

Use proper flare and decrab flying techniques

Flare

If the flare technique is not modified by the presence of crosswind, some aspects need to be particularly kept in mind in such situations, especially:

A high or extended flare significantly increases the landing distance, whereas, due to possible adverse reversers effects explained later in this article, it is even more important than usual to keep as much runway length as possible to decelerate after touch-down. In case of an extended flare, the decrease in the aircraft energy will make it even more sensitive to crosswind. Counteracting crosswind becomes more and more difficult as speed decays in the flare. Eventually, the crosswind may move the aircraft away from the centerline. In summary, flare at normal height and do not look for a kiss landing.

Decrab

As mentioned earlier, keeping a crabbed approach is the only way to keep the aircraft on the correct lateral flight path. However, before touch-down, the aircraft needs to be decrabbed to align with the runway axis. The aircraft is to be decrabbed at the time of the flare, using the rudder.

However, it is worth going into further detail to better understand what results from this action on the rudder. Indeed, when doing so, the aircraft will move a bit towards the wind. Why is it so?

In fact, when pushing on the rudder, the aircraft will yaw around a vertical axis that is located a bit forward from the CG, the yaw axis. The moment induced will make the aircraft move slightly towards the wind.

FLARE AND DECRAB IN THE SPECIAL CASE OF HIGH CROSSWIND, ESPECIALLY ON CONTAMINATED RUNWAYS

In such situations, allowing a slight bank angle to maintain the runway axis, less than 5° , and a small crab angle, less than 5° , from the approach through to touchdown is the only way to keep the cockpit aligned with the runway axis.

Why 5° maximum for the bank angle? It is the appropriate balance between the bank angle needed to keep the aircraft trajectory aligned with the runway centerline and the risk of hitting the runway with the wing tip or engine nacelle.

Why 5° maximum for the crab angle? Here again, it is an appropriate trade-off between maintaining the aircraft trajectory and experiencing an acceptable load at the landing gear on touch-down.

A common tendency to be avoided

Some pilots appear to be reluctant to keep a bank angle, even a small one, prior to touch-down. They then try and compensate the crosswind impact using the rudder only. However, an action on the rudder does not change immediately the CG speed vector. Therefore, if the aircraft lateral flight path starts drifting away from the runway centerline, using the rudder alone may not allow for an easy realignment of the aircraft.

Should such drift occur too close to the ground, the safe practice is to go-around. And as mentioned earlier, as long as reversers are not selected, a go-around is always possible!