

Material Identification Guide

Hardware Identifiers:

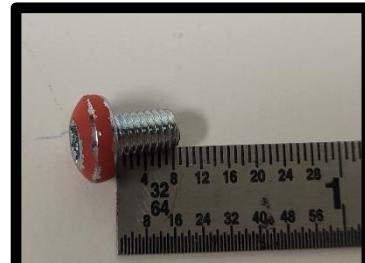
Pink – M5 T-Nut



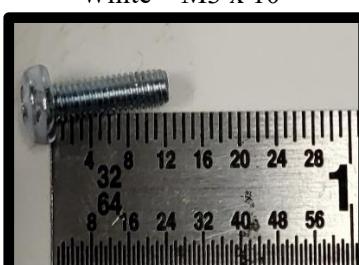
Blue – M5 x 25



Red – M5 x 8



White – M3 x 10



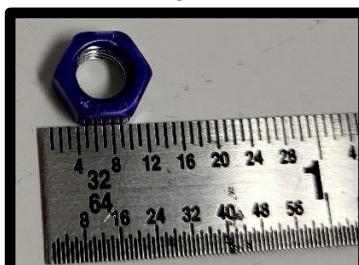
Unpainted – M3 x 8



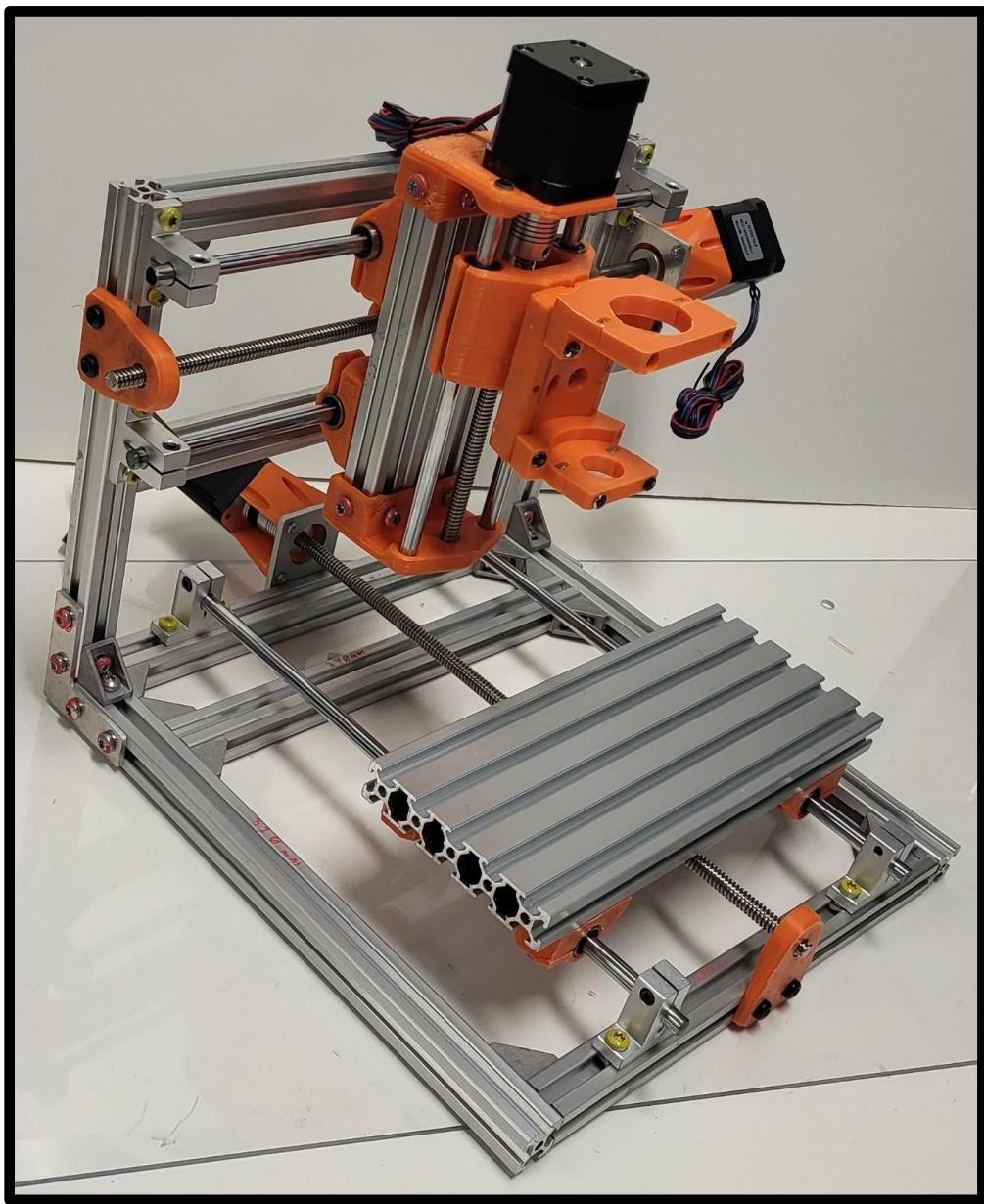
Yellow – M5 x 12



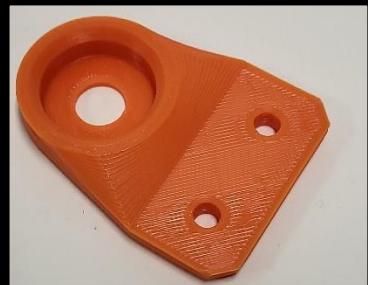
Blue – M5 Hex Nut



X and Y-AXIS CHASSIS ASSEMBLY



Materials Needed:

Printed Parts:	Quantity:	Description:
	1	Carriage Top Body
	1	Carriage Bottom Body
	1	Z-Axis Body
	4	Bearing Block LM8UU
	1	Pillow Block 608 Body
	1	Stepper Motor Mount
	1	Bearing Bracket

Kit Components:	Quantity:	Description:
	8	LM8UU Linear Bearing
	2	Lead Screw Nut
	1	5x8 Coupling
	4	320mm Rod
	2	335mm Lead Screw
	5	270mm T-Slot Aluminum
	2	310mm T-Slot Aluminum

	2	230mm T-Slot Aliminum
	1	240mm T-Slot Aluminum, 20x100
	14	90-Degree Angle Brace for Aluminum T-Slot
	2	Bearing
	2	NEMA 17 Stepper Motor

	2	Stepper Motor Frame Bracket
	8	Rod Bracket
	2	Aluminum L-Brackets

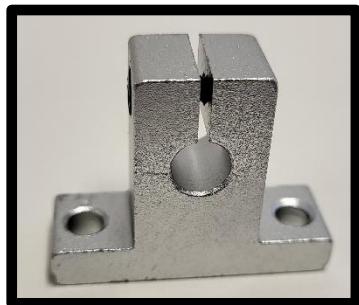
Tools Needed:

	2mm Allen Wrench
TORX DRIVER	T25 Torx Driver
PH 1 SCREWDRIVER	PH #1 Screwdriver
HACKSAW	Hacksaw (or Comparable)

KEY

	Blue Arrow: Press Fit
	Red Arrow: Tighten Screw or Bolt
	Green Arrow: Move Piece Without Fastening

Step 1: Rod Bracket Prep



1.A



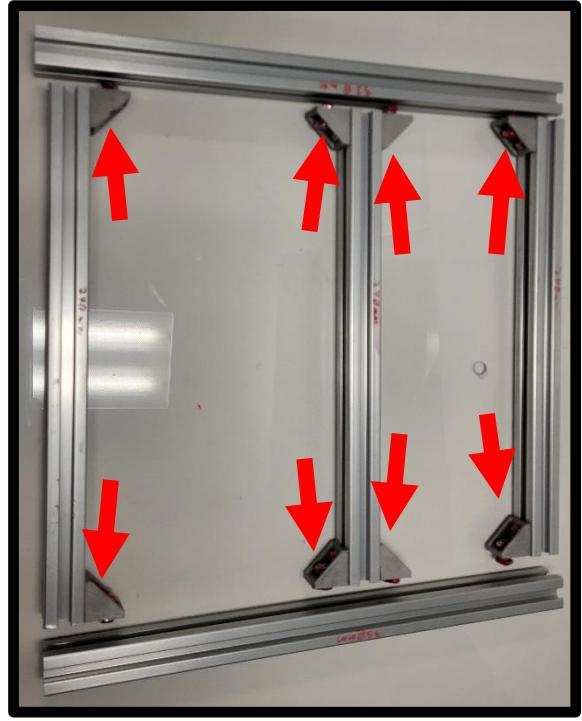
1.B

NOTES

- All eight must be cut.
- Notice the difference between the rod bracket in Figure 1.A and Figure 1.B. An approximately $\frac{1}{4}$ " cut has been made at the bottom of the hole.

