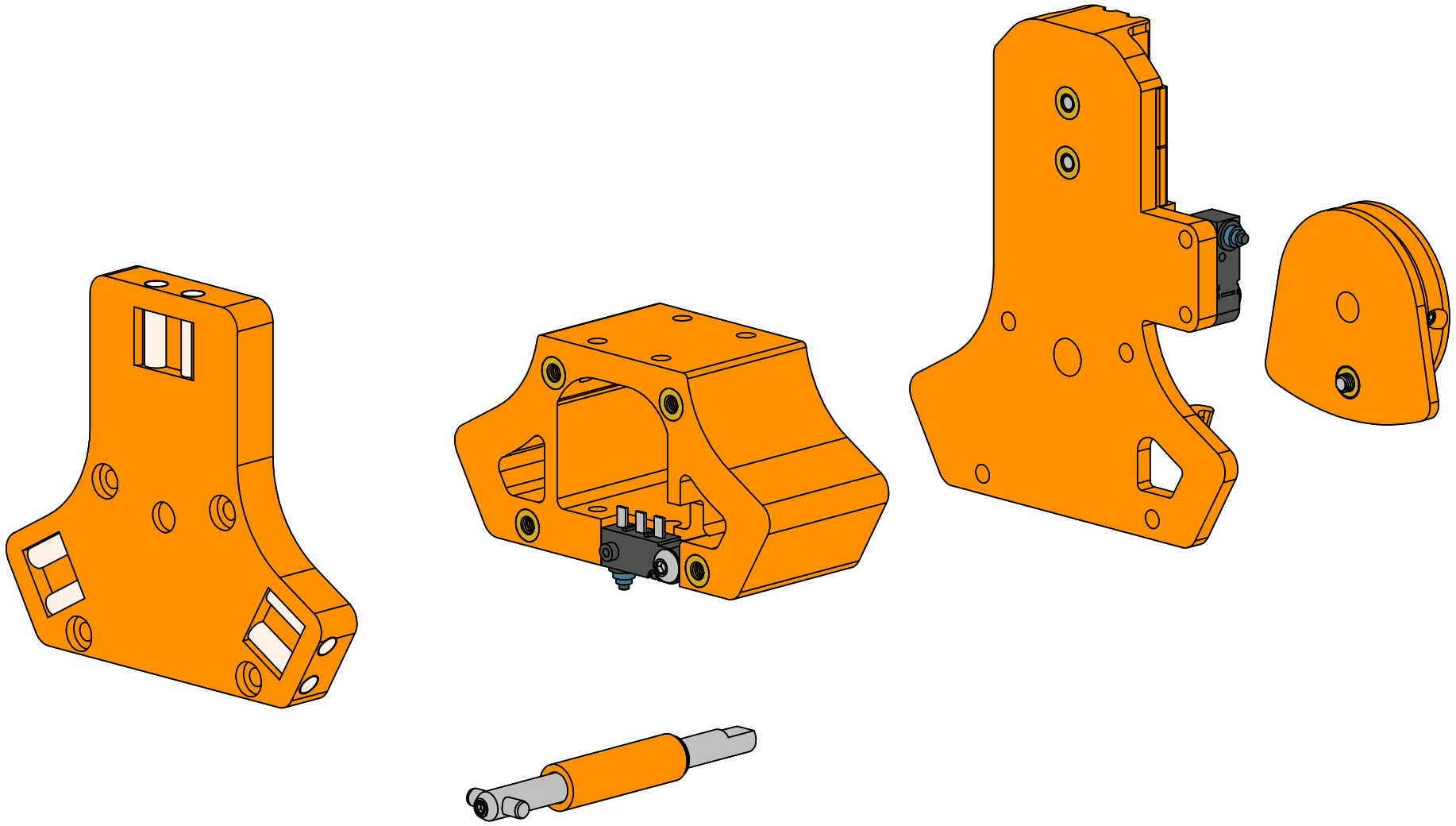


Toolchanger Carriage Assembly

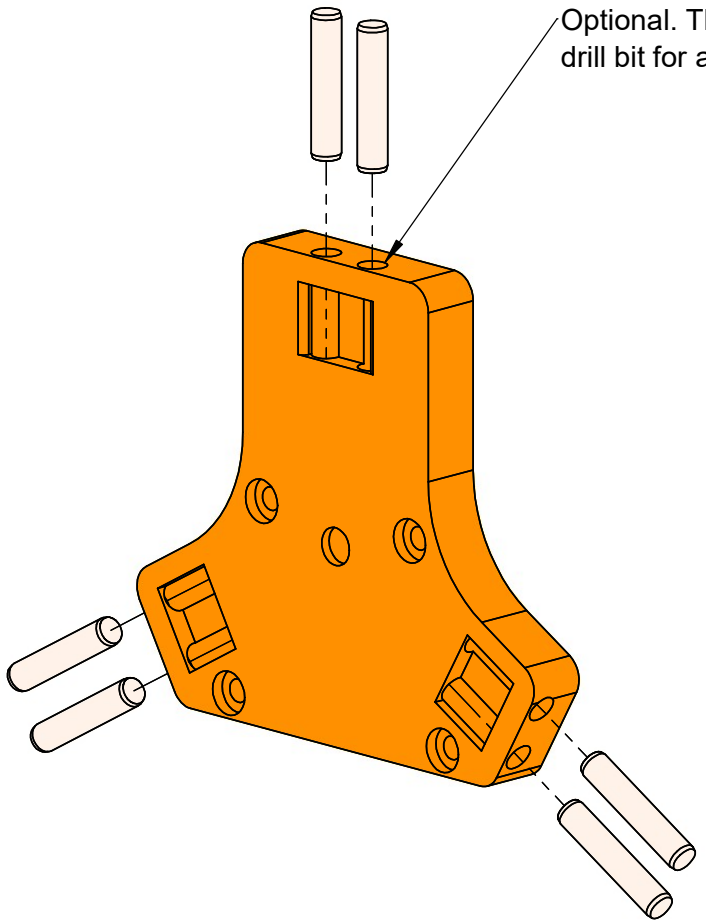
CC BY

Created by: Joshua Vasquez

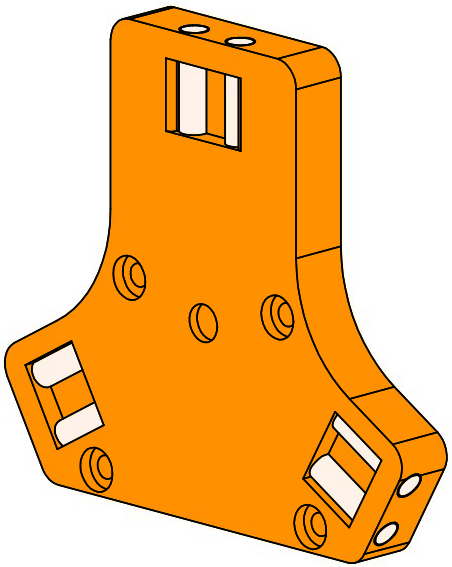
last edited: 6/27/2020

