

CHAPTER I

INTRODUCTION

1.1. Background

Vehicle are one of transportation, need the engine to the starting machine, which is an energy conversion machine that converts heat energy into mechanical energy. With the heat energy as a producer of energy then it should require fuel and combustion system as the heat source.

One treatment to improve engine performance and exhaust emissions is improved the quality of combustion of fuel in the combustion chamber.

With the increasing user of motorcycles, so there are many people who want the engine performance is increased without decimate efficiency, the reason for this is also done by the mechanics in the process of generating maximum power on the machine. There are some things you can do that is by mixing or use the fuel as well as the ways to improve the internal combustion engine.

With the efforts of attention and complete the parameters that influence, one of them is changing the ignition system, it has the intention that the combustion in the combustion chamber can occur complete combustion, with complete combustion expected performance of the machine can be increased without reducing efficiency on the machine.

Motorcycle is the type of internal combustion engine with a fuel mixture of air and gasoline. The fuel mixture of air and fuel burned by electric sparks generated by a high-voltage spark from the coil. Increase for performance work vehicles, many new innovations that developed such as coils and spark

plugs. Plugs and coils Producers said that product can improve engine performance.

From the above explanation making the writer wants to research the effect of replacing coil to torque and power.

1.2. Problem Formulations

How influence resistance coil on the 4 stroke engine performance. That is influence on the torque and power.

1.3. Problem Limitations

Based on the problems described above and to avoid irregularities discussion, it needs to make the limitation problems.

Limitation problem that needs to be used in this paper are:

1. The tests be done on a single type of machine that is 4 stroke engine 1 cylinder, using a dynamometer.
2. Do not explain about the specifications in the coil.
3. Air humidity is considered constant and motorcycles are considered standard.

1.4. Objectives and Benefits Research

1.4.1. Objectives

This research has specific objectives include:

1. Knowing the 4 stroke engine performance with resistance coil variations.
2. With resistance coil variations, obtained the coil accord with the character of engine 4 stroke.

1.4.2. Benefits

Benefits from this study as follows.

1. To improve the quality of science, especially as the consideration of resistance coil variations to increase the maximum power.
2. For the widest range can be used or applied to the motor vehicle.

1.5. Systematical of Writing

The final project is divided into chapters which are described in detail the systematics of writing are as follows:

CHAPTER I INTRODUCTION

CHAPTER II FUNDAMENTAL THEORY

CHAPTER III RESEARCH METHODOLOGY

CHAPTER IV RESULT AND DISCUSSION

CHAPTER V CLOSING