

Mini-Trapdoor Guide:

Matthew's Phone Number: 602-679-1866

System	Part	Issues to Look For	Possible Fixes
Overall		- Excess force required to open the trapdoor. - Broken 3D-printed parts (Includes cracks and deformations).	- Identify the part causing the excess force and make the necessary fixes/replacement. - Notify Matthew of broken parts (include picture). If replacement part is available and time allows, replace the part. Notify Stage Manager if part is unable to be replaced. - Notify Stage Manager if any issue completely prevents opening and closing of trapdoor.
Four Bar Linkages			
	Shaft Collars	- Part is cracked. - Collar is slipping. - Loose machine screws.	- Remove faulty collar from shaft (may require removal of other components), and replace with a new shaft collar. - Tighten loose screws with hex wrench (2.5 mm).
	Cranks	- Part is deformed or cracked. - Extreme friction felt in ball bearings. - Inside pin has broken.	- Remove and replace faulty crank. - Remove cover with hex wrench (2.5 mm) if ball bearing or pin needs to be removed.
	Couplers	Part is deformed or cracked.	Remove and replace faulty coupler (requires removal of pin from associated crank).
Rotary Shafts			
	Pillow Blocks	- PB is cracked. - Set screw is loose.	- Notify Mathew of any cracks. - Tighten loose screws with hex wrench.

	Shafts	• Shaft is misaligned.	• Reorient PBs if possible to realign shaft. • Notify Matthew of serious misalignment.
Trapdoor			
	Trapdoor Hinge	• Excessive friction. • Hinge misaligned. • Loose screws.	• Notify Matthew of the broken hinge. • Tighten nuts of loose screws.
Handle			
	Handle Link	• Link is cracked or deformed. • Hinge experiencing excessive friction or is cracked.	• Remove and replace link. • Remove handle base cover with hex wrench (2.5 mm) if hinge is experiencing problems.
	Handle Base	• Base cracked. • Base not flush with frame.	• Remove and replace base. • Tighten nuts of loose screws on backside of portrait.
Rotation Limiters			
	Limiters	• Rotation limiters cracked. • Crank not aligning with limiters.	• Remove and replace limiters. • Misalignment likely to be an issue with the crank or shaft rather than the limiters.

Date	Notes
9/21	warped Ivan
9/22	warped Ivan
9/23	N/A
9/24	N/A
9/25	N/A
9/26	N/A
9/27	N/A
10/1	N/A
10/2	N/A
10/3	N/A
10/4	N/A