

SERIOUS INCIDENT

Aircraft Type and Registration:	Airbus A350-1041, G-XWBL
No & Type of Engines:	2 Rolls-Royce Trent XWB-97 turbofan engines
Year of Manufacture:	2021 (Serial no: 547)
Date & Time (UTC):	22 January 2023 at 0519 hrs
Location:	In flight over the coast of North Africa
Type of Flight:	Commercial Air Transport (Passenger)
Persons on Board:	Crew - 15 Passengers - 323
Injuries:	Crew - 1 (Serious) Passengers - None 1 (Minor) 13 (None)
Nature of Damage:	No damage reported
Commander's Licence:	Airline Transport Pilot's Licence
Commander's Age:	56 years
Commander's Flying Experience:	21,594 hours (of which 1,422 were on type) Last 90 days - 199 hours Last 28 days - 85 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot and flight data analysis by the aircraft manufacturer

Synopsis

The aircraft entered unexpected turbulence during the cruise. A member of cabin crew in the galley was lifted off their feet and when they fell back to the floor they injured their shoulder and hip. A second cabin crew member received a minor cut from fragments of a cup dropped by the original cabin crew member when they fell.

History of the flight

While in the cruise at FL360/M0.85, with autopilot engaged and passenger seatbelt signs off, the aircraft encountered unexpected turbulence. The flight crew immediately switched the seatbelt signs on, but the turbulence event came and went very quickly.

As a precaution, even though there were no more instances of turbulence, the seatbelt signs were kept on until the cabin crew confirmed to the commander that the cabin was secure. At this point, he was also informed that two of the cabin crew had been injured as a result of the turbulence. The most severely injured person had been drinking a cup of tea when the turbulence started and was moving to the galley sink to dispose of it when the severity of the aircraft's motion lifted them off their feet. They then fell to the floor, suffering injuries to their shoulder and hip as a result. One of the other cabin crew members received a minor cut to their ankle caused by fragments from the ceramic cup which had shattered after being

dropped by their falling colleague. Having taken medical advice, the commander elected to continue to the planned destination where the seriously injured crew member was taken to hospital. It was later established they had sustained a badly bruised shoulder and two pelvic fractures.

Recorded information

Analysis of flight data recordings confirmed that the turbulence event lasted for 20 seconds, during which the vertical g loading varied between 0 G and +1.47 G. The aircraft's speed briefly reached a maximum of M0.892, with the time above M_{MO}^1 (M0.89) being less than one second. While the speed was above M_{MO} the Master Warning sounded but the maximum Mach reached did not activate the M_{MO} warning (trigger threshold M0.896). The aircraft's altitude varied between 35,950 ft and 36,080 ft, with a vertical speed variation of between +1,100 ft/min and -1,460 ft/min. The autopilot remained engaged throughout the event. Post-flight data analysis confirmed no load exceedances had occurred during the event.

Commander's observation

While it would not have prevented the crew member being injured walking to the sink to dispose of their hot tea, the commander commented that this event was a reminder, to passengers and crew alike, that unexpected turbulence is a normal operating hazard and wearing seatbelts when seated is a sensible precaution, even if the seatbelt signs are not illuminated.

Footnote

¹ Maximum operating Mach number.