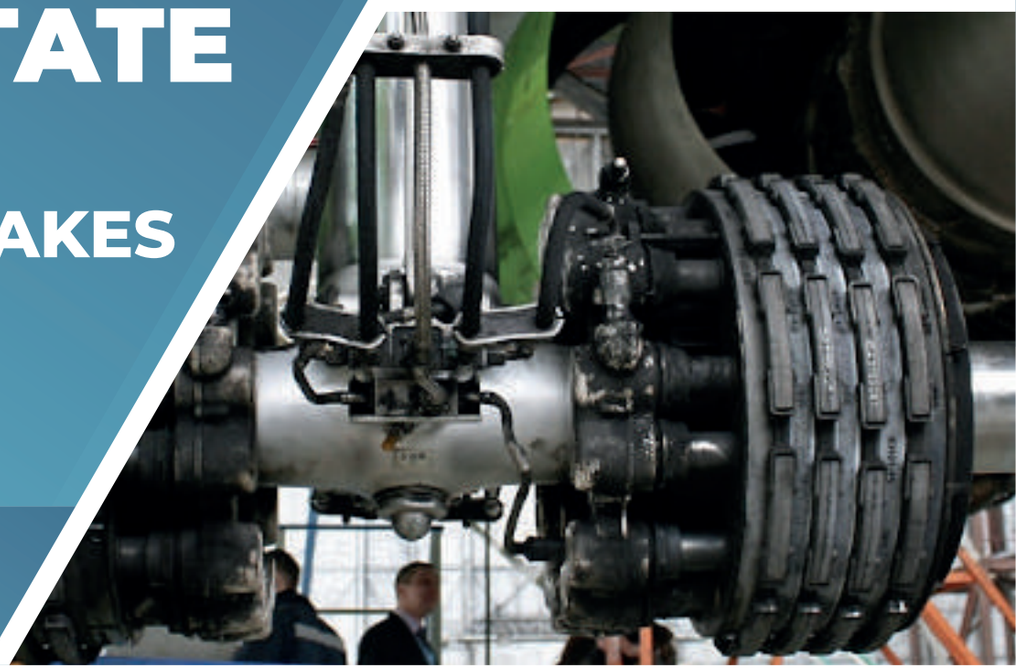
CONÉCTATE

TAKE CARE OF YOUR BRAKES



Loss of performance and potential brake fire In addition to high maintenance costs, brake oxidation can lead to brake rupture and a loss of braking for the affected wheel. If maximum braking is necessary, such as in the case of a rejected takeoff at or close to the maximum takeoff weight, it may result in a runway overrun.

Brake rupture can also damage brake pistons and lead to leakage of hydraulic fluid.

The fluid may vaporize and create smoke if it comes into contact with hot components. This could result in fire. The hydraulic fuses will limit the amount of hydraulic fluid lost and the fire should remain contained to the brake, but damage may be caused to nearby components. Maintenance personnel and flight crews both have a role to play to prevent brake rupture.

- ✓ Brake wear indicator check on walkaround
- ✓ Reducing brake use during taxi
- ✓ The PF should allow the aircraft to accelerate to 30 kt of ground speed, and then use one smooth brake application to decelerate to 10 kt.
- ✓ Keep thrust at idle Maintaining idle thrust during taxi enables a reduced number of brake applications to keep the aircraft below the 30 kt maximum taxi speed. Single engine taxi Single engine taxi is a fuel saving initiative that also reduces brake wear, because it further reduces the idle thrust during taxi.

Reducing braking energy at landing

- The number of thermal oxidation reports is increasing, especially on the A320 family fleet. This phenomenon may be linked with efforts by many operators to save fuel. It was observed that a majority of operators reporting high thermal oxidation were using CONF 3 and thrust reversers on IDLE at landing. There is a trade-off between fuel savings, engine maintenance costs, and increased brake replacement due to higher rates of oxidation. This will depend on the flight conditions, aircraft condition, and the operator’s policy.

- Use of Flaps FULL (or FLAP 5 on A220) The use of flaps FULL (FLAP 5 on A220) at landing reduces the approach speed, and therefore, the aircraft energy to be absorbed by the brakes.

