

## Level busts

## Information for pilots

- Brief the hazards when flying SIDs and STARs or when there are constraints in altitude situations
- Consider your vertical speed when approaching assigned level above and below
- Use full callsigns. Be aware of similar sounding callsigns
- Ensure a full and correct read-back of ATC clearances, especially when the radio is busy
- Set the clearance you receive not the clearance you expect. If in doubt, always confirm with ATC
- Follow altimeter setting RULES and change altimeter pressure setting in good time when cleared through the transition altitude
- Consider distraction management and focus on the prime tasks during dynamic phases of flight
- Follow SOPs when the workload is challenging climb and descent
- There is an increased risk of Level Bust events in the approach phase
- Evidence indicates that flight crews on more automated flight decks have more monitoring errors

## NATS

## Level busts Information for controllers

- Mode S/C level information on radar is generally accurate but has a slight lag compared to the aircraft's actual passing level in climbs or descents.
- > High rates of climb and descent close to other aircraft can trigger TCAS RAs resulting in a level deviation.
- A 'when ready' descent clearance from a flight level to an altitude carries a risk of incorrect pressure setting by the crew. If you are busy, the flight crews are also likely to be busy.
- Be aware that immediate instructions to turn, climb and descend, particularly at high level, can seem very slow as highly automated aircraft respond with a time lag.
- Every level clearance must be cross referenced and acknowledged by both pilots on the flight-deck following SOPs and 'Expect' levels carry a risk of level bust.
- > Multiple stepped climbs or descents increase the chance of a level bust.
- Limiting rates of climb or descent can allow continuous clearances to be issued.
- Issuing frequency changes (or any numeric instruction) in close sequence (i.e. close but separate transmissions) with climb and turn instructions, increases the chance of flight crew mistakes due to workload associated with the first instruction.
- > The Selected Flight Level downlinked from the aircraft will only be maintained if all the systems work correctly.

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