

**DESIGN AND DEVELOPMENT OF AN INSTRUCTIONAL 5-SPEED DIESEL  
MANUAL TRANSMISSION**

Undergraduate Design Project  
Submitted to the Faculty of the  
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Indang, Cavite

In partial fulfillment  
of the requirements for the degree of  
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(Major in Automotive Technology)

**MARDY V. GLORIANI**  
**EDGARDO S. SANTOS**  
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## ABSTRACT

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The Design and Development of an Instructional 5-Speed Diesel Manual Transmission was constructed in Automotive Shop, Department of Industrial Engineering and Technology, Cavite State University, where it was tested and evaluated on February 14, 2005.

The study was conducted to show actual movement and actual operation of 5-Speed Diesel Manual Transmission. To automatically rotate the system, the authors used electric motor as the main source power of the system. It also used clutch operation to engage and is engaging the power of the transmission from the main source. The system also used differential assembly to showed the counter clockwise and clockwise movement of the system. It also show's the speed of the system.

The system had six indicator lamps for each gears: the first gear, second gear, third gear, fourth gear, fifth gear, and the reverse gear. It's also has each different contact switches to indicate what gear is in the operation.

The results showed that there mere sufficient instruction for the actual operation of the 5-Speed diesel manual transmission. It posed more advantages than theoretical explanation and it can helped to understand the importance of the system in the automotive vehicle operation. It is easy to operate and learn the operation. It was



recommended to manually lubricate the system because of its lack of manual lubrication  
so that the rust formation will be prevented.

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