Aviation Safety Investigation Report 199600991

SOCATA - Groupe Aerospatiale Tobago

29 March 1996

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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.

Aviation Safety Investigation Report

199600991

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: 199600991 **Occurrence Type:** Accident
Location: Glen Innes, Aerodrome
State: NSW **Inv Category:** 4
Date: Friday 29 March 1996
Time: 1600 hours **Time Zone** ESuT
Highest Injury Level: None

Aircraft Manufacturer: SOCATA - Groupe Aerospatiale
Aircraft Model: TB-10
Aircraft Registration: VH-YTG **Serial Number:** 1407
Type of Operation: Instructional Dual
Damage to Aircraft: Substantial
Departure Point: Coolangatta QLD
Departure Time: 1400 ESuT
Destination: Glen Innes NSW

Crew Details:

Role	Class of Licence	Hours on Type	Hours Total
Pilot-In-Command	Commercial	558.9	2684

Approved for Release: Monday, August 26, 1996

The aircraft was engaged on a VFR pilot navigation training flight. One cadet pilot had flown the aircraft from Tamworth to Coolangatta via Coffs Harbour earlier in the day. A second cadet pilot was conducting the return leg to Tamworth, with a landing at Glen Innes, under the supervision of an instructor.

At about 80 feet after take-off from Glen Innes the instructor initiated a practice engine failure. The aircraft was about 10 knots below the glide speed for the flap setting in use at this point. The cadet pilot promptly lowered the nose, but not sufficiently to obtain the desired glide speed or maintain the take-off speed. The instructor pushed the controls forward to lower the nose to the attitude normally required to maintain a safe speed. The flap setting was not altered to a landing position. Shortly after this the instructor realised that a high sink rate had developed and took corrective action to reduce the sink rate, including the application of power. The sink rate could not be arrested in the distance available and the aircraft landed very heavily.

Both main landing gears were damaged and the right wing was rotated nose down. The aircraft came to rest on the runway, after a ground run of 100 metres. The cadet pilot suffered a cut above his left eye when his head struck the transmit switch on the control yoke during the landing impact.

The company's operations manual for the aircraft type specifies that practice engine failures may be conducted at a minimum altitude of 500 feet above the aerodrome, and that the ensuing approach must be terminated at a minimum height of 200 feet. An obstacle clearance climb is to be terminated at 300 feet above the aerodrome and a normal climb profile adopted. The operator considers that a practice engine failure during an obstacle clearance climb phase is unsafe, and does not include such a training exercise. In addition, with a temperature of 22 deg C, the density altitude of 4783 feet could be expected to exacerbate the problems.

Factors:

A high density altitude prevailed.

The instructor initiated a training manoeuvre at a height and speed from which recovery was difficult.

The optimum aircraft configuration was not adopted during the power-off approach.