



Team A

Design Review II

Lab Deliverable 10/02

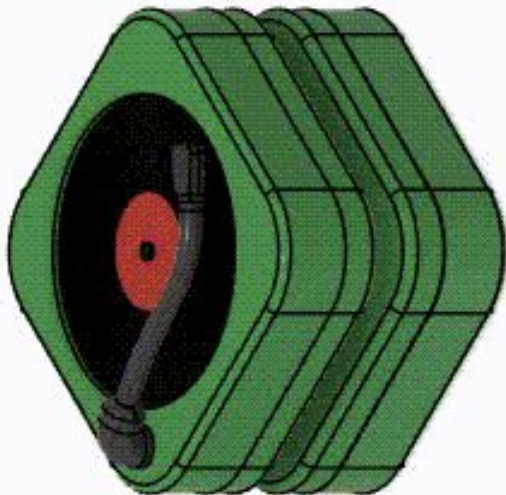


Progress Update

Part Name	CAD Done?	CAM Done?	Machined?
Top Shell	Done!	Done!	Done!
Inner Shell (2x)	Done!	Done!	Cavity Done
Lower Shell	Done!	Done!	Not Started
Record Arm	Redesign	Redesign	Redesign



Current Design

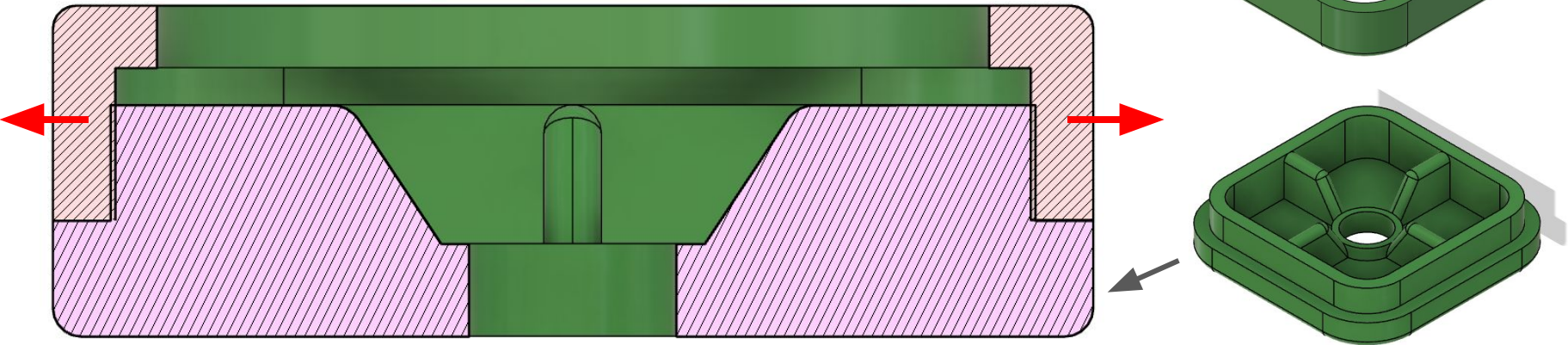




Interference Design

0.01" interference on each side (0.02" in total)

Interior ribs to prevent deformation of inner shell, focus deformation on outer shell

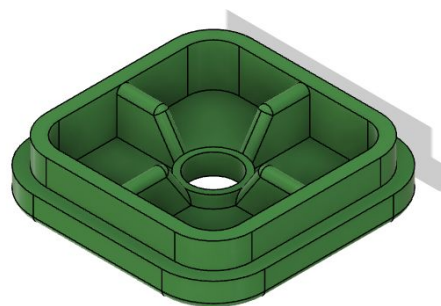
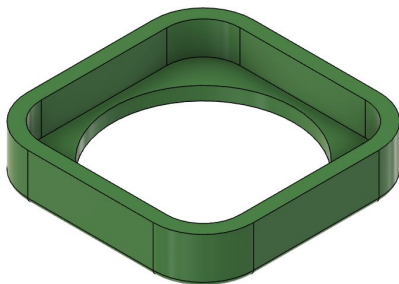




Interference Design

Attempted static simulations in Fusion360

0.04" caused failure in the **corners of the top shell** in, and **very high assembly forces**



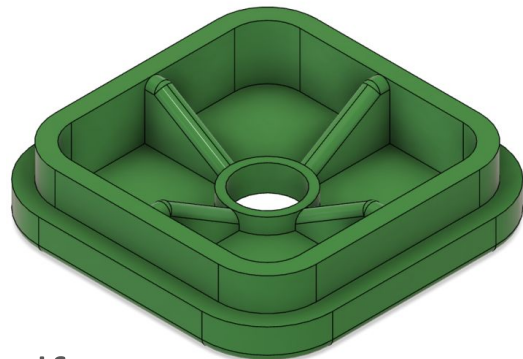


Square Yo-yo

- Manufacturing a square yo-yo may present unique challenges
- We are addressing this through **design** and team **organization**

