

QAC Quickie 1, G-BWIT

AAIB Bulletin No: 2/98 Ref: EW/G97/10/10 Category: 1.3

Aircraft Type and Registration:	QAC Quickie 1, G-BWIT
No & Type of Engines:	1 Rotax 503 piston engine
Year of Manufacture:	1986
Date & Time (UTC):	12 October 1997 at 1230 hrs
Location:	Coventry Airport, West Midlands
Type of Flight:	Private
Persons on Board:	Crew - 1 - Passengers - None
Injuries:	Crew - None - Passengers - N/A
Nature of Damage:	Right canard and one propeller blade broken
Commander's Licence:	Private Pilot's Licence
Commander's Age:	37 years
Commander's Flying Experience:	351 hours (of which 46 were on type) Last 90 days - 2 hours Last 28 days - Nil
Information Source:	Aircraft Accident Report Form submitted by the pilot

The flight was being undertaken for the renewal of the aircraft's Permit to Fly. It had been flown little in the preceding 12 months and the last flight had been in July but the engine had been groundrun on a number of occasions. Take off from Runway 35 was normal, with the engine providing normal power at 6,000 RPM. When the aircraft was downwind at about 700 feet (QFE), climbing to overhead the airfield, the engine faltered and, after 3 or 4 seconds, lost power. The pilot checked fuel and ignition but could see nothing amiss. The engine continued to run at about 3,000 to 4,000 RPM and the pilot elected to try and return to Runway 35, turning early for a left base leg. At this point the engine stopped. The pilot made a 'PAN' call and as he turned final it became apparent that, with the steeper than normal descent angle (and wind 15 to 20 kt from the north), it was marginal whether he would clear a road which crossed south of the Runway 35 threshold. The engine began to windmill as airspeed increased in the descent but attempts to start the engine, including use of the manual fuel pump, were unsuccessful and the pilot decided not to stretch the glide but to land in a field short of the runway. A normal touchdown was achieved but the aircraft

hit a bump and the canard failed. The far edge of the field was marked by a fence with concrete posts and the pilot applied full left rudder to initiate a ground-loop and avoid the fence. The aircraft came to a gentle stop and the pilot evacuated it without injury.

The aircraft was later examined by the owners. They noted that the fuel levels were low in both carburetors. However, the diaphragm fuel pump, which is driven by crankcase pressure, and the in-line back-up pump operated normally when tested and the flow rate through the aircraft's fuel system to the two carburetors was found to be adequate. The diaphragm pump was later dismantled but no contamination or defect was found which could have interrupted the fuel flow. The in-line filter was clear and charged with fuel and the vents to both fore and aft fuel tanks were also found to be clear. There was no debris in either tank that could have caused a temporary blockage. All the sparking plugs were of normal appearance and unfouled. After a check had been carried out for any deformation of the crankshaft a new propeller was fitted and the engine was successfully test run up to 3,000 RPM.

The pilot reported no significant weather at the time of the accident; visibility was greater than 20 km, ambient temperature was +16_C and there were 3 oktas of cloud cover at 3,500 feet.

The loss of engine power and post accident examination are consistent with fuel starvation but the reason for a reduced fuel delivery to the carburetors could not be found. If a cause is established during the repair and subsequent testing it will be reported in a later Bulletin.