Purpose

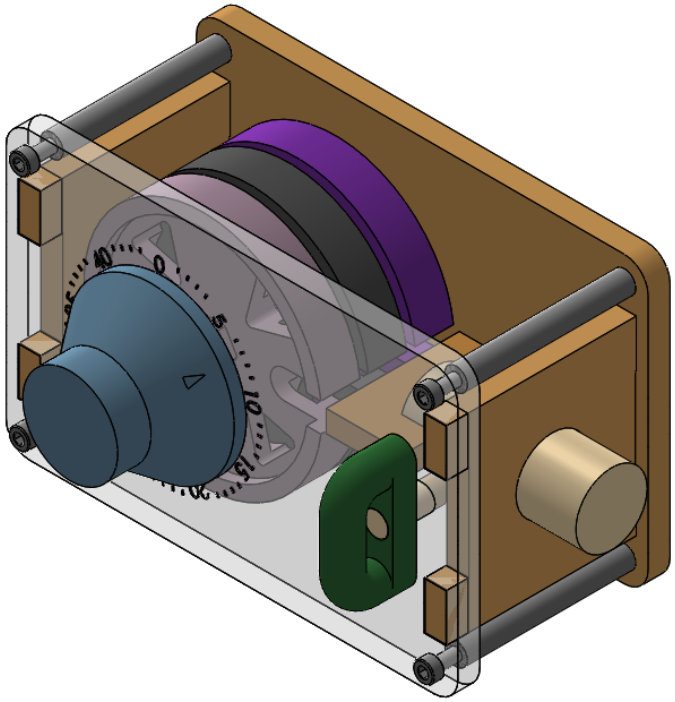
This assignment provides an opportunity to continue developing assembly and drawing creation skills in SolidWorks by using advanced mates, exploded views, and generation of balloons, route lines and bill of materials.

By completing this assignment, you will be able to:

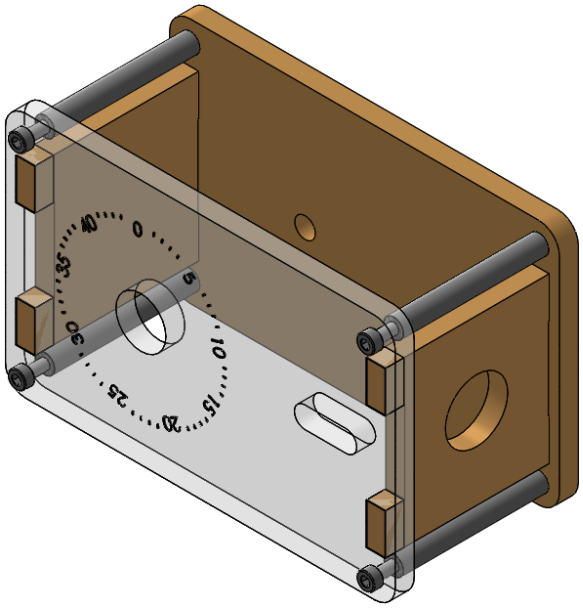
- Apply advanced relations to constrain parts to produce a fully constrained assembly (SLO 3b)
- Create an exploded view of assemblies with route lines (SLO 3c)
- Create working drawings of assemblies including exploded views, bill of materials, and balloons using CAD software (SLO 4i)

Task

Using the subassemblies you have previously generated for the case and Dial-Connector-Front_Rotor, and the remaining provided parts, assemble the combination lock using advanced mates to simulate the motion of opening the lock (assume the combination has already been correctly entered). You will also need to download the rotor spacers from McMaster-Carr: https://www.mcmaster.com/94639A568/



Then, create an exploded view of the case subassembly that you created in G04 AND a drawing file of the exploded view with Balloons, route lines, and a bill of materials (you only need to submit the drawing).



Submit

For the assembly, submit a screenshot of the entire SolidWorks window following the guidelines in the *SolidWorks Submission Standards* document in Carmen. Your submission should include the part in isometric view, expanded model tree (features or mates), and the mass properties window as shown below in the *Criteria for Success* section.

For the drawing file, submit a PDF of the drawing with a completed title block (full SolidWorks window not needed) following the guidelines in the *SolidWorks Submission Standards* document in Carmen.

Criteria for Success

Grading of this assignment will be based on:

1. Adhering to the submission standards.
2. Inclusion of all necessary subassembly components.
3. Proper use of mates to correctly orient and define the assembly.
4. Use of OSU Drawing Template with title block completely filled in.
5. Inclusion of properly formatted exploded view of assembly.
6. Proper use of balloons and bill of materials.

For detailed descriptions of the grading criteria for this assignment, please see the rubric on Carmen.