DESIGN *to reduce risks*

- Ribs to decrease deformation of parts
- Increased the length of contact for press fit
- Thermoformed parts will be circular

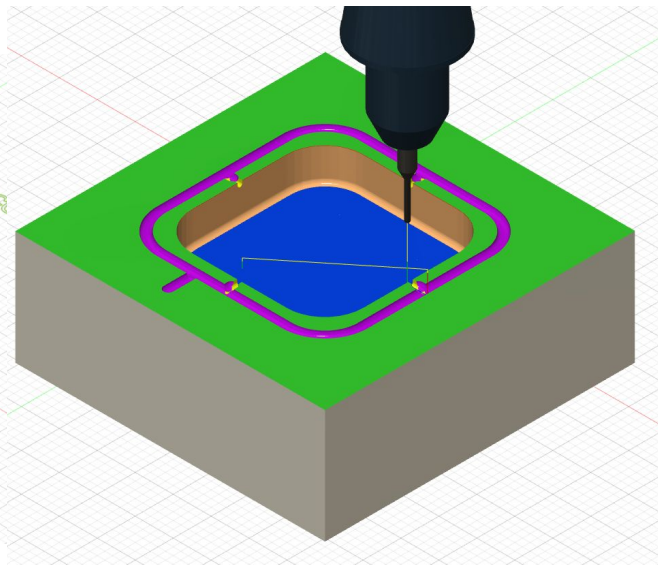
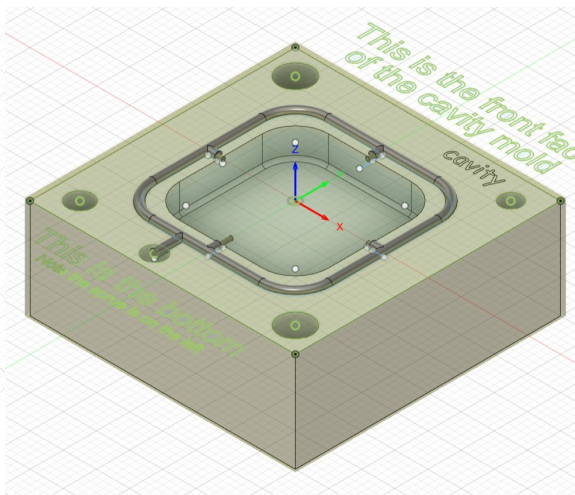
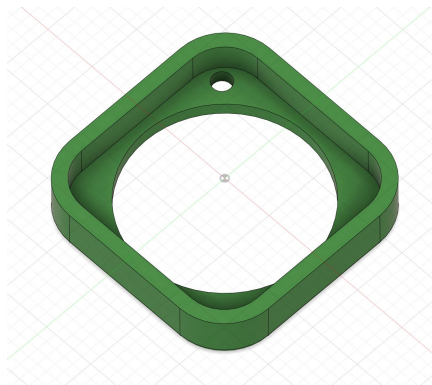


ORGANIZATION *to equip us to address challenges*

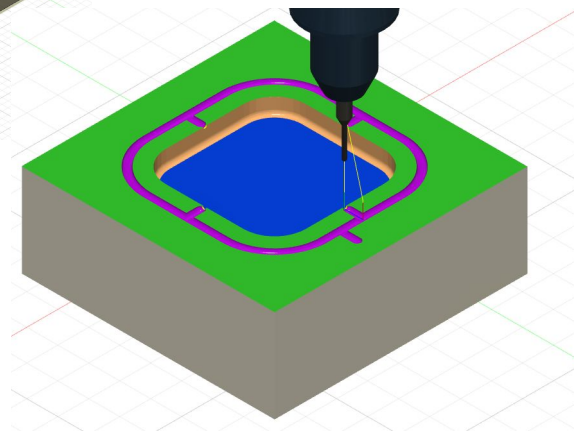
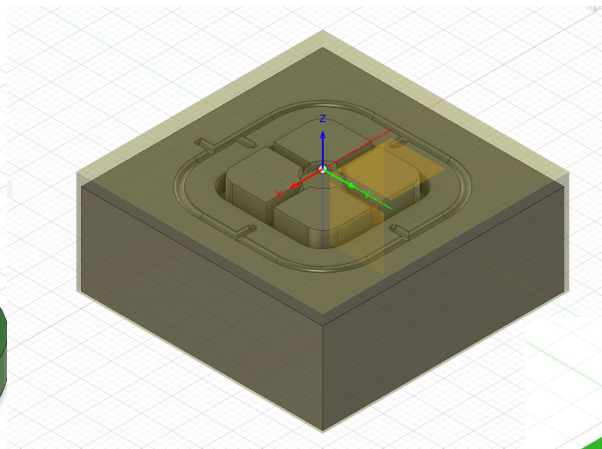
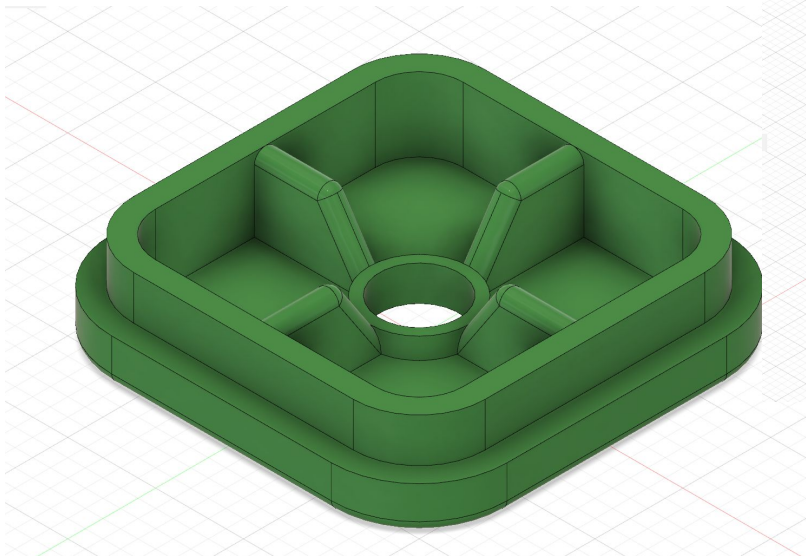
- Individual team members assigned to each mold half
- All versions of toolpaths logged in spreadsheet and saved in shared drive
- Maintaining itemized list of assigned action items each week



