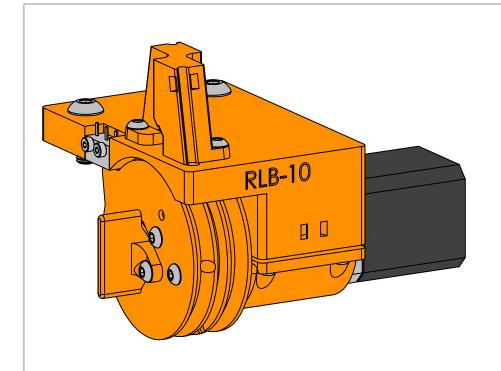
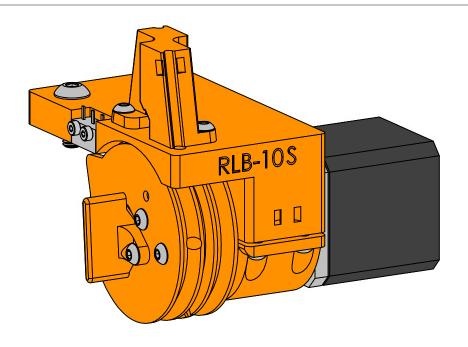
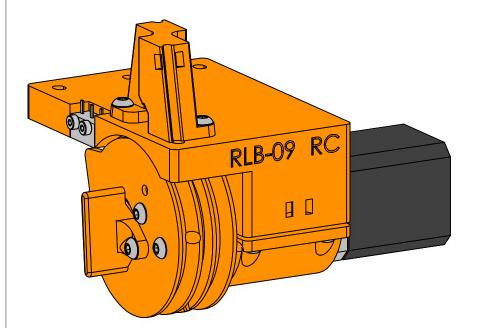


Remote Elastic Lock Assembly

	(A)	Created by:	last edited:
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		SCALE: 1:1	SHEET 1 OF 17





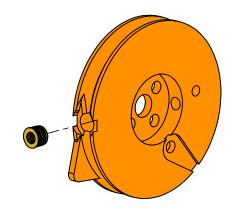


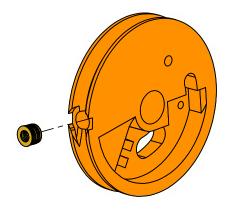
Note: There are three variants of this subsystem.

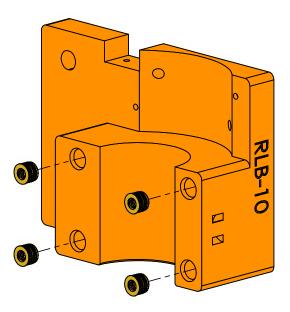
- RLB-10 for Jubilee
 - use an LDO motor
- RLB-10S for Jubilee
 - uses a StepperOnline motor
- RLB-09RC for the Railcore
 - uses an LDO motor

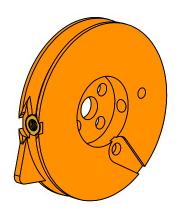
Each variant has a unique base plate. RLB-10S uses a unique base plate and motor clip. Make sure you've printed the parts that correspond to your motor.

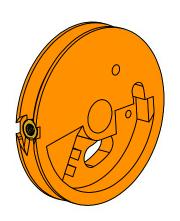
Variants			
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	SCALE: 1:1	SHEET 2 OF 17	

