

THE DEVELOPMENT OF ENERGY EFFICIENT
VEHICLE USING NATURAL GAS TECHNOLOGY
(NGV)

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STATEMENT OF AWARD FOR DEGREE

1. Bachelor of Engineering Technology

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SUPERVISOR'S DECLARATION

I hereby declare that I have already checked this thesis and in our opinion, this thesis is adequate in term of scope and quality for the award of the degree of Bachelor of Engineering Technology in Manufacturing.

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STUDENT'S DECLARATION

I hereby declare that the work in this thesis is in my own except for quotations and summaries of which have been duly acknowledged. The thesis has not been accepted for any degree and is not concurrently submitted for the award of another degree.

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DEDICATION

This dissertation is dedicated to my family such as my parents, whose always support me through thick and thin in order to finish this thesis. Also to my love one Lynn, always cherishing me every moment in order to make this thesis become a success. To my supervisor Sir Junaedi and also my teammates Nasa and Amalin, thank you for the cooperation.

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LIST OF SYMBOLS

km	Kilometer
L	Liter
σ	Stress
MPa	Mega Pascal
mm	Millimeter
N	Newton
cc	Cubic centimeter
m ³	Meter cube

LIST OF ABBREVIATION

NGV	Natural Gas Vehicle
CNG	Compressed Natural Gas
EEV	Energy Efficient Vehicle
MAI	Malaysia Automotive Institute
NAP	National Automotive Policy
ECU	Engine Controller Unit
MAP	Manifold Absolute Pressure
TCF	Trillion Cubic Feet
DOHC	Dual Overhead Camshaft
FEM	Finite Element Method
JPJ	Jabatan Pengangkutan Jalan
SKM	Suruhanjaya Koperasi Malaysia
DOSH	Department of Occupational Safety And Health
RPM	Rotation per Minute
LCD	Liquid Crystal Display