FINAL YEAR PROJECT REPORT

SCHOOL OF MECHANICAL ENGINEERING

MARA INSTITUTE OF TECHNOLOGY

TROUBLE SHOOTING FOR SQUEAKING DOORHINGES

BY

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ACKNOWLEDGMENT

We would like to express our appreciation and deep sense of gratitude to Mr Dr Bhuvanesh Rajamony who initiated and supervised this project. His endless help and guidance throughout this project have made possible to obtain the desire result.

We are also very grateful to all the lecturers whom we seek for their advice and information, all staff members of the engineering workshop and not forget to all staff members of computer lab.

Finally we would like to express our deepest gratitude to all our classmate and friends who directly or indirectly involve in making this project a success. Special thank to " Smurf " and their friends.

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PREFACE

The project is done to understand what causes the squeaking sound that is heard while opening or closing the door of a Proton car. This sound is probably caused by the doorhinges.

In this project, we will explain all the processes of producing doorhinges and the main reasons why the door squeaks when it is being opened.

This project also involves how we solved the problem via various means, namely by redesigning all structures and changing the currently used material to a more appropriate one. Our project was granted permission and co-operation from Syarikat TRACOMA Sendirian Berhad.

INTRODUCTION

The main component of this project is the doorhinge. Doorhinges can be divided into two subcomponents, namely male and female. Both are fixed together by using a bush and a pin to produce a complete doorhinge.

Before designing the doorhinge, we have to know all the dimensions of the components of a doorhinge and the sketch pertaining how the doorhinge is to be fixed. Then forces and moments are calculated.

We must also identify which components should be redesigned to stop the squeak. Perhaps the pin or maybe the bush will have to be redesigned.