Fokker F28 Mk 100, G-UKFK

AAIB Bulletin No: 2/99 Ref: EW/G98/09/17 Category: 1.1

Aircraft Type and Registration:	Fokker F28 Mk 100, G-UKFK
No & Type of Engines:	2 Rolls-Royce Tay 620-15 turbofan engines
Year of Manufacture:	1988
Date & Time (UTC):	24 September 1998 at 1000 hrs
Location:	Amsterdam Schiphol Airport
Type of Flight:	Public Transport
Persons on Board:	Crew - 6 - Passengers - 62
Injuries:	Crew - None - Passengers - None
Nature of Damage:	Left-hand outboard mainwheel separated from aircraft
Commander's Licence:	Airline Transport Pilot's Licence
Commander's Age:	55 years
Commander's Flying Experience:	12,000 hours (of which 2,500 were on type) Last 90 days - 92 hours Last 28 days - 49 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot and investigations by the operator and Netherlands Aviation Safety Board

The aircraft was being operated on a scheduled flight from Amsterdam, Schiphol to Belfast. The take off, from Runway 01L, was normal but a pilot in another aircraft reported that a wheel had separated from G-UKFK as it left the ground. The flight crew of 'FK' then performed a 'fly-by' over Runway 01R for a landing gear inspection. It was confirmed from the ground that it was the left-hand outboard mainwheel which had left the aircraft, that the brake pack was still in place and that there did not appear to be any further damage. The wheel and tyre were found shortly afterwards.

The crew determined that the best course of action would be to return to Schiphol and, with some uncertainty as to the state of the landing gear, they prepared for an emergency landing. These preparations included the use of the Emergency Checklist for 'gear unsafe', briefing of the cabin crew and passengers and spending an hour 'burning-off' fuel to reduce the aircraft weight on landing. The landing was normal, with touchdown on the right main landing gear. The crew applied full reverse thrust, holding the left wing up with aileron until about 80 kt and then bringing the aircraft to a normal halt.

Technical examination

This incident was very similar to an incident involving another aircraft of the same operator at Aberdeen in February 1998. In both cases the mainwheel had separated because of the lack of the circular spacer which is normally installed between the wheel nut and the wheel assembly. In both cases the spacer had not been reinstalled during a wheel change. In the case of G-UKFK, the aircraft had had a wheel change performed at Newcastle Airport by a 'third party' maintenance organisation the previous evening (23 September) and the spacer was later found at Newcastle, still adhering to the removed wheel.

Following the previous incident, the operator's maintenance organisation had publicised the correct wheel-change procedure in an internal Engineering Bulletin and had identified that the manufacturer had generated a suitable modification, promulgated in Service Bulletin SB F100-32-096. This modification essentially puts together the wheel nut and spacer into a single unit so that the nut cannot be applied without the spacer. As an additional and interim measure, the maintenance organisation has generated a quantity of stick-on tape with the text 'SPACER?', as a simple reminder to maintenance engineers.