Clasper Finger Test Plan

Functions

1. Maintain the cube’s position in 3D-space in any of four gripping orientations
2. Re-orient the cube’s position in 3D-space without interference
3. Re-orient the cube’s position in 3D-space roughly symmetrically
4. Engage and disengage from the cube without interference
5. Execute actions a-c in a consistent manner

**A** **–** Increase the perpendicular support length. Apply rubber cement to the cube. Align cube to the claspers as best as possible. If all these modifications prove ineffective, could re-orient the entire machine.

**B –** Re-design of claspers and housing should prevent interference during cube rotation and face manipulation. (Shown by model).

**C –** Dependent on whether any slipping occurs during cube operation, as well as the alignment of the stepper adapter axis to the “center” of the clasper.

**D –** 3D model reveals that clasper finger engagement/disengagement involves an edge on the clasper finger rubbing against the cube face. Smoothing out this edge, and reducing the edge length may help.

**E –** Measure using tests.