

## ABSTRAK

Di dalam dunia penerbangan sudah menjadi hal yang mutlak bagi setiap operator (airlines) untuk melakukan maintenance (perawatan) pesawat terbang secara berkala untuk menjaga keandalan pesawat tersebut. Citilink Indonesia Airlines adalah salah satu maskapai penerbangan di Indonesia yang mengoperasikan beberapa jenis dan tipe pesawat terbang. Di antara beberapa jenis dan tipe yang ada adalah ATR 72-600. Penelitian ini bertujuan untuk menganalisis reliability fuel quantity probe harness pada pesawat ATR 72-600. Salah satu jenis perawatan pesawat yang dilakukan adalah perawatan berupa inspeksi pada komponen fuel quantity probe harness yang terletak pada aircraft wing tank pada tipe pesawat ATR 72- 600. Umur komponen didefinisikan sebagai waktu rata-rata antar kerusakan suatu komponen. Rata-rata antar suatu kerusakan komponen diukur sebagai waktu interval rata-rata antar kerusakan (removal) komponen yang bisa diperbaiki (repairable/rotable), dengan waktu yang dinyatakan sebagai jam terbang pesawat (flight hours). Untuk meningkatkan keselamatan pesawat maka dilakukan uji reliability dengan preventive maintenance terhadap komponen pesawat terbang khususnya pada bagian *fuel quantity probe harness*. Penelitian ini mengarah pada karakteristik kerusakan bagian komponen pesawat menggunakan metode distribusi Weibull. Hasil perhitungan secara teoritis didapatkan MTBF (Mean Time Between Failure) komponen fuel quantity probe harness pada pesawat ATR 72-600 milik Citilink Indonesia adalah 5091,67 hours. Apabila dirata-rata jam terbang pesawat perhari adalah 6 FH, maka MTBF nya adalah 849 hari. Dengan menggunakan distribusi poisson didapatkan stock minimum spare part sebanyak 1 komponen guna menunjang kelancaran saat pesawat beroperasi.

**Kata Kunci:** fuel quantity probe harness, reliability, citilink indonesia, ATR 72-600, distribusi weibull.

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## **ANALYSIS OF RELIABILITY FUEL QUANTITY PROBE HARNESS ON ATR72-600 CITILINK INDONESIA**

### **ABSTRACT**

*In the world of aviation, it has become an absolute must for every operator (airlines) to carry out aircraft maintenance on a regular basis to maintain the reliability of the aircraft. Citilink Indonesia Airlines is one of the airlines in Indonesia that operates several types and types of aircraft. Among the several types and types that exist is the ATR 72-600. This study aims to analyze the reliability of the fuel quantity probe harness on the ATR 72-600 aircraft. One type of aircraft maintenance carried out is maintenance in the form of inspection of the fuel quantity probe harness component located on the aircraft wing tank on the ATR 72-600 aircraft type. Component age is defined as the average time between damage to a component. The average between a component failure is measured as the average time interval between repairable/rotatable components, with the time expressed as flight hours. To improve aircraft safety, reliability tests were carried out with preventive maintenance on aircraft components, especially in the fuel quantity probe harness section. This research leads to the characteristics of the damage to the components of the aircraft using the Weibull distribution method. The theoretical calculation results obtained that the MTBF (Mean Time Between Failure) of the fuel quantity probe harness component on the ATR 72-600 aircraft belonging to Citilink Indonesia is 5091.67 hours. If the average flight hours per day is 6 FH, then the MTBF is 849 days. By using the Poisson distribution to get a minimum stock of spare parts as much as 1 component to help support flights while operating.*

**Keywords:** fuel quantity probe harness, reliability, citilink indonesia, ATR 72-600, weibull distribution.