



ROTATION 2: SYSTEMS TEST MECHANICAL DESIGN

Vishank Battar | Purdue University

AGENDA

- About me
- What I did this rotation
- Outside of work
- Lessons learned
- Plans for the future!

ABOUT ME

- School: Purdue University
- Major: Aerospace Engineering
- Hometown: Palo Alto, CA



WHAT I DID THIS ROTATION

1. B17 Turret Assembly
2. Adding Fidelity to APU cart fuel tank
3. AFD Drawer
4. Air Duct
5. Helping lay up composite parts
6. Reverse Engineering 280 ITF
7. Learned to use 5-axis and conversational mills
8. SmarTeam Startup Guide

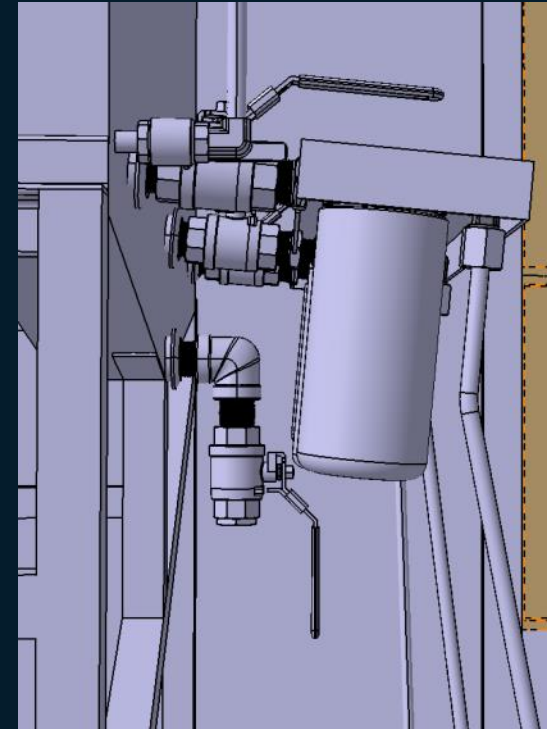
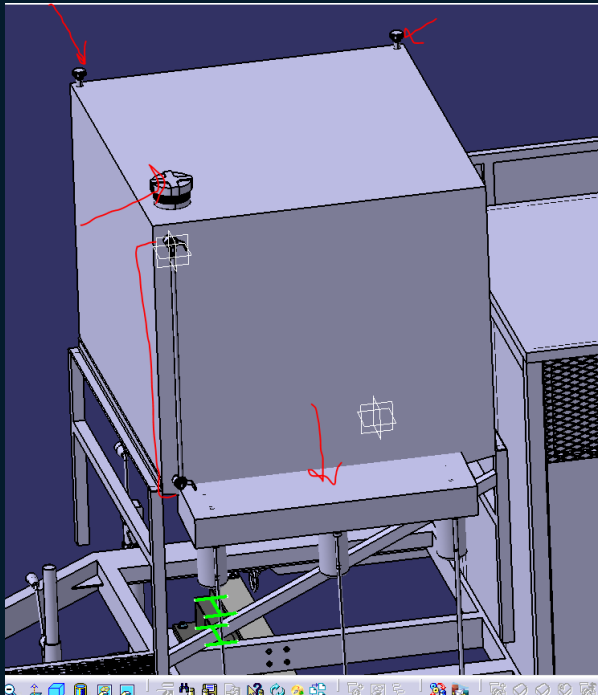
B17 TURRET ASSEMBLY

- Reverse engineered B17 turret parts to help with restoration for Mighty Eighth AF Museum.