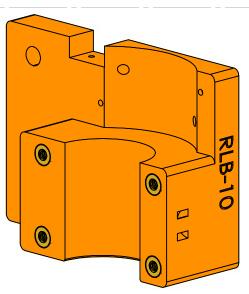












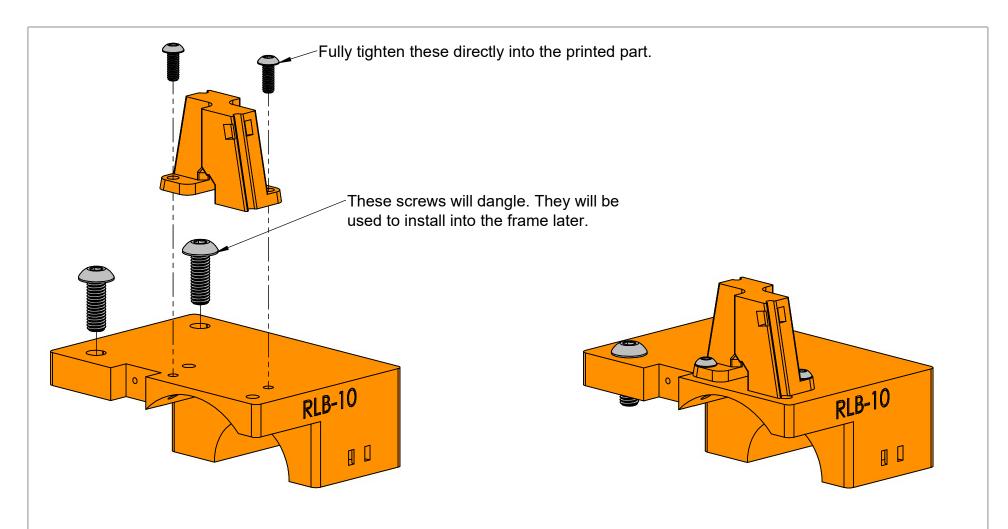
Parts with Inserts			
		Created by: Joshua Vasquez	last edited: 3/25/2021
		SCALE: 1:1	SHEET 3 OF 17



With a set of Needle nose pliers, bend the terminal lug upwards about 90 degrees along this line. Do this for both terminal lugs.

ITEM NO.	DESCRIPTION	QTY.
1	M3 Solder Terminal Lug	2

Part Prep			
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	SCALE: 2:1	SHEET 4 OF 17	



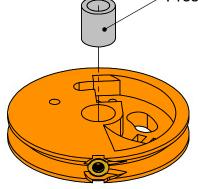
Exploded View

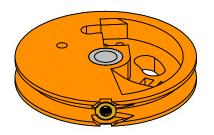
ITEM NO.	DESCRIPTION	
1	REL Base with Inserts	1
2	Spring Guide Anchor Block	1
3	M3 Buttonhead Screw, 8mm long	2
4	M5 Buttonhead Screw, 14mm long	2

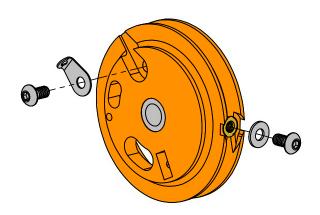
Assembled View

Base Plate Assembly			
		Created by: Joshua Vasquez	last edited: 3/25/2021
		SCALE: 1:1	SHEET 5 OF 17

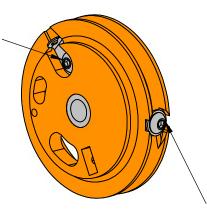
Press fit the bushing such that it is flush with the surface of the pulley.







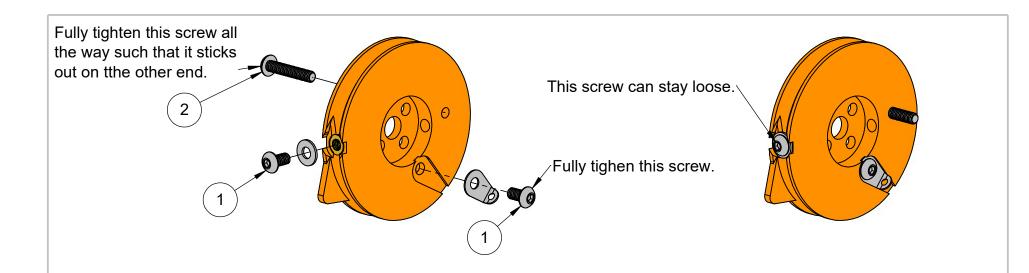
Fully tighten this screw.

