

**UNIVERSITI TEKNOLOGI MARA**

**THERMAL ANALYSIS ON OUTER  
SURFACE OF TURBO FOR ZERO LOAD  
ON GASOLINE ENGINE**

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**DIPLOMA**

**March 2022**

## **ACKNOWLEDGEMENT**

Firstly, I wish to thank God for giving me the opportunity to embark on my Diploma and for completing this long and challenging journey successfully. My gratitude and thanks go to my supervisor, Mr. Helmisyah Ahmad Jalaludin for the support, patience, and ideas in assisting me with this project. Special thanks to my friends for helping me with this project.

Finally, this dissertation is dedicated to my family for the vision and determination to educate me. This piece of victory is dedicated to you guys. Alhamdulillah.

## **ABSTRACT**

Turbo application helps to produce high power to gasoline engine. However, it may produce high temperature around the engine which may affect the durability of the materials. The objectives in this project are to analyze and to compare the temperature levels on different points of turbo on gasoline engine with different engine rpms using thermocouple and thermal imager, in order to evaluate the accuracy of the results. Furthermore, the effect of high temperature is to be evaluated due to heat localization. The gasoline engine will be operated with different engine rpms ranging of from 1000 rpm to 3000 rpm with 500 rpm interval. The expectation from the experiment is when engine speed increase, the temperature of a turbocharged engine should rise. There is also heat localization in a specific location, which can be assessed with appropriate cooling.

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