Step 2: Chassis Frame





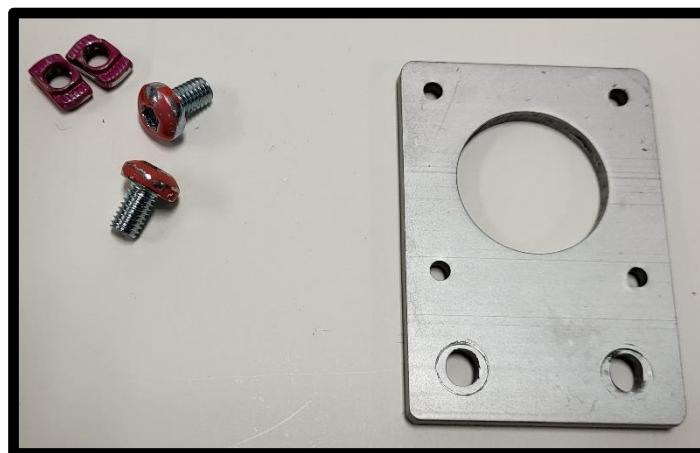
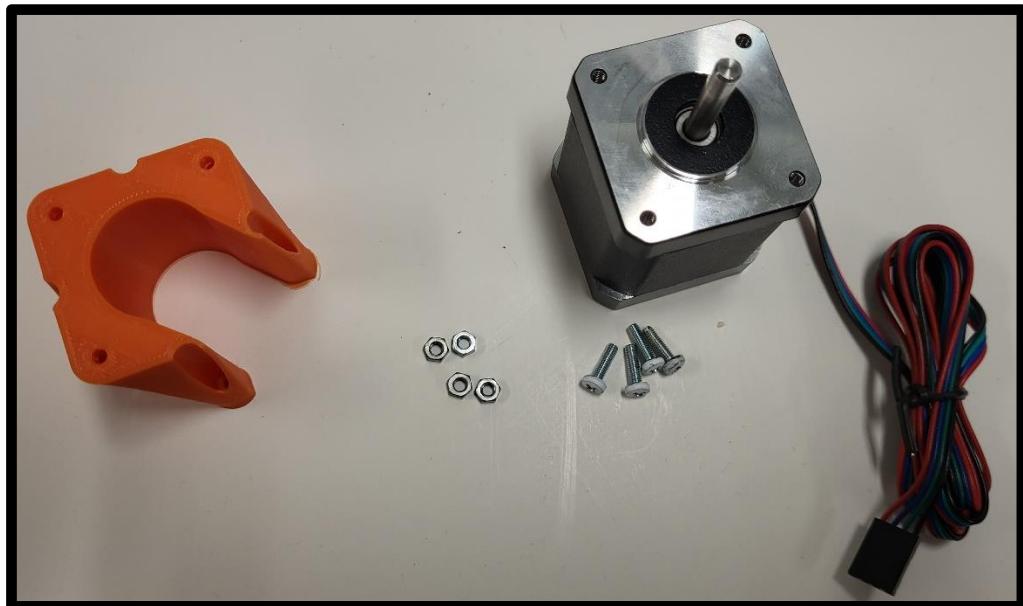
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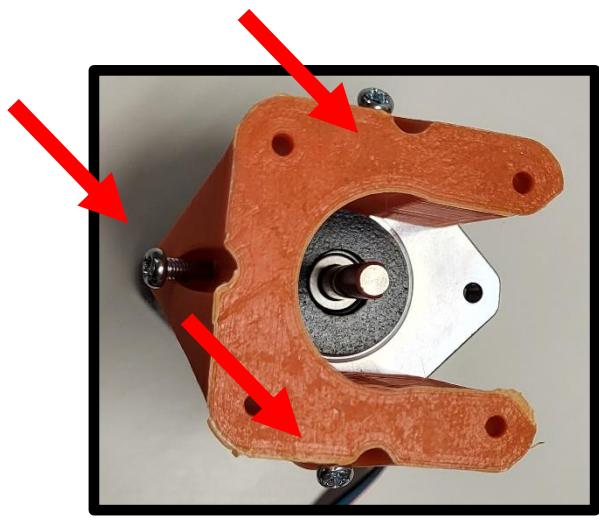
- Lay the frame flat on a surface and ensure that all four corners are in contact with the surface. This may require twisting the frame after tightening. Be cautious of sharp corners.
- Recommended but not a necessity is to ensure the system is properly square by way of a speed square or similar tool.



