

INCIDENT

Aircraft Type and Registration:	Hawker 800XP, CS-DRP	
No & Type of Engines:	2 Honeywell TFE731-5BR turbofan engines	
Year of Manufacture:	2006	
Date & Time (UTC):	14 March 2010 at 2047 hrs	
Location:	London City Airport	
Type of Flight:	Commercial Air Transport (Non-Revenue)	
Persons on Board:	Crew - 2	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	None	
Commander's Licence:	Airline Transport Pilot's Licence	
Commander's Age:	33 years	
Commander's Flying Experience:	4,300 hours (of which 1,200 were on type) Last 90 days - 60 hours Last 28 days - 20 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

The aircraft encountered navigation problems after it departed from London City Airport with its heading reference systems misaligned. Safety action taken following a series of such events before 2008 has been effective but remains relevant.

History of the flight

During flight preparation, while the aircraft was parked on the general aviation apron at the western end of London City Airport, the pilots noticed that the compasses were taking longer than usual to align. During taxi the attitude and heading reference systems (AHRS) were selected to the SLEW mode in preparation for setting the correct heading.

The aircraft was instructed to backtrack Runway 27, vacate onto the loop taxiway at Hold K and hold short at Hold M. During backtrack the pilots accepted the offer of an immediate takeoff from the aerodrome controller, who advised that a landing aircraft was 4 nm from touchdown. The aircraft turned on the runway to face the takeoff direction instead of using the loop taxiway. The commander reported that all checks were completed according to the checklist but that, although both pilots were aware that the AHRS were selected to SLEW mode, the aircraft departed without the correct heading set.

The departure was uneventful until, in receipt of heading instructions, the crew were asked if the aircraft was

experiencing navigation problems. The pilots realised that the aircraft was not maintaining the assigned heading and altered the flight path accordingly. No other traffic was affected by the event and the flight proceeded without further incident.

Previous occurrences

In its January 2008 bulletin the AAIB reported on the investigation of a series of events¹ in which aircraft departing Runway 27 at London City Airport experienced navigation problems attributed to misalignment of their heading reference systems. The investigation identified several magnetic anomalies, associated with the industrial legacy of the airport estate and construction of the loop taxiway, strong enough to affect aircraft heading reference systems. The report established that this only became an operational problem if pilots had insufficient time to realign the heading reference systems when lined up on the runway.

The report made six Safety Recommendations, initially to provide short-term procedural remedies and operator awareness, and in the longer term to change aerodrome standards with regard to magnetic anomalies. All

the recommendations addressed to the UK CAA were accepted and action taken to address them. One recommendation to ICAO was also accepted.

Other information

The commander concluded that the cause of the occurrence was a “rushed departure”. In a report submitted to the operator, he commented that crews should not accept such a departure, “especially from London City with the known heading problem”.

The occurrence to CS-DRP on 14 March 2010 was the first similar occurrence at London City Airport reported to the AAIB since the January 2008 bulletin. The airport operator has stated that it continues to monitor the situation.

Discussion

The commander’s comments and the absence of occurrences attributed to the magnetic anomalies at London City since January 2008 indicates that safety action taken since publication of the AAIB report highlighting the issue has been successful but remains relevant.

Footnote

¹ Incident to Raytheon Hawker 800XP registration CS-DRQ on 31 October 2009 et al, AAIB reference EW/C2006/10/10.