones y Tests
- y ejecuta el Selftest desde el principio.
- Después de pasar el Selftest, tu impresora estará lista para volver a usarla. ¡Hurra!
