



ANALYSIS OF AUTOMOBILE GEARBOX (i.e: REVERSE TECHNOLOGY)

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TABLE OF CONTENTS

CONTENTS	PAGE
ACKNOWLEDGEMENTS	i
TABLE OF CONTENTS	iii
LIST OF FIGURES	vi
LIST OF TABLES	vii
LIST OF SYMBOLS	viii

CHAPTER I

MANUAL TRANSMISSION (WIRA 1.3 : MODEL F5M21)

1.1	Introduction	1
1.2	Manual Transmission (WIRA 1.3 : MODEL F5M21)	1
1.3	Transmission Operation : Five Speed Transmissions	6
1.3.1	Neutral	6
1.3.2	First	8
1.3.3	Second	10
1.3.4	Third	12
1.3.5	Fourth	14
1.3.6	Fifth	16

1.3.7	Reverse	18
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CHAPTER II INTRODUCTION TO GEARS - THEORIES

2.1	Introduction	20
2.2	Types of Gears	20
2.3	Gear Teeth Terminology	21

CHAPTER III THE MEASUREMENTS & READINGS OF GEAR WHEELS

3.1	Introduction	25
3.2	Number of Teeth	26
3.3	Outside Diameter	28
3.4	Helix Angle	29
3.5	Analysis of Data	29
3.5.1	Calculations for Data	31

CHAPTER IV THE OBSERVATIONS & CONCLUSIONS

4.1	Introduction	33
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CHAPTER I

MANUAL TRANSMISSION (WIRA 1.3 : MODEL F5M21)

1.1 Introduction

Many automobiles have their own standard of manual transmission or gearbox. It is not easy to design a good gearbox since it requires various design factors. Besides that, the cost of materials and size requirements also may influence the gearbox designs.

Generally, there are two types of gearboxes, either manual or automatic. Nowadays, many cars use five-speed transmission instead of four-speed transmission operation. In order to give some clearer meaning, therefore an example of analysis has been done on the gearbox namely Manual Transmission (WIRA 1.3 : MODEL F5M21).

1.2 Manual Transmission (WIRA 1.3 : MODEL F5M21)

This gearbox is a type of manual transmission and provides five speed ratios. It is also called as synchromesh gearbox. It comprises major components such as shafts, gears, synchronizers, shift forks and differential. There are three types of shafts namely input shaft, intermediate or layshaft and output shaft. The types of gears used are spur gears and helical gears. Almost all the gears are made of helical type rather than spur. It has thirteen helical gears and two spur gears.

The meshing gears are arranged on parallel shafts so they must have different hands. In other words, if the driver is right-handed, the driven gear or follower, must