



**INVESTIGATION ON THE DRIVER'S BRAKE APPLICATION
BEHAVIOURS DURING EMERGENCY BRAKING**

MOHAMED HEIKAL BIN MOHAMED SAINI

2006133649

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**Faculty of Mechanical Engineering
Universiti Teknologi Mara (UiTM)**

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

Signed : 

Date : 24/5/2010

MOHEMED HEIKAL BIN MOHAMED SAINI

UiTM No : 2006133649

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ABSTRACT

In this project entitled “Investigation on the Driver’s Brake Application Behaviours during Emergency Braking”, investigation of the effects of human braking application on the total stopping distance and stopping time. Vehicle braking is a complicated process which involve human and machine. The shortest braking distance will be achieved through a proper brake application. In the absence of anti-lock braking system (ABS), it has become the sole responsibility of the driver to achieve optimum braking. Ideally, the driver shall apply stepped or rammed force to the brake to achieve optimum braking. The rate of this force is very important as of to fast will cause wheel locking while to slow will increase braking distance. It is thus the objective to investigate the drivers’ braking application behavior during emergency braking through experimental study. The experimental data obtained will be analyzed and compared with theoretical calculations, and conclusion can be drawn on factors which may contribute to the drivers’ brake application behaviors. This research takes place to come out with ways to reduce the stopping time of a vehicle associated with the braking input of the driver thus contributing ways to reduce the accidents. This project will be focusing on the braking application of various drivers through experiment that will be conducted. We will try to study about the human factor and their braking application base on the ideal data. The results will give ways in contributing to the methods to reduce the accidents rates. This project will allow identifying the human and machine factors that affect the total braking time and distance. This project is also to define the cumulative effects of various drivers which had been a big factor in road accidents. This project will allow designing a brake application simulator in hope to contribute helpful data in reducing the accident rate.

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