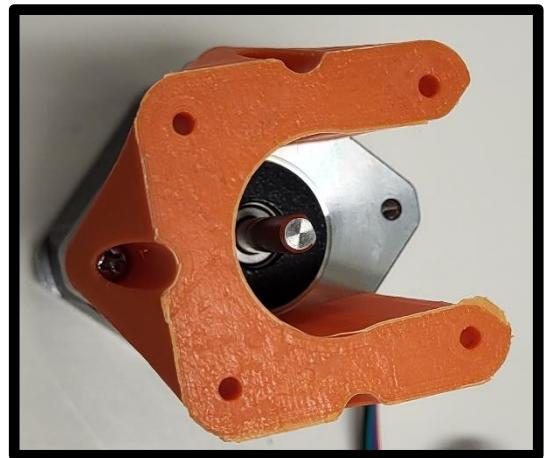
2.Optional

STEP 3: Stepper Mounting

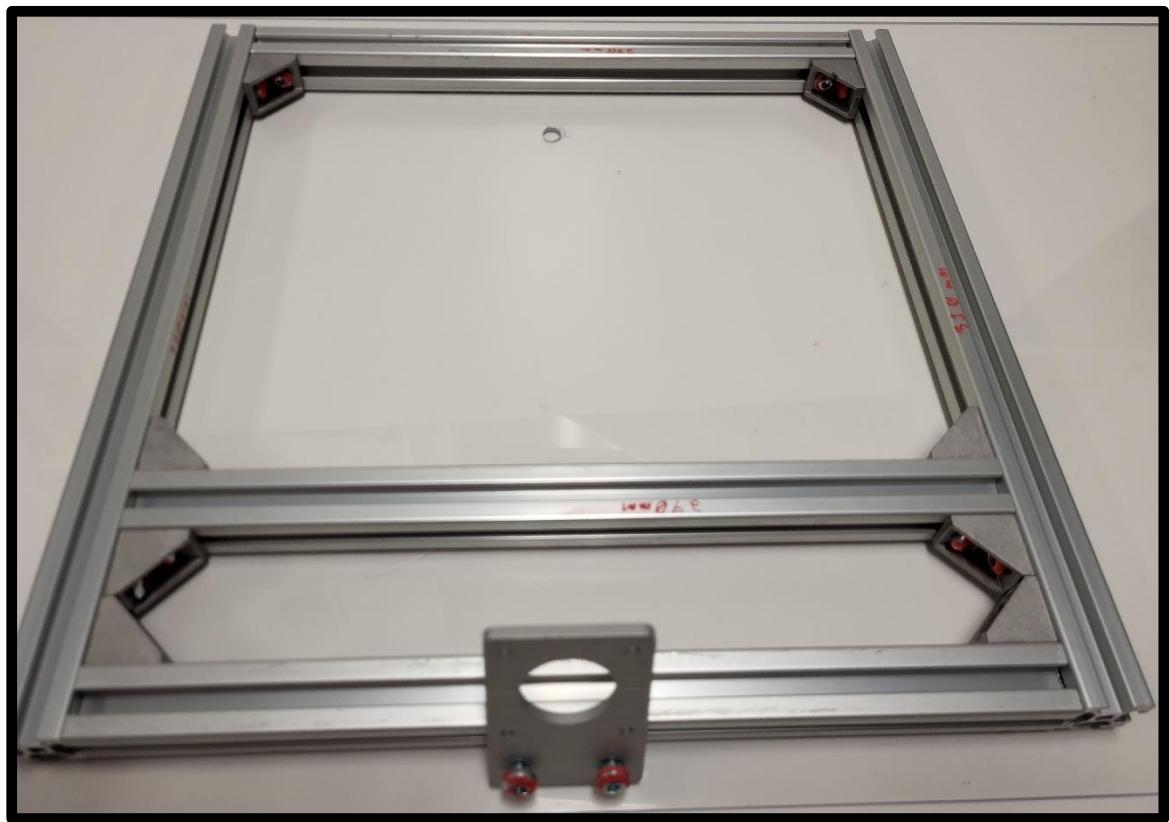




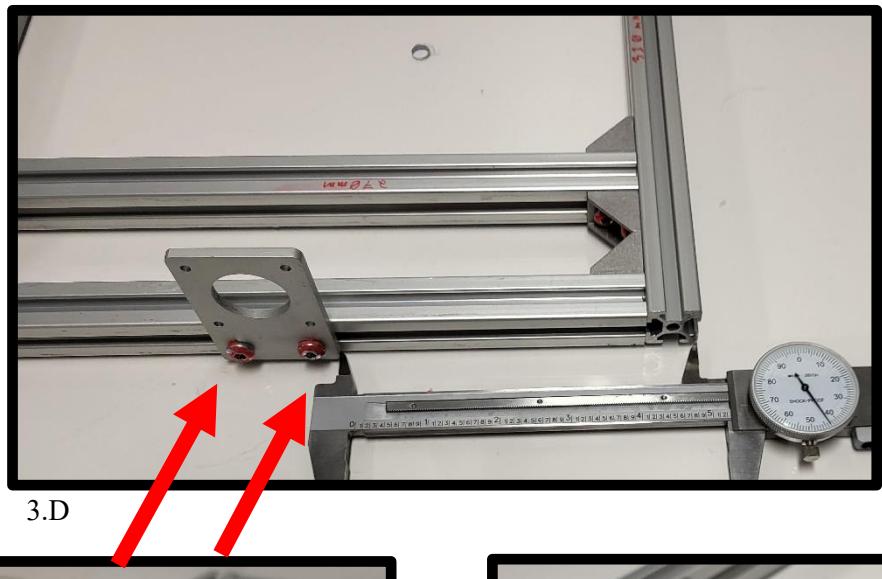
3.A



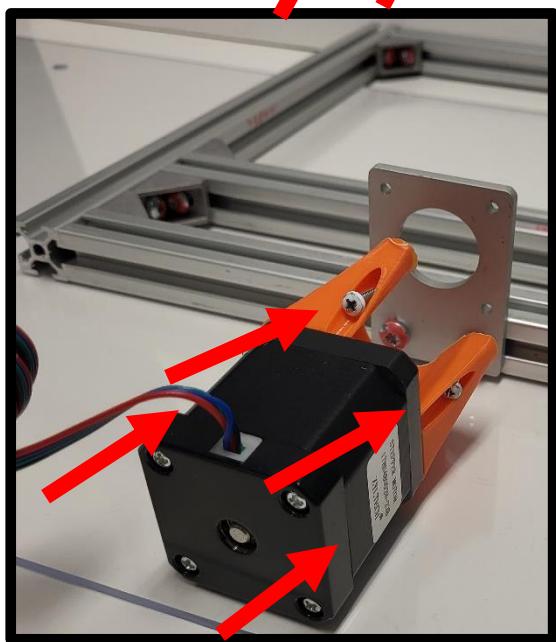
3.B



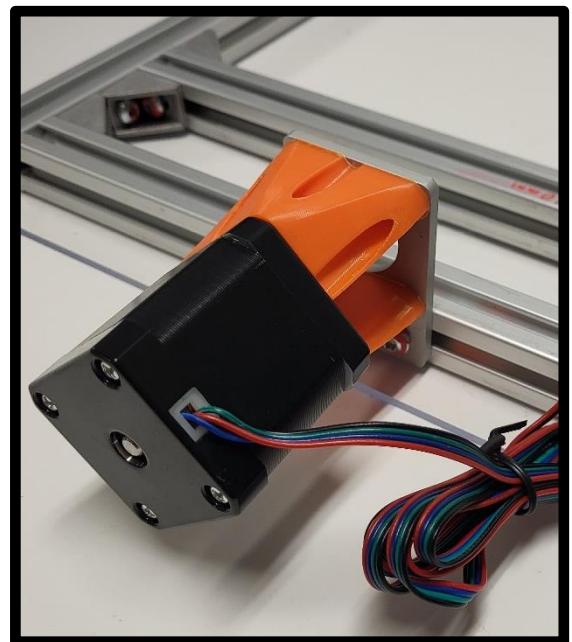
3.C



3.D



3.E



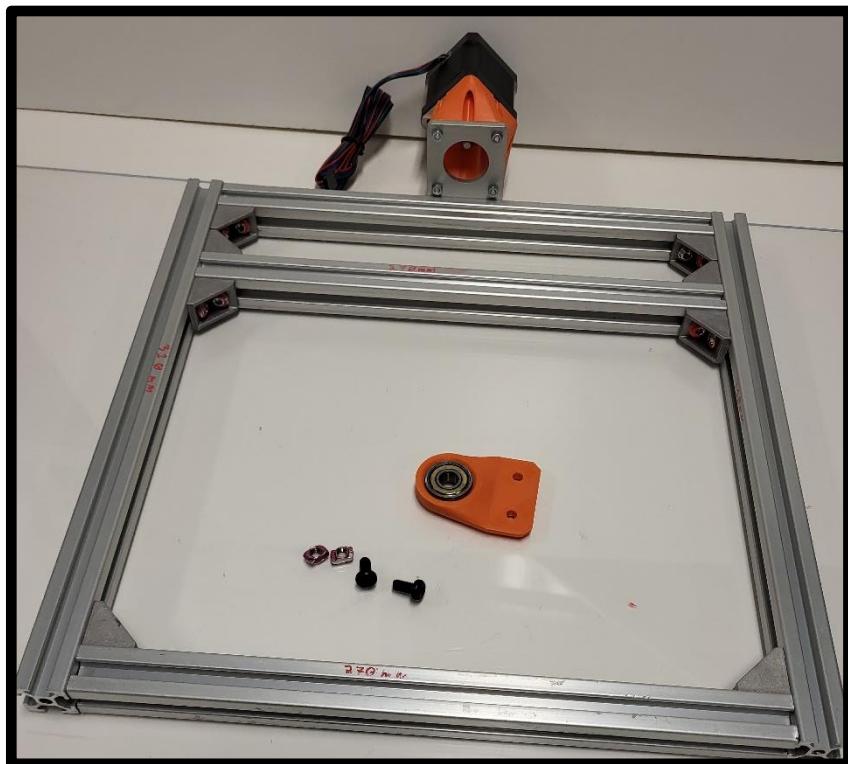
3.F



3.G



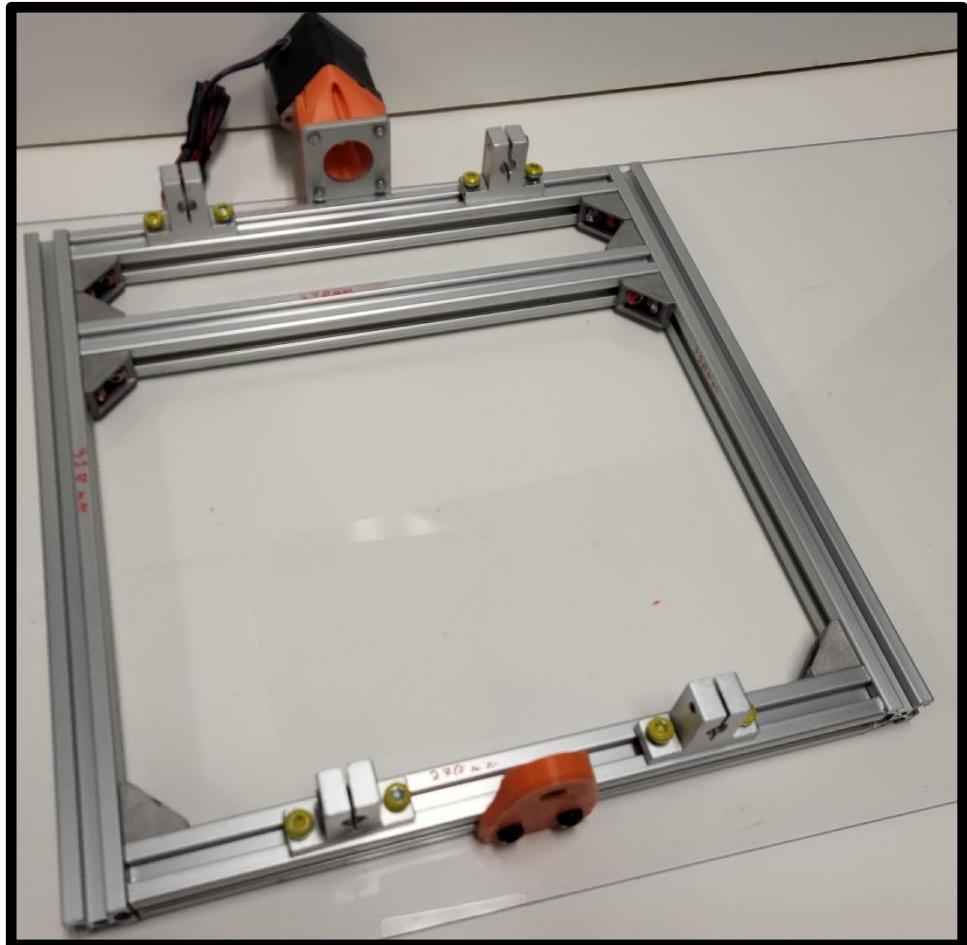
3.H



3.I



3.L



3.M

NOTE

- When placing the Rod Brackets, ensure that the contained bolt has the head facing the outside of the machine.



