

# DESIGN AND FABRICATION OF ELECTRIC HYDRAULIC JACK

A Project report  
Submitted in partial fulfilment of the requirements for award of degree of  
**BACHELOR OF TECHNOLOGY**  
IN  
**MECHANICAL ENGINEERING**

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## CERTIFICATE

This is to certify that the thesis entitled “**DESIGN AND FABRICATION OF ELECTRIC HYDRAULIC JACK**” being submitted by **TINO VARGHESE (14811A03C2)**, **N SAI TEJA REDDY (14811A0381)**, **N MOULI SAI (14811A0380)**, **M ASHWIN KUMAR (14811A0371)** in partial fulfilment of the requirement for the award of the degree of **BACHELOR OF TECHNOLOGY in MECHANICAL ENGINEERING** is a record of bonafide work done by them under my supervision during the academic year 2017-18.

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**EXTERNAL EXAMINER**

## ABSTRACT

The project work titled "Design and Fabrication of Portable Hydraulic Jack" has been conceived having studied the difficulty in lifting any type of vehicles. Our survey regarding several automobile garages, revealed the facts that mostly some difficult methods were adopted in lifting the vehicles for reconditioning. The project has mainly concentrated on this difficulty.

In this project we are converting the conventional hydraulic jack in to automated hydraulic jack by using linkage mechanism with a help of a motor. Such that the vehicles can be lifted from the floor land without the application of impact force. It works on the principle of Pascal law the invention relates to hydraulic jack and more specifically to an automobile hydraulic jack system. The fabrication part of it has been considered with almost case for simplicity and economy, such that this can be accommodated easily in a car and also portable.

An electro hydraulic jack is a device used to carry large loads with the application of small force. Here we fabricated a hydraulic jack which is operated using a DC motor which gets dc supply from the battery of the vehicle without application of man force. Quick lifting is one of the main advantages of this electro hydraulic system. It will also reduce the man power and large load can be lifted and the whole arrangement is portable. Arrangement is also very useful for heavy loading vehicles and a single person can go on a long drive.