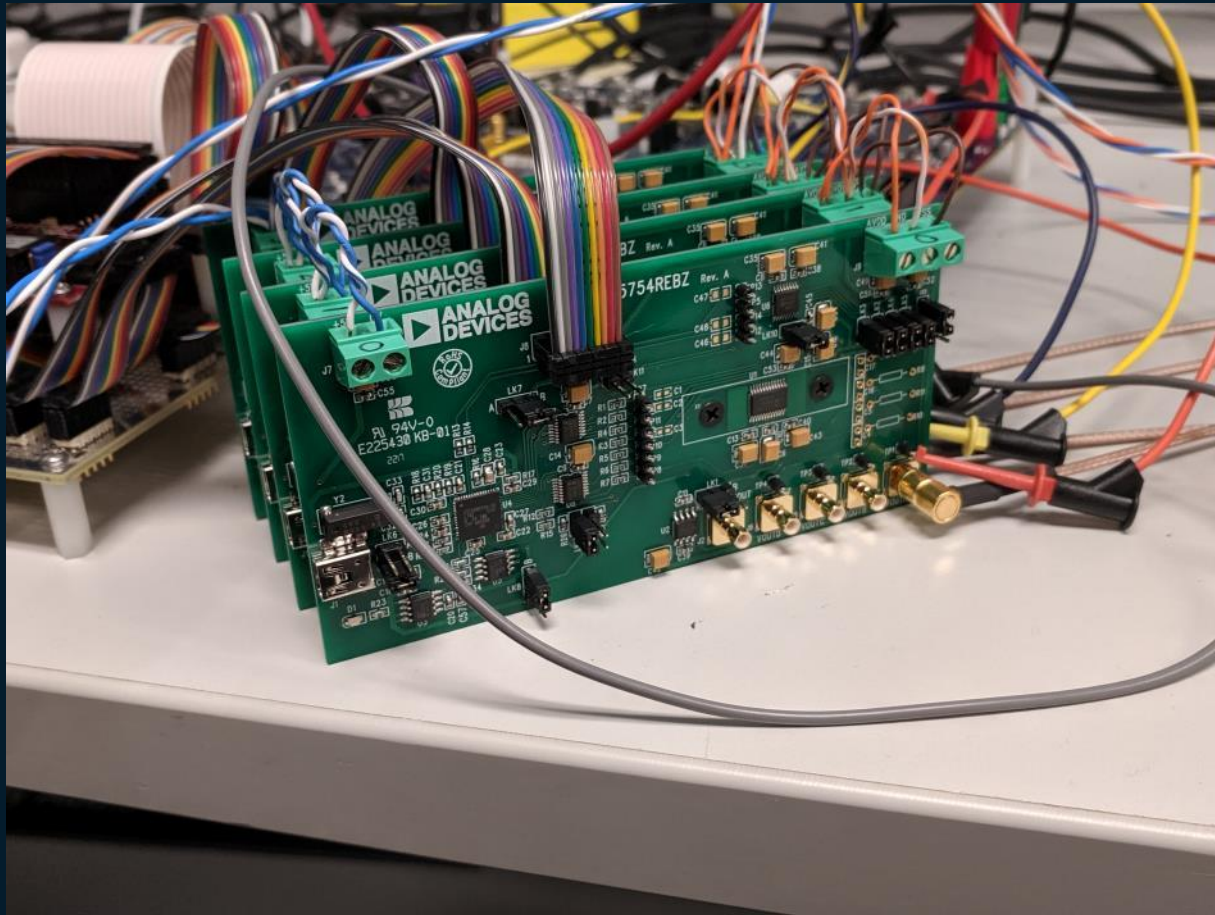


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ADDING FIDELITY TO APU CART FUEL TANK

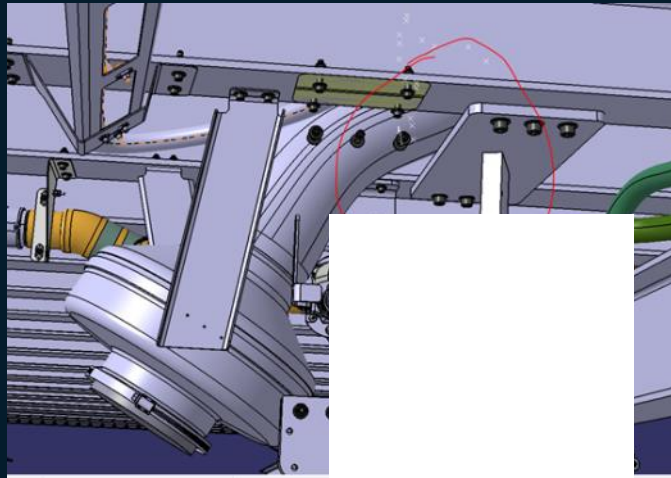
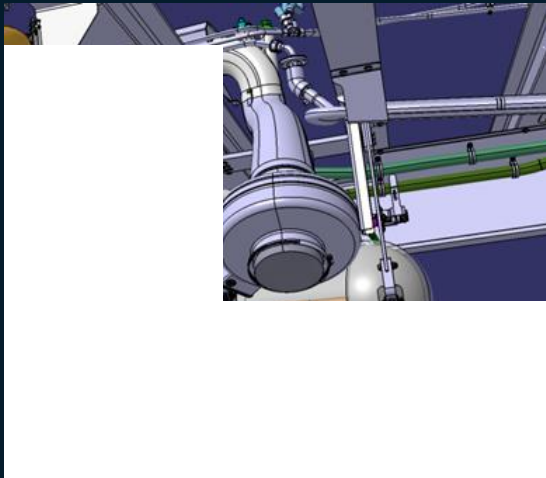