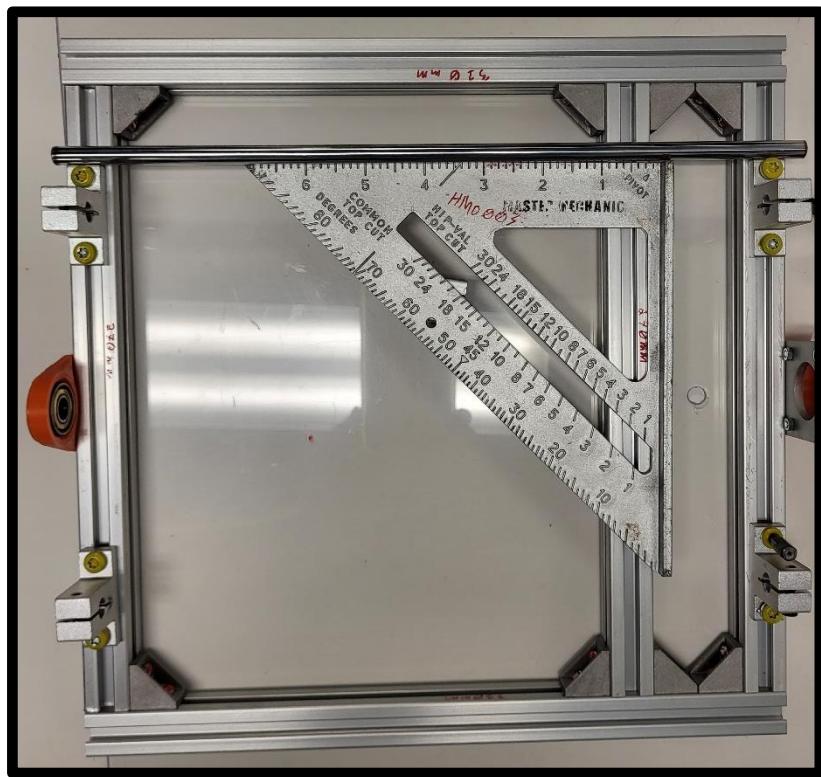
3.N



3.O

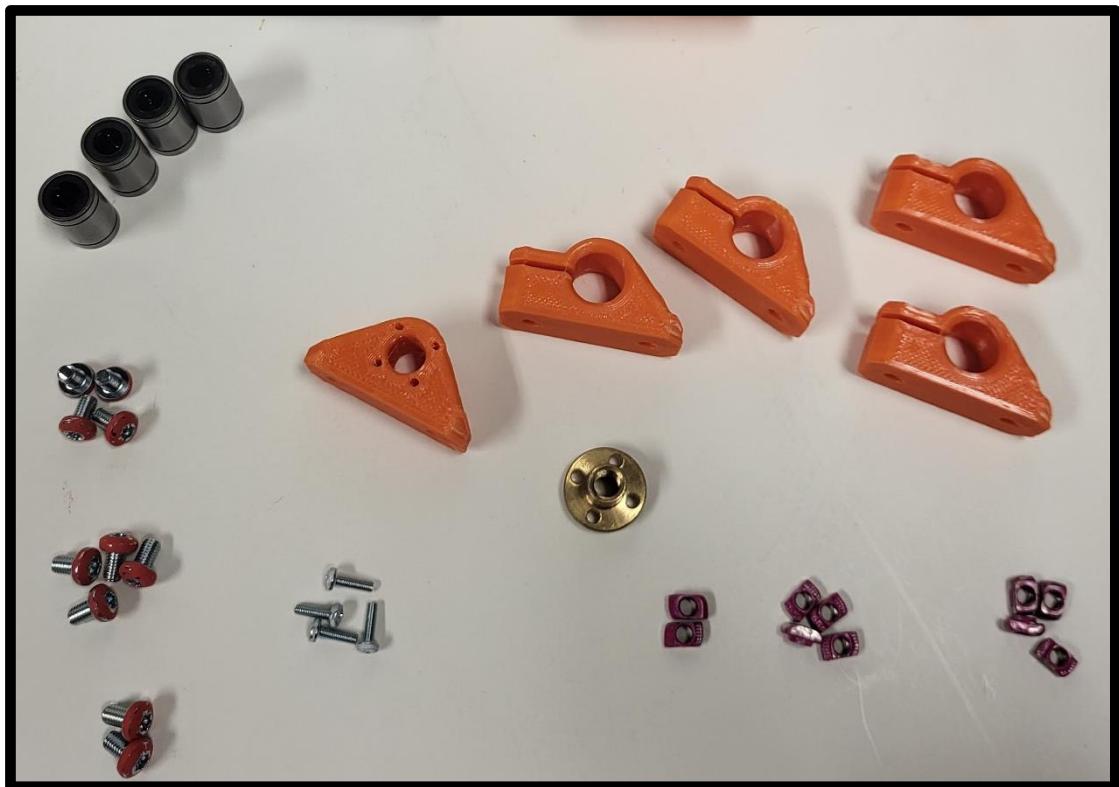
NOTES

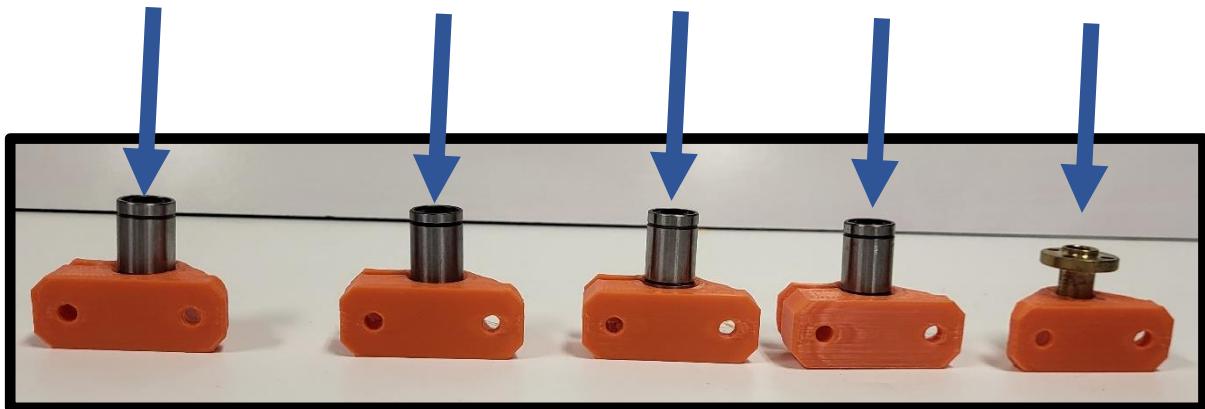
- In the final step, only tighten the four bolts indicated, and only tighten those when the distance has been confirmed.
- Do not fully tighten these four, at this time. Snug them down such that they do not move without effort, but they are still able to be moved for fine adjustments.
- Recommended but not a necessity is to ensure the system is properly square by way of a speed square or similar tool. As shown in figure 3.Optional, below, the 320mm rod can be used in tandem with a square to ensure that the rod brackets are in line with each other. If this is done, still do not tighten all eight bolts until the specified step.



