

INCIDENT

Aircraft Type and Registration:	Boeing 737-377, G-CELS	
No & Type of Engines:	2 CFM56-3B2 turbofan engines	
Year of Manufacture:	1986 (Serial no: 23660)	
Date & Time (UTC):	1 March 2013 at 0912 hrs	
Location:	Stand 25, London Gatwick Airport	
Type of Flight:	Commercial Air Transport (Passenger)	
Persons on Board:	Crew - 6	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Minimal damage around electrical connector	
Commander's Licence:	Airline Transport Pilot's Licence	
Commander's Age:	49 years	
Commander's Flying Experience:	11,701 hours (of which 3,015 were on type) Last 90 days - 98 hours Last 28 days - 15 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

During pre-flight preparations smoke was seen coming from the overhead bin over seat row 1 D, E, F. The smoke was caused by arcing across the pins of the redundant No 2 Galley electrical connector. Tests confirmed that the connector remained powered despite the No 2 Galley CB being pulled and collared. A previous inspection had identified this issue, but the operator's maintenance systems allowed the task to be closed prior to completion of the rectification work. The operator has changed the systems used to control such inspections to ensure that additional work must be completed before the inspection is closed. Any aircraft which may have been similarly affected, have been reinspected.

History of the flight

The aircraft was being prepared for a ferry flight by the crew when electrical ground power was lost. After checking the power supply, electrical power was restored and the crew continued with their preparations. Shortly afterwards the Senior Cabin Crew Member reported smoke and sparks coming from the vicinity of the overhead locker above seat row 1 D,E, F. After ordering the cabin crew to leave the aircraft, the flight crew carried out the QRH drills and declared a MAYDAY before leaving the aircraft. The AFRS attended the aircraft and confirmed that smoke and sparks had originated from an electrical connector which was positioned close to damp sound insulation material.

Investigation

An investigation carried out by the operator's engineering organisation determined that the smoke and sparks had been caused by arcing across the pins of an electrical connector previously used to provide power to the No 2 galley unit, which had been removed from the aircraft. Tests confirmed that, despite the CB for the galley unit being tripped and collared, voltage was still present at the connector pins. The connector was removed from the aircraft and the wires capped and stowed.

In 2012 a Line Maintenance Work Request (LMWR) had been raised to inspect the operator's fleet, including G-CELS, after a similar event identified the possibility of the redundant galley connector remaining powered despite the No 2 Galley CB being tripped. Analysis of the results of this LMWR showed that in the case of G-CELS, and a number of other aircraft, the LMWR had identified that the connector remained live but the system for controlling the LMWRs allowed them to be closed without confirmation that additional work identified had been completed.

Safety action

The operator carried out an additional inspection of those aircraft which the results of the previous LMWR indicated may have required additional work. One other aircraft was found to have a live No 2 Galley connector.

The operator has reviewed its procedure for the management of LMWRs and introduced new systems and procedures which will ensure that any additional work identified as a result of carrying out an LMWR is completed before the LMWR can be closed.