HUMAN ERROR

Introduction

Human error is defined as a human action with unintended consequences. There is nothing inherently wrong or troublesome with error itself, but when you couple error with aviation maintenance and the negative consequences that it produces, it becomes extremely troublesome.

Training, risk assessments, safety inspections, etc., should not be restricted to attempt to avoid errors but rather to make them visible and identify them before they produce damaging and regrettable consequences. Simply put, human error is not avoidable, but it is manageable. All modes of transportation deal with human error, particularly as it relates to accidents. Human error or pilot error is readily pointed to as the cause factor of most aircraft accidents although maintenance errors and Air Traffic Control errors also receive attention.

Engineers typically view error as the difference between desired and actual performance. Human factors engineering is used during the design phase to reduce human error by making machines and systems error tolerant. Possible human error actions in a man-machine system must be predicted during the design stage to permit appropriate measures to be taken on the machine design, training of operators, or the organizations.

The nature of the engineering design process is virtually impossible to avoid errors in complex projects because "design is a matter of making many assumptions in often problematic situations". Slips and lapses are identified as the two main sources of error in design. In the field of reliability engineering, human error is defined as "the failure to perform a task (or the performance of a forbidden action) that could lead to the disruption of scheduled operations or damage to property and equipment".

TYPES OF ERROR

Unintentional

An unintentional error is an unintentional wandering or deviation from accuracy. This can include an error in your action (a slip), opinion, or judgment caused by poor reasoning, carelessness, or insufficient knowledge (a mistake). For example, an aircraft maintenance personnel reads the torque values from a job card and unintentionally transposed the number 26 to 62. He or she did not mean to make that error but unknowingly and unintentionally did. An example of an unintentional mistake would be selecting the wrong work card to conduct a specific repair or task. Again, not an intentional mistake but a mistake, nonetheless.

Intentional

In aviation maintenance, an intentional error should really be considered a violation. If someone knowingly or intentionally chooses to do something wrong, it is a violation, which means that one has deviated from safe practices, procedures, standards, or regulations.

KINDS OF ERRORS

Active and Latent

An active error is the specific individual activity that is an obvious event. A latent error is the company issues that lead up to the event. For example, an aircraft maintenance personnel climbs up a ladder to do a repair knowing that the ladder is broken. In this example, the active error was falling from the ladder. The latent error was the broken ladder that someone should have replaced.