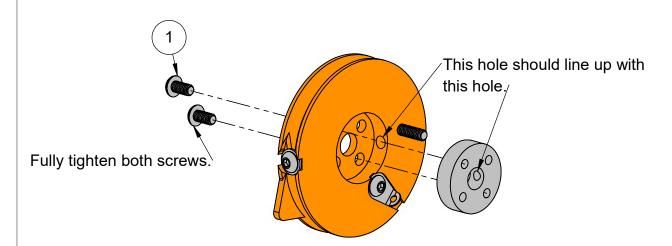


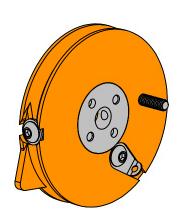
[∖]This screw can stay loose.

	ITEM NO.	DESCRIPTION	QTY.
Ī	1	Floating Half Pulley with Insert	1
	2	M3 Buttonhead Screw, 6mm long	2
	3	Bent M3 Solder Terminal Lug (Bend A)	1
	4	Sleeve Bearing, 6mm bore, 10mm long	1
	5	M3 Washer	1

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		SCALE: 1:1	SHEET 6 OF 17







ITEM NO.	DESCRIPTION	QTY
1	M3 Buttonhead Screw, 6mm long	4
2	M3 Buttonhead Screw, 16mm long	1
3	M3 Washer	1
4	Bent M3 Solder Terminal Lug (Bend A)	1
5	Fixed Pulley with Insert	1
6	Hub, 6mm bore	1

	Fixed	Half Pulley Ass	sembly
2	\odot	Created by:	last edited:

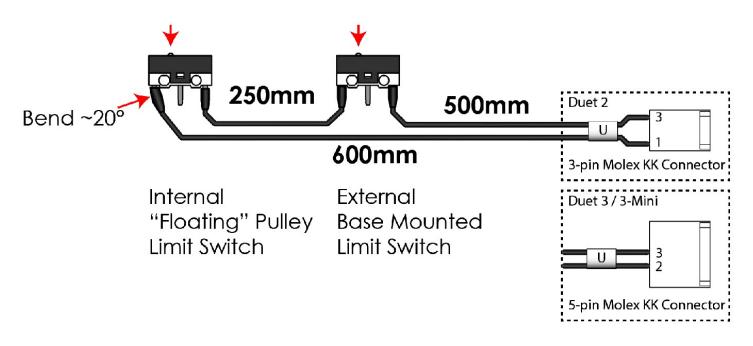
(i)	Created by:	last edited:
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	SCALE: 1:1	SHEET 7 OF 17

Solder together the following limit switch harness. Be sure to insulate the solder connections with heat-shrink tubing.

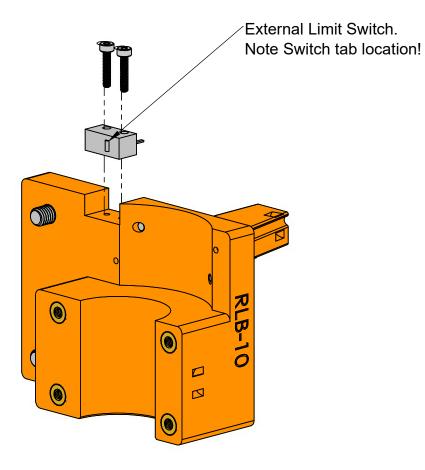
Note wire lengths with respect to switch buttons.

Note: KK Connectors are included with Duet hardware.

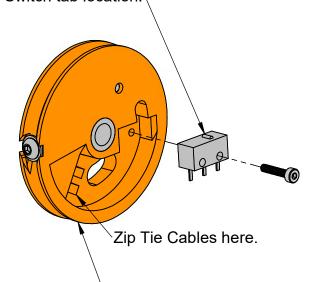
24-26AWG all limit switch wires



Wiring		
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	SCALE: 1:1	SHEET 8 OF 17



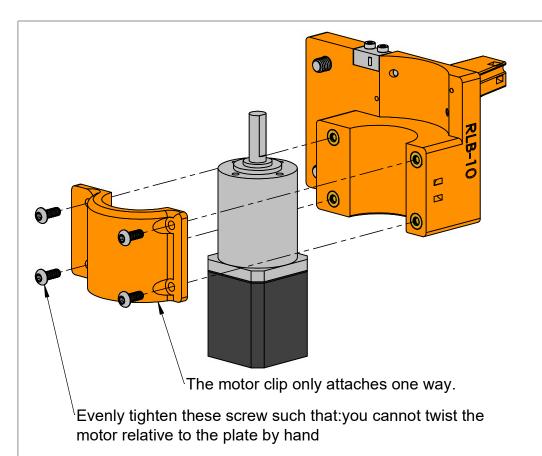
Internal Limit Switch.
Note Switch tab location!

