

Recovery of an AOA-related upset - Recovery from STALL event

Table 1: Recommended Stall Event Recovery Template

Stall Event Recovery Template		
Pilot Flying - Immediately do the following at first indication of a stall (aerodynamic buffeting, reduced roll stability and aileron effectiveness, visual or aural cues and warnings, reduced elevator (pitch) authority, inability to maintain altitude or arrest rate of descent, stick shaker activation (if installed).) – during any flight phases <i>except at lift-off</i> .		
	Pilot Flying (PF)	Pilot Monitoring (PM)
1.	AUTOPILOT – DISCONNECT (A large out-of-trim condition could be encountered when the autopilot is disconnected.)	MONITOR airspeed and attitude throughout the recovery and ANNOUNCE any continued divergence
2.	AUTOTHROST/AUTOTHROTTLE – OFF	
3.	a) NOSE DOWN PITCH CONTROL apply until stall warning is eliminated b) NOSE DOWN PITCH TRIM (as needed) (Reduce the angle of attack (AOA) whilst accepting the resulting altitude loss.)	
4.	BANK – WINGS LEVEL	
5.	THRUST – ADJUST (as needed) (Thrust reduction for aeroplanes with underwing mounted engines may be needed)	
6.	SPEEDBRAKES/SPOILERS - RETRACT	
7.	When airspeed is sufficiently increasing - RECOVER to level flight (Avoid the secondary stall due premature recovery or excessive g-loading.)	

Recovery of attitude related upsets - Recovery from Nose HIGH or Nose LOW

Table 2: Recommended Nose High Recovery Strategy Template

Nose HIGH Recovery Strategy		
Either pilot - Recognise and confirm the developing situation by announcing: 'Nose High'		
	PF	PM
1.	AUTOPILOT – DISCONNECT (A large out of trim condition could be encountered when the AP is disconnected.)	MONITOR airspeed and attitude throughout the recovery and ANNOUNCE any continued divergence
2.	AUTOTHRUST/AUTOTHROTTLE – OFF	
3.	APPLY as much nose-down control input as required to obtain a nose-down pitch rate	
4.	THRUST – ADJUST (if required) (Thrust reduction for aeroplanes with underwing mounted engines may be needed.)	
5.	ROLL – ADJUST (if required) (Avoid exceeding 60 degrees bank.)	
6.	When airspeed is sufficiently increasing - RECOVER to level flight (Avoid the secondary stall due premature recovery or excessive g-loading.)	
NOTE:		
1) Recovery to level flight may require use of pitch trim.		
2) If necessary, consider reducing thrust in aeroplanes with underwing-mounted engines to aid in achieving nose-down pitch rate.		
3) WARNING: Excessive use of pitch trim or rudder may aggravate the upset situation or may result in high structural loads.		

Table 3: Recommended Nose Low Recovery Strategy Template

Nose LOW Recovery Strategy Template		
Either pilot - Recognise and confirm the developing situation by announcing: 'Nose Low' (If the autopilot or autothrust/autothrottle is responding correctly, it may not be appropriate to decrease the level of automation while assessing if the divergence is being stopped.)		
	PF	PM
1.	AUTOPILOT – DISCONNECT (A large out of trim condition could be encountered when the AP is disconnected.)	MONITOR airspeed and attitude throughout the recovery and ANNOUNCE any continued divergence
2.	AUTOTHRUST/AUTOTHROTTLE – OFF	
3.	RECOVERY from stall if required	
4.	ROLL in the shortest direction to wings level. (It may be necessary to reduce the g-loading by applying forward control pressure to improve roll effectiveness)	
5.	THRUST and DRAG – ADJUST (if required)	
6.	RECOVER to level flight. (Avoid the secondary stall due premature recovery or excessive g-loading.)	
NOTE:		
1) Recovery to level flight may require use of pitch trim.		
2) WARNING: Excessive use of pitch trim or rudder may aggravate the upset situation or may result in high structural loads.		