MAXIMUM ENERGY BRAKING

Definitions

Maximum energy braking is the maximum amount of energy put into the brakes to bring an aircraft to a complete stop on the runway using only its brakes after an aborted take-off. The maximum energy braking tests are performed with an aircraft at its certified maximum takeoff weight and accelerated to a ground speed corresponding to the maximum certified energy. This test is also used to validate the certified landing distance of the aircraft.

Purpose of the Flight Tests

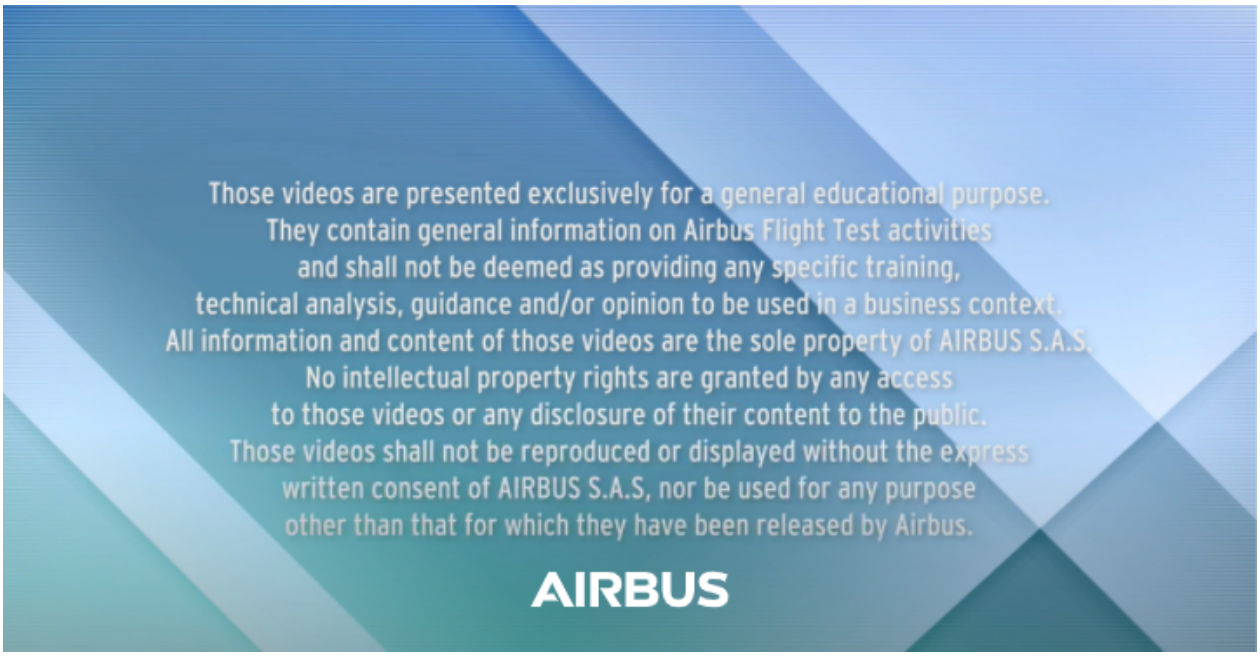
The aircraft, at maximum takeoff weight and its brakes are already worn to 90%, is taxied for 3 nautical miles to warm the brake units. The aircraft accelerates on the runway with TOGA thrust and when it reaches a speed corresponding to its maximum certified energy, maximum braking is applied (maximum pedal or Max RTO, and no reverser) until the aircraft comes to a complete stop. It must stop safely on the runway and wait 5 minutes before fire brigade intervention to pass the test.

Application to Line Operations

The brakes are certified to be used with maximum pedal application or with the RTO autobrake mode in the worst case of an aborted take-off. Tyre deflation in these scenarios is expected because the fuses are designed to melt to prevent explosion of the wheel assembly. During operations within the certified envelope, flight crew can be confident of the following:

- The brakes are designed to bring the aircraft at its maximum takeoff weight to a complete stop using only the brakes
- The aircraft remains safe for a sufficient amount of time (at least 5 minutes) before intervention by the fire brigade
- This means that the crew has sufficient time to apply the ECAM procedure when the aircraft has stopped and the parking brake is applied.

Video available on Airbus WIN : https://www.airbus-win.com/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