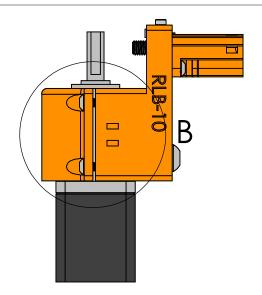


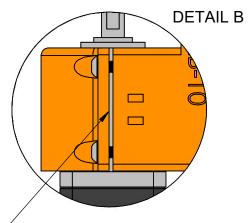
This part will dangle by the wires for a couple steps an is not shown in the inbetween steps.

=M NO.	DESCRIPTION	QIY.
1	Floating Half Pulley with Insert	1
2	REL Base Plate with Inserts	1
3	M2 Screw, 10mm long	3
4	Mechanical Limit Switch	2

Limit Switch Installation			
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		SCALE: 1:1	SHEET 9 OF 17





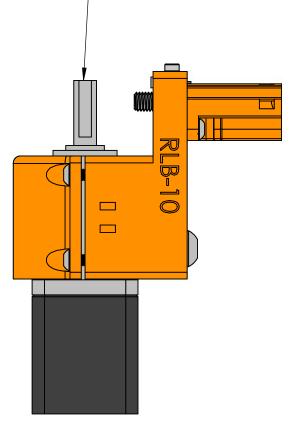


There will be a gap here on both sides. Ensure that it is even.

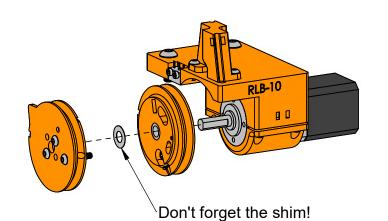
ITEM NO.	DESCRIPTION	
1	Planetary Stepper (varies)	1
3	Lock Actuator Motor Clip	1
4	M3 Buttonhead Screw, 8mm long	4

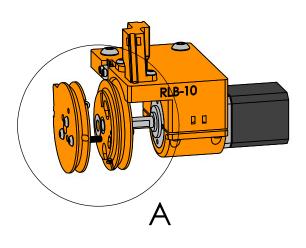
Motor Installation			
<u></u>	(i) BY	Created by: Joshua Vasquez	last edited: 3/25/2021
		SCALE: 3:4	SHEET 10 OF 17

By hand, turn the motor shaft such that the flat part faces the orientation with the part number as shown here.