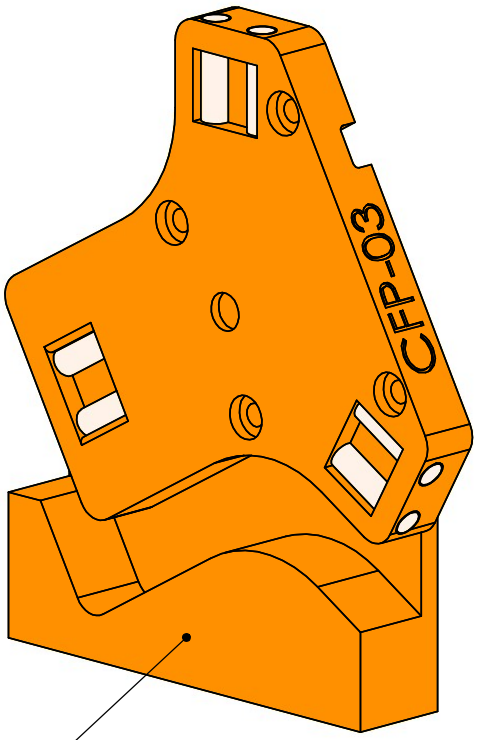
SCALE: 1:1

SHEET 1 OF 7



Optional. These dowel pin holes can be pre-drilled out in a drill press with a 5/32in. (3.97mm) drill bit for an easier press fit.





