UNIVERSITI TEKNOLOGI MARA

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

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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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