DEVELOPMENT OF AN ADVANCED ELECTRONIC TYPE STEERING SYSTEM INSTRUCTIONAL MOCK UP

Undergraduate Design Project
Submitted to the Faculty of the
College of Engineering and Information Technology
Cavite State University
Indang, Cavite

In partial fulfillment
of the requirements for the degree
Bachelor of Industrial Technology
Major in Automotive Technology

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ABSTRACT

CALIJA, JERRAMILL S. and GIDOC, DARRYLL JAIRUS G. Development of An Advanced Electronic Type Steering System Instructional Mock Up. Undergraduate Design Project. Bachelor in Industrial Technology, major in Automotive Technology. Cavite State University, Indang, Cavite. May 2017. Adviser: Mr. Danielito R. Escaño.

Electrically assisted power steering (EPS) is the latest technological cross applied to the modern vehicles produced until now. Replacing hydraulic type with a computer-controlled electric motor plays a major role in fuel efficiency and vehicle stability today.

The design project was constructed using mainly of angular bar which served as the major frame for the power steering system. The authors used an angular bar which has a size of 1"x1"x ½" for the whole frame since the system was not that heavy at all. The measurement for the frame was 48"x30"x25". The authors also decided to make the two front wheels to be intact on the floor for the better feel of the resistance between the wheel and the road. The two caster wheels are fully welded on each end of the rear frame to lessen the effort in moving the instructional mock up to their desired position inside the automotive laboratory. The development of an advanced electronic type steering system will provide a steering system manual that will lessen the complexity of the modernization of steering system.

The trainer was limited only to the basic principles and fundamentals of a column type electronic power steering system. The electronic type steering system with its parts and components can be clearly viewed. The design project was also the new system trainer for the learners. The design project proved to be very useful for it served as the

first instructional mock up equipped with a modern technology which can be a great tool to provide basic knowledge and skills about an electronic type power steering system.

The researchers spent the total amount of ₱ 28,185.00 and at the end of the evaluation, the participants gave an overall rating of 4.62 with a corresponding degree of outstanding.

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