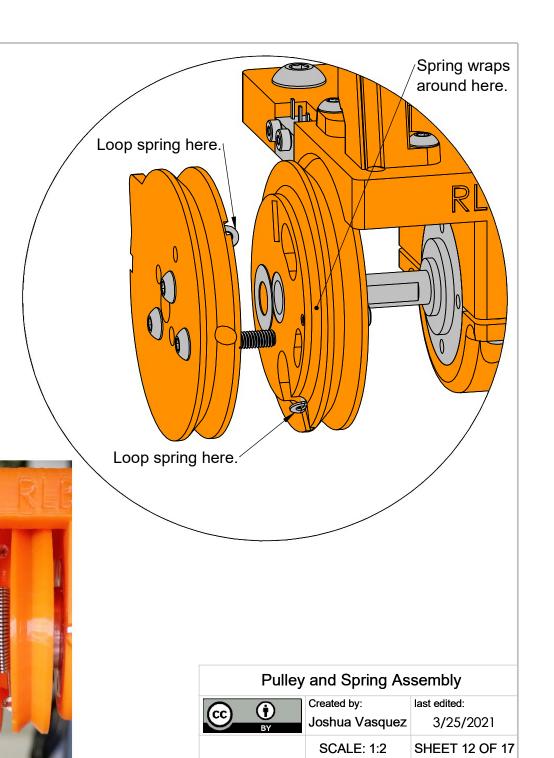


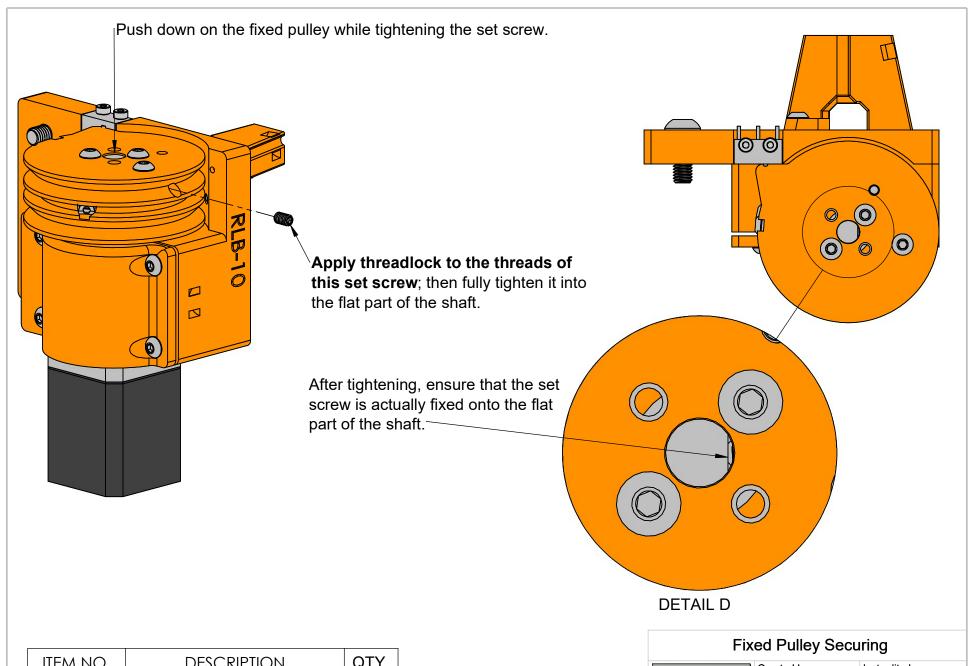
Shaft Alignment			
<u></u>	(i)	Created by: Joshua Vasquez	last edited: 3/25/2021
		SCALE: 1:1	SHEET 11 OF 17





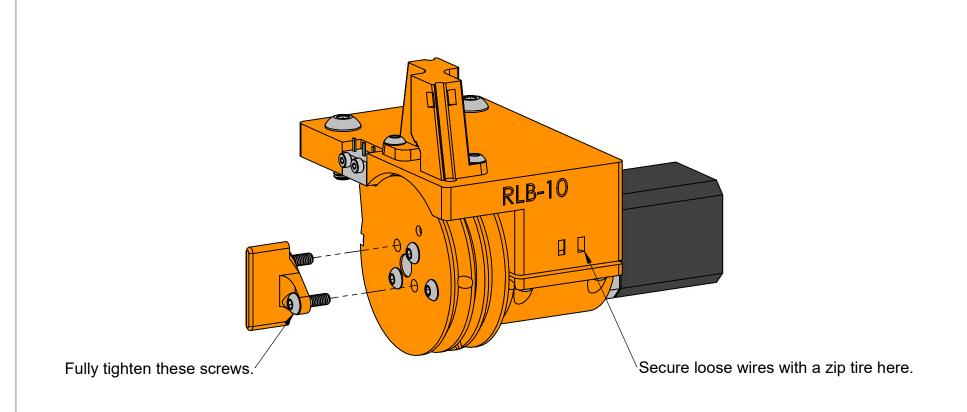






ITEM NO.	DESCRIPTION	QTY.
2	M3 Set Screw, 5mm long	1

Fixed Pulley Securing			
(33)	(i)	Created by:	last edited:
	BY	Joshua Vasquez	3/25/2021
		SCALE: 1:1	SHEET 13 OF 17



ITEM NO.	DESCRIPTION	QTY.
1	REL Knob	1
2	M3 Buttonhead Screw, 10mm long	2

Knob and Cable Management			
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		SCALE: 1:1	SHEET 14 OF 17

Note: this is just a schematic representation. Join these parts loosely together on a flat table following the color coding.