3.Optional

STEP 4: Linear Bracket Assembly





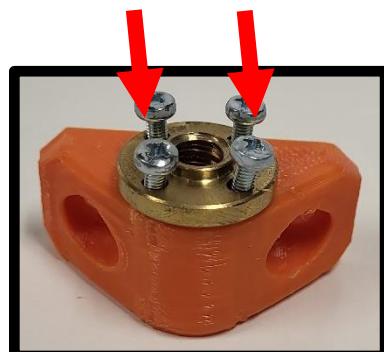
4.A



4.B



4.C



4.D



4.E

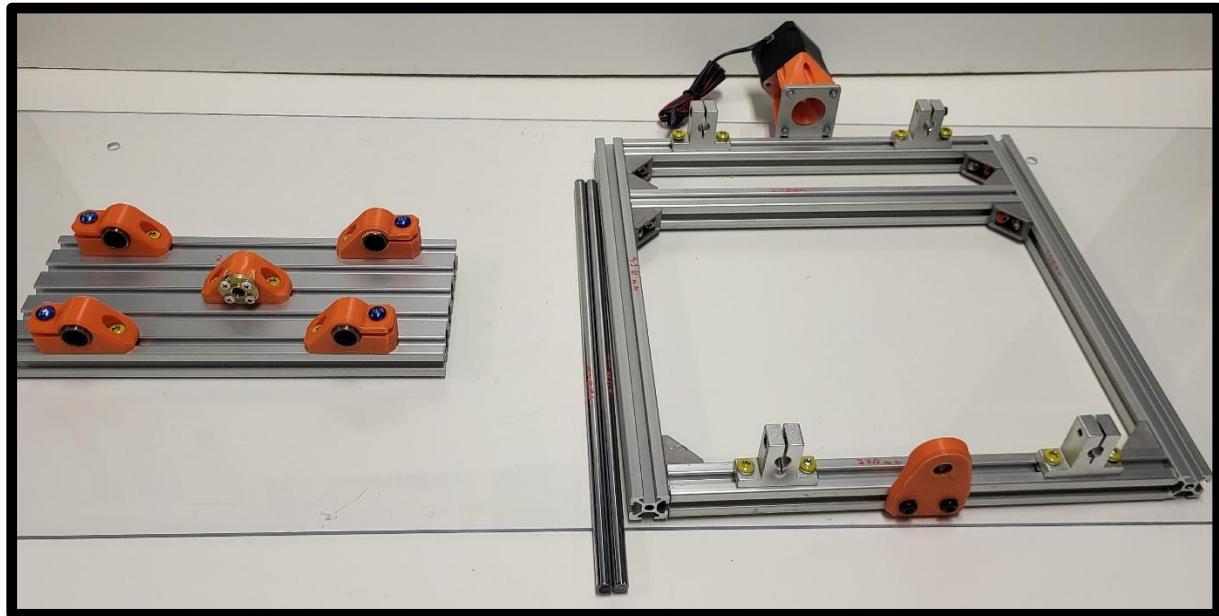
NOTE

- Do not overtighten the white screws



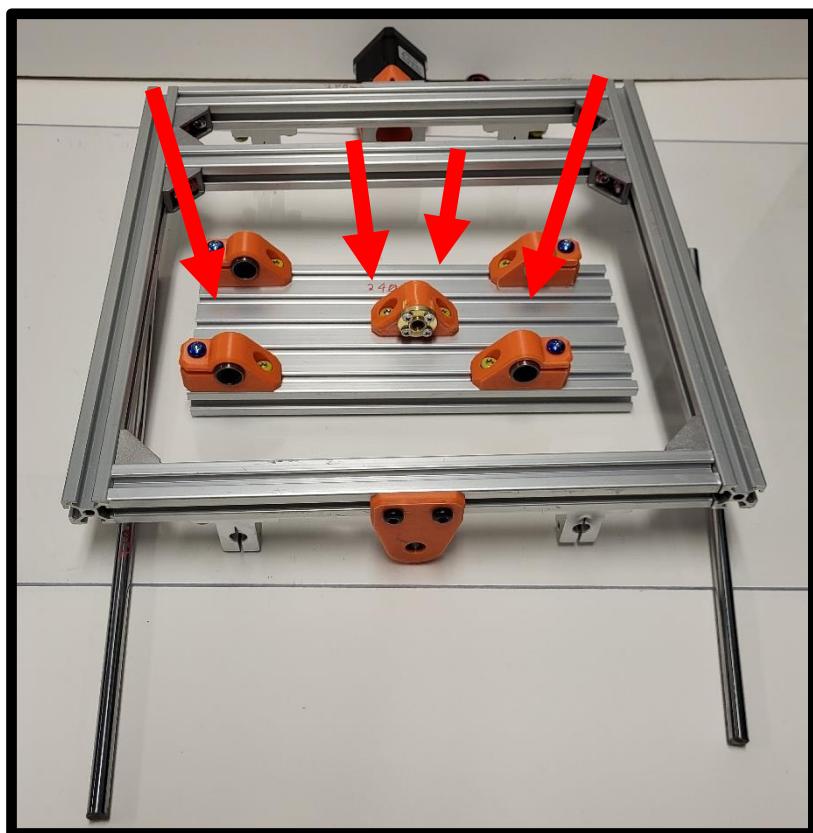
4.F

STEP 5: Y-Carriage Assembly and Mount





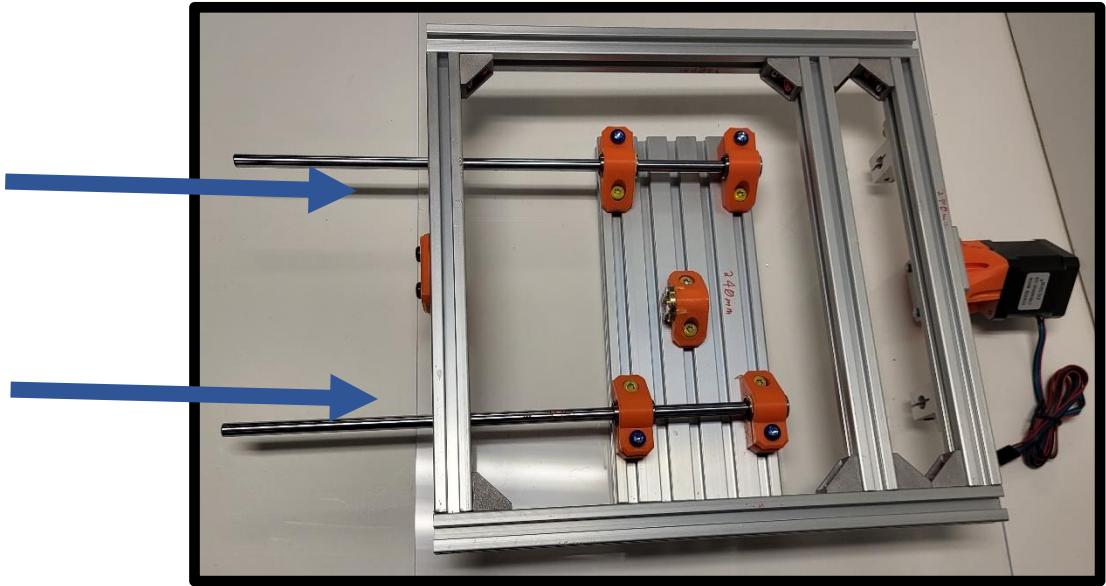
4.A



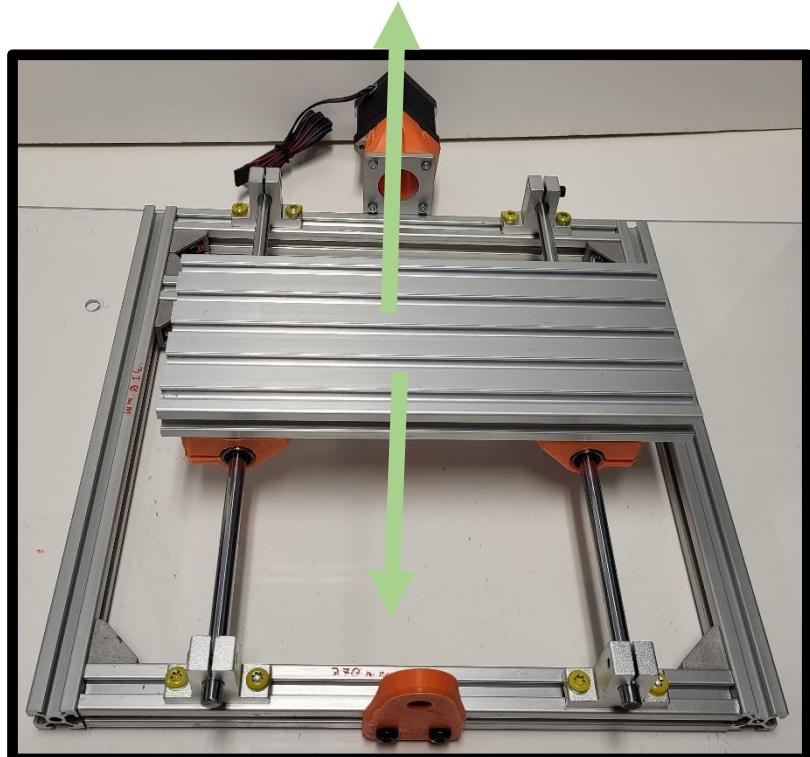
4.B

NOTES

- Tighten the bolts on the pillow block.
