INCIDENT

Aircraft Type and Registration:	Airbus A320-232, G-TTOB
No & Type of Engines:	2 International Aero Engine V2527-A5 turbofan engines
Year of Manufacture:	2002 (Serial no: 1687)
Date & Time (UTC):	18 December 2014 at 2036 hrs
Location:	London Heathrow Airport
Type of Flight:	Commercial Air Transport (Passenger)
Persons on Board:	Crew - 6 Passengers - 137
Injuries:	Crew - None Passengers - None
Nature of Damage:	None
Commander's Licence:	Airline Transport Pilot's Licence
Commander's Age:	40 years
Commander's Flying Experience:	10,700 hours (of which 4,550 were on type) Last 90 days - 185 hours Last 28 days - 78 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot and aircraft operator's investigation report

Synopsis

An unusual smell was noticed soon after takeoff, the source of which could not be determined. The flight crew donned their oxygen masks and carried out the appropriate actions to deal with the situation, while arranging with ATC for a return to Heathrow.

Subsequent investigation revealed that hydraulic fluid leaking from a hydraulic actuator had been ingested into the air conditioning system. Following appropriate maintenance action, the aircraft was returned to service and no recurrence has been reported.

History of the flight

The aircraft was operating a scheduled passenger service from London Heathrow Airport to Paris Charles de Gaulle Airport. There were six crew and 137 passengers on board. The aircraft departed Heathrow at 2015 hrs.

As the aircraft climbed through 5,000 ft, the flight crew noticed a musty smell, which was mild at first but strengthened slightly over the next few minutes. As the flight crew were discussing the smell and possible courses of action, the purser called from the cabin and informed the commander that cabin crew at the front and rear of the aircraft had also noticed the smell and that some were also feeling light headed and a little nauseous. The flight crew initiated the smoke / fumes response actions with reference to the Quick Reference Handbook, which included donning their oxygen masks.

With the source of the smell not identified, the flight crew informed ATC of the situation using a PAN call and stated that they wished to return to Heathrow. The commander then briefed the cabin crew accordingly. During the subsequent approach to Heathrow, the smell was still present although not worsening, so the flight crew continued to wear their oxygen masks. After landing and vacating the runway, the aircraft was brought to a stop on a taxiway while emergency services carried out an external inspection. The smell had reduced in intensity by this time and the flight crew were able to remove their oxygen masks before taxiing the aircraft to the stand. There were no reports of lasting adverse effects of the fumes on passengers or crew.

The aircraft operator carried out a technical investigation which found that hydraulic fluid, leaking from a yaw damper actuator, had been ingested into the air inlet for the Auxiliary Power Unit (APU). One of the purposes of the APU is to provide a supply of bleed air to the aircraft's air conditioning system when it is not being provided by the engines. Thus, the ingested fluid found its way into the air conditioning system. The actuator was replaced and a decontamination procedure carried out. The aircraft was subsequently returned to service with no reported recurrence.