

ACCIDENT

Aircraft Type and Registration:	Airbus A321-231, G-ZBAD
No & Type of Engines:	2 International Aero Engine V2533-A5 turbofan engines
Year of Manufacture:	2013 (Serial no: 5582)
Date & Time (UTC):	23 June 2015 at 0710 hrs
Location:	Manchester Airport
Type of Flight:	Commercial Air Transport (Passenger)
Persons on Board:	Crew - 7 Passengers - 193
Injuries:	Crew - None Passengers - None
Nature of Damage:	Puncture to aircraft's fuselage
Commander's Licence:	Airline Transport Pilot's Licence
Commander's Age:	41 years
Commander's Flying Experience:	6,400 hours (of which 4,000 were on type) Last 90 days - 181 hours Last 28 days - 91 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot and further enquiries by the AAIB

Synopsis

After being pushed back the aircraft was pulled forward onto the taxiway centreline using a tug and towbar. As it did so the tug's raised cabin came in to contact with the aircraft, puncturing the fuselage. While the towbar used was suitable for the aircraft type it was shorter than that normally used. It has now been removed from service.

History of the flight

The aircraft was to be pushed back from Stand 86R using a tug and a towbar. In attendance were two ground crew, one on a headset to communicate with the flight crew and one to drive the tug.

After the aircraft had been pushed back the aircraft was required to be pulled forward onto the taxiway centreline. Prior to this the tug driver's cabin needed to be raised to allow him forward visibility during the pull. At the tug driver's request the headset operator monitored the raising of the cabin. This was achieved with the headset operator using a thumbs up during the raising and a clenched fist to signal when to stop. When raised the cabin was clear of the aircraft. It had been raised about 45-55 cm. The cabin's height when fully raised is 254 cm.

As the tug started to pull the aircraft forward the headset operator noticed that the cabin was getting close to the aircraft's underside and attempted to attract the tug driver's attention,

but was unable to do so because the latter was looking away from him and the aircraft. After the aircraft had been pulled forward 2-3 metres the tug driver heard a “crunch” to which he responded by applying the brakes. The roof of the tug’s beacon light and cabin had come into contact with the aircraft, puncturing the underside of the fuselage just aft of the radome. At the time of impact the tow bar’s shear pin, which connects the towbar to the aircraft’s nose leg, also sheared. The aircraft remained in its position and the passengers subsequently disembarked. There were no injuries.

Additional information

A two-man pushback is standard from Stand 86R.

Stand 86R is at the end of a taxiway cul-de-sac. A pull forward is required after a pushback, to position the aircraft onto the taxiway centreline, due to a fence at the end of the cul-de-sac.

The towbar used in this incident was 4,300 mm long and suitable for this aircraft type. However, all other tow bars for this aircraft type at the airport were 5,200 mm long.

Safety actions

The 4,300 mm towbar was suitable for the aircraft type. However, the handling agent believed that if a 5,200 mm towbar had been used the tug’s cabin would not have contacted the aircraft.

The handling agent subsequently removed the 4,300 mm towbar from service.