

UNIVERSITI TEKNOLOGI MARA (UiTM)
DIPLOMA IN MECHANICAL ENGINEERING (AUTOMOTIVE)

KJP365

HYDRAULIC JACK STAND

AINAL SYAFEEK BIN NOORAZMI	2002256687
ISMAIL BIN YAHAYA	2002256941
MOHD AZHAR BIN ABD. WAHAB	2002257008
MUHAMMAD NAZIR BIN MUSA	2002256662
WAN AMIRUDIN BIN WAN MOHAMAD NOOR	2002256735
ZARIZAMBRI BIN AHMAD	2002256808

NAME OF ADVISORS:
HAJI SULAIMAN BIN MOHAMAD
MR. MOHD GHAZALI BIN SIKIN

NAME OF COORDINATOR:
MR. IDRIS BIN SAAD

NOVEMBER 2004 - APRIL 2005

CONTENT

TITLE	PAGE
1. ACKNOWLEDGEMENT	1
2. INTRODUCTION	2
3. OBJECTIVE	3
4. PROCEDURES	4
5. FLOWCHART	6
6. PROCESS	7
7. GANTT CHART	14
8. COST	15
9. RESULT	16
10. CONCLUSION	17
11. APPENDIX	18

ACKNOWLEDGEMENT

Eternal praise to Allah s.w.t, with his blessing we manage to finish our project, HYDRAULIC JACK STAND. Alhamdulillah and a very grateful thank to Allah for giving us the strength and determination to finish our project in the required time.

Firstly, we would like to thank our supervisors, Mr Mohd Ghazali Bin Sikin and Tuan Haji Sulaiman Bin Mohammad for helping and guiding us throughout the project. With all the knowledge and experience they have, they were able to lead us well in accomplishing the project. They are also giving us full supports and encouragement in all the things we do. We really appreciate it.

We would also like to thank all the workshop supervisors that had help and teach us the skills to be used in some particular process. They also teach us to use the machine correctly. Sometime they bring new ideas to smoothen the process.

We also would like to appreciate the help of Mr Idris Saad, Mr Adam Mokhlis, Allahyarham Mr Baharum and all other people contributed in this project. To all other team, friends and family that help us directly or indirectly. We just hope that we could repay them back. May Allah bless you all.

Finally we would like to apologize if there's any mistakes that we unintentionally done during this project period. We hope that this project will be useful and can help people.

Thank you.

INTRODUCTION

KJP365 is a compulsory course for every student under the Faculty of Mechanical Engineering. It is a course at which students are expected to create new ideas or being innovative over products that are already in the market.

In this course, students are expected to solve problems encountered by human being in our daily routine. To accomplish this, students need to do some observations over things that are daily done. These observations include daily routine that is being done in the house, office or workshop. After finding out the hassles, students need to solve the problems themselves - that's what engineers do!

This course also encourages students to work in a group. It will train the students to be cooperative among each other. Students will learn how to tolerate with each other as there might be some argument about everybody's opinion. It is normal if there are arguments when there are a number of different ideas. This is when the students need to be tolerant with each other. Also, students will learn either to be a leader or follower. This will train the students to work in a team. This is a good training for the students before entering the work field.

In our project, we have decided to rebuild a hydraulic jack used in automotive workshop. It is a decision after some discussions with our supervisors, Mr. Sulaiman and Mr. Ghazali. We have decided to add another function to the hydraulic jack, which is the stand. From our observations, we found that mechanic in automotive workshops use a hydraulic jack to slightly lift the car. Then, they place another stand to hold the car in its lifted position. This will prevent the car from slipping and fall onto the mechanic who is working under it. The result could be fatal!

Therefore, we have found a solution to make the hydraulic jack as the stand for the car. This would lessen the time taken to place another stand and pull the jack out from under the car. The mechanic wouldn't need two different devices to lift and to hold the car. It'll be combined together in our product called 'Hydraulic Jack-Stand',

OBJECTIVE

After completing this course, the students are expected to achieve some of the objectives lined by the faculty. The objectives are:

- to let the students use the skills that they learned in KJP170 during semester 2, such as grinding, welding and drilling.
- to help the students to use the proper tools for particular tasks and also for particular materials.
- to let the students handle machines so that they won't have any fear of handling them when entering the work field.
- to train the students to be more observant, to find or locate any troubles in their daily routine, and then fix them.
- to train the students to work in a group; someone plays a role as the leader while the other be the followers, while also contribute to the group.
- to train the students to be problem-solver, as there might be problems arose during the project period.
- to train the students to be innovative and creative, in order to upgrade or modify products that are already in the market.
- to prepare the students for the industry.