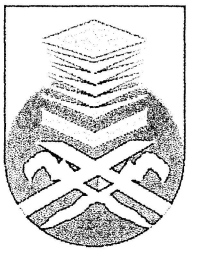

EXPERIMENTAL INVESTIGATION OF FOUR THROTTLE SYSTEM IN FOUR CYLINDER INTERNAL COMBUSTION ENGINE

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Thesis submitted in fulfillment of the requirements for the Bachelor of Engineering (Hons) Mechanical

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NOVEMBER 2006

I declare that this thesis is the result of my own work except the ideas and summaries which I have clarified their sources. This thesis has not been accepted for any degree and is not concurrently submitted in candidature of any degree"

Signed : .....

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ABSTRACT

Current trends to gain a higher engine performance are to convert a naturally aspirated engine to a forced induction system. This kind of performance-based approach has forced us to do some modifications with naturally aspirated engine either to modify the original parts or replace a new performance part. Since the intake manifold is one of the primary factors that affect the engine performance, this study involves one method of modification to the intake manifold to raise gain an optimum power of a naturally aspirated engine. This project will study how far the modification to the intake manifold contributed in generating the engine power by replacing the present intake manifold with an Individual Throttle Body (ITB) intake manifold system as mostly known as Four Throttle system. The four throttles system offers the highest level performance for naturally aspirated engines. A rapid increment in volumetric efficiency has contributed to the sudden change of engine output. The performance achievement of the four throttle system will be tested using 'on wheel dynamometer' testing method. The significance differences of the power achievement between these two intake manifold will show us the effectiveness of the modification. Applying the four throttle intake manifold to the engine will be done carefully in order to pretend harm and maintain the engine's reliability. Hopefully, upon the completion of this project, it will give us a preferable result in order to improve the engine performance and will be able to apply it in racing engine.

ACKNOWLEDGEMENTS

In the name of Allah, The Almighty and The Merciful and Blessings. Be upon His Messenger, Prophet Muhammad S.A.W and his companion. I am very thankful to Allah for his divine inspirational guidance and his blessings to me in completing this project report. The first honor should go to Mr. Idris b Saad cum my Project Advisor that had being hard on me; his solid criticisms and concrete opinion that made this project run smoothly following the schedule. Lot of appreciation also should go to Hairul Nizam b Kassim; for the permission of using his engine as the experimental engine in this project. A special thanks goes to Mr. Ahmad Fauzi Abdul Latif, Addriana, Ahmad Zaki Abdul Latif, and Mohamadiah Abdul Latif from Prodrag Motosport Division for their technical support while running this project. Thanks to all Millennium Motorsport crews for their technical advice during dynamometer testing. Not forgotten my entire course mate especially Reza Mohd Rashid, Suffian Johari, Mohd Nazim Md Shah, Suhaila and all of them who's involved directly or not upon completion of this project. It is a pleasure to express heartfelt gratitude to my family for their continuing support while I was running this project. Thank you.

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