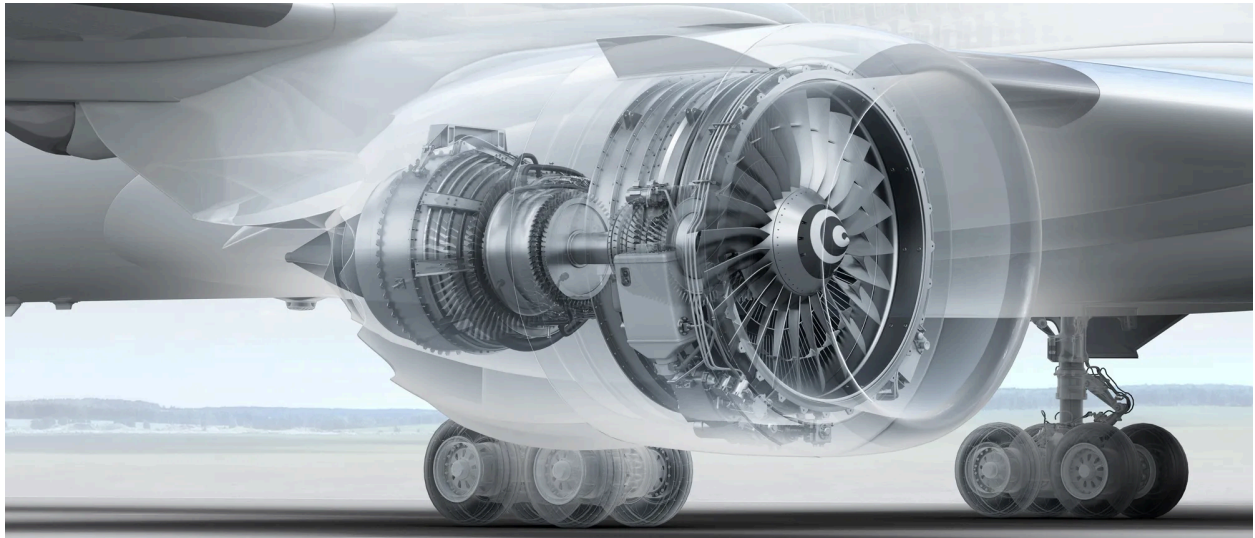


Engine

An airplane engine, or aero engine, generates the power to propel an aircraft by expelling a jet of air at high speed, creating thrust. Modern aircraft predominantly use turbofan engines, which are gas turbines with a large fan at the front that moves a significant amount of air around the engine's core, known as "bypass air". This bypass air, combined with the hot air from the engine's internal combustion, produces the necessary thrust for flight.



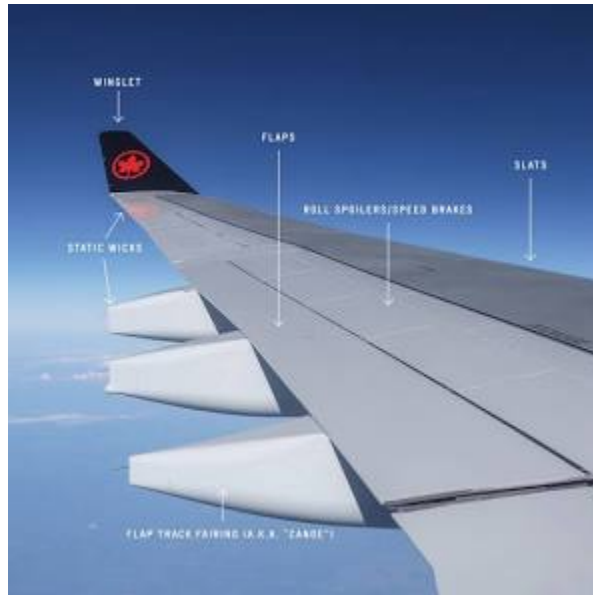
Tyre

An aircraft tire or tyre is designed to withstand extremely heavy loads for short duration. The number of tires required for aircraft increases with the weight of the aircraft, as the weight of the airplane needs to be distributed more evenly. Aircraft tire tread patterns are designed to facilitate stability in high crosswind conditions, to channel water away to prevent hydroplaning, and for braking effect.



Wings

Airplane wings are complex structures that generate lift, which counteracts gravity, allowing an aircraft to fly. Their design must be strong enough to withstand significant aerodynamic forces while also enabling control and maneuverability.



Cockpit

The cockpit, also known as the flight deck, is the command center of an aircraft where the flight crew operates the plane's controls and monitors its systems. Modern cockpits are highly integrated, with large digital displays replacing many traditional analog gauges. A flight crew typically consists of a captain and a first officer who alternate flying and monitoring duties during a flight.

