

ACCIDENT

Aircraft Type and Registration:	Sky Arrow 650T, G-BYCY
No & Type of Engines:	1 Rotax 914-UL piston engine
Year of Manufacture:	1999 (Serial no: PFA 298-13332)
Date & Time (UTC):	1 June 2019 at 1445 hrs
Location:	Near Newport City Aerodrome, Newport, Gwent
Type of Flight:	Private
Persons on Board:	Crew - 1 Passengers - None
Injuries:	Crew - 1 (Minor) Passengers - N/A
Nature of Damage:	Beyond economic repair
Commander's Licence:	Private Pilot's Licence
Commander's Age:	66 years
Commander's Flying Experience:	597 hours (of which 374 were on type) Last 90 days - 2 hours Last 28 days - 2 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot and inquiries made by the AAIB

Synopsis

The aircraft was downwind to land after a short cross-country flight, when the pilot became aware of a “rumble” from the engine followed by a stoppage. The pilot turned the aircraft into wind and carried out a forced landing in an uneven field. During the landing the aircraft sustained severe damage and the pilot suffered minor injuries. The engine stoppage was caused by the failure of the No 3 big end bearing. This may have been the result of lubrication failure, but it could not be positively determined whether there was a No 3 bearing problem that led to lubrication failure or a lubrication problem that led to the bearing failure.

History of the flight

The pilot reported that he had flown a short uneventful flight along the Welsh coast and had returned to Newport City Aerodrome (formerly Upfield Farm). Whilst on the downwind leg, he “heard and felt a rumble” from the rear¹ of the aircraft. The pilot tried to “add power” but the engine stopped. He was unable to make the airfield so turned into wind to land in what appeared to be a suitable field. However, the field was “full of ditches” that were indiscernible from the air and the aircraft was severely damaged during the landing. The pilot sustained minor injuries.

Footnote

¹ The Sky Arrow 650T is a microlight aircraft with a high wing. The engine is mounted behind the trailing edge of the wing above the rear fuselage and drives a pusher propeller. The pilot sits forward of the engine.

Engineering investigation

The engine was examined and found to have suffered a catastrophic mechanical failure of one of its connecting rods which had broken and was protruding from the crankcase. A more detailed assessment was carried out with the assistance of the Light Aircraft Association (LAA). The damage was centred around the No 3 connecting rod big end bearing and journal. There was also significant secondary damage to the No 3 piston. The evidence on the bearing fragments suggested lubricating oil starvation leading to premature and accelerated wear. The other journals and big end bearings were normal and well lubricated. However, it could not be positively determined whether there was a No 3 bearing problem that led to lubrication failure or a lubrication problem that led to the bearing failure.