- Use of thrust reversers at landing The use of thrust reversers reduces the energy to be absorbed by the brakes. It is therefore a good option to use thrust reversers to limit brake oxidation, especially on short runways.

- Maximum available braking performance is necessary to prevent the risk of a runway overrun in an event such as a rejected takeoff with a fully loaded aircraft. Brakes need to be closely monitored to ensure that they do not have excessive wear or oxidation that will affect the braking performance of the aircraft or to ensure that they do not degrade to a condition that could cause a brake rupture.

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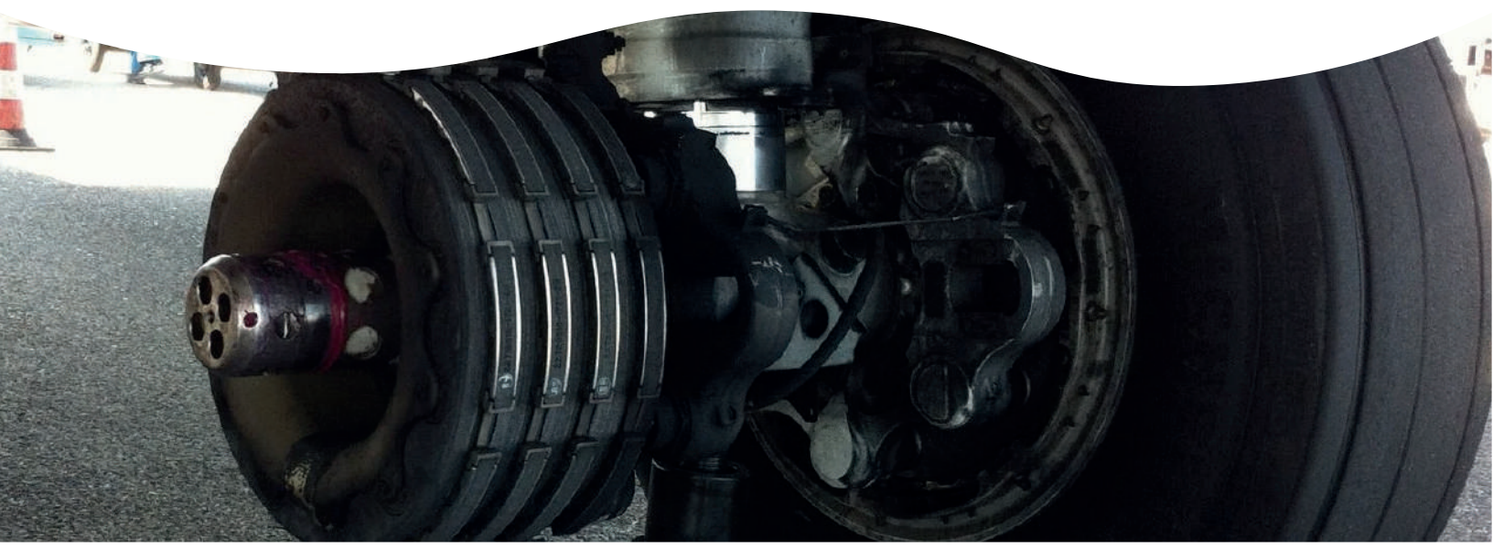

Recomendación ADPA

- Desde la division de seguridad y operaciones de ADPA y en busca de evitar posibles rupturas de frenos y como consecuencia salidas de pista o situaciones que pongan en riesgo la seguridad en nuestras operaciones , recomendamos hacer un buen análisis de riesgo al aplicar la politica de "Reduced Flaps Landing +Rev Idle" en aeronaves sin Brake cooling fans siempre que el peso de aterrizaje (LW) sea superior a 60.000KGS o con vientos de cola y pistas con menos de 7.000FT (LDA) independientemente del peso.

- Recordemos la importancia de hacer el reporte de mantenimiento una vez se presenten Temperaturas de frenos superiores a 900°C.

Información tomada de: https://safetyfirst.airbus.com/take-care-of-your-brakes/