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CAWANGAN JOHOR KAMPUS PASIR GUDANG

MEC300

Go-Kart Mechanical Linkage Steering System

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ABSTRACT

The revolution of go-kart steering system shown from their beginnings, go-kart mechanical linkage steering system used till now. This go-kart mechanical linkage steering system have improved into more advanced design and technology. The rack and pinion system and hydraulic system has been used in achieving optimal performance and control for go-kart mechanical system. The key components for build a go-kart steering system is the steering column, tie rods, steering knuckles, steering wheels, linkage or system such as rack and pinion. All of the components will work on their functions to contribute the system function smoothly. These components will be able to do a task given by the driver by receiving input and precise wheel movements will be out as an output. The study aims to explore the performance characteristic and applications of the steering system of the go-kart. It will investigate factors such as the movement, the direction, the material used, and the pressure that effect the mechanical linkage steering system. Furthermore, the research will identify the suitable components to be used in steering system and the effectiveness of type of system used. The findings form this study will contribute to improve the understanding in steering system of go-kart.

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CHAPTER 1: INTRODUCTION

1.1 Background of Study

The revolution of go-kart steering system shown from their beginnings, go-kart mechanical linkage steering system used till now. This go-kart mechanical linkage steering system have improved into more advanced design and technology. The rack and pinion system and hydraulic system has been used in achieving optimal performance and control for go-kart mechanical system [1].

The steering system of Go- Kart is important for both safety and also for the rider's comfort. The steering system is to provide good directional stability and full control over the go-kart even on the sharp turns. Steering system is used to achieve the angular motion of the front wheels of the go-kart to make a turn. This is done through the linkage and steering gear which convert the rotary motion of the steering wheel into angular motion of front wheel.

The go-kart steering system always use rack and pinion steering system because this is a simple system that directly converts the rotation of the steering wheel into straight line movement of the wheels. Rack and pinion system having an advantage than other system because it allows smaller turning radius which is important for safety and handling in certain driving situation.

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The study aims to explore the performance characteristic and applications of the steering system of the go-kart. It will investigate factors such as the movement, the direction, the material used, and the pressure that effect the mechanical linkage steering system. Furthermore, the research will identify the suitable components to be used in steering system and the effectiveness of type of system used. The findings form this study will contribute to improve the understanding in steering system of go-kart.