THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF COMMUNICATION AND TRANSPORT
ACCIDENT INVESTIGATION BRANCH

OFFICE OF THE MINISTER
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AIB Bulletin

AIB Bulletin No: 13/00 Ref: CAV/ACC/13/00 **Category**: 1.1

Aircraft Type :	DC8-54F **Reg.** 3D-AVD **Serial No.** 46012
No & Type of Engines:	4 Pratt & Whitney JT3D-3B
Year of Manufacture:	1969
Date: & Time (UTC):	12 October 2000 at 2253 hours
Location :	Mwanza Airport (Lat. 0227S Long. 3256E)
Type of Flight:	Air Cargo
Persons on Board.	**Crew-4 Passengers-NIL**
Injuries:	**Crew-NIL Passengers-N/A**
Nature of Damage:	Damage to right main landing gear lower oleo strut and bogie beam.
Commander's Licence:	ATPL
Commander's Age:	54 years
Commander's Experience	17,000 **hours of which** 12,000 **were on type**
	Last 90 days 200 hrs
	Last 28 days 70 hrs
Information Source:	Telephone call from Mwanza ATS

ALL TIMES UTC

The aircraft was preparing for take-off for a flight to Ostend, Belgium via Khartoum. It was carrying a crew of four and 36 tons of fish fillet loaded at Mwanza. At 2247 hours (1.47 a.m. local time) 3D-AVD was cleared to enter and backtrack runway 30 and call ready for take-off.

The commander said that whilst conducting a 180° turn at the beginning of runway 30 the crew heard a loud bang and aircraft was stopped immediately. The flight engineer was dispatched down using the escape rope from the main door to investigate. He reported damage to the right main landing gear bogie beam, extensive damage to the casting around the pivot pin and inner landing gear strut. The aircraft was subsequently shut down on that spot and the freight was off-loaded. The aircraft remained here for two days waiting for spares. It was feared that attempts to move the aircraft would cause the damaged landing gear to collapse. Examination of the right main landing gear assembly showed that the inboard lug of the fork end of the lower oleo strut had fractured. The fracture surface showed evidence of overload failure and a small fatigue crack. A brake compensating rod fractured in the accident sequence and jammed against the No. 3 front main tyre.

It was evident from the tyre marks on the runway that 3D-ADV was executing a turn at the threshold of runway 30. Brakes were applied on the right main wheels. By the time of the accident the aircraft had already turned through 125° .

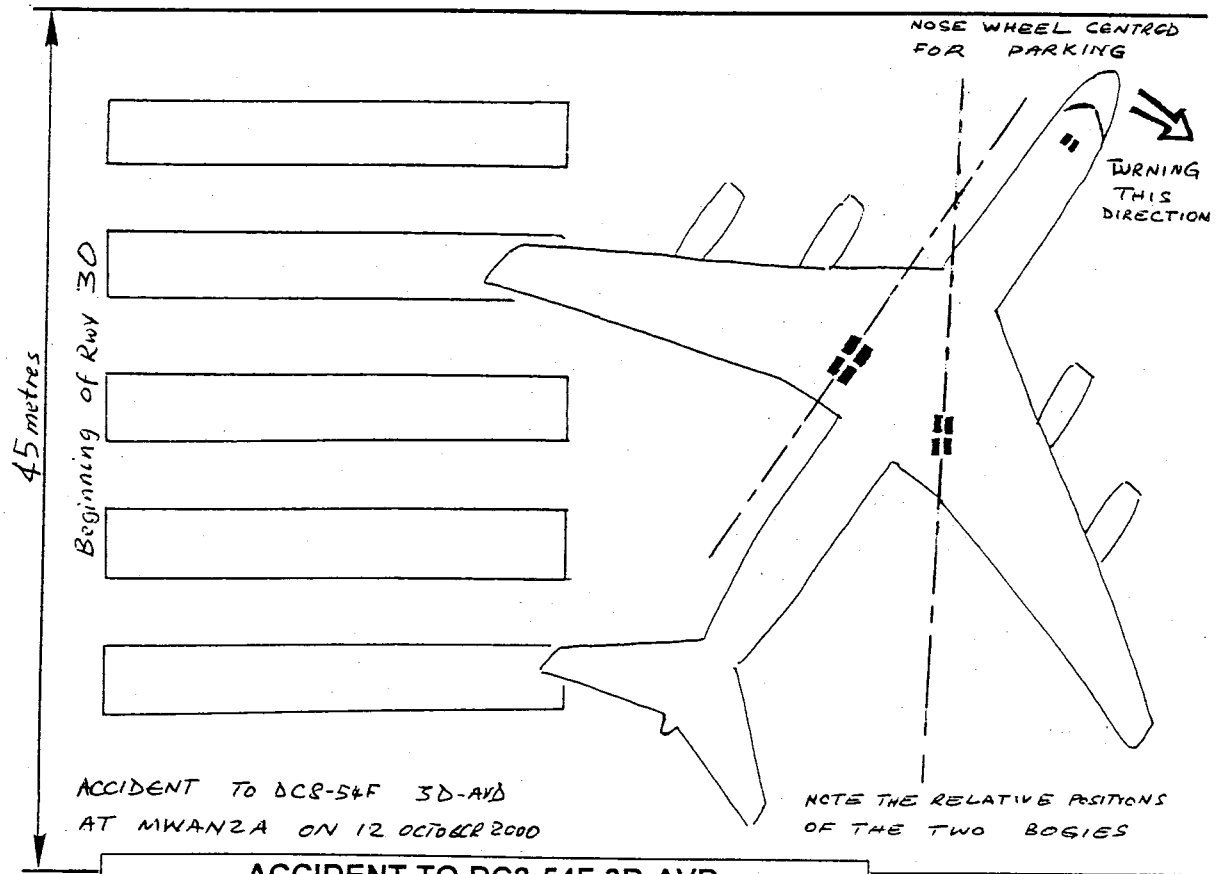
Visual inspection showed that while the aircraft was negotiating the turn to runway 30 centre-line, the right main bogie did not turn nor did the bogie beam unlock to allow relative movement of its two axles. The right bogie beam thus resisted the twisting effect of the right main landing gear strut causing the lower oleo strut fork end lug to fail.

The operator has since submitted the relevant maintenance history of the aircraft. Landing Gear Assy Part No. 577407-5526 S/N 6681 was installed on the aircraft in March 1991 at 43,119 airframe hours and 16,450 cycles. The Bogie Beam Assy front and rear P/N 5774700-504 S/N ST6065 was installed at the same time and the required FAA Airwothiness Directive No. 96-17-07 (SB32-182R2) was carried out in March1997 at 55,289 airframe hours. The life of both the main landing gear and bogie beam assemblies is 24,000 hours T.B.O. Therefore both the strut and bogie beams become due for overhaul at 67,119 airframe hours.

Mwanza airport, elevation 3763 feet has one runway (12/30) which is 3300 metres long and 45 metres wide. The surface is tarmac and was in good condition at the time of the accident. The runway has neither parallel taxiways nor turning pads. Following the accident to a Cessna 210 on 10 September 2000 whose nose landing gear was broken when it dropped into a trench on the edge of the runway at the runway 30 threshold a NOTAM was issued. It stipulated that:

> *All aircraft turning on the runway 30 should make sure the turn is made within the runway and not beyond the runway edge at the threshold,....*

The failed parts are due to be shipped to the manufacturer, Boeing McDonnel Douglas, for further analysis



ACCIDENT TO DC8-54F 3D-AVD AT MWANZA AIRPORT ON 12TH OCTOBER, 2000