



Meeting Agenda

Sponsor:

NASA

Company Name:

NASA

Liaison Name:

Rachel McCauley

Team Members:

Josh Blank
Design Engineer

Matt Fowler
Systems Engineer

Tristan Jenkins
Design Engineer

Alex Noll
Mechanical Engineer

Melanie Porter
Dynamics Engineer

Advisor:

Keith Larson

Instructor:

Shayne McConomy, Ph.D.

Teaching Assistant:

Melanie Monroe
Joshua Jones

Project Name: Reusable Shock Absorber for New
Lunar Lander

Thursday, January 14, 2021, 4:10 pm

Past Work

- Research possible concepts for the design
- Concept selection
- Developed a design in Creo
- Chose materials for the final design
- Began sizing the spring

Current Work

- Present our progress to NASA
- Create design drawings
- Scale design to 1:6th size for the prototype
- Create prototype drawings
- Virtual Design Review 4
- Figure out spring parameters for the prototype
 - Stiffness, # of coils, Etc...
- Size pawl positioning springs and attachment points

Looking Ahead

- Find testing location to swing a big pendulum
- Design testing rig
- Write testing procedure
- Test prototype

Needed Feedback

- Can we make the prototype out of low carbon steel?
- Can we use different fabrication techniques for the prototype, i.e. welding, then we would for the actual design?
- Bearing vendor won't get back to us.
- How should we approach simulating our prototype?
- How should go about getting NASA to email us back more frequently?