

## ABSTRAK

*Engine change* merupakan suatu proses bisnis/perkerjaan berupa *major maintenance* atau *overhaul* dan dikerjakan di unit *base maintenance*. Disebabkan oleh penuhnya slot hangar pada unit *base maintenance* dan keharusan pesawat agar tetap beroperasi, maka pekerjaan tersebut dialihkan ke unit *line maintenance* melalui *project engine change*. Selama pengerjaan *project engine change* tersebut, didapati keterlambatan dari TAT (*Turn Around Time*) sebanyak 2 jam. Target pengerjaan *engine change* diharapkan dapat selesai dalam 2 kali *shift* kerja yaitu 18 jam. Dimana 1 *shift* kerja adalah 9 jam kerja, sehingga *shift* pertama menyelesaikan proses *removal engine* dan *shift* kedua menyelesaikan proses *installation engine*. Dalam melakukan analisa terhadap proses *engine change* ini, digunakanlah metode FMECA (*Failure Mode, Effect, and Criticality Analysis*) dengan melakukan identifikasi potensial risiko pada setiap proses kerja yang dipetakan menggunakan peta risiko/*risk mapping*. Kategori risiko *high* nantinya diberikan usulan langkah mitigasi dengan melakukan proses rangking risiko terlebih dahulu berdasarkan perhitungan nilai RPN (*Risk Priority Number*). Hasilnya adalah terdapat 6 tahapan kerja dengan total 70 proses kerja dan 90 potensi risiko kerja. Kemudian dari 90 potensi risiko kerja diklasifikasikan menjadi 4 potensi risiko kerja *low risk*, 41 potensi risiko kerja *medium risk*, dan 45 potensi risiko kerja *high risk*.

Kata kunci : *engine change*, FMECA, *risk mapping*



## ABSTRACT

*Engine change is a business/work process in the form of major maintenance or overhaul and is done in the base maintenance unit. Due to the full hangar slots in the base maintenance unit and the need for the aircraft to continue operating, the work was transferred to the line maintenance unit through the engine change project. During the execution of the engine change project, there was a delay of 2 hours from the TAT (Turn Around Time). The engine change target is expected to be completed in 2 work shifts, namely 18 hours. Where 1 work shift is 9 hours of work, so the first shift completes the engine removal process and the second shift completes the engine installation process. In analyzing the engine change process, the FMECA (Failure Mode, Effect, and Criticality Analysis) method is used by identifying potential risks in each work process which are mapped using a risk map. The high risk category will then be given a proposed mitigation measure by first carrying out a risk ranking process based on calculating the RPN (Risk Priority Number) value. The result is that there are 6 work stages with a total of 70 work processes and 90 potential work risks. Then the 90 potential work risks are classified into 4 low risk work potentials, 41 medium risk work potentials, and 45 high risk work potentials.*

*Key word : engine change, FMECA, risk mapping*