- Do not tighten the bolts on the bearing block beyond snug. They are only to be secured sufficiently such that they do not fall out.

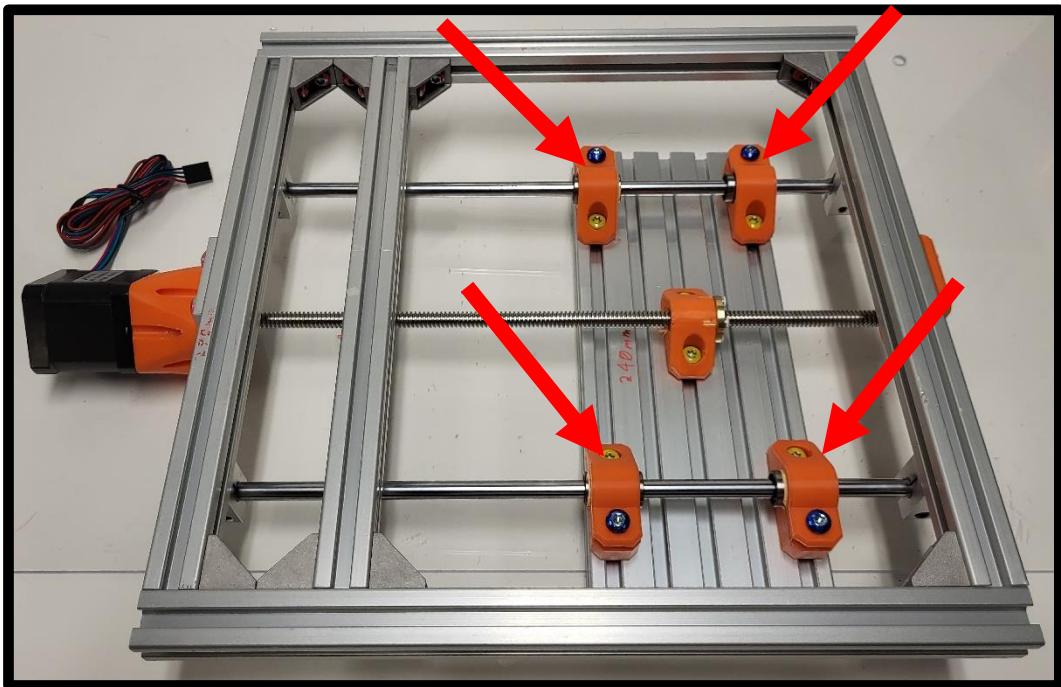


4.C

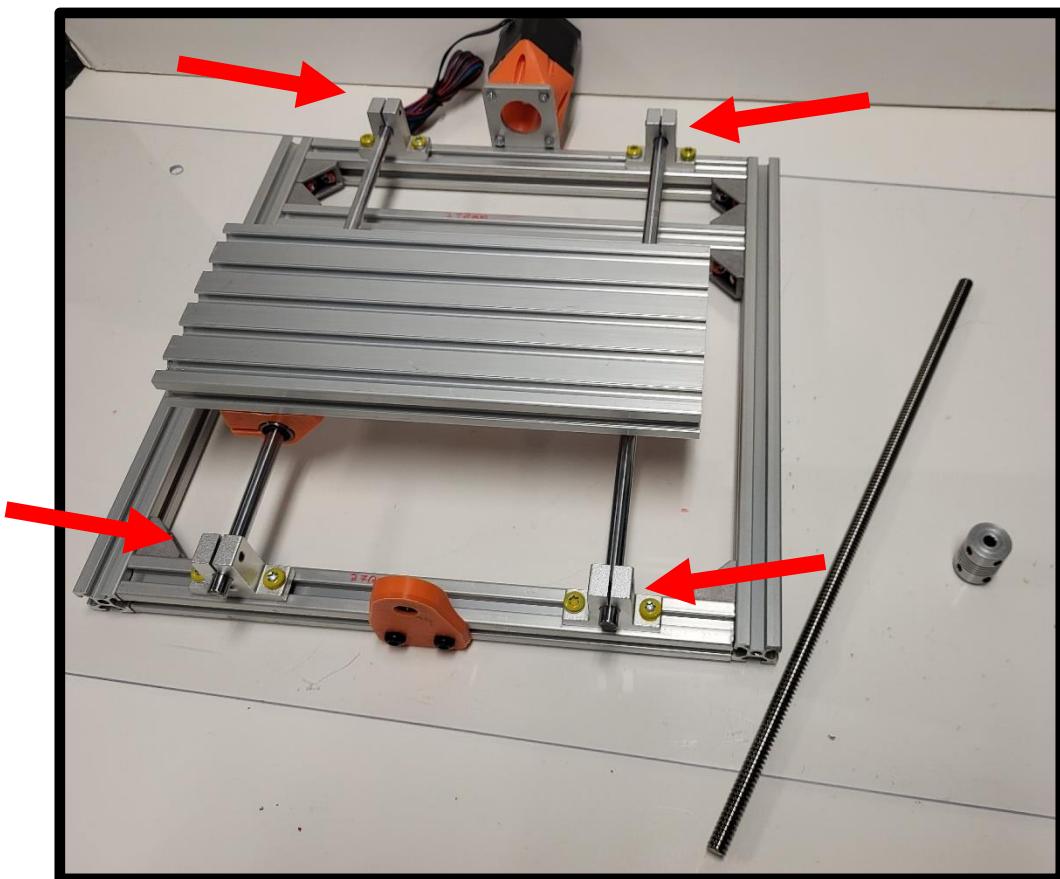


4.D

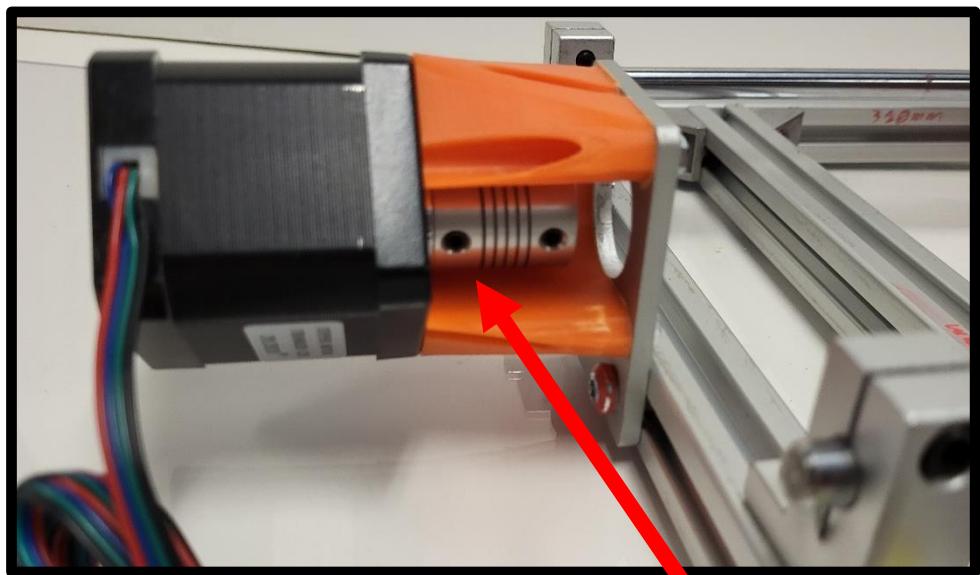
In step 4.D, move the carriage back and forth by hand until it moves freely. This may cause brackets to shift as the racking works its way out of the chassis. Once this is done, tighten the remaining bolts.



