

**Aviation Safety Investigation Report
199503422**

**Cessna Aircraft Company
310R
British Aerospace Plc
BAe 146**

13 October 1995

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NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at www.atsb.gov.au.

The Bureau did not conduct an on scene investigation of this occurrence. The information presented below was obtained from information supplied to the Bureau.

Occurrence Number: 199503422 **Occurrence Type:** Incident
Location: 7km S Perth, Aerodrome
State: WA **Inv Category:** 4
Date: Friday 13 October 1995
Time: 0857 hours **Time Zone** WST
Highest Injury Level: None

Aircraft Manufacturer: British Aerospace Plc
Aircraft Model: BAe 146-100
Aircraft Registration: VH-NJR

Serial Number: E
1152

Type of Operation: Air Transport Domestic High Capacity Passenger
Scheduled
Damage to Aircraft: Nil
Departure Point: Kalgoorlie WA
Departure Time: 0800 WST
Destination: Perth WA

Aircraft Manufacturer: Cessna Aircraft Company
Aircraft Model: 310R
Aircraft Registration: VH-MPZ **Serial Number:** 310R0551
Type of Operation: Instructional Unknown
Damage to Aircraft: Nil
Departure Point: Jandakot WA
Departure Time: 0855 WST
Destination: Jandakot WA

Approved for Release: Friday, December 15, 1995

Circumstances

A reduction in separation standards occurred when VH-NJR, tracking for a right base for runway 06 at Perth and cleared for a visual approach (no altitude limit), came within 1.75 NM and 300 ft of VH-MPZ, departing Jandakot for Rottneest via overhead Perth airport and cleared at 2,000 ft. The standard separation requirement was 3 NM laterally or 1000 ft vertically.

The airspace to the east of the extended centreline of Perth runway 03/21 is the responsibility of the approach east controller [APP (E)] and to the west the approach west controller [APP (W)]. The final approach for Perth runway 06 lies within the APP (W)'s area of responsibility.

As VH-NJR was approaching Perth from the east APP (E) was responsible for initial radar vectoring. To improve aircraft handling APP (W) agreed that APP (E) would maintain vectoring after the aircraft crossed into APP (W)'s airspace. APP (W) also indicated that he would keep all his other traffic clear of VH-NJR.

The pilot of VH-MPZ was cleared to depart Jandakots runway 06 in a left turn with a climb to 2,000 ft. He read back his allocated transponder code as 4503 instead of 4502 and the error was not detected despite a request to repeat his read-back. VH-MPZ's clearance for a departure from Jandakot meant that separation between VH-NJR (initially cleared to descend to 2,500 ft) and VH-MPZ (cleared to climb to 2,000 ft) was not assured. APP (W) did not realise this error nor did he coordinate VH-MPZ's departure with APP (E) and as a result APP (E) was not warned there might be a traffic conflict. APP (W) had placed VH-MPZ's flight strip in the bay between the two controllers and had intended drawing APP (E)'s attention to it. APP (E) was busy and APP (W) decided to leave it until later. He was then distracted by communications with another aircraft and forgot about it.

When VH-MPZ departed Jandakot its transponder code was set at 4503. A code of 4502 had been programmed into the radar's computer; consequently, when the return appeared on both APP (W) and APP (E)'s screens it did not have a label indicating the aircraft's callsign. It appears both controllers initially assumed that the un-labeled return was circuit traffic at Jandakot and paid little attention to it. VH-MPZ exited the Jandakot control zone at the same time as APP (E) was giving further directions to VH-NJR to turn right and continue on a visual descent. Because APP (E) had the quick-look facility selected on her radar she observed that the traffic, which was now heading towards VH-NJR, was at 2,000 ft and would be in conflict. She immediately turned VH-NJR further right and assigned the aircraft 2,500 ft. This was to provide emergency separation of 500 ft between the aircraft. VH-NJR descended to 2,300 ft before returning to 2,500 ft.

Analysis

The factors leading to the occurrence started when APP (W) cleared the pilot of VH-MPZ to depart Jandakot at 2,000 ft on a track that would take the aircraft towards the flight path of VH-NJR which had been cleared to descend to 2,500 ft. The separation requirement were not assured by this instruction. APP (W) should have cleared VH-MPZ via a different route or restricted its climb to 1,500 ft. APP (W) could also have coordinated a descent limit of 3,000 ft for VH-NJR with APP (E), to provide the required assurance. A lack of commitment to the principal of separation assurance was identified as a possible factor in APP (W)'s under-performance.

Having started the process APP (W) did not ensure that APP (E) was aware of the possible traffic by drawing her attention to the flight progress strip located in the bay between the controllers. Distraction probably played a part in this failure. APP (E) was operating on the assumption that APP (W) was going to keep all other traffic clear and was not expecting any conflicting traffic and therefore, was not looking for it.

All the visual cues that may have been provided to both APP (W) and APP (E) by their radar screens were not there because VH-MPZ's pilot did not have the correct transponder code set. In addition APP (W) did not have the quick-look facility selected and was therefore, not aware, at least, of the un-labeled returns altitude. It was APP (E)'s use of the quick-look facility which alerted her to the approaching confliction. Use of the quick-look facility is not mandated because of the radar return clutter that results from the circuit traffic at Jandakot, when it is selected.

Safety Action



Airservices Australia's Western Australian office is reviewing the airspace layout around Perth and Jandakot, Jandakot departure procedures and coordination requirements, the use of the radar quick-look facility and methods of reducing radar clutter in the Jandakot area. They will also continue to emphasise, to their staff, the mandatory use of defensive control techniques that are designed to provide separation assurance in all appropriate circumstances.

