

RESTRICTED

ABSTRACT

Air power is arguably more important than it ever has been before due to the characteristics and limitations of contemporary warfare. It is of paramount importance to Sri Lanka Air Force (SLAF) as a small air force to keep the highest serviceability and operational readiness of the limited aircraft platforms it possesses to project its air power to meet national expectations during war and operations other than war. However, during the recent past SLAF has been experiencing adverse issues such as loss of aircraft and aircrew, long time grounding, highly expensive repairs and component replacement and flight delays due to aircraft accidents and incidents. Human Error of maintenance personnel is one of the predominant root causes for these accidents and incidents. This study evaluated the prevailing human error management system of the SLAF aircraft maintenance organisation to derive sustainable solution to control the human errors of maintenance personnel in order to minimise the aircraft accidents and incidents in future. This paper reviews current approaches in the civil aviation industry to identify the relationship between contributing factors, human errors, human error management system and aircraft accidents and incidents. Human Factors in Maintenance found as the conceptual approach in aviation in which human errors of maintenance personnel are critically discussed and analysed. During the study most significant contributing factors of maintenance related human errors of the SLAF were identified, along with the lapses of existing human error management system. Short term and long term measures were identified to prevent and control the human errors by introducing proactive error detection methods for continual improvements. A new concept on Human Error Coefficient which gives the indication on effectiveness of human error management was introduced by this study. In essence, this research was looked at more systematic solution to human error management as human factor is more than just about people.

Key Words: Aircraft Accidents, Human Errors, Human Error Management and Human Factors in Maintenance