BS Project Report

Institute of Aviation Studies

University of Management and Technology

Reducing Human Error Related Hazard in Aircraft Maintenance Environment

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May 26th, 2017.

DECLARATION STATEMENT

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DEDICATION

All of our efforts are dedicated to Almighty Allah & Hazrat Muhammad-e-Mustafa (Sul-Allah-oh-Alayha-Wassullum)

& beloved parents.

To whom we love more than anything in the world and who gave us the meaning of life and taught us how to struggle and achieve the goals. Dedication also goes to our honorable teachers and the friends whose guidance and cooperation was torchbearer for us.

Jaan Muhammad Ashmal

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ABSTRACT

Maintenance error due to personal limitations is turning into a huge region of worry to the aviation business. Aviation safety relies heavily on maintenance. This report “Reducing Human Factor Related Errors in Aircraft Maintenance” is primarily concerned with the development of techniques to minimize human error and to increase the safety of the system. A number of models and techniques have been designed to scale down human errors due to personal limitations, beside this perfection is beyond practicable, the only way is to diminishing it to a safe level.

The main purpose of this dissertation is to understand the real time circumstances that a working employee is facing which contribute to an error and to generate a recommendation that will help in the minimization of human related errors in aviation specifically in aircraft maintenance. To get real time scenario a survey was conducted (from general aviation) based on the results and analysis, a conclusion was constructed.

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1. INTRODUCTION:

Human Factors (Ergonomics) is the term used for the study of human behaviour with respect to an environment. Behaviour may be physical or psychological. Since the start of industrial era (18th century, Britain) researchers have been working to reduce, human related errors or accidents caused due to human actions. Human by their very nature make mistakes, in aviation human error is a concern in flying as well as maintenance and, air traffic management. According to a study conducted by Maintenance Error Decision Aid, Boeing reveals that about 80% of accidents in aviation are caused due to human error or human incapability. The part within these 80%, which is contributed to maintenance, related error or faults, is estimated to be 6 to 25%.With the passage of time aircraft are becoming more sophisticated and safer that is why the trend of causes is deviated from machine to human as shown in figure 1.1