IMPROVEMENT AND OPTIMIZATION OF TIRE NUT REMOVAL WITH 114 PCD

AZIZUL RAHMAN B ABD AZIZ

UNIVERSITI MALAYSIA PAHANG

IMPROVEMENT AND OPTIMIZATION OF TIRE NUT REMOVAL
WITH 114 PCD

AZIZUL RAHMAN B ABD AZIZ

A report submitted in partial fulfilment of the requirements
for the award of the degree of
Bachelor of Mechanical Engineering

Faculty of Mechanical Engineering
UNIVERSITI MALAYSIA PAHANG

OCTOBER 2008

TABLE OF CONTENTS

CHAPTER 3   DURABILITY ASSESSMENT METHODS

CHAPTER 4   RESULTS AND DISCUSSION

CHAPTER 5   CONCLUSION AND RECOMMENDATIONS

APPENDIX A12

SAMPLE OF LIST OF TABLES

LIST OF TABLES

1 × ENTER (1.5 line spacing)

Table no. and title should be Left alliged

Page no. should be Left

1 line spacing

APPENDIX A13

SAMPLE OF LIST OF FIGURES

LIST OF FIGURES

$\left.\begin{array}{c}\\\\\end{array}\right\}$ 1 × ENTER (1.5 line spacing)

APPENDIX A14

SAMPLE OF LIST OF SYMBOLS

LIST OF SYMBOLS

$\}$ $1 \times$ ENTER (1.5 line spacing)

ω	Natural frequency
ε	Total strain, Bandwidth parameter
ε_a	Strain amplitude
ε_f	True fracture ductility
ε'_f	Fatigue ductility coefficient
σ	True stress, local stress
$\Delta\sigma$	Stress range
σ_a	Local stress amplitude
σ_m	Local mean stress
σ_{max}	Local maximum stress
σ_f	True tracture strength
S_f	Fatigue strength
S'_f	Fatigue strength coefficient

APPENDIX A15

SAMPLE OF LIST OF ABBREVIATIONS

LIST OF ABBREVIATIONS

$\left.\begin{array}{c}\\\\\end{array}\right\}$ 1 × ENTER (1.5 line spacing)

AA	Aluminum alloy
A-A	ASTM air to air typical fighter loading
Al	Aluminium
ASTM	American Society for Testing and Materials
CAD	Computer-aided drafting
CAE	Computer-aided engineering
DOF	Degree-of-freedom
DTP	Discretized turning point
FE	Finite element
FFT	Fast Fourier transform
FRF	Frequency response function
IC	Internal combustion
LG	Linear generator
MBD	Multibody dynamics
PDF	Probability density function
PSD	Power spectral density
SAE	Society of Automotive Engineers

LIST OF TABLES

LIST OF FIGURE

LIST OF SYMBOLS

$\prod$	Pi (3.142)
σ	Stress
σ_t	Tangential Stress

LIST OF ABBRESIVIATION

AGMA	American Gear Manufacturers Association
PCD	Pitch circle Diameter
F	Force
M	Module
OD	Outside Diameter
T	Torque
r	Pitch Circle Radius
A	Area
PA	Polyamide
f_w	Face Width