Press-fit each dowel pin into each socket until it is flush with the surface.

Use the pin insertion fixture to hold the Carriage Front Plate at the right angle for pin insertion.

ITEM NO.	DESCRIPTION	QTY.
1	Carriage Front Plate	1
2	M4 Dowel Pin, 20mm long	6
3	Pin Insertion Fixture	1

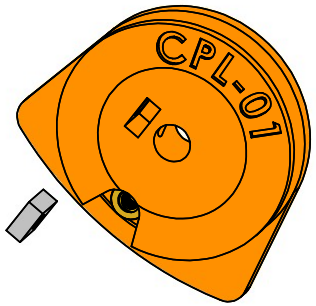
Coupling Plate Assembly

CC BY

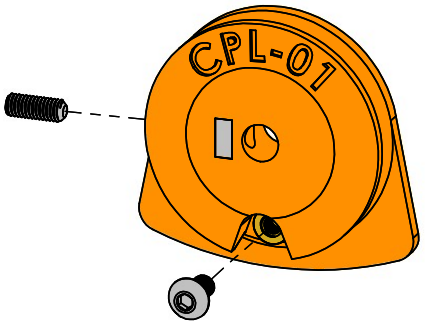
Created by: Joshua Vasquez

last edited: 6/27/2020

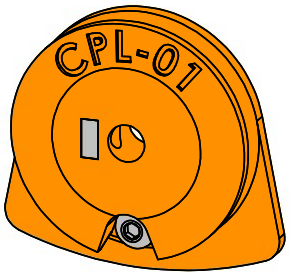
SCALE: 1:1



Step 1: Press-fit the square nut such that it is flush with the top face.



Step 2: Loosely install both screw components such that they engage the threads. The set screw should not peek out into the center hole. The buttonhead screw will be tightened later.



ITEM NO.	DESCRIPTION	QTY.
1	Tool Lock Pulley with Insert	1
2	M3 Square Nut	1
3	M3 Buttonhead Screw, 6mm long	1
5	M3 Set Screw, 8mm long	1

