

**DEVELOPMENT OF AN AUTO AIR CONDITIONING  
INSTRUCTIONAL TRAINER**

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

In partial fulfillment  
of the requirements for the degree of  
Bachelor of Industrial Technology

**HILARION M. DINGLASAN  
FRANDEL .M HOPILEÑA  
EMMANUEL .P LUBIGAN**

April 2008



## ABSTRACT

**FRANDEL M. HOFILÉÑA, EMMANUEL P. LUBIGAN and HILARION M. DINGLASAN** “Development of Auto Air Conditioning Instructional Trainer”  
**Bachelor of Industrial Technology Major in Automotive Technology.** Cavite State University, Idang Cavite. April 2008. Adviser: Engr. Danielito R. Escaño.

Auto Air Conditioning Instructional Trainer was constructed to improve and develop the teaching method of teachers and to visually demonstrate functions of each part of an air conditioning through the use of the trainer and its manual.

Mounted a table frame, the trainer was intended to be portable. Electric motor served as the source of power for the compressor unit. A 12A-power converter was installed to convert other components which is 12 volts form Compressor. A hose was installed going the condenser that serves as compressor, and from condenser, Copper tube was installed to receiver Drier/filter w/c Filtered and Refrigerant, Moisture the end of Receiver or Drier another copper tube was installed to expansion valve where high pressured liquid was Converted Valve, A Copper Tube was installed at the lower portion of the evaporation, A Hose was installed going back to the Compressor where in the Refrigerant return at the low pressure vapor.

The result showed that the trainer meets the, users' needs and assures that it is free from error, efficient and easy to operate.



## TABLE OF CONTENTS

	Page
<b>BIOGRAPHICAL DATA</b> .....	ii
<b>ACKNOWLEDGMENT</b> .....	v
<b>ABSTRACT</b> .....	xi
<b>LIST OF TABLES</b> .....	xv
<b>LIST OF FIGURES</b> .....	xvi
<b>LIST OF APPENDICES</b> .....	xvii
<b>LIST OF APPENDIX FIGURES</b> .....	xviii
<b>INTRODUCTION</b> .....	1
Nature and Importance of the Study .....	2
Objectives of the Study. ....	2
Time and Place of the Study. ....	3
Scope and Limitation of the Study .....	3
Definition of Terms.....	3
<b>REVIEW OF RELATED LITERATURE</b> .....	22
<b>MATERIALS AND METHODS</b> .....	14
Materials.....	14
Methods. ....	14
<b>RESULT AND DICUSSIONS</b> .....	16

	<b>Page</b>
<b>SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS.....</b>	20
Summary .....	20
Conclusions.....	21
Recommendations.....	21
<b>BIBLIOGRAPHY.....</b>	22
<b>APPENDICES .....</b>	26