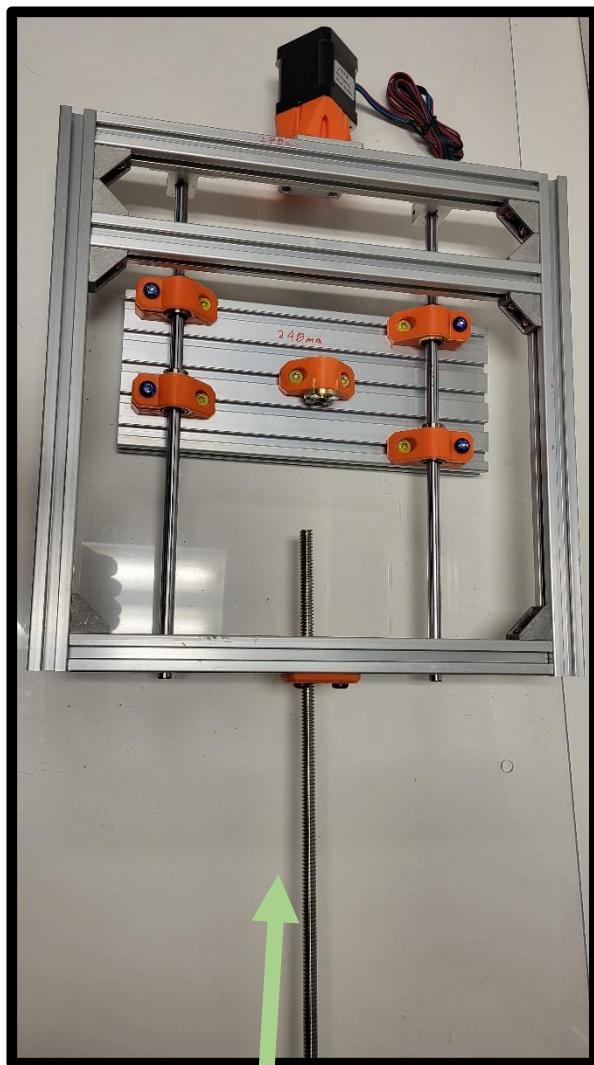
4.E



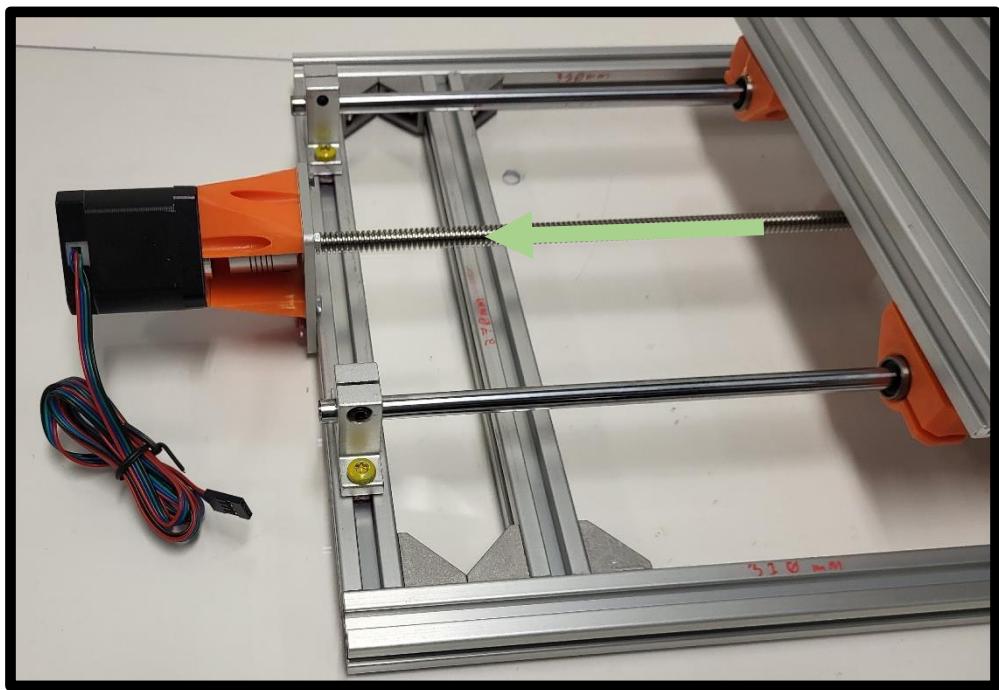
4.F



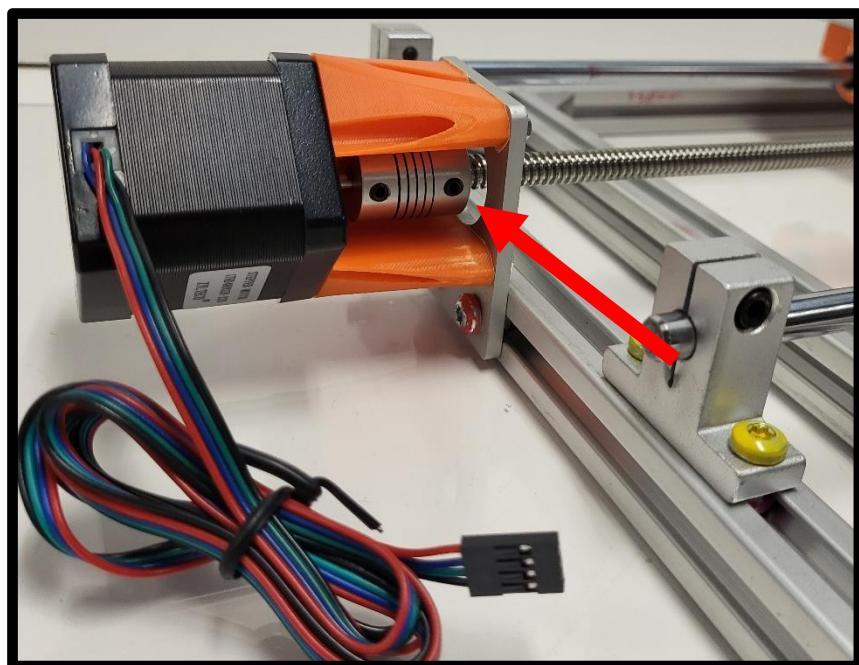
4.G



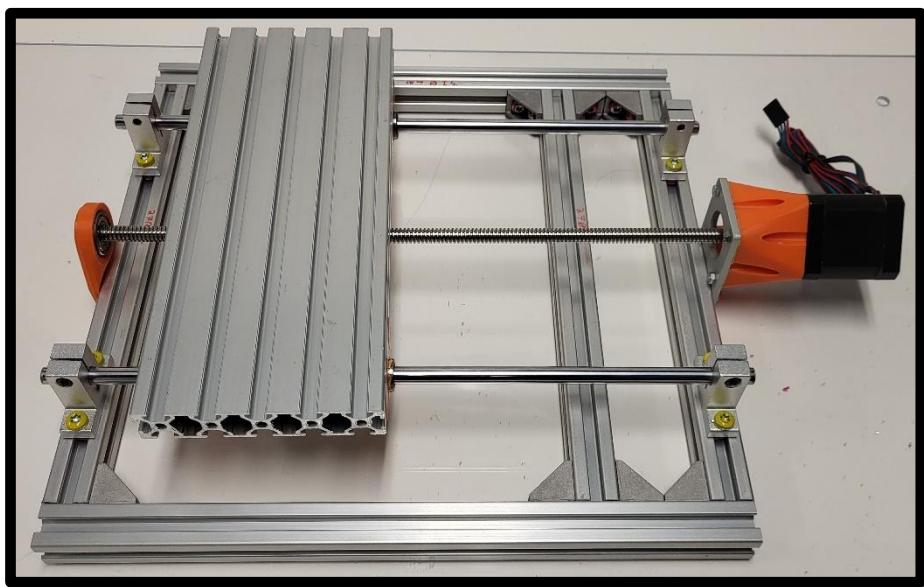
4.H



4.I



4.J



4.K

STEP 5: X-Carriage Frame

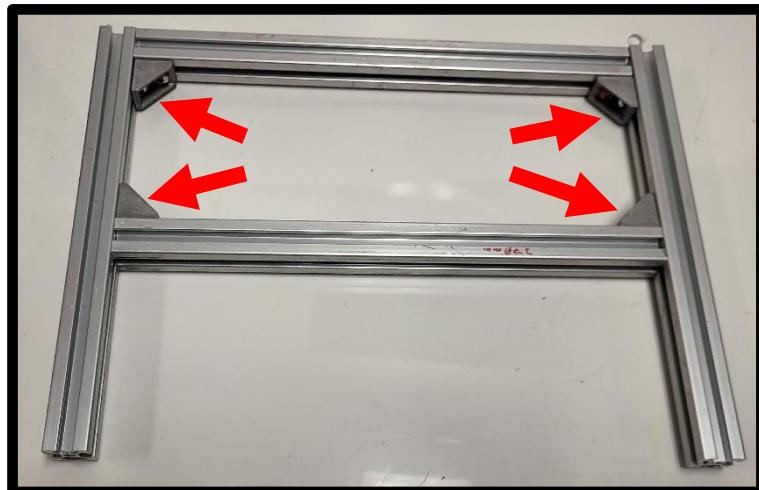




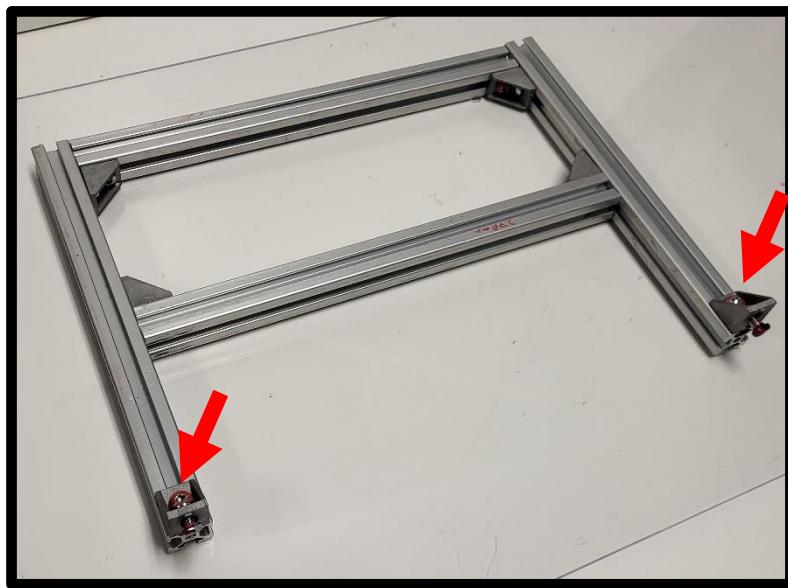
5.A



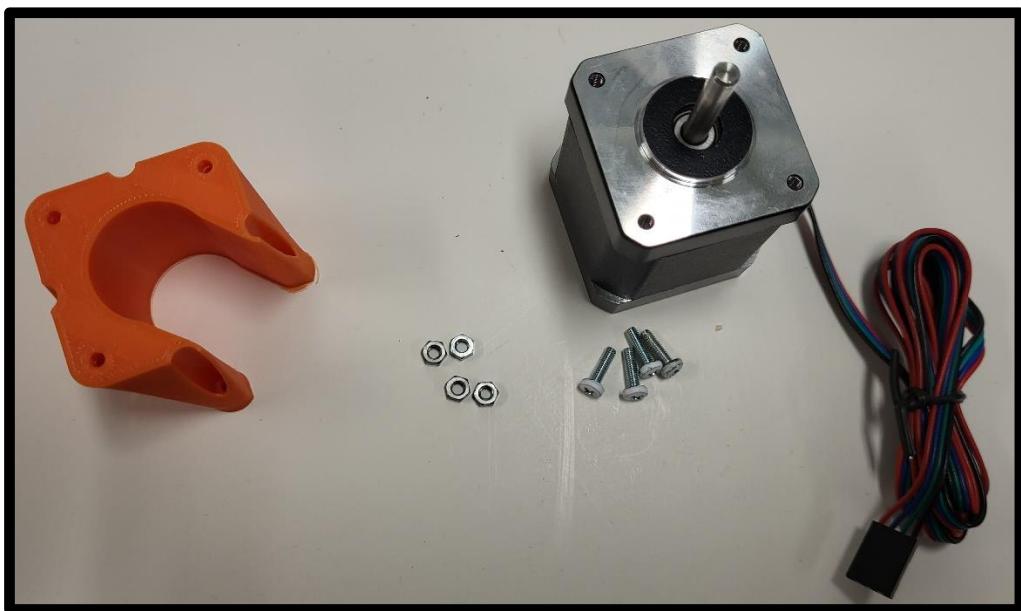
5.B



5.C



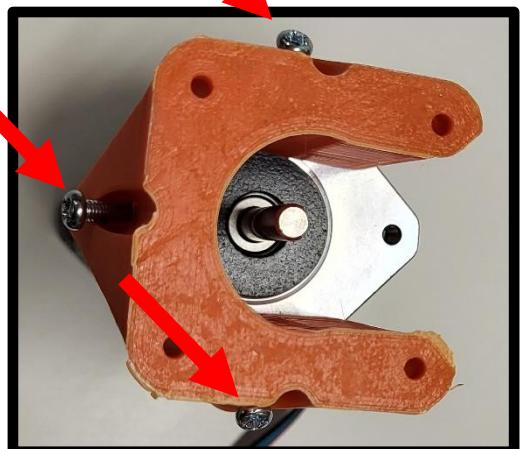
5.D



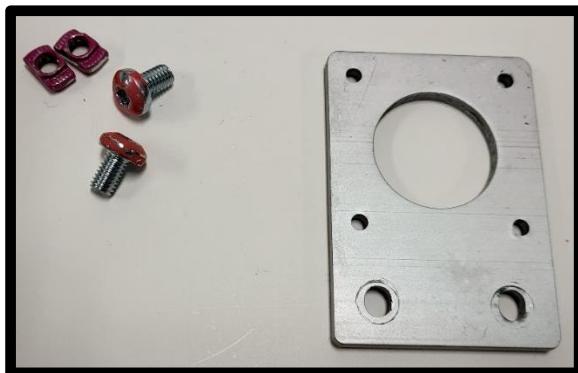
5.E



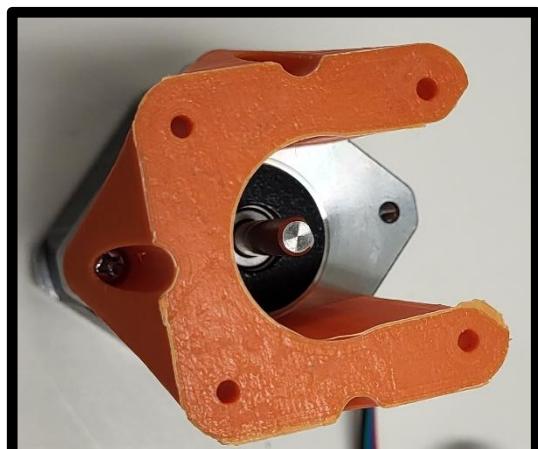
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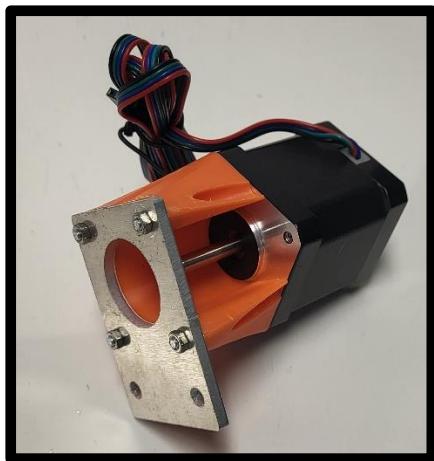
5.H