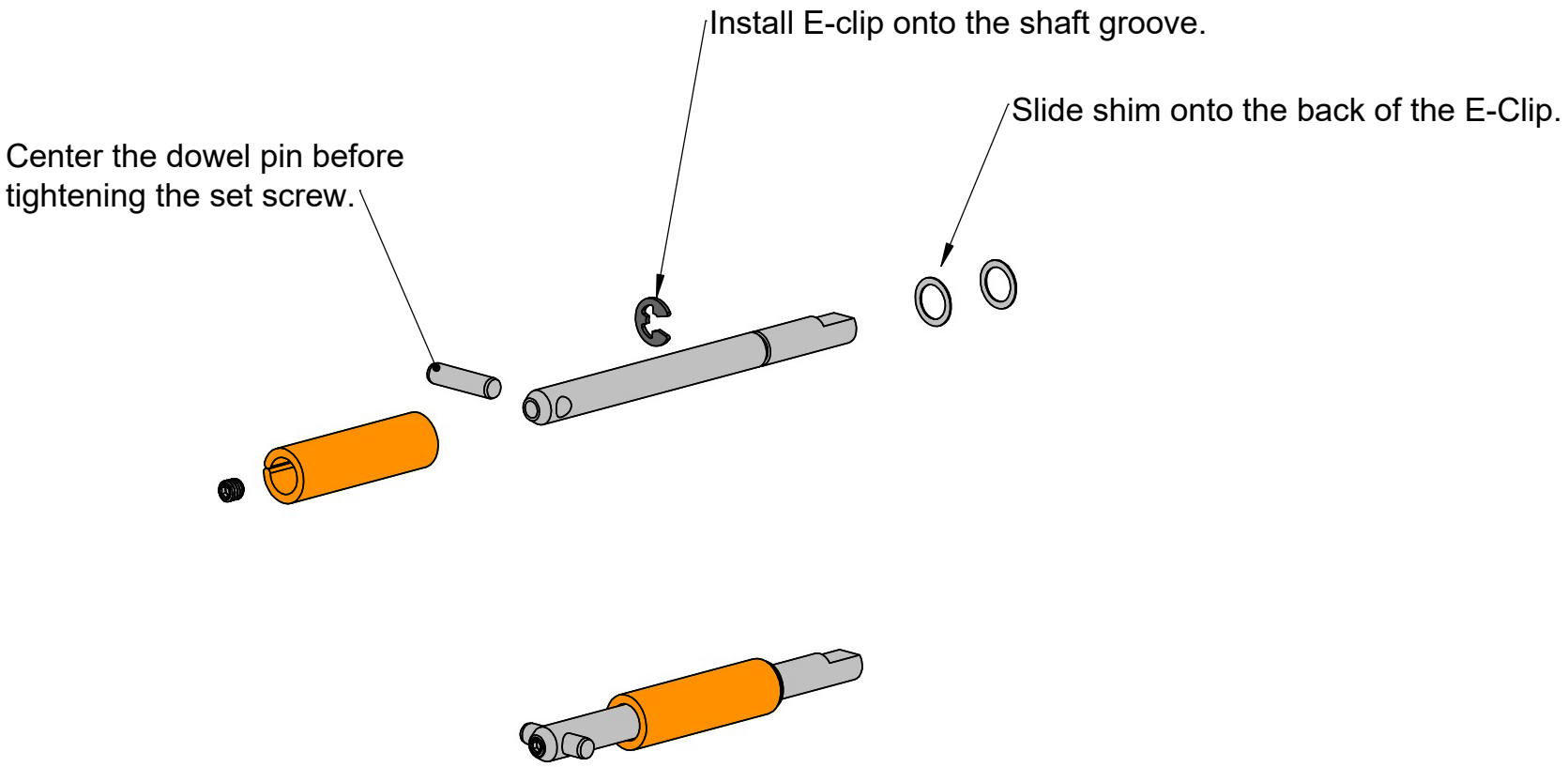
Pulley Assembly

CC BY

Created by: Joshua Vasquez

last edited: 6/27/2020

SCALE: 1:1



ITEM NO.	DESCRIPTION	QTY.
1	Twist Lock Shaft	1
2	M3 Dowel Pin, 12mm long	1
3	M3 Set Screw, 3mm long	1
4	E-Clip	1
5	M5 Shim, 0.2mm thick, 10mm OD	2
6	Twist Lock Spacer	1

