

FLIGHT AT LESS THAN ZERO G



Definitions

An aircraft may be subjected to negative G for a very short period when flying in strong turbulence. Negative G may also be reached in a situation requiring a sudden large forward input on the sidestick (e.g. during an avoidance maneuver). There are different certification requirements that aircraft must comply with.

Purpose of the Flight Tests

Fluid flow may be disrupted in certain systems on the aircraft if subjected to flight at less than zero G. This can cause issues with engine operation, oil pressure, fuel system, hydraulic system, etc. The purpose of the negative G test is to ensure the aircraft continues to operate properly in negative G, and all systems recover normal operation when the aircraft returns to positive G.

Application to Line Operations

Flying at less than zero G must always be avoided since it may lead to serious injuries in the cabin.

However, the aircraft systems are designed to sustain negative G and the aircraft is protected to not exceed -1G in the event of an encounter with strong turbulence or if an emergency situation requires a large forward input on the sidestick (e.g. during an avoidance maneuver).

Those videos are presented exclusively for a general educational purpose. They contain general information on Airbus Flight Test activities and shall not be deemed as providing any specific training, technical analysis, guidance and/or opinion to be used in a business context. All information and content of those videos are the sole property of AIRBUS S.A.S. No intellectual property rights are granted by any access to those videos or any disclosure of their content to the public. Those videos shall not be reproduced or displayed without the express written consent of AIRBUS S.A.S, nor be used for any purpose other than that for which they have been released by Airbus.

AIRBUS