5.G



5.I



5.J



5.K

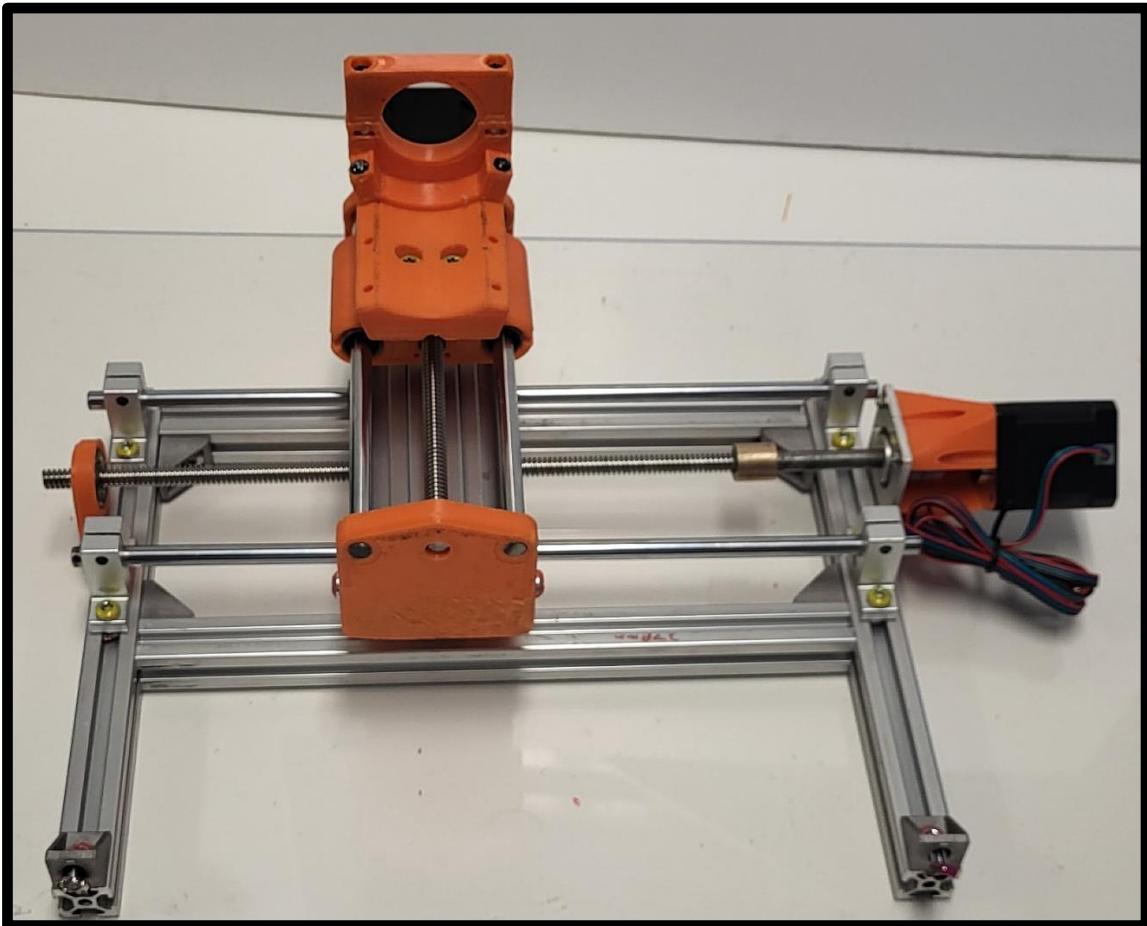


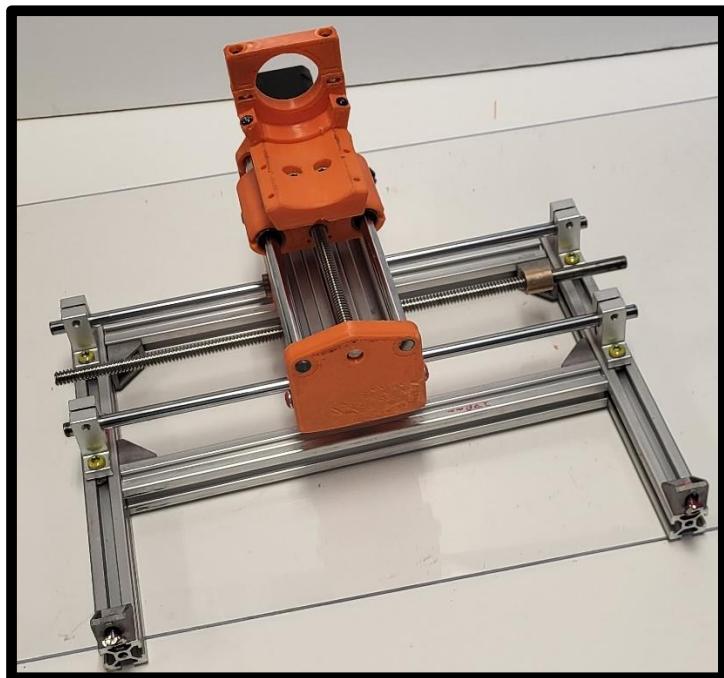
5.L



5.M

STEP 6: Final Assembly

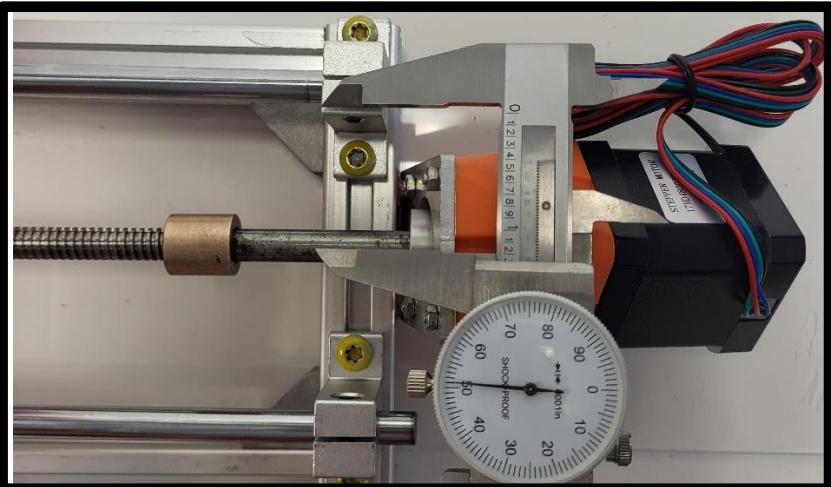




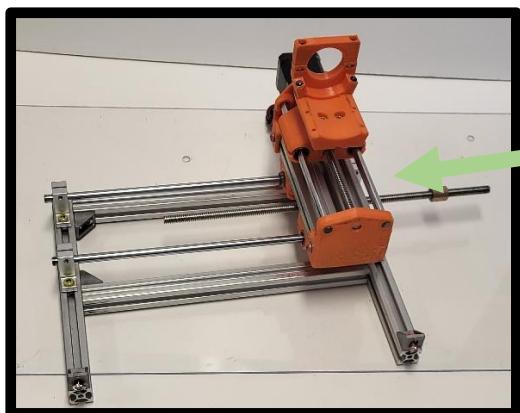
6.A



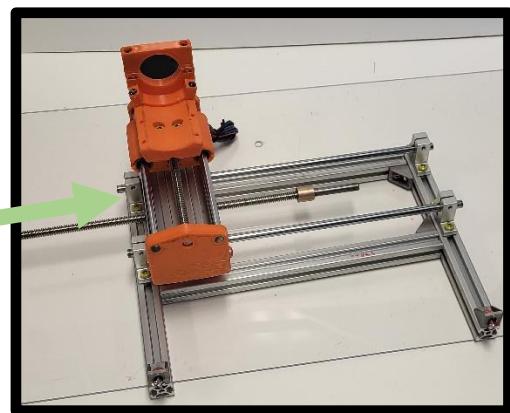
6.B



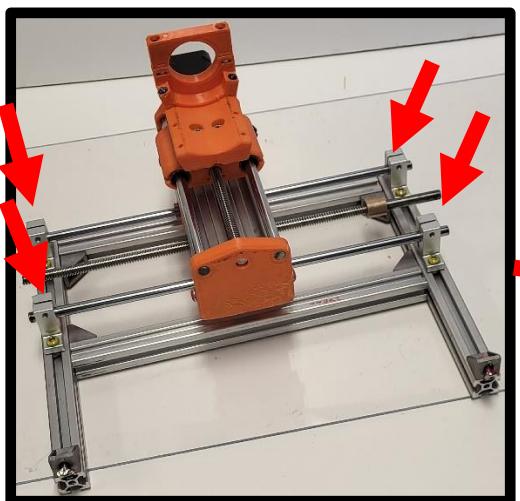
6.C



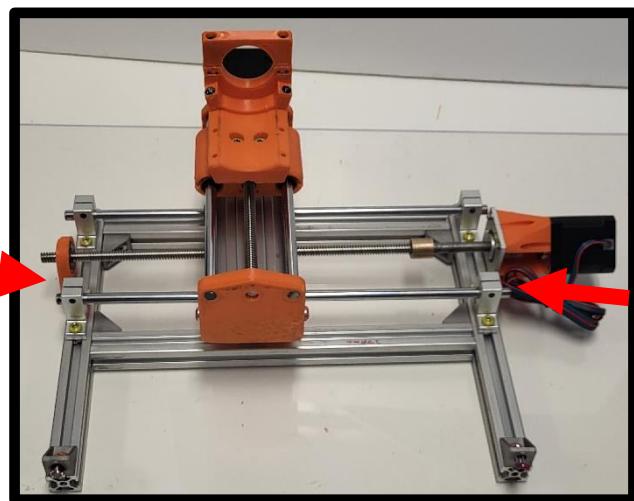
6.D-a



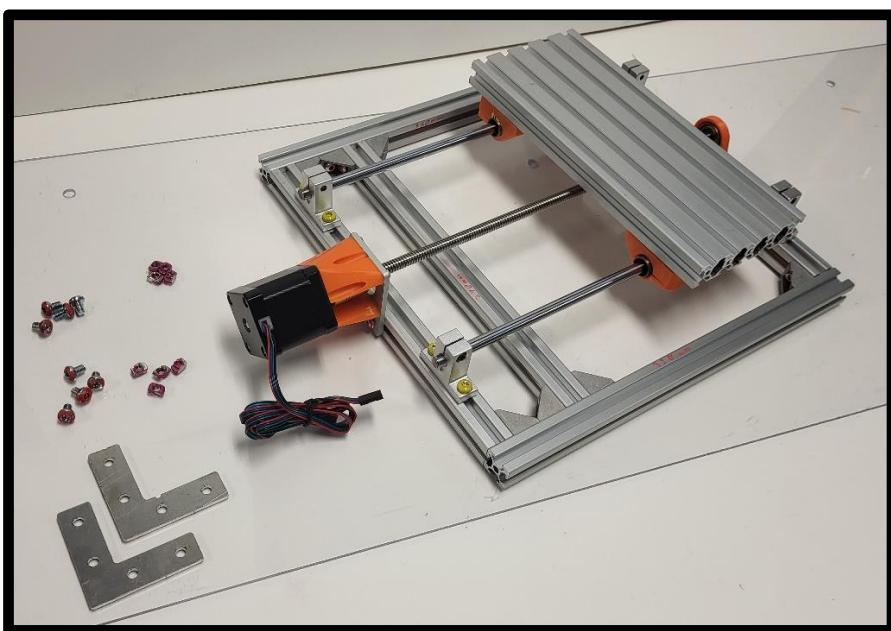
6.D-b



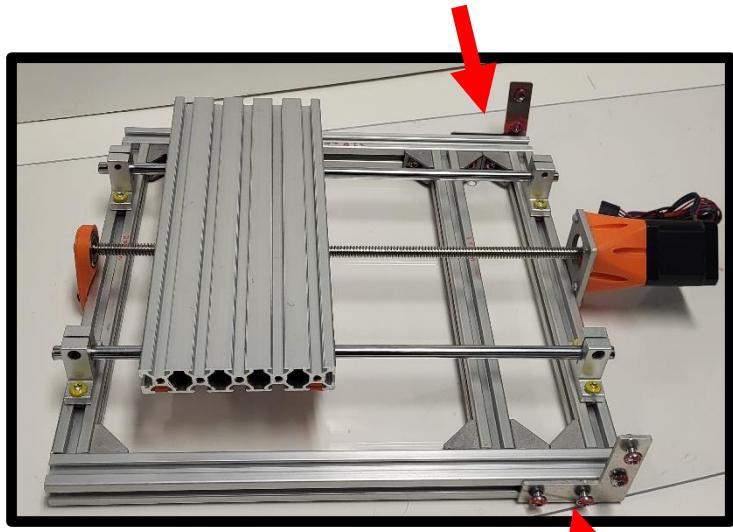
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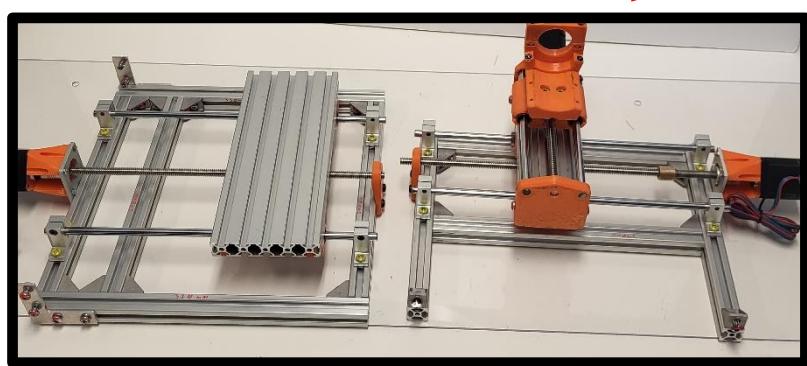
6.F



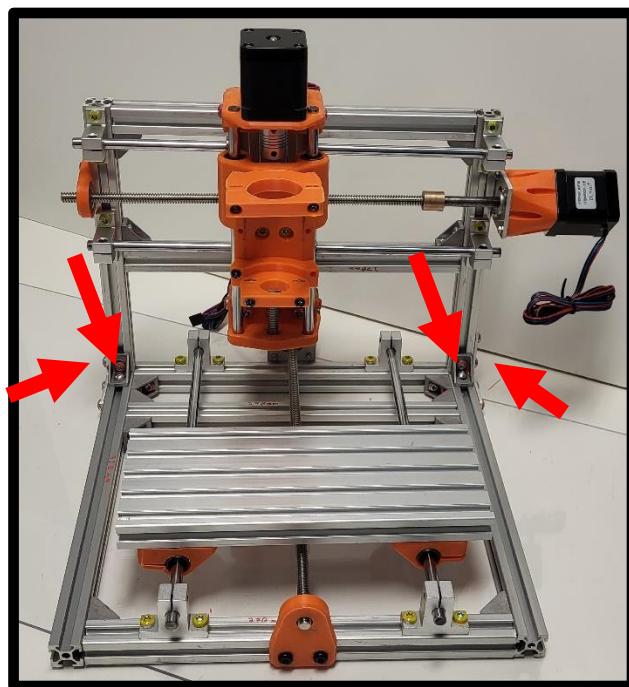
6.G



6.H



6.I



6.J