

**Aviation Safety Investigation Report
199400831**

**Short Bros Pty Ltd
SD360**

06 April 1994

Readers are advised that the Australian Transport Safety Bureau investigates for the sole purpose of enhancing transport safety. Consequently, Bureau reports are confined to matters of safety significance and may be misleading if used for any other purposes.

Investigations commenced on or before 30 June 2003, including the publication of reports as a result of those investigations, are authorised by the Executive Director of the Bureau in accordance with Part 2A of the Air Navigation Act 1920.

Investigations commenced after 1 July 2003, including the publication of reports as a result of those investigations, are authorised by the Executive Director of the Bureau in accordance with the Transport Safety Investigation Act 2003 (TSI Act). Reports released under the TSI Act are not admissible as evidence in any civil or criminal proceedings.

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: 199400831 **Occurrence Type:** Incident
Location: 55 km NNW Mackay
State: QLD **Inv Category:** 4
Date: Wednesday 06 April 1994
Time: 0913 hours **Time Zone** EST
Highest Injury Level: None

Aircraft Manufacturer: Short Bros Pty Ltd
Aircraft Model: SD360
Aircraft Registration: VH-BWO **Serial Number:** SH 3651
Type of Operation: Air Transport Domestic Low Capacity Passenger Scheduled
Damage to Aircraft: Nil
Departure Point: Proserpine QLD
Departure Time: 0905 EST
Destination: Mackay QLD

Crew Details:

Role	Class of Licence	Hours on Type	Hours Total
Pilot-In-Command	ATPL 1st Class	2500.0	4150
2nd Officer	Senior Commercial	1600.0	4000

Approved for Release: Thursday, November 7, 1996

FACTUAL INFORMATION

When VH-BWO called taxiing at Proserpine, the flight service officer (FSO) receiving the call became confused regarding the type of aircraft and operation as he did not have a flight strip for the aircraft. Following its departure, VH-BWO called Flight Service. This confused the FSO further as he expected the aircraft to call Mackay Control direct for a clearance to enter the Mackay control zone, which has a lower limit of 4,000 ft in the area of concern. The FSO asked for the cruising level and was told 5,000 ft.

The FSO calculated a point at which to transfer the crew to the air traffic control frequency and instructed the pilot to call Mackay Control for a clearance at 32 NM from Mackay. The crew complied with this instruction and called at the designated point, to be told by the Mackay Controller that they were already in controlled airspace at their present level of 5,000 ft. There was no other traffic in the area. The boundary at 5,000 ft was 35 NM.

ANALYSIS

There was no flight progress strip on the aircraft available for the flight service officer, which meant that the first information he had on the aircraft was when the crew established radio contact. In his haste to provide information to the crew, he made an incorrect calculation for the position at which the aircraft would enter controlled airspace. This led to the instruction to the crew to call control for a clearance at 32 NM Mackay.

The crew were lulled into a false sense of security by the flight service officer's instruction and failed to obtain a clearance before entering controlled airspace.

SIGNIFICANT FACTORS

1. When BWO called unexpectedly, the flight service officer made some mistaken assumptions and issued inappropriate clearance instructions.
2. The aircrew followed the instructions from the flight service officer without question.

SAFETY ACTION

As a result of the investigation, the Bureau of Air Safety Investigation issued interim recommendation IR940204 to the then Civil Aviation Authority on 2 September 1994:

"The Bureau of Air Safety Investigation recommends that the Civil Aviation Authority review the phraseologies in use by flight service to ensure that:

- "1. pilots are fully aware that an airways clearance is not available until they call ATC and that they are responsible for remaining outside controlled airspace until a clearance is obtained; and
- "2. pilots are instructed to contact control for a clearance when the pilot judges it is appropriate based on the aircraft's operational criteria rather than at a specific time, place or altitude".

The Civil Aviation Authority replied on 19 July 1995 as follows:

"Reference is made to BASI recommendation R940204 regarding phraseologies used by Flight Service.

"Fundamentally, the responsibility to obtain the appropriate clearances before entering controlled airspace lies with the pilot. This point is very clearly stated in AIP OPS CTLI para 14. 1, which, in part shows "No aircraft shall enter controlled airspace without a clearance.", reiterated at CTL 10 para 20.1 "If the arrival involves entering controlled airspace, the pilot in command of an IFR flight must contact ATC prior to entry for airways clearance.", and again at CTL I 1 para 20.2 "Before reaching the boundary of controlled airspace, a pilot must request airways clearance on the ATC frequency notified in ERSa or MAP." In the cases cited however, the frequency change instructions provided by FS could have contributed to the unauthorised penetrations of CTA.



"The anecdotal evidence and pilot belief that ATC will have received co ordination about the flight from Flight Service is, in respect of IFR and MLJ aircraft, correct. MATS 11A 7 FIS SEC and FIS APP/TWR details the co ordination responsibilities relating to IFR or MLJ flights intending to enter CTA/CTR.

"AIP OPS CTL 1 and the other references shown above are explicit in the requirement for pilots to obtain clearances before entry. However, to reinforce the point, an amendment will be processed to alter the present text shown in OPS CTL 1 14.1, "No aircraft shall enter controlled airspace without a clearance." to be shown as underlined text "Aircraft must not enter controlled airspace without a clearance."

"In relation to pilots determining an appropriate position or time at which to contact ATC, this point is made at CTL 10 para 20.1 "When determining where the clearance request will be made, the pilot should consider aircraft performance and the possibility of frequency congestion if the airspace is known to be busy.", and again at CTL 11 para 20.2 "In determining how far from the boundary to make the request, the pilot should allow for aircraft performance, and also the possibility of frequency congestion should the airspace be known to be busy."

"Consideration must also be given to ATS responsibilities for the continuing provision of a flight information service, including traffic information to pilots of IFR flights operating outside controlled airspace. In this regard, a partnership must exist between ATS and the pilot in relation to frequency change management.

"Phraseologies in use will however, be amended to reflect the need for frequency change instructions to recognise aircraft performance and that frequency change instructions to pilots operating outside controlled airspace are no longer the sole province of Flight Service. A copy of the proposed amendments is shown on the attachment.

"OPS CTL I, para 14.1, amend that portion of the para reading:

"No aircraft shall enter controlled airspace without a clearance.", to be shown as underlined text "Aircraft must not enter controlled airspace without a clearance."

"AIP OPS CTL 10, amend in the paragraph reading:

"FS will instruct an IFR flight to contact ATC approximately 10 NM from the lateral boundary or approaching the vertical boundary of controlled airspace.",

"to read:

"ATS will instruct the pilot of an IFR flight to contact ATC not later than 10 NM from the lateral boundary or approaching the vertical boundary of controlled airspace. Aircraft must not enter controlled airspace without a clearance."

"MATS 12 4 1, paragraph 2, amend to read:

"2. Pilots of IFR and MLJ aircraft shall be given appropriate frequency change instructions before entering controlled airspace. Frequency change instructions should be timely and consistent with aircraft performance to assist the pilot avoid unauthorised penetrations of controlled airspace"."

The Bureau has assessed this response as: CLOSED - ACCEPTED.