Twist Lock Assembly

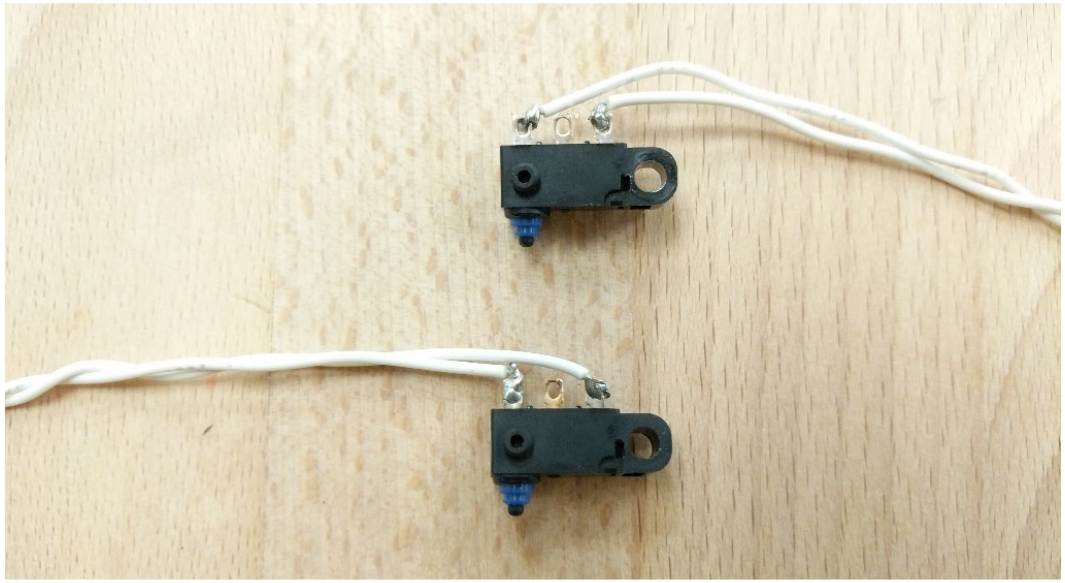
CC BY

Created by: Joshua Vasquez

last edited: 6/27/2020

SCALE: 1:1

SHEET 4 OF 7



(Optional: twist the wires into two pairs for easier cable management.)

Solder two wires to the outer ends of each limit switch with the wires bent in the directions shown above. Note that the direction is different for each limit switch!

ITEM NO.	DESCRIPTION	QTY
1	900mm of 26AWG stranded white wire	4
2	Dust Proof Limit Switch	2

