ABSTRAK

Pesawat Boeing seri 737-800 registrasi pada tanggal 13 September 2019 harus mendarat darurat di bandara kualanamu dikarenakan ada gangguan. Setelah dilakukan pengecekan ditemukan penyebabnya adalah *Auxiliary Power Unit Auto Shutdown* dengan Indikasi panel kontrol mesin di kokpit menunjukan kenaikan suhu melebihi batas pada sistem lubrikasi *Auxiliary Power Unit*. Kejadian kenaikan suhu pada APU disebabkan oleh kebocoran pada komponen *oil cooler* dan telah terjadi 17 kali dengan penyebab yang sama. Tujuan dari penelitian ini adalah untuk mengetahui penyebab kenaikan suhu pada sistem lubrikasi APU maka dilakukan studi kasus penyebab kenaikan suhu *Auxialary Power Unit* menggunakan fishbone diagram *Man Machine Material Method.* Setelah mengetahui penyebabnya maka dapat dilakukan Tindakan perawatan yang sesuai dengan *Maintenance* manual. Tindakan pencegahan yaitu diperlukan Analisa keandalan menggunakan distribusi weibull sehingga mengetahui keandalan dari komponen *oil cooler*. Hasil penelitian setelah dilakukan identifikasi didapatkan solusi atas permasalahan yang terjadi menggunakan *five ws method* serta penentuan jadwal penggantian komponen *oil cooler* setiap *16.156 flight hours* berdasarkan keandalannya .

Kata kunci: *High Oil Temperature, Fishbone Diagram*, Identifikasi

IDENTIFICATION OF OIL COOLER LEAKAGE AND RELIABILITY ANALYZE ON AUXILIARY POWER UNIT B737-800 COMPONENT

ABSTRACT

The Boeing 737-800 series aircraft registered on September 13, 2019 had to make an emergency landing at Kualanamu Airport due to a disturbance. After checking, it was found that the cause was the Auxiliary Power Unit Auto Shutdown with an indication that the engine control panel in the cockpit showed an increase in temperature exceeding the limit on the Auxiliary Power Unit lubrication system. The occurrence of temperature increase in the APU is caused by a leak in the oil cooler component and has occurred 17 times with the same cause. The purpose of this research is to find the root cause of high oil temperature on Auxialary Power Unit. so a case study is conducted on the cause of the increase in temperature of the Auxialary Power Unit. Using Five Ws Methods to determine root cause of failure include Man, Machine, Material and Methode possibilites After knowing the cause, maintenance actions can be carried out in accordance with the Maintenance manual. Preventive action is required reliability analysis using weibull distribution to determine the reliability of the oil cooler components. The result of this research is to find the solution of the problem with 5ws method and for addition determine the schedule for replacing the oil cooler components every 16.156 flight hours based on oil cooler reliability.

***Keywords**: Return to base, High Oil Temperature, identification*