

INCIDENT

Aircraft Type and Registration:	ATR 42-300, EI-BYO	
No & Type of Engines:	2 Pratt and Whitney PW120 turboprop engines	
Year of Manufacture:	1989	
Date & Time (UTC):	7 October 2008 at 1517 hrs	
Location:	22 miles South West of Ronaldsway, Isle of Man	
Type of Flight:	Commercial Air Transport (Passenger)	
Persons on Board:	Crew - 3	Passengers - 17
Injuries:	Crew - None	Passengers - None
Nature of Damage:	None	
Commander's Licence:	Airline Transport Pilot's Licence	
Commander's Age:	49 years	
Commander's Flying Experience:	14,038 hours (of which 2,150 were on type) Last 90 days - 39 hours Last 28 days - 1 hour	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

The aircraft was en-route to the Isle of Man when smoke was detected in the toilet compartment at the rear of the aircraft. The cabin crew member carried out the fire fighting procedure and the smoke cleared. The flight crew advised ATC that they had received an indication of a fire in the cabin, assistance was provided by ATC and the emergency services and the aircraft landed successfully at the Isle of Man. The source of the smoke was found to have been a light fitting in the toilet compartment.

History of the flight

The flight was a scheduled service from Dublin to Ronaldsway, Isle of Man. Shortly after the aircraft started its initial descent from the cruise level, an AFT

SMK warning was triggered on the flight deck. The flight crew carried out the 'AFT SMK' Quick Reference Handbook (QRH) emergency procedure and the commander informed the cabin crew member, at the rear of the aircraft, about the problem.

The cabin crew member checked the area and found that the cargo bay was clear but that there was smoke in the toilet. She discharged one BCF extinguisher into the toilet compartment, closed the door, and reported back to the commander. After about two minutes she checked the toilet compartment again and found that the smoke had cleared. This was also reported back to the flight crew who noted that the AFT SMK warning on the flight deck had extinguished.

The commander contacted Ronaldsway ATC, advised them that a fire warning had activated in the cabin and requested a priority landing. ATC declared a full emergency, alerted both the Aerodrome Rescue and Fire Fighting Service (RFFS) and the external emergency services, and provided the aircraft with vectors for an ILS approach to Runway 26.

The aircraft completed a successful approach and landing on Runway 26, following which it was taxied to the ramp area with the RFFS in attendance. The passengers disembarked normally and the RFFS checked the aircraft for signs of fire. None were found.

The AFT SMK warning on the flight deck is linked to smoke detectors in the aft cargo area and the toilet compartment. Should either of these detectors activate, it will alert the flight crew to a possible fire but will not specify where. However, on the Flight Attendant Panel, located at the rear of the aircraft, the toilet and

cargo smoke detectors are identified with individual warning lights.

The aircraft's QRH has a generic '*SMOKE*' procedure. This includes a recall action for the flight crew to put on oxygen masks and further items to identify the source of the smoke. On another page there are separate procedures for FWD SMK and AFT SMK indications. On this occasion, in the absence of any smell of smoke, the flight crew went directly to the '*AFT SMK*' procedure.

An initial examination by maintenance personnel after the flight revealed that the cover on the illuminated RETURN TO SEAT sign in the toilet had overheated and the bulb filaments had failed. Further investigation took place which showed that the correct bulbs had been fitted and no cause of overheating could be found. The troubleshooting documentation and the unit were then sent to the manufacturer for examination; to date no apparent reason for the smoke has been determined.