TROUBLESHOOTING PADA *AIR CONDITIONING RECIRCULATION SYSTEM* DI KOMPONEN *FAN* PESAWAT BOEING 737-900ER

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ABSTRAK

Air conditioning recirculation system merupakan sub-sistem pada *air conditioning system* yang berfungsi untuk meresirkulasi dan memfilter 50% udara dari kabin agar penumpang terhindar dari berbagai macam polusi, virus, bakteri dan debu yang dapat memicu iritasi kepada manusia seperti hidung tersumbat, mata berarir dan pilek. Berdasarkan hasil data kerusakan yang penulis ambil pada maskapai XYZ dari tahun 2016 – 2019, kerusakan *air conditioning recirculation system* pada komponen *fan* cukup tinggi dengan 21 kali kerusakan. Dimana kerusakan yang paling dominan yaitu *fan pop out* sebanyak 5 kali dan *fan not working* sebanyak 4 kali. Tahap penelitian ini dimulai dengan menentukan komponen kritis dengan metode *criticality analysis* dengan melakukan perhitungan empat kriteria dimana ada frekuensi kerusakan tinggi, dampak kerusakan pada *sub-assembly*, *removal* dan *installation* sulit serta harga mahal dan analisis ABC, kemudian menentukan nilai TTF dan TTR komponen. Setelah itu mengidentifikasi kerusakan yang sering terjadi pada komponen kritis *air conditioning recirculation system*. Berdasarkan hasil pengolahan data yang telah dilakukan di dapatkan komponen yang paling kritis yaitu komponen *fan* dengan nilai *grade* 32. Selanjutnya berdasarkan hasil identifikasi kerusakan, terdapat 9 jenis kerusakan yang sering terjadi pada komponen *fan*, yaitu *pop out, low flow, bad condition, motor broken, noise, not working, unstable rotation, not rotate* dan *weak*. Dimana kerusakan yang paling dominan yaitu *fan pop out* sebanyak 5 kali dan *fan not working* sebanyak 4 kali.

Kata kunci: Analisis kritis, Perawatan, Sistem Resirkulasi

TROUBLESHOOTING OF AIR CONDITIONING RECIRCULATION SYSTEM ON THE FAN COMPONENTS OF BOEING 737-900ER AIRCRAFT

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ABSTRACT

The air conditioning recirculation system is a sub-system in the air conditioning system that functions to recirculate and filter 50% of the air from the cabin so that passengers avoid various kinds of pollution, viruses, bacteria and dust which can trigger irritation to humans such as stuffy noses, runny eyes and runny nose. . Based on the results of the damage data that the author took on XYZ airlines from 2016 - 2019, the damage to the air conditioning recirculation system on the fan component was quite high with 21 times the damage. Where the most dominant damage is the fan pop out 5 times and the fan not working 4 times. This research phase begins with determining critical components using the criticality analysis method by calculating four criteria where there is a high frequency of damage, the impact of damage on the sub-assembly, the removal and installation is difficult and the price is expensive and ABC analysis, then determines the TTF and TTR values of the components. After that identify damage that often occurs in critical components of the air conditioning recirculation system. Based on the results of data processing that has been done, the most critical component is the fan component with 32 grade score. Furthermore, based on the results of damage identification, there are 9 types of damage that often occur in fan components, namely pop out, low flow, bad condition, broken motor, noise, not working, unstable rotation, not rotate and weak. Where the most dominant damage is the fan pop out 5 times and the fan not working 4 times.

Keywords: *Critical analysis, Maintenance, Recirculation System*