Note: tape the spring guide to the table for ease of assembly.

These two pieces can be sleeved together in a nylon sleeving, but leave at least 100mm exposed on the carriage side and 150mm exposed on the Lock side.

Push each spring guide into the printed part until they hard-stop at about 10mm deep.

18

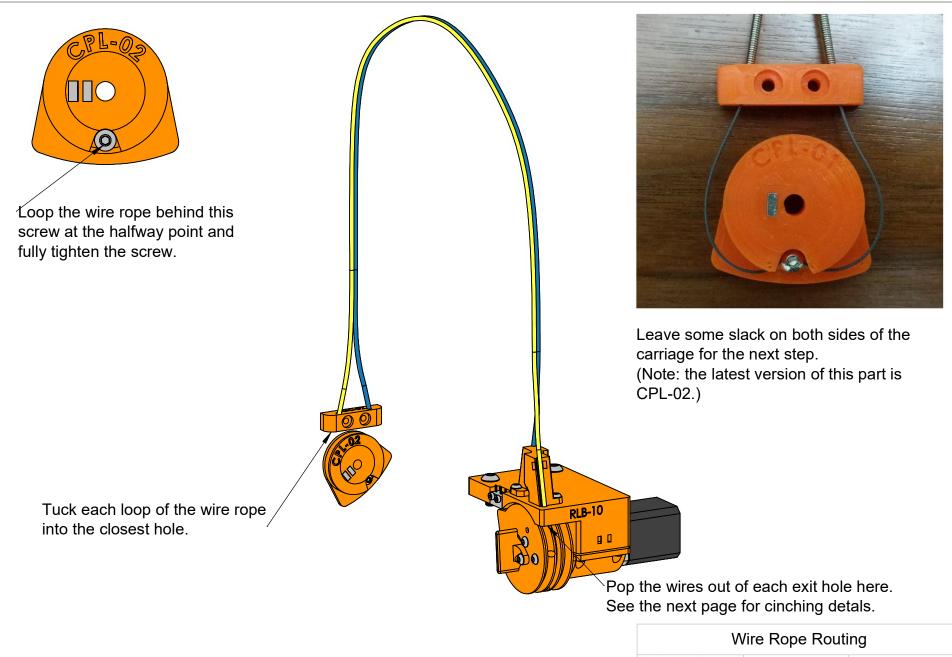
Push each Spring Guide into the hole until it hard-stops. Then apply two zip ties to secure each spring guide at the locking side..

RLB-10

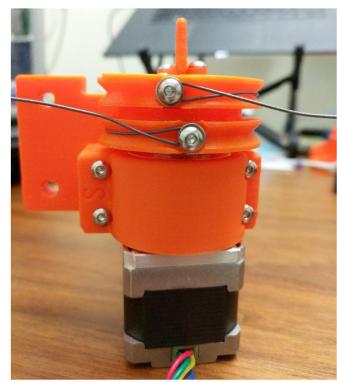
ITEM NO	DESCRIPTION	QTY
1	1600 mm wire rope	1
2	Carriage Pulley Assembly	1
3	Spring Guide, 600mm long	2
18	Spring Guide Ćapture (SGČ)	1
5	Optonal: Braided Cable Sleeving 350mm long	1

Spring Guide Installation

	•	•	
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		SCALE: 1:2	SHEET 15 OF 17



y obsider deque			wire Rope Rout
Josnua Vasquez 3			Created by:
	DESCRIPTION	QTY	Inshiia Vasquez
SCALE: 1:2 SHEE	ire rope	1	



Cinch both wire rope ends down very lightly (upper left image), just enough such that the wire rope cannot pop out. The location of where they are cinched doesn't matter now as they will be properly located later.



Once the wires are cinched, you may optionally take in the slack until there is no more excess wire rope on the carriage side (left image), but do not put tension into either side of the rope. This setup makes it easier to install on the machine later.

(Note: The latest version of this part is CPL-02.)





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Joshua Vasquez

RLB-10

last edited: 3/25/2021

SCALE: 1:2

SHEET 17 OF 17