Reviewing GE's LM2500 Turbine Engine Repair Process at Component Repair Technologies

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INTRODUCTION

My name is Jon DePiero and over the summer of 2022, I interned at Component Repair Technologies which is in Mentor Ohio. I worked as a Product Support Engineer intern. This was a 10-week internship that started in mid May and went to the beginning of August. During the fall 2021, I was working at an exclusive golf club in Pepper Pike where I was talking to a member about my previous internship at Parker Hannifin. When he heard about this, he asked me for my resume and talked about his company Component Repair Technologies (CRT) and how he would love to have me come and intern there. Within a couple weeks, I went through their interview process and was offered the position.

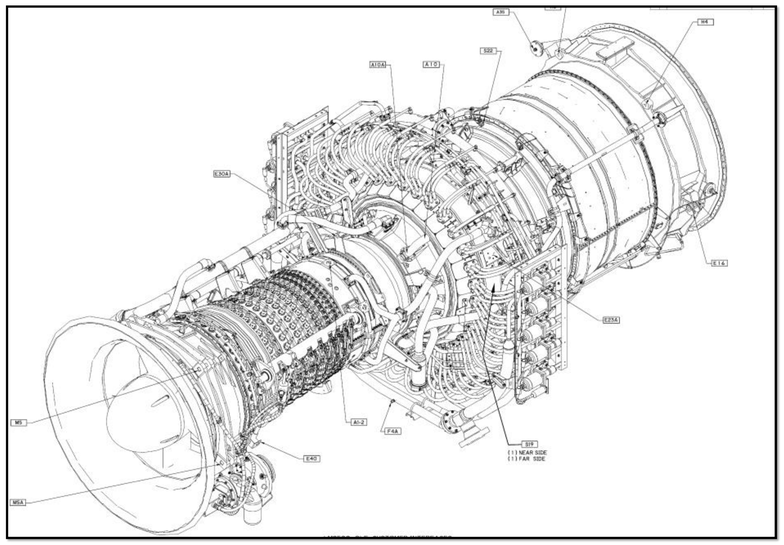
LEARNING OBJECTIVES

- Learn as much as I can about the Engine components that were assigned to me.
- Learn about all the repair process's that are used to repair the components.

RESPONSIBILITIES

- Review the LM2500 Turbine Mid Frame (TMF) component work packages of the TMF sump and liner.
- Locate documents in approval process and track through completion.
- Verify all tooling and gauging have approved drawing on file and if not, create a drawing for them.

Me at my office desk at CRT.



Drawing of a GE LM2500 Turbine Engine

APPLIED COURSE CONTENT

- SOLIDWORKS to draw sketches for tools and gauges
- Reverse Engineering learned in class to take apart device and model it.
- Thermodynamics to determine thickness of heat sink made of steel used for welding.
- How to design an effective tolerance fit hole.
- Advanced usage of Microsoft Excel from the multiple labs that I have taken.

LM2500 Turbine Mid Frame, the component that I did the most work on.

LESSONS LEARNED

This experience taught me so many things about the engineering and business world. I first learned exactly how a jet turbine and land marine turbine engines work. I also learned that in the business world, one person's review of work is not enough but multiple people must approve of work before it can be implemented. I also was able to learn about all the special process that CRT does like shot peen, plasma spray, and heat treatment. One thing that I improved on is my professional communication

Weld test being done on a Seal Ring

FUTURE WORK

Coming in the next few months, I will be going back to CRT to start as a full-time product support engineer. At this time, I am uncertain as which components I will be specializing in. I'm beyond excited to continue my work that I started on while I was there this past fall.

Acknowledgments

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