

ABSTRAK

Operasional pesawat udara hanya boleh dilakukan jika dalam keadaan laik terbang dan aman beroperasi apabila ditemukan kondisi yang tidak aman maka operasional harus dihentikan, ini menyebabkan kerugian bagi operator pesawat maupun pelanggan yang akan melakukan penerbangan. Salah satu kondisi tidak aman adalah kerusakan *main landing axle sleeve* namun kerusakan ini tidak dapat dilihat langsung oleh mata karena berada di dalam *landing gear* akan sangat fatal apabila kerusakan ini dibiarkan terjadi karena *landing gear* merupakan penopang beban pesawat ketika pesawat bergerak di darat, lepas landas dan ketikan melakukan pendaratan. Pada pesawat Airbus A330 ada dua jenis *axle sleeve* yaitu menggunakan *brake fan* dan tanpa *brake fan*. Dalam penelitian ini dilakukan uji t sampel bebas yang bertujuan untuk mengetahui ada atau tidaknya perbedaan jumlah kerusakan antara kedua jenis *axle sleeve*, identifikasi faktor penyebab kerusakan *axle sleeve* berdasarkan observasi yang dilakukan. H_0 diterima atau tidak ada perbedaan jenis kerusakan antara kedua jenis *axle sleeve* karena $W_{hitung} > W_{tabel}$. Faktor yang menyebabkan kerusakan pada *main landing gear axle sleeve* yaitu *brake overheat*, penggunaan *grease* yang tidak *sufficient* (cukup), *wheel bearing failure*, RTO (*reject takeoff*).

Kata kunci : *Axle sleeve, brake fan, maintenance.*



*ANALYSIS OF DAMAGE TO THE MAIN LANDING GEAR AXLE SLEEVE
BETWEEN USING BRAKE FAN AND WITHOUT BRAKE FAN ON AIRBUS A330
AIRCRAFT WITH T TEST*

ABSTRACT

Aircraft operations should only be carried out if they are in a state of airworthiness and are safe for operation if unsafe conditions are found, then operations must be stopped, this causes losses to aircraft operators and customers who will fly. One of the unsafe conditions is damage to the axle sleeve but this damage cannot be seen directly by eyes because being inside the landing gear will be very fatal if this damage is allowed to occur because the landing gear is a load support for the aircraft when the aircraft moves on the ground, takes off and when making a landing. On the Airbus A330 aircraft, there are two types of axle sleeves, namely using a brake fan and without a brake fan. In this study, a t test was carried out which aimed to determine the presence or absence of differences in the type of damage between the two types of axle sleeves, identify the factors causing the damage to the axle sleeve based on the observations made. H_0 is accepted or there is no difference in the type of damage between the two types of axle sleeves due to $t_{\text{Calculated}} > t_{\text{table}}$. Factors that cause damage to the main landing gear axle sleeve are brake overheating, insufficient use of grease, wheel bearing failure, RTO (reject takeoff).

Keywords : *Axle sleeve, brake fan, maintenance.*



UNIVERSITAS
MERCU BUANA