



LOSS OF SEPARATION

The incident which is described below took place in the middle of the day in the terminal area near a major European airport. The three aircraft involved were operated by major European airlines. The details of the incident have been changed to protect confidentiality but the facts are very much as they happened.

Factual Information

AirB123 is a Boeing 737 which is intending to land at the airport and is descending to FL100 under control of the Initial Approach Controller (INI). At 1200.00, INI instructs the pilot of AirB123 to "proceed PQR, for radar to ILS RWY 25R".

Two minutes later at 1202, the pilot of CAir035, an Airbus A340 departing from the airport, informs Departure Control (DEP) that he is climbing to FL90 and proceeding to LMN. DEP instructs him to continue towards LMN and report reaching FL90.

CAir3365 is an Airbus A320 at FL90 on the same route as CD035 but 10 miles ahead, also under control of DEP.

At 1205.00, CAir035 advises levelling at FL90 and requests further climb. Unfortunately, the callsign is corrupt and DEP believes the message came from CAir 3365. He issues the instruction: "CAir 3365 climb report level FL200".

CAir 035 does not notice the incorrect call sign and replies: "Climbing to 200, 035".

DEP does not notice that the wrong aircraft has responded to the clearance.

A few seconds later, INI detects the conflict and instructs AirB 123 to turn left heading 300. He advises AirB 123 that he has "traffic at 11 o'clock 5 miles same level, climbing". He then instructs AirB 123 to "descend immediately to FL70".

At 1205.50, DEP issues the instruction: "CAir035 maintain FL90, traffic crossing right to left, turn left heading 120."

But CAir035 had already passed FL90. Five seconds later he reports "We have a TCAS TA. Traffic is in sight."

DEP responds: "CAir035 descend immediately FL90, turn immediately left heading 090."

At the same time, CAir035 receives a TCAS "climb" RA. He replies: "Descending FL90, left 150 degrees, following TCAS."

In fact the pilot continued to descend, contrary to his "climb" RA.

At 1206.30, AirB123 informs INI that he has the traffic in sight on his right hand side. The aircraft pass 1.5nm apart, both at FL096, descending.

Analysis

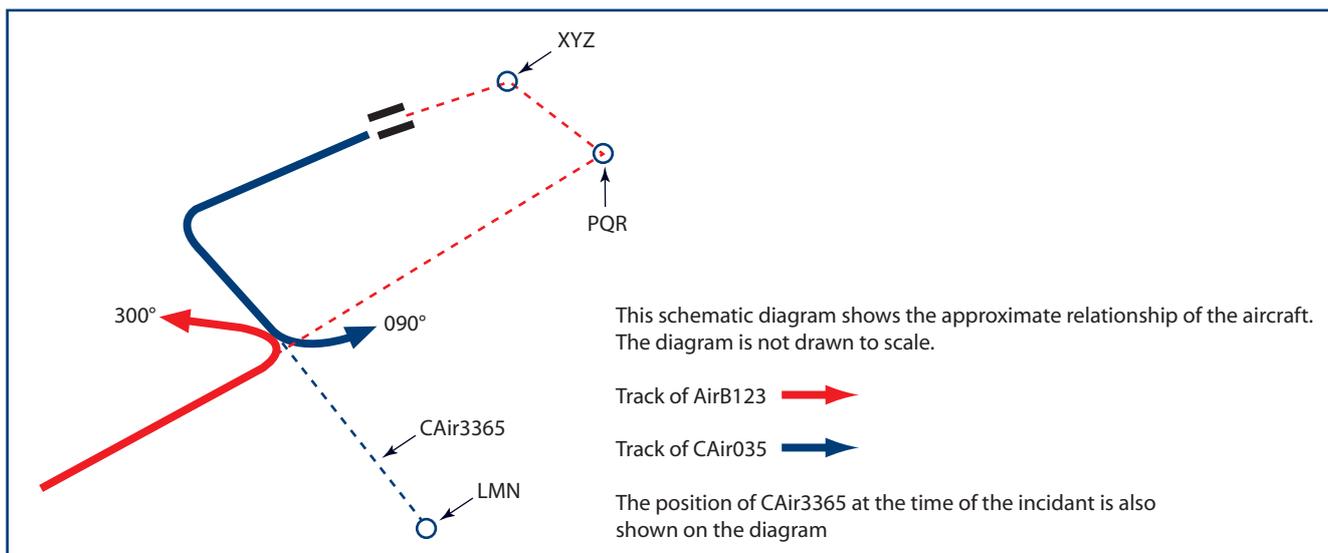
Two aircraft with callsigns CAir035 and CAir3365 departed from the same airfield on similar initial tracks within a few minutes of each other. The potential for call sign confusion (same prefix, two digits in each suffix the same, final digit in each suffix the same) was apparently not detected by the airline callsign deconfliction programme nor was it noticed by the controllers or the pilots of either aircraft.

The request from CAir035 for further climb was corrupt and the call sign was unclear. The DEP controller was expecting a climb request from CAir3365 and so assumed the call was from that aircraft and issued it with a clearance to climb to FL200 without first checking the call sign.

The pilots of CAir035 were expecting further climb clearance and accepted the clearance as being intended for them.

The DEP controller did not detect the error on readback. The fact that the pilot of CAir035 abbreviated his callsign at 1205.16 may have contributed to this error.

The pilot of CAir035 received a TCAS "climb" RA and reported to ATC that he was following it however he apparently continued to descend in accordance with ATC avoiding instructions.



Lessons Learned

LOSS OF SEPARATION - From several safety occurrences we recommend:

Communication & Similar Callsigns

- Use correct RTF phraseology, procedures and discipline at all times;
- Insist on readback. Listen carefully to readback. Always correct errors and insist on correct readback following an error for as many times as is necessary to ensure that the correct clearance has been understood;
- Monitor flight crew compliance with RTF callsign use;
- Take extra care when language difficulties may exist;
- Recognise and understand the pilots' working environments and constraints;
- Warn the pilots of aircraft on the same RTF frequency having similar callsigns that callsign confusion may occur. If necessary, instruct one or both aircraft to use alternative callsigns while they are on the frequency;
- A transmission could be blocked when two or more aircraft are responding to the same clearance. Typically the controller would hear a partial or garbled readback. If a blocked transmission is suspected, ensure that both aircraft retransmit their messages and confirm that a clearance has not been taken by an aircraft for which it was not intended;
- Where an actual or potential callsign confusion incident is observed, file a report using the national mandatory incident reporting system or voluntary incident reporting system as appropriate;
- Advise adjacent sectors/airports if it is felt that potential confusion may exist between aircraft likely to enter their airspace;
- Ensure that aircraft operators are made aware of any actual or potential callsign confusion reported by air traffic controllers.

TCAS

- Where a collision risk exists, ACAS provides the most effective means of collision avoidance.
- When a controller is informed that a pilot is following an RA, he should not attempt to modify the aircraft flight path until the pilot reports returning to the clearance. He should provide traffic information as appropriate.

The EUROCONTROL Level Bust Toolkit contains further information to reduce the potential for loss of separation. See page 20.