



**ANALYSIS OF THE EXHAUST EMISSION ON THE VARIABLE SPARK
STRENGTH WITH STOICHIOMETRIC AIR – FUEL RATIO**

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ABSTRACT

The purpose of this project is to obtain the percentages of exhaust emission products in terms of percentages of volume. The theoretical and experimental analysis was carried out throughout this study. In this project, the analysis is carried out to determine the effect of the spark strength to the exhaust emission content as the spark strength is varied. The voltage law use is that $V = IR$, where our task is to increase the resistance (R) and a result decreasing in voltage (V). For this case the current (I) is assumed to be constant through out. With resistors at different value is use to control the spark strength. The effect is on the emission contents where the percentages volume will be differ. Theoretically, the spark strength will influence the percentages volume of emission contents. For analysing purpose, the Bosch Emission Analyser is used with the engine is running at idling speed and fast idle for old and new spark plugs. At every idle and fast idle speed, data will be analysed. For another analysis, the resistor will be used and the resistance will be varied hence the spark strength will be affected. Finally, the result of the emission contents will be finalised and compared between those testing conducted. Results presented in term of graphs are provided in this thesis.

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