AFD DRAWER



AIR DUCT

- A fan was placed in the production location of a waste tank
- Had to engineer an alternative duct with fan in different location:



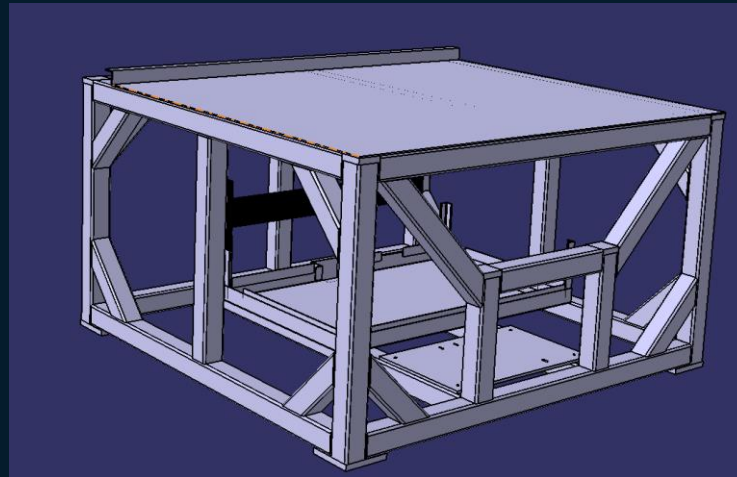
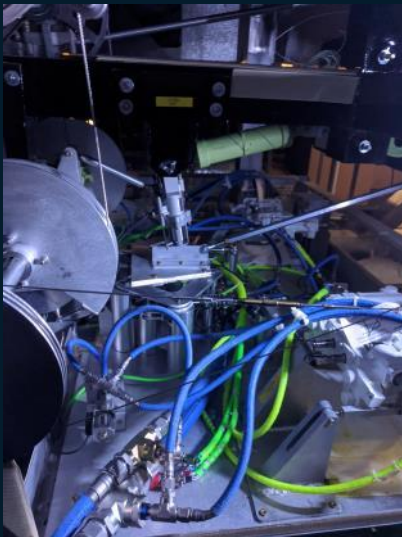
Pictures have been redacted to protect proprietary information

HELPING LAY UP COMPOSITE PARTS



REVERSE ENGINEERING 280 ITF

280 ITF had no documentation except for a CGR, so I had to go reverse engineer as much of the lab as possible (everything except for the flight deck)



LEARNED TO USE 5-AXIS AND CONVERSATIONAL MILLS



SMARTTEAM STARTUP GUIDE

SmarTeam can be difficult and time consuming to learn, so I proposed a startup guide to quickly familiarize users with it .

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DOCUMENT NO:	XXX-GER-XXXX	FAA PROJECT NO:	N/A
CURRENT REVISION:	As Noted	INITIAL DATE:	XXX, ##, 20##
GAC CAGE CODE:	59734	MODEL:	N/A
VENDOR REFERENCE:	N/A	ATA NO:	N/A
CERTIFICATION DATA TOP ASSEMBLY NO (if applicable):			

SmarTeam User Guide

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OUTSIDE OF WORK

1. CFL Tourney
2. Project K.U.M.A.R.
3. Exploring the South
4. Hanging out with other co-ops
5. Family

CFL TOURNEY

4 teams of 4 double elimination!



PROJECT K.U.M.A.R.

We built and launched a high powered rocket (H motor). This is the first rocket in a series of many. The name was inspired by the Harold and Kumar movie series.



PROJECT K.U.M.A.R.



EXPLORING THE SOUTH



HANGING OUT WITH OTHER CO-OPS



FAMILY



LESSONS LEARNED

- Don't be afraid to ask for help
- Understanding the big picture is important – don't get too lost in the details
- Talk to your customers!!!
- Have fun

IN THE FUTURE

1. Joining Professional Fraternity
2. Working at CMSC
3. Building K.U.M.A.R. 2
4. Pilots License
5. Coming back for a 3rd rotation this summer.



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