Top Shell

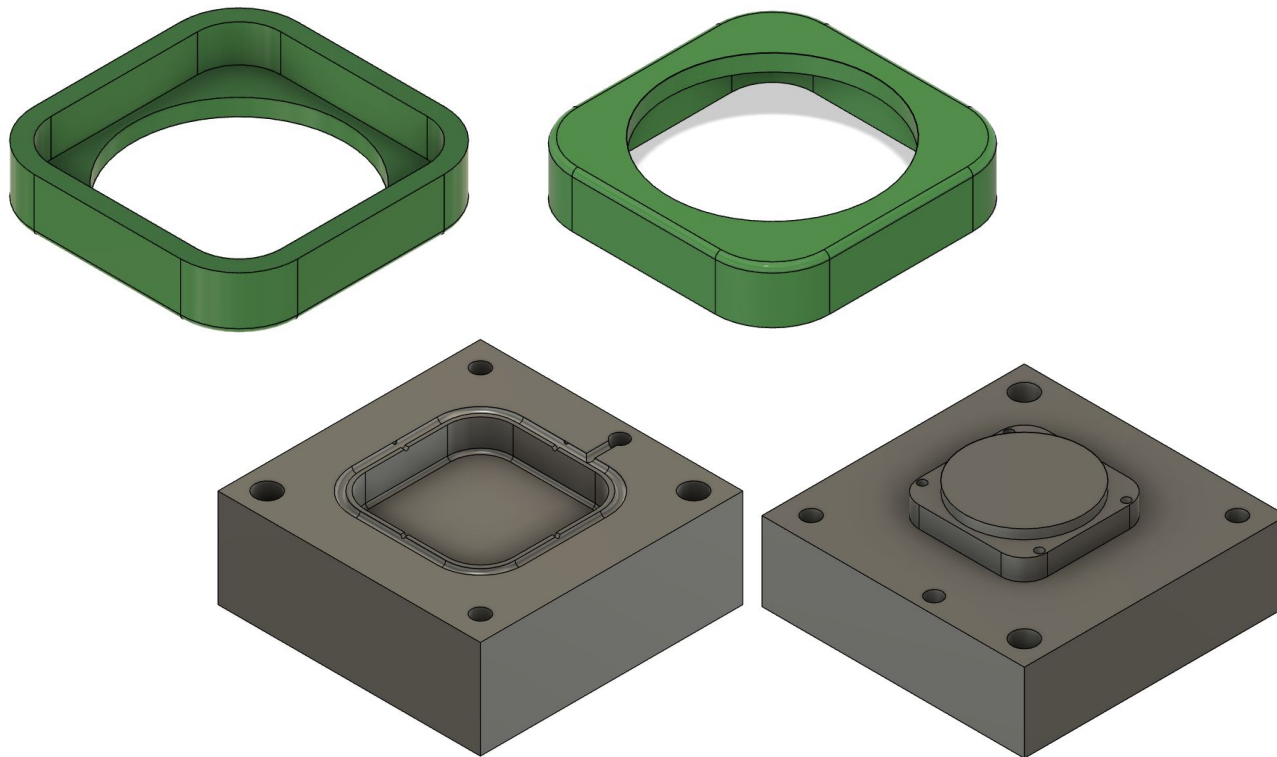


Inner Shell





Lower Shell



Record Arm

