

DESIGN OF HYDRAULIC HYBRID RETROFIT FOR HEAVY VEHICLES

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ABSTRACT

This report paper is written for the INTI International University Bachelor in Mechanical Engineering final year project with the project title of Design of Hydraulic Hybrid Retrofit for Heavy Vehicle or HHV. This report is reporting for the project process as well as the final result. The report is started with the project background and defines the problem statement with the scope in the first chapter. Then the literature review on the HHV technology is summarised in the second chapter with a comparison between the two basic types of HHV drive train is performed for choosing the design target. Moving forward into the report body, the project methodology of developing a series HHV system with a chosen chassis type by selecting the market available hydraulic machine components for converting the conventional diesel drivetrain into a high fuel efficiency series HHV without compromising the original performance and chassis configuration for low-entry city bus is presented in the third chapter. Moving on, a discussion of the HHV design outcome and future work recommendation is contained in last sections of the report.

Keywords: Hydraulic Hybrid, City bus, Hydraulic motor/pump, accumulators.