

## **ABSTRACT**

*Engine testing is required when the engine has gone through maintenance or repair to ensure the safety and performance of the engine. In engine testing, various instruments are used to get the value of the parameters required as a condition that an engine can be declared pass the test. To ensure the standard of measurement, it is necessary to apply a method to equalize the calculation results of machines at the facility and the OEM. This method is called correlation. One way to maintain the validity of the correlation is to perform trend monitoring. Trend monitoring is done by recording and plotting test data into charts for further evaluation. The method used to conduct trend monitoring at PT Nusantara Turbin and Propulsion is to use an exponentially weighted moving average. This study compared the EWMA method used by PT Nusantara Turbin and Propulsion with the Cumulative Sum method. From this research, the results show that the CUSUM chart is able to detect values that are out of control. It can be seen from this research that the CUSUM diagram of TRQEDL is able to detect values that are out of limit with a value of 17.080520 with a control limit of 16.854249. While the EWMA chart is not. But the EWMA chart can be used as a correction factor for testing to be carried out.*

**Keywords:** *correlation, CUSUM, EWMA, aircraft engine testing, trend monitoring*