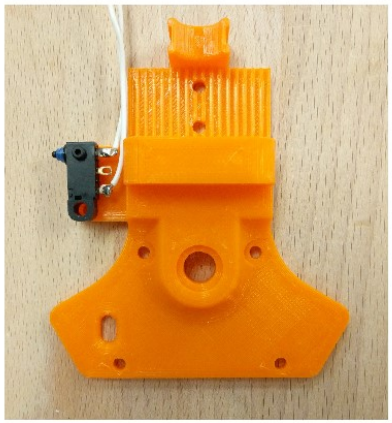
Wiring Installation

CC BY

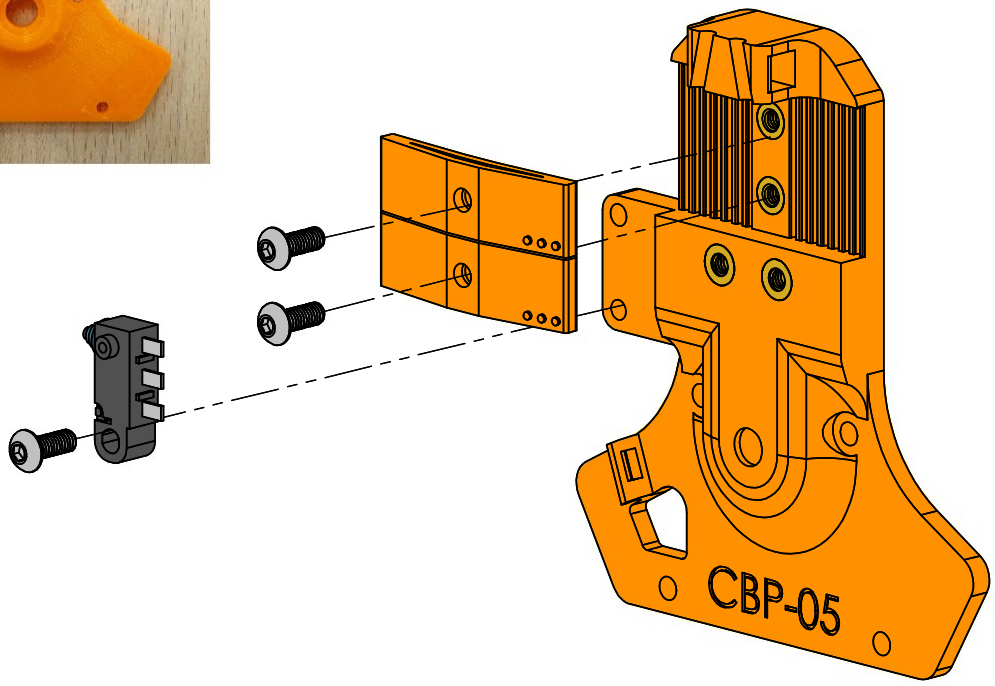
Created by: Joshua Vasquez

last edited: 6/27/2020

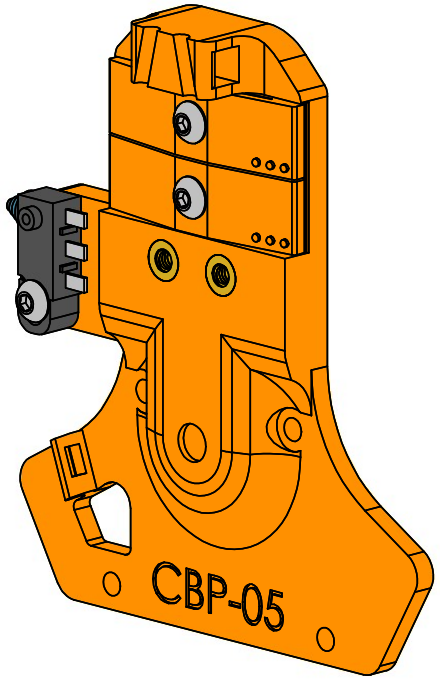
SCALE: 1:1



Select the limit switch with wires bent towards the button.



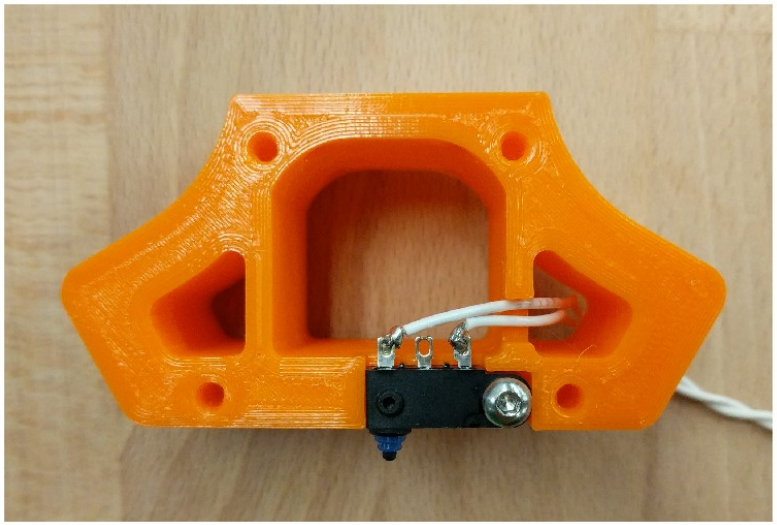
Exploded View



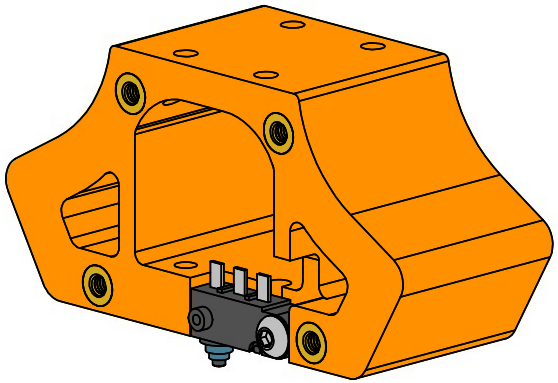
Assembled View

ITEM NO.	DESCRIPTION	QTY.
1	Dust-Proof Limit Switch	1
2	M3 Buttonhead Screw, 8mm long	3

Carriage Back Plate Assembly		
CC BY	Created by: Joshua Vasquez	last edited: 6/27/2020
	SCALE: 1:1	SHEET 6 OF 7



Select the limit switch with wires bent away from the button. Route the wires as shown above.



Set all completed subassemblies aside for installation on the CoreXY frame at a later step.

ITEM NO.	DESCRIPTION	QTY.
1	Dust-Proof Limit Switch with wires installed	1
2	M3 Buttonhead Screw, 8mm long	1
3	Carriage Center Plate	1

Carriage Center Assembly

CC BY

Created by: Joshua Vasquez

last edited: 6/27/2020

SCALE: 1:1

SHEET 7 OF 7