MTD Products Work Experience

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INTRODUCTION

My name is Akosh Raffai and I worked as a Service Training Intern/Co-op at MTD Products in Valley City, Ohio. I obtained this co-op through the Engineering Connections Fair in the fall of 2019, and worked at this position during the summers of 2020 and 2021. My experience counted as an ESC 400 credit.

ABSTRACT

This presentation seeks to share my co-op work experience at MTD Products as Content Developer in the service training department. Through outlining my role duties, accomplishments, and challenges, I hope to provide an educational summary of my co-op experience. I want to help other students understand what a co-op can be like and how they should approach work experiences, so that they can form their own expectations and goals when starting a job. I also want to give students who have already had co-ops the opportunity to compare our work, so that we can learn from each other's experiences.

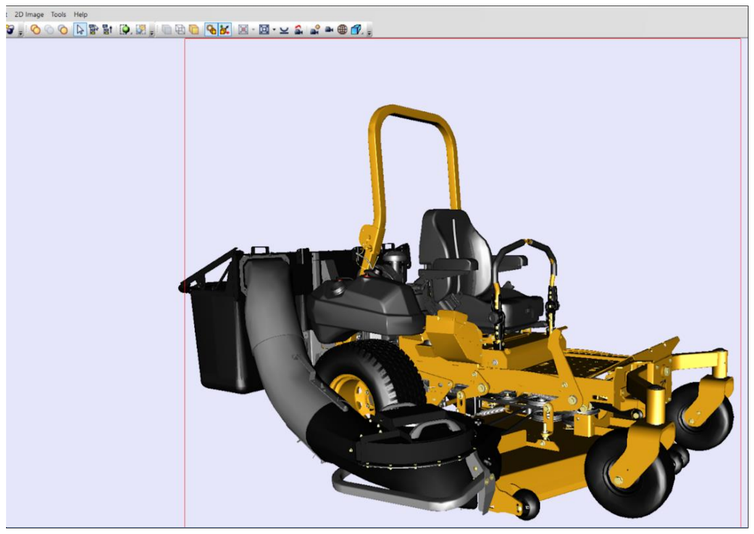
LEARNING OBJECTIVES

- Use 3D assemblies to better understand mechanical systems
- Assemble and disassemble physical machines to see how they work
- Become familiar with industry software such as Siemens Teamcenter and Cortona 3D

RESPONSIBILITIES AND PROJECTS

Creation of animated and narrated service guides for various components on multiple mower models

- Animated servicing transmissions, belts, batteries, controllers, linkages, etc. with Cortona 3D
- Wrote procedures with scripts to explain the service steps, and used audio from a voice actor to narrate the animations
- Verified service procedure and animation by checking engineering drawings, talking to coworkers, and performing the service on machines in the shop



Cub Cadet mower assembly in Cortona 3D

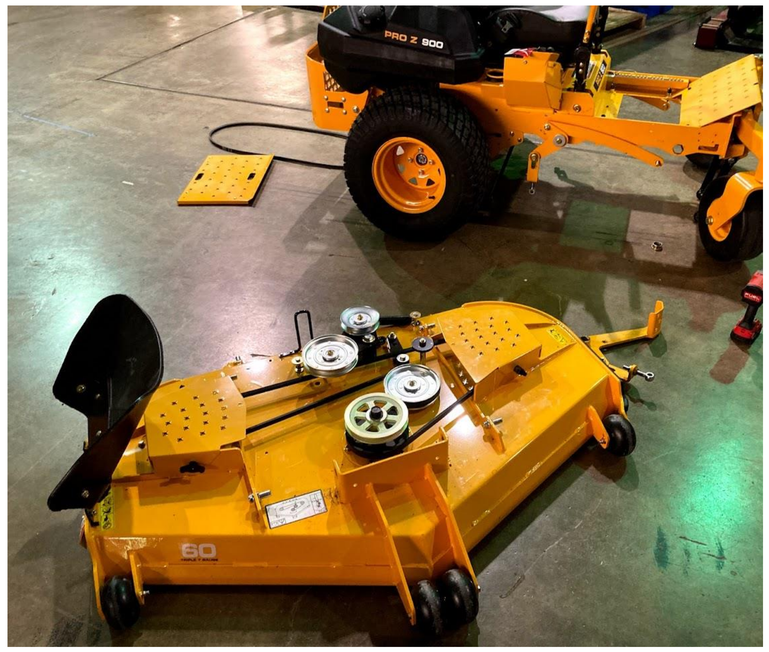
APPLICATION OF COURSES

- Manufacturing and Processes – This class helped get me familiar with some tools I used in the shop. Occasionally I needed to use calipers to take measurements or perform light machining using a drill press.
- Solidworks – Being exposed to 3D modeling software and assemblies made using Cortona 3D intuitive, as the software was somewhat similar. It also helped me read engineering drawings of parts.

Assembly of mowers in the engineering shop

LESSONS LEARNED

- Technical work with software and assembly work in a shop are two sides of the same coin when doing technical writing, being knowledgeable in both sides helps in writing a clear service procedure, especially when describing using tools like torque wrenches.
- Communication skills are very important. It is key to describe how to do something correctly, but without extraneous information.



Verifying deck belt replacement procedure in the shop

FUTURE CAREER OBJECTIVES

I analyzed many mechanical systems during my work experience, and enjoyed both the technical and hands-on sides of the process. I would enjoy further refining my analytical skills and eventually move on to designing mechanical systems. Working with CAD software to model components would also be interesting to me.

ACKNOWLEDGEMENTS

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