AAIB Bulletin No: 3/2005 **Ref: EW/G2004/12/03** **Category: 1.3**

Aircraft Type and Registration:	Europa AL Europa, PH-ZZZ
No & Type of Engines:	1 NSI Subaru EA81 piston engine
Year of Manufacture:	1998
Date & Time (UTC):	9 December 2004 at 1137 hrs
Location:	RAF Linton-on-Ouse, Yorkshire
Type of Flight:	Private
Persons on Board:	Crew - 1 Passengers - 1
Injuries:	Crew - 1 (Minor) Passengers - 1 (Minor)
Nature of Damage:	Extensive damage, aircraft written off
Commander's Licence:	Airline Transport Pilot's Licence
Commander's Age:	53 years
Commander's Flying Experience:	4,010 hours (of which 50 were on type) Last 90 days - 61 hours Last 28 days - 9 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot

The pilot took off from Wombleton Airfield near Pickering in Yorkshire, for a flight to Manston Airport in Kent. About 15 minutes into the flight a loud bang was heard from the engine compartment and the engine began to run very roughly, accompanied by a considerable decrease in power and a smell of fuel in the cockpit. The pilot was unable to restore full power, and that which remained was only just sufficient for level flight. The aircraft was turned towards RAF Linton-on-Ouse which was about 10 minutes flying time away. The pilot established communications with ATC at Linton-on-Ouse and was given radar vectors to assist navigation. The longest runway available was Runway 22, but the pilot chose to make an approach to Runway 28, which allowed for a more expeditious approach and required less manoeuvring. The surface wind at RAF Linton-on-Ouse was from 150º(M) at 5 kt, with 6,000 metres visibility in smoke haze and with scattered cloud cover at 1,500 feet.

The pilot identified the airfield at relatively close range and commenced approach to Runway 28, remaining high to assure a landing on the runway if the engine should fail completely. Once he was confident of reaching the runway, the pilot reduced power to idle and lowered flaps to the landing

setting. The aircraft approached the runway at a higher than normal approach speed and appeared reluctant to decelerate for landing. The pilot later estimated that the aircraft's airspeed approaching the flare may have been as high as 80 kt. He also had the impression that a physical throttle restriction may have prevented him selecting the idle setting.

It became clear to the pilot that the runway was much shorter than expected and that a landing on the remaining runway would not be possible without risking an over-run. He initiated a go-around and the engine appeared to produce some power initially, but the power then reduced rapidly. The pilot selected a field ahead and to the right for a forced landing, but soon realised that an impact with a hedge immediately before the field was likely. Rather than risk stalling the aircraft in an attempt to clear the hedge, he flew the aircraft into the hedge, actually touching down briefly in the field just before it. The aircraft passed through the hedge into the field beyond and then travelled for about 20 metres before pitching nose down and inverting. The 'gull wing' doors and front windscreen separated from the aircraft as it inverted but the pilot and his passenger became trapped in the wreckage.

The pilot turned off the master switches and both occupants were able to confirm that they had not sustained major injury. Neither was able to move though, and with fuel dripping over them, both were concerned about the obvious fire risk. After a few minutes the RAF fire and medical crews, which had been placed on stand-by, arrived at the crash site and were able to lift the wreckage with airbags. The occupants were then airlifted to York hospital where they were found to have suffered only minor injuries.

Runway 28 at RAF Linton on Ouse is 1,339 metres long. For a normal powered approach, the aircraft owner's manual quotes an approach speed of 60 kts, with a touchdown speed of 45 to 50 kt, depending on weight. The landing ground roll at maximum weight is 160 metres on a hard, dry surface with normal wheel braking applied in calm conditions. The recommended glide speed (engine off) is 75 kt.

The cause of the engine's rough running has not yet been determined. The aircraft owner, who lives abroad, is to arrange a detailed inspection of the engine in due course; the results of that investigation will be issued as an addendum to this report in a future bulletin.