SERIOUS INCIDENT

Aircraft Type and Registration:	BAE 146 RJ85, EI-RJW	
No & Type of Engines:	4 Honeywell LF507-1F turbofan engines	
Year of Manufacture:	2000 (Serial no: E2371)	
Date & Time (UTC):	24 October 2013 at 1330 hrs	
Location:	Norwich International Airport, Norfolk	
Type of Flight:	Not applicable	
Persons on Board:	Crew - None	Passengers - None
Injuries:	Crew - N/A	Passengers - N/A
Nature of Damage:	Superficial heat damage to engine and nacelle	
Commander's Licence:	Not applicable	
Commander's Age:	Not applicable	
Commander's Flying Experience:	Not applicable	
Information Source:	Aircraft Accident Report Form submitted by the operator and inquires by the AAIB	

Synopsis

During a power assurance check on the No 3 engine a fire warning appeared approximately three minutes into a full-power soak period. The presence of an engine fire was confirmed by maintenance staff outside the aircraft and the operator shut the engine down, pulled the fire handle and vacated the aircraft. The fire had extinguished prior to the arrival of the emergency services. The fire was caused by the ignition of fuel leaking from fittings between the fuel supply lines and manifolds.

Sequence of events

The aircraft was in maintenance at Norwich Airport undergoing a post-installation power assurance check on the No 3 engine. Three minutes into a full-power soak a fire warning illuminated in the cockpit. Safety staff outside the aircraft confirmed that there was a fire and the operator shut down the engine, pulled the fire handle and expelled shots of the aircraft engine fire suppression system. The operator notified the control tower for fire assistance and, along with three engineering colleagues, vacated the aircraft without further incident. Fire was still apparent between the jet pipe fairing and fan cowl doors in an area inaccessible to fire extinguishers. The fire died down and was out by the time the fire service arrived.

Engineering investigation

The engine examination found that a fuel leak had ignited in the fuel manifold area in the vicinity of the combustion chamber casing. The fuel manifold assemblies were tested by

the manufacturer and it was found that the fuel leak emanated from loose fittings between the fuel supply lines and the manifolds. The manifolds were found to be serviceable. The cause of the loose fittings is unclear, however, the engine had been in storage prior to installation so it is unlikely that the fittings loosened whilst the engine was on wing.

It was noted that the fire caused only superficial damage to the engine and nacelle. The fire protection features within the engine nacelle satisfactorily contained the fire within the immediate zone.