

SERIOUS INCIDENT

Aircraft Type and Registration:	Antonov An-12BK, UR-DWF
No & Type of Engines:	4 Ivchenko AI-20M turboprop engines
Year of Manufacture:	1968 (Serial no 8345802)
Date & Time (UTC):	9 February 2012 at 1620 hrs
Location:	Birmingham Airport
Type of Flight:	Commercial Air Transport (Cargo)
Persons on Board:	Crew - 7 Passengers - None
Injuries:	Crew - None Passengers - N/A
Nature of Damage:	Right wing suffered scratch damage
Commander's Licence:	Airline Transport Pilot's Licence
Commander's Age:	41 years
Commander's Flying Experience:	8,070 hours (of which 7,700 were on type) Last 90 days - n/k Last 28 days - 87 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot, an Occurrence Report by Birmingham ATC and a Ground Incident Report by the Airport Authority

Synopsis

Whilst negotiating a gap between parked aircraft under the guidance of a marshaller and two assistants, the aircraft's right wing struck the tailplane of one of the parked aircraft. The aircraft did not follow marshalling signals precisely and the marshaller and his assistants, one of whom was not trained in his assigned role, did not stop the aircraft before the collision had taken place. The gap provided less than the recommended minimum wing tip clearance.

Description of the event

The aircraft had just landed after a flight from Graz in Austria and was taxiing to its parking position. A marshaller and two assistants who were allocated to

guide the aircraft had arrived on the apron in good time. The marshaller identified a suitable parking position although it entailed the aircraft taxiing through a gap between two parked aircraft, a Piaggio P180 to the left and a Lockheed L-100-30 Hercules to the right. There were no ground taxi markings on the apron.

As the aircraft entered the apron, the marshaller positioned himself between the two parked aircraft to attract the An-12 crew's attention and indicate the intended parking stand. Having done so, he turned and walked back to the head of the stand to continue marshalling. One assistant was placed on each side of the gap; the assistant on the right stood directly under

the tail of the Hercules. The subsequent events were described in the Airport Authority's report, which drew on information from CCTV cameras, ATC surface movement radar and the marshaller.

As the marshaller indicated for the aircraft to taxi straight ahead towards the gap, it started to deviate to the right. The commander of the An-12 later stated that his initial concern was clearance from the P180 to his left. The assistant standing by the P180 signalled safe wingtip clearance, while the assistant under the tail of the Hercules made no gestures, which the crew took also to mean safe clearance also. Once the commander was satisfied with clearance to the left he straightened the aircraft.

The marshaller realised the close proximity of the An-12's right wing to the Hercules, and started giving signals to turn left, about 6 to 10 seconds before the An-12's wing struck the tail of the Hercules. The assistant under the tail of the Hercules had remained passive until immediately before the collision. The marshaller gave a 'stop' signal to the aircraft, but then after a short pause continued marshalling the aircraft ahead towards its parking position. Subsequent inspection revealed scrape marks on the under surface

of the outer part of the An-12's right wing, where it had come into contact with the upper surface of the Hercules's horizontal tailplane. The Hercules suffered scratch damage to the upper surface of its left horizontal tailplane and was subsequently ferried, with specific approval, to a maintenance facility for repair.

The gap between the parked aircraft was subsequently measured at 42.4 m, while the wingspan of the An-12 was 38 m, giving a clearance of only 2.2 m each side. However, the marshaller had been confident that the aircraft could safely pass through the gap. As the Airport Authority's report observed, Civil Aviation Publication 168, *Licensing of Aerodromes*, suggests a minimum clearance between a manoeuvring aircraft and any obstruction of 20% of wingspan, equivalent to 7.6 m each side in this case¹.

The Airport Authority's report revealed that the assistant under the tail of the Hercules was not trained for the wing tip guide role and acknowledged that the crew of the An-12 could reasonably expect both assistants to be trained wing tip guides. It was observed that, while the aircraft could have passed through the gap, the clearance was less than ideal.

Footnote

¹ CAP 168 actually states that the apron should be of such